

Appendix E

Analytical Reports

Soil, Reconnaissance, and LNAPL Analytical Reports for 2016

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L852412
Samples Received: 08/10/2016
Project Number: 1696120
Description: BNSF - Wishram Railyard, WA
Site: WISHRAM
Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Jason Romer
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



B-16-20-10FT L852412-01 Solid

Collected by Joseph S. Collected date/time 08/08/16 14:20 Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG897578	1	08/10/16 19:54	08/12/16 09:52	NJB
Metals (ICP) by Method 6010C	WG897988	1	08/11/16 17:52	08/12/16 11:26	CCE
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 08:58	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG899518	1	08/17/16 05:59	08/17/16 10:55	DMG
Total Solids by Method 2540 G-2011	WG897844	1	08/11/16 13:36	08/11/16 13:46	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898710	1	08/14/16 11:51	08/14/16 22:13	DWR

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B-16-23-10FT L852412-02 Solid

Collected by Joseph S. Collected date/time 08/08/16 13:20 Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG897578	1	08/10/16 19:54	08/12/16 10:00	NJB
Metals (ICP) by Method 6010C	WG897988	1	08/11/16 17:52	08/12/16 11:42	CCE
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 09:19	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897835	1	08/16/16 09:25	08/16/16 19:56	KLM
Total Solids by Method 2540 G-2011	WG897846	1	08/11/16 11:04	08/11/16 11:14	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898710	1	08/14/16 11:51	08/14/16 22:30	DWR

B-16-19-12FT L852412-03 Solid

Collected by Joseph S. Collected date/time 08/08/16 15:15 Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG897578	1	08/10/16 19:54	08/12/16 10:03	NJB
Metals (ICP) by Method 6010C	WG897988	1	08/11/16 17:52	08/12/16 11:49	CCE
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 09:40	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897835	1	08/16/16 09:25	08/16/16 20:08	KLM
Total Solids by Method 2540 G-2011	WG897846	1	08/11/16 11:04	08/11/16 11:14	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898710	1	08/14/16 11:51	08/14/16 22:47	DWR

B-16-13-11FT L852412-04 Solid

Collected by Joseph S. Collected date/time 08/08/16 09:15 Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG897578	1	08/10/16 19:54	08/12/16 10:05	NJB
Metals (ICP) by Method 6010C	WG897988	1	08/11/16 17:52	08/12/16 11:52	CCE
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 10:01	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG899518	1	08/17/16 05:59	08/17/16 11:10	DMG
Total Solids by Method 2540 G-2011	WG897846	1	08/11/16 11:04	08/11/16 11:14	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898711	1	08/14/16 13:03	08/14/16 19:52	JHH

B-16-21-13FT L852412-05 Solid

Collected by Joseph S. Collected date/time 08/08/16 16:30 Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG897578	1	08/10/16 19:54	08/12/16 10:08	NJB
Metals (ICP) by Method 6010C	WG897988	1	08/11/16 17:52	08/12/16 11:55	CCE
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 10:22	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897835	1	08/16/16 09:25	08/16/16 20:32	KLM
Total Solids by Method 2540 G-2011	WG897846	1	08/11/16 11:04	08/11/16 11:14	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898711	1	08/14/16 13:03	08/14/16 20:12	JHH

SAMPLE SUMMARY



B-16-11-12FT L852412-06 Solid

Collected by
Joseph S. Collected date/time
08/08/16 10:50 Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG897578	1	08/10/16 19:54	08/12/16 10:10	NJB
Metals (ICP) by Method 6010C	WG897988	1	08/11/16 17:52	08/12/16 11:57	CCE
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 10:43	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897835	1	08/16/16 09:25	08/16/16 20:44	KLM
Total Solids by Method 2540 G-2011	WG897846	1	08/11/16 11:04	08/11/16 11:14	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898711	1	08/14/16 13:03	08/14/16 20:33	JHH

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B-16-10-10FT L852412-07 Solid

Collected by
Joseph S. Collected date/time
08/08/16 11:45 Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG897578	1	08/10/16 19:54	08/12/16 10:13	NJB
Metals (ICP) by Method 6010C	WG897988	1	08/11/16 17:52	08/12/16 12:00	CCE
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 11:04	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897835	1	08/16/16 09:25	08/16/16 20:56	KLM
Total Solids by Method 2540 G-2011	WG897846	1	08/11/16 11:04	08/11/16 11:14	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898711	1	08/14/16 13:03	08/14/16 20:53	JHH

B-16-14FT L852412-08 Solid

Collected by
Joseph S. Collected date/time
08/08/16 08:25 Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG897578	1	08/10/16 19:54	08/12/16 10:15	NJB
Metals (ICP) by Method 6010C	WG897988	1	08/11/16 17:52	08/12/16 12:03	CCE
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 11:25	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897835	1	08/16/16 09:25	08/16/16 21:09	KLM
Total Solids by Method 2540 G-2011	WG897846	1	08/11/16 11:04	08/11/16 11:14	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898711	1	08/14/16 13:03	08/14/16 21:13	JHH

B-16-22-10FT L852412-09 Solid

Collected by
Joseph S. Collected date/time
08/09/16 08:20 Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG897578	1	08/10/16 19:54	08/12/16 10:18	NJB
Metals (ICP) by Method 6010C	WG897988	1	08/11/16 17:52	08/12/16 12:05	CCE
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 11:46	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897835	1	08/16/16 09:25	08/16/16 21:21	KLM
Total Solids by Method 2540 G-2011	WG897846	1	08/11/16 11:04	08/11/16 11:14	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898711	1	08/14/16 13:03	08/14/16 21:34	JHH

B-16-17-10FT L852412-10 Solid

Collected by
Joseph S. Collected date/time
08/09/16 07:40 Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897835	1	08/16/16 09:25	08/16/16 21:33	KLM
Total Solids by Method 2540 G-2011	WG897846	1	08/11/16 11:04	08/11/16 11:14	KDW

SAMPLE SUMMARY

DUP-0809 L852412-11 Solid

Collected by Joseph S. Collected date/time 08/09/16 08:30 Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG897578	1	08/10/16 19:54	08/12/16 10:20	NJB
Metals (ICP) by Method 6010C	WG897988	1	08/11/16 17:52	08/12/16 12:08	CCE
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 12:07	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897835	1	08/16/16 09:25	08/16/16 21:45	KLM
Total Solids by Method 2540 G-2011	WG897846	1	08/11/16 11:04	08/11/16 11:14	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898711	1	08/14/16 13:03	08/14/16 21:54	JHH

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B-16-15-12FT L852412-12 Solid

Collected by Joseph S. Collected date/time 08/09/16 10:50 Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 12:28	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG899518	1	08/17/16 05:59	08/17/16 11:25	DMG
Total Solids by Method 2540 G-2011	WG897847	1	08/11/16 10:53	08/11/16 11:01	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG899201	1	08/16/16 10:46	08/16/16 18:19	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898715	1	08/15/16 03:28	08/17/16 00:49	ACG

B-16-16-12FT L852412-13 Solid

Collected by Joseph S. Collected date/time 08/09/16 11:45 Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898566	1	08/16/16 02:15	08/16/16 12:50	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897835	1	08/16/16 09:25	08/16/16 22:09	KLM
Total Solids by Method 2540 G-2011	WG897847	1	08/11/16 10:53	08/11/16 11:01	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG898700	1	08/14/16 19:48	08/15/16 05:48	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898709	1	08/14/16 12:04	08/14/16 20:37	LRL



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jason Romer
Technical Service Representative

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	82.9		1	08/11/2016 13:46	WG897844

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Mercury	ND		0.0241	1	08/12/2016 09:52	WG897578

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Arsenic	ND		2.41	1	08/12/2016 11:26	WG897988
Barium	114		0.603	1	08/12/2016 11:26	WG897988
Cadmium	ND		0.603	1	08/12/2016 11:26	WG897988
Chromium	23.2		1.21	1	08/12/2016 11:26	WG897988
Lead	5.23		0.603	1	08/12/2016 11:26	WG897988
Selenium	ND		2.41	1	08/12/2016 11:26	WG897988
Silver	ND		1.21	1	08/12/2016 11:26	WG897988

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Acetone	ND		0.0603	1	08/14/2016 22:13	WG898710
Acrylonitrile	ND		0.0121	1	08/14/2016 22:13	WG898710
Benzene	0.00158		0.00121	1	08/14/2016 22:13	WG898710
Bromobenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
Bromodichloromethane	ND		0.00121	1	08/14/2016 22:13	WG898710
Bromoform	ND		0.00121	1	08/14/2016 22:13	WG898710
Bromomethane	ND		0.00603	1	08/14/2016 22:13	WG898710
n-Butylbenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
sec-Butylbenzene	ND	J3	0.00121	1	08/14/2016 22:13	WG898710
tert-Butylbenzene	ND	J3	0.00121	1	08/14/2016 22:13	WG898710
Carbon tetrachloride	ND		0.00121	1	08/14/2016 22:13	WG898710
Chlorobenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
Chlorodibromomethane	ND		0.00121	1	08/14/2016 22:13	WG898710
Chloroethane	ND	J3	0.00603	1	08/14/2016 22:13	WG898710
2-Chloroethyl vinyl ether	ND		0.0603	1	08/14/2016 22:13	WG898710
Chloroform	ND		0.00603	1	08/14/2016 22:13	WG898710
Chloromethane	ND		0.00301	1	08/14/2016 22:13	WG898710
2-Chlorotoluene	ND		0.00121	1	08/14/2016 22:13	WG898710
4-Chlorotoluene	ND		0.00121	1	08/14/2016 22:13	WG898710
1,2-Dibromo-3-Chloropropane	ND		0.00603	1	08/14/2016 22:13	WG898710
1,2-Dibromoethane	ND		0.00121	1	08/14/2016 22:13	WG898710
Dibromomethane	ND		0.00121	1	08/14/2016 22:13	WG898710
1,2-Dichlorobenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
1,3-Dichlorobenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
1,4-Dichlorobenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
Dichlorodifluoromethane	ND	J3	0.00603	1	08/14/2016 22:13	WG898710
1,1-Dichloroethane	ND		0.00121	1	08/14/2016 22:13	WG898710
1,2-Dichloroethane	ND		0.00121	1	08/14/2016 22:13	WG898710
1,1-Dichloroethene	ND	J3	0.00121	1	08/14/2016 22:13	WG898710
cis-1,2-Dichloroethene	ND		0.00121	1	08/14/2016 22:13	WG898710
trans-1,2-Dichloroethene	ND		0.00121	1	08/14/2016 22:13	WG898710
1,2-Dichloropropane	ND		0.00121	1	08/14/2016 22:13	WG898710
1,1-Dichloropropene	ND		0.00121	1	08/14/2016 22:13	WG898710

1 Cp

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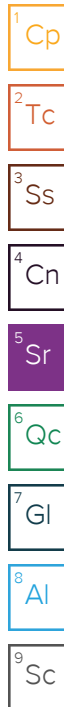


Collected date/time: 08/08/16 14:20

L852412

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00121	1	08/14/2016 22:13	WG898710
cis-1,3-Dichloropropene	ND		0.00121	1	08/14/2016 22:13	WG898710
trans-1,3-Dichloropropene	ND		0.00121	1	08/14/2016 22:13	WG898710
2,2-Dichloropropane	ND		0.00121	1	08/14/2016 22:13	WG898710
Di-isopropyl ether	ND		0.00121	1	08/14/2016 22:13	WG898710
Ethylbenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
Hexachloro-1,3-butadiene	ND		0.00121	1	08/14/2016 22:13	WG898710
Isopropylbenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
p-Isopropyltoluene	ND		0.00121	1	08/14/2016 22:13	WG898710
2-Butanone (MEK)	ND		0.0121	1	08/14/2016 22:13	WG898710
Methylene Chloride	ND		0.00603	1	08/14/2016 22:13	WG898710
4-Methyl-2-pentanone (MIBK)	ND		0.0121	1	08/14/2016 22:13	WG898710
Methyl tert-butyl ether	ND		0.00121	1	08/14/2016 22:13	WG898710
Naphthalene	ND		0.00603	1	08/14/2016 22:13	WG898710
n-Propylbenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
Styrene	ND		0.00121	1	08/14/2016 22:13	WG898710
1,1,1,2-Tetrachloroethane	ND		0.00121	1	08/14/2016 22:13	WG898710
1,1,2,2-Tetrachloroethane	ND		0.00121	1	08/14/2016 22:13	WG898710
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00121	1	08/14/2016 22:13	WG898710
Tetrachloroethene	ND		0.00121	1	08/14/2016 22:13	WG898710
Toluene	ND		0.00603	1	08/14/2016 22:13	WG898710
1,2,3-Trichlorobenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
1,2,4-Trichlorobenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
1,1,1-Trichloroethane	ND		0.00121	1	08/14/2016 22:13	WG898710
1,1,2-Trichloroethane	ND		0.00121	1	08/14/2016 22:13	WG898710
Trichloroethene	ND		0.00121	1	08/14/2016 22:13	WG898710
Trichlorofluoromethane	ND		0.00603	1	08/14/2016 22:13	WG898710
1,2,3-Trichloropropane	ND		0.00301	1	08/14/2016 22:13	WG898710
1,2,4-Trimethylbenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
1,2,3-Trimethylbenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
Vinyl chloride	ND	J3	0.00121	1	08/14/2016 22:13	WG898710
1,3,5-Trimethylbenzene	ND		0.00121	1	08/14/2016 22:13	WG898710
Xylenes, Total	ND		0.00362	1	08/14/2016 22:13	WG898710
(S) Toluene-d8	100		88.7-115		08/14/2016 22:13	WG898710
(S) Dibromofluoromethane	113		76.3-123		08/14/2016 22:13	WG898710
(S) 4-Bromofluorobenzene	99.0		69.7-129		08/14/2016 22:13	WG898710



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.82	1	08/17/2016 10:55	WG899518
Residual Range Organics (RRO)	ND		12.1	1	08/17/2016 10:55	WG899518
(S) o-Terphenyl	87.4		50.0-150		08/17/2016 10:55	WG899518

Sample Narrative:

NWTPHDX L852412-01 WG899518: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00724	1	08/16/2016 08:58	WG898566
Acenaphthene	ND		0.00724	1	08/16/2016 08:58	WG898566
Acenaphthylene	ND		0.00724	1	08/16/2016 08:58	WG898566
Benzo(a)anthracene	ND		0.00724	1	08/16/2016 08:58	WG898566
Benzo(a)pyrene	ND		0.00724	1	08/16/2016 08:58	WG898566



Collected date/time: 08/08/16 14:20

L852412

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00724	1	08/16/2016 08:58	WG898566
Benzo(g,h,i)perylene	ND		0.00724	1	08/16/2016 08:58	WG898566
Benzo(k)fluoranthene	ND		0.00724	1	08/16/2016 08:58	WG898566
Chrysene	ND		0.00724	1	08/16/2016 08:58	WG898566
Dibenz(a,h)anthracene	ND		0.00724	1	08/16/2016 08:58	WG898566
Fluoranthene	ND		0.00724	1	08/16/2016 08:58	WG898566
Fluorene	ND		0.00724	1	08/16/2016 08:58	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00724	1	08/16/2016 08:58	WG898566
Naphthalene	ND		0.0241	1	08/16/2016 08:58	WG898566
Phenanthrene	ND		0.00724	1	08/16/2016 08:58	WG898566
Pyrene	ND		0.00724	1	08/16/2016 08:58	WG898566
1-Methylnaphthalene	ND		0.0241	1	08/16/2016 08:58	WG898566
2-Methylnaphthalene	ND		0.0241	1	08/16/2016 08:58	WG898566
(S) Nitrobenzene-d5	88.6		22.1-146		08/16/2016 08:58	WG898566
(S) 2-Fluorobiphenyl	74.7		40.6-122		08/16/2016 08:58	WG898566
(S) p-Terphenyl-d14	62.1		32.2-131		08/16/2016 08:58	WG898566

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	80.2		1	08/11/2016 11:14	WG897846

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0351		0.0249	1	08/12/2016 10:00	WG897578

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.49	1	08/12/2016 11:42	WG897988
Barium	95.4		0.623	1	08/12/2016 11:42	WG897988
Cadmium	ND		0.623	1	08/12/2016 11:42	WG897988
Chromium	13.2		1.25	1	08/12/2016 11:42	WG897988
Lead	4.61		0.623	1	08/12/2016 11:42	WG897988
Selenium	ND		2.49	1	08/12/2016 11:42	WG897988
Silver	ND		1.25	1	08/12/2016 11:42	WG897988

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		0.0623	1	08/14/2016 22:30	WG898710
Acrylonitrile	ND		0.0125	1	08/14/2016 22:30	WG898710
Benzene	ND		0.00125	1	08/14/2016 22:30	WG898710
Bromobenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
Bromodichloromethane	ND		0.00125	1	08/14/2016 22:30	WG898710
Bromoform	ND		0.00125	1	08/14/2016 22:30	WG898710
Bromomethane	ND		0.00623	1	08/14/2016 22:30	WG898710
n-Butylbenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
sec-Butylbenzene	ND	J3	0.00125	1	08/14/2016 22:30	WG898710
tert-Butylbenzene	ND	J3	0.00125	1	08/14/2016 22:30	WG898710
Carbon tetrachloride	ND		0.00125	1	08/14/2016 22:30	WG898710
Chlorobenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
Chlorodibromomethane	ND		0.00125	1	08/14/2016 22:30	WG898710
Chloroethane	ND	J3	0.00623	1	08/14/2016 22:30	WG898710
2-Chloroethyl vinyl ether	ND		0.0623	1	08/14/2016 22:30	WG898710
Chloroform	ND		0.00623	1	08/14/2016 22:30	WG898710
Chloromethane	ND		0.00312	1	08/14/2016 22:30	WG898710
2-Chlorotoluene	ND		0.00125	1	08/14/2016 22:30	WG898710
4-Chlorotoluene	ND		0.00125	1	08/14/2016 22:30	WG898710
1,2-Dibromo-3-Chloropropane	ND		0.00623	1	08/14/2016 22:30	WG898710
1,2-Dibromoethane	ND		0.00125	1	08/14/2016 22:30	WG898710
Dibromomethane	ND		0.00125	1	08/14/2016 22:30	WG898710
1,2-Dichlorobenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
1,3-Dichlorobenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
1,4-Dichlorobenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
Dichlorodifluoromethane	ND	J3	0.00623	1	08/14/2016 22:30	WG898710
1,1-Dichloroethane	ND		0.00125	1	08/14/2016 22:30	WG898710
1,2-Dichloroethane	ND		0.00125	1	08/14/2016 22:30	WG898710
1,1-Dichloroethene	ND	J3	0.00125	1	08/14/2016 22:30	WG898710
cis-1,2-Dichloroethene	ND		0.00125	1	08/14/2016 22:30	WG898710
trans-1,2-Dichloroethene	ND		0.00125	1	08/14/2016 22:30	WG898710
1,2-Dichloropropane	ND		0.00125	1	08/14/2016 22:30	WG898710
1,1-Dichloropropene	ND		0.00125	1	08/14/2016 22:30	WG898710

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
1,3-Dichloropropane	ND		0.00125	1	08/14/2016 22:30	WG898710
cis-1,3-Dichloropropene	ND		0.00125	1	08/14/2016 22:30	WG898710
trans-1,3-Dichloropropene	ND		0.00125	1	08/14/2016 22:30	WG898710
2,2-Dichloropropane	ND		0.00125	1	08/14/2016 22:30	WG898710
Di-isopropyl ether	ND		0.00125	1	08/14/2016 22:30	WG898710
Ethylbenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
Hexachloro-1,3-butadiene	ND		0.00125	1	08/14/2016 22:30	WG898710
Isopropylbenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
p-Isopropyltoluene	ND		0.00125	1	08/14/2016 22:30	WG898710
2-Butanone (MEK)	ND		0.0125	1	08/14/2016 22:30	WG898710
Methylene Chloride	ND		0.00623	1	08/14/2016 22:30	WG898710
4-Methyl-2-pentanone (MIBK)	ND		0.0125	1	08/14/2016 22:30	WG898710
Methyl tert-butyl ether	ND		0.00125	1	08/14/2016 22:30	WG898710
Naphthalene	ND		0.00623	1	08/14/2016 22:30	WG898710
n-Propylbenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
Styrene	ND		0.00125	1	08/14/2016 22:30	WG898710
1,1,1,2-Tetrachloroethane	ND		0.00125	1	08/14/2016 22:30	WG898710
1,1,2,2-Tetrachloroethane	ND		0.00125	1	08/14/2016 22:30	WG898710
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00125	1	08/14/2016 22:30	WG898710
Tetrachloroethene	ND		0.00125	1	08/14/2016 22:30	WG898710
Toluene	ND		0.00623	1	08/14/2016 22:30	WG898710
1,2,3-Trichlorobenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
1,2,4-Trichlorobenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
1,1,1-Trichloroethane	ND		0.00125	1	08/14/2016 22:30	WG898710
1,1,2-Trichloroethane	ND		0.00125	1	08/14/2016 22:30	WG898710
Trichloroethene	ND		0.00125	1	08/14/2016 22:30	WG898710
Trichlorofluoromethane	ND		0.00623	1	08/14/2016 22:30	WG898710
1,2,3-Trichloropropane	ND		0.00312	1	08/14/2016 22:30	WG898710
1,2,4-Trimethylbenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
1,2,3-Trimethylbenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
Vinyl chloride	ND	J3	0.00125	1	08/14/2016 22:30	WG898710
1,3,5-Trimethylbenzene	ND		0.00125	1	08/14/2016 22:30	WG898710
Xylenes, Total	ND		0.00374	1	08/14/2016 22:30	WG898710
(S) Toluene-d8	102		88.7-115		08/14/2016 22:30	WG898710
(S) Dibromofluoromethane	114		76.3-123		08/14/2016 22:30	WG898710
(S) 4-Bromofluorobenzene	100		69.7-129		08/14/2016 22:30	WG898710

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.99	1	08/16/2016 19:56	WG897835
Residual Range Organics (RRO)	ND		12.5	1	08/16/2016 19:56	WG897835
(S) o-Terphenyl	71.4		50.0-150		08/16/2016 19:56	WG897835

Sample Narrative:

NWTPHDX L852412-02 WG897835: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00748	1	08/16/2016 09:19	WG898566
Acenaphthene	ND		0.00748	1	08/16/2016 09:19	WG898566
Acenaphthylene	ND		0.00748	1	08/16/2016 09:19	WG898566
Benzo(a)anthracene	ND		0.00748	1	08/16/2016 09:19	WG898566
Benzo(a)pyrene	ND		0.00748	1	08/16/2016 09:19	WG898566



Collected date/time: 08/08/16 13:20

L852412

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00748	1	08/16/2016 09:19	WG898566
Benzo(g,h,i)perylene	ND		0.00748	1	08/16/2016 09:19	WG898566
Benzo(k)fluoranthene	ND		0.00748	1	08/16/2016 09:19	WG898566
Chrysene	ND		0.00748	1	08/16/2016 09:19	WG898566
Dibenz(a,h)anthracene	ND		0.00748	1	08/16/2016 09:19	WG898566
Fluoranthene	ND		0.00748	1	08/16/2016 09:19	WG898566
Fluorene	ND		0.00748	1	08/16/2016 09:19	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00748	1	08/16/2016 09:19	WG898566
Naphthalene	ND		0.0249	1	08/16/2016 09:19	WG898566
Phenanthrene	ND		0.00748	1	08/16/2016 09:19	WG898566
Pyrene	ND		0.00748	1	08/16/2016 09:19	WG898566
1-Methylnaphthalene	ND		0.0249	1	08/16/2016 09:19	WG898566
2-Methylnaphthalene	ND		0.0249	1	08/16/2016 09:19	WG898566
(S) Nitrobenzene-d5	81.4		22.1-146		08/16/2016 09:19	WG898566
(S) 2-Fluorobiphenyl	76.4		40.6-122		08/16/2016 09:19	WG898566
(S) p-Terphenyl-d14	62.1		32.2-131		08/16/2016 09:19	WG898566

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	81.0		1	08/11/2016 11:14	WG897846

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0247	1	08/12/2016 10:03	WG897578

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.47	1	08/12/2016 11:49	WG897988
Barium	84.8		0.617	1	08/12/2016 11:49	WG897988
Cadmium	ND		0.617	1	08/12/2016 11:49	WG897988
Chromium	18.2		1.23	1	08/12/2016 11:49	WG897988
Lead	4.59		0.617	1	08/12/2016 11:49	WG897988
Selenium	ND		2.47	1	08/12/2016 11:49	WG897988
Silver	ND		1.23	1	08/12/2016 11:49	WG897988

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		0.0617	1	08/14/2016 22:47	WG898710
Acrylonitrile	ND		0.0123	1	08/14/2016 22:47	WG898710
Benzene	ND		0.00123	1	08/14/2016 22:47	WG898710
Bromobenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
Bromodichloromethane	ND		0.00123	1	08/14/2016 22:47	WG898710
Bromoform	ND		0.00123	1	08/14/2016 22:47	WG898710
Bromomethane	ND		0.00617	1	08/14/2016 22:47	WG898710
n-Butylbenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
sec-Butylbenzene	ND	J3	0.00123	1	08/14/2016 22:47	WG898710
tert-Butylbenzene	ND	J3	0.00123	1	08/14/2016 22:47	WG898710
Carbon tetrachloride	ND		0.00123	1	08/14/2016 22:47	WG898710
Chlorobenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
Chlorodibromomethane	ND		0.00123	1	08/14/2016 22:47	WG898710
Chloroethane	ND	J3	0.00617	1	08/14/2016 22:47	WG898710
2-Chloroethyl vinyl ether	ND		0.0617	1	08/14/2016 22:47	WG898710
Chloroform	ND		0.00617	1	08/14/2016 22:47	WG898710
Chloromethane	ND		0.00308	1	08/14/2016 22:47	WG898710
2-Chlorotoluene	ND		0.00123	1	08/14/2016 22:47	WG898710
4-Chlorotoluene	ND		0.00123	1	08/14/2016 22:47	WG898710
1,2-Dibromo-3-Chloropropane	ND		0.00617	1	08/14/2016 22:47	WG898710
1,2-Dibromoethane	ND		0.00123	1	08/14/2016 22:47	WG898710
Dibromomethane	ND		0.00123	1	08/14/2016 22:47	WG898710
1,2-Dichlorobenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
1,3-Dichlorobenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
1,4-Dichlorobenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
Dichlorodifluoromethane	ND	J3	0.00617	1	08/14/2016 22:47	WG898710
1,1-Dichloroethane	ND		0.00123	1	08/14/2016 22:47	WG898710
1,2-Dichloroethane	ND		0.00123	1	08/14/2016 22:47	WG898710
1,1-Dichloroethene	ND	J3	0.00123	1	08/14/2016 22:47	WG898710
cis-1,2-Dichloroethene	ND		0.00123	1	08/14/2016 22:47	WG898710
trans-1,2-Dichloroethene	ND		0.00123	1	08/14/2016 22:47	WG898710
1,2-Dichloropropane	ND		0.00123	1	08/14/2016 22:47	WG898710
1,1-Dichloropropene	ND		0.00123	1	08/14/2016 22:47	WG898710

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
1,3-Dichloropropane	ND		0.00123	1	08/14/2016 22:47	WG898710
cis-1,3-Dichloropropene	ND		0.00123	1	08/14/2016 22:47	WG898710
trans-1,3-Dichloropropene	ND		0.00123	1	08/14/2016 22:47	WG898710
2,2-Dichloropropane	ND		0.00123	1	08/14/2016 22:47	WG898710
Di-isopropyl ether	ND		0.00123	1	08/14/2016 22:47	WG898710
Ethylbenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
Hexachloro-1,3-butadiene	ND		0.00123	1	08/14/2016 22:47	WG898710
Isopropylbenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
p-Isopropyltoluene	ND		0.00123	1	08/14/2016 22:47	WG898710
2-Butanone (MEK)	ND		0.0123	1	08/14/2016 22:47	WG898710
Methylene Chloride	ND		0.00617	1	08/14/2016 22:47	WG898710
4-Methyl-2-pentanone (MIBK)	ND		0.0123	1	08/14/2016 22:47	WG898710
Methyl tert-butyl ether	ND		0.00123	1	08/14/2016 22:47	WG898710
Naphthalene	ND		0.00617	1	08/14/2016 22:47	WG898710
n-Propylbenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
Styrene	ND		0.00123	1	08/14/2016 22:47	WG898710
1,1,1,2-Tetrachloroethane	ND		0.00123	1	08/14/2016 22:47	WG898710
1,1,2,2-Tetrachloroethane	ND		0.00123	1	08/14/2016 22:47	WG898710
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00123	1	08/14/2016 22:47	WG898710
Tetrachloroethene	ND		0.00123	1	08/14/2016 22:47	WG898710
Toluene	ND		0.00617	1	08/14/2016 22:47	WG898710
1,2,3-Trichlorobenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
1,2,4-Trichlorobenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
1,1,1-Trichloroethane	ND		0.00123	1	08/14/2016 22:47	WG898710
1,1,2-Trichloroethane	ND		0.00123	1	08/14/2016 22:47	WG898710
Trichloroethene	ND		0.00123	1	08/14/2016 22:47	WG898710
Trichlorofluoromethane	ND		0.00617	1	08/14/2016 22:47	WG898710
1,2,3-Trichloropropane	ND		0.00308	1	08/14/2016 22:47	WG898710
1,2,4-Trimethylbenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
1,2,3-Trimethylbenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
Vinyl chloride	ND	J3	0.00123	1	08/14/2016 22:47	WG898710
1,3,5-Trimethylbenzene	ND		0.00123	1	08/14/2016 22:47	WG898710
Xylenes, Total	ND		0.00370	1	08/14/2016 22:47	WG898710
(S) Toluene-d8	100		88.7-115		08/14/2016 22:47	WG898710
(S) Dibromofluoromethane	113		76.3-123		08/14/2016 22:47	WG898710
(S) 4-Bromofluorobenzene	102		69.7-129		08/14/2016 22:47	WG898710

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.94	1	08/16/2016 20:08	WG897835
Residual Range Organics (RRO)	ND		12.3	1	08/16/2016 20:08	WG897835
(S) o-Terphenyl	59.7		50.0-150		08/16/2016 20:08	WG897835

Sample Narrative:

NWTPHDX L852412-03 WG897835: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00740	1	08/16/2016 09:40	WG898566
Acenaphthene	ND		0.00740	1	08/16/2016 09:40	WG898566
Acenaphthylene	ND		0.00740	1	08/16/2016 09:40	WG898566
Benzo(a)anthracene	ND		0.00740	1	08/16/2016 09:40	WG898566
Benzo(a)pyrene	ND		0.00740	1	08/16/2016 09:40	WG898566



Collected date/time: 08/08/16 15:15

L852412

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00740	1	08/16/2016 09:40	WG898566
Benzo(g,h,i)perylene	ND		0.00740	1	08/16/2016 09:40	WG898566
Benzo(k)fluoranthene	ND		0.00740	1	08/16/2016 09:40	WG898566
Chrysene	ND		0.00740	1	08/16/2016 09:40	WG898566
Dibenz(a,h)anthracene	ND		0.00740	1	08/16/2016 09:40	WG898566
Fluoranthene	ND		0.00740	1	08/16/2016 09:40	WG898566
Fluorene	ND		0.00740	1	08/16/2016 09:40	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00740	1	08/16/2016 09:40	WG898566
Naphthalene	ND		0.0247	1	08/16/2016 09:40	WG898566
Phenanthrene	ND		0.00740	1	08/16/2016 09:40	WG898566
Pyrene	ND		0.00740	1	08/16/2016 09:40	WG898566
1-Methylnaphthalene	ND		0.0247	1	08/16/2016 09:40	WG898566
2-Methylnaphthalene	ND		0.0247	1	08/16/2016 09:40	WG898566
(S) Nitrobenzene-d5	90.4		22.1-146		08/16/2016 09:40	WG898566
(S) 2-Fluorobiphenyl	75.7		40.6-122		08/16/2016 09:40	WG898566
(S) p-Terphenyl-d14	62.5		32.2-131		08/16/2016 09:40	WG898566

- 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	08/11/2016 11:14	WG897846

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0264	1	08/12/2016 10:05	WG897578

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.64	1	08/12/2016 11:52	WG897988
Barium	130		0.660	1	08/12/2016 11:52	WG897988
Cadmium	ND		0.660	1	08/12/2016 11:52	WG897988
Chromium	17.1		1.32	1	08/12/2016 11:52	WG897988
Lead	6.17		0.660	1	08/12/2016 11:52	WG897988
Selenium	ND		2.64	1	08/12/2016 11:52	WG897988
Silver	ND		1.32	1	08/12/2016 11:52	WG897988

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		0.0660	1	08/14/2016 19:52	WG898711
Acrylonitrile	ND		0.0132	1	08/14/2016 19:52	WG898711
Benzene	0.00148		0.00132	1	08/14/2016 19:52	WG898711
Bromobenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
Bromodichloromethane	ND		0.00132	1	08/14/2016 19:52	WG898711
Bromoform	ND		0.00132	1	08/14/2016 19:52	WG898711
Bromomethane	ND		0.00660	1	08/14/2016 19:52	WG898711
n-Butylbenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
sec-Butylbenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
tert-Butylbenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
Carbon tetrachloride	ND		0.00132	1	08/14/2016 19:52	WG898711
Chlorobenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
Chlorodibromomethane	ND		0.00132	1	08/14/2016 19:52	WG898711
Chloroethane	ND		0.00660	1	08/14/2016 19:52	WG898711
2-Chloroethyl vinyl ether	ND		0.0660	1	08/14/2016 19:52	WG898711
Chloroform	ND		0.00660	1	08/14/2016 19:52	WG898711
Chloromethane	ND		0.00330	1	08/14/2016 19:52	WG898711
2-Chlorotoluene	ND		0.00132	1	08/14/2016 19:52	WG898711
4-Chlorotoluene	ND		0.00132	1	08/14/2016 19:52	WG898711
1,2-Dibromo-3-Chloropropane	ND		0.00660	1	08/14/2016 19:52	WG898711
1,2-Dibromoethane	ND		0.00132	1	08/14/2016 19:52	WG898711
Dibromomethane	ND		0.00132	1	08/14/2016 19:52	WG898711
1,2-Dichlorobenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
1,3-Dichlorobenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
1,4-Dichlorobenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
Dichlorodifluoromethane	ND		0.00660	1	08/14/2016 19:52	WG898711
1,1-Dichloroethane	ND		0.00132	1	08/14/2016 19:52	WG898711
1,2-Dichloroethane	ND		0.00132	1	08/14/2016 19:52	WG898711
1,1-Dichloroethene	ND		0.00132	1	08/14/2016 19:52	WG898711
cis-1,2-Dichloroethene	ND		0.00132	1	08/14/2016 19:52	WG898711
trans-1,2-Dichloroethene	ND		0.00132	1	08/14/2016 19:52	WG898711
1,2-Dichloropropane	ND		0.00132	1	08/14/2016 19:52	WG898711
1,1-Dichloropropene	ND		0.00132	1	08/14/2016 19:52	WG898711

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
1,3-Dichloropropane	ND		0.00132	1	08/14/2016 19:52	WG898711
cis-1,3-Dichloropropene	ND		0.00132	1	08/14/2016 19:52	WG898711
trans-1,3-Dichloropropene	ND		0.00132	1	08/14/2016 19:52	WG898711
2,2-Dichloropropane	ND		0.00132	1	08/14/2016 19:52	WG898711
Di-isopropyl ether	ND		0.00132	1	08/14/2016 19:52	WG898711
Ethylbenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
Hexachloro-1,3-butadiene	ND		0.00132	1	08/14/2016 19:52	WG898711
Isopropylbenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
p-Isopropyltoluene	ND		0.00132	1	08/14/2016 19:52	WG898711
2-Butanone (MEK)	ND		0.0132	1	08/14/2016 19:52	WG898711
Methylene Chloride	ND		0.00660	1	08/14/2016 19:52	WG898711
4-Methyl-2-pentanone (MIBK)	ND		0.0132	1	08/14/2016 19:52	WG898711
Methyl tert-butyl ether	ND		0.00132	1	08/14/2016 19:52	WG898711
Naphthalene	ND		0.00660	1	08/14/2016 19:52	WG898711
n-Propylbenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
Styrene	ND		0.00132	1	08/14/2016 19:52	WG898711
1,1,1,2-Tetrachloroethane	ND		0.00132	1	08/14/2016 19:52	WG898711
1,1,2,2-Tetrachloroethane	ND		0.00132	1	08/14/2016 19:52	WG898711
1,1,2-Trichlorotrifluoroethane	ND		0.00132	1	08/14/2016 19:52	WG898711
Tetrachloroethene	ND		0.00132	1	08/14/2016 19:52	WG898711
Toluene	ND		0.00660	1	08/14/2016 19:52	WG898711
1,2,3-Trichlorobenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
1,2,4-Trichlorobenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
1,1,1-Trichloroethane	ND		0.00132	1	08/14/2016 19:52	WG898711
1,1,2-Trichloroethane	ND		0.00132	1	08/14/2016 19:52	WG898711
Trichloroethene	ND		0.00132	1	08/14/2016 19:52	WG898711
Trichlorofluoromethane	ND		0.00660	1	08/14/2016 19:52	WG898711
1,2,3-Trichloropropane	ND		0.00330	1	08/14/2016 19:52	WG898711
1,2,4-Trimethylbenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
1,2,3-Trimethylbenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
Vinyl chloride	ND		0.00132	1	08/14/2016 19:52	WG898711
1,3,5-Trimethylbenzene	ND		0.00132	1	08/14/2016 19:52	WG898711
Xylenes, Total	ND		0.00396	1	08/14/2016 19:52	WG898711
(S) Toluene-d8	107		88.7-115		08/14/2016 19:52	WG898711
(S) Dibromofluoromethane	110		76.3-123		08/14/2016 19:52	WG898711
(S) 4-Bromofluorobenzene	94.5		69.7-129		08/14/2016 19:52	WG898711

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.28	1	08/17/2016 11:10	WG899518
Residual Range Organics (RRO)	ND		13.2	1	08/17/2016 11:10	WG899518
(S) o-Terphenyl	80.3		50.0-150		08/17/2016 11:10	WG899518

Sample Narrative:

NWTPHDX L852412-04 WG899518: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00792	1	08/16/2016 10:01	WG898566
Acenaphthene	ND		0.00792	1	08/16/2016 10:01	WG898566
Acenaphthylene	ND		0.00792	1	08/16/2016 10:01	WG898566
Benzo(a)anthracene	ND		0.00792	1	08/16/2016 10:01	WG898566
Benzo(a)pyrene	ND		0.00792	1	08/16/2016 10:01	WG898566



Collected date/time: 08/08/16 09:15

L852412

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00792	1	08/16/2016 10:01	WG898566
Benzo(g,h,i)perylene	ND		0.00792	1	08/16/2016 10:01	WG898566
Benzo(k)fluoranthene	ND		0.00792	1	08/16/2016 10:01	WG898566
Chrysene	ND		0.00792	1	08/16/2016 10:01	WG898566
Dibenz(a,h)anthracene	ND		0.00792	1	08/16/2016 10:01	WG898566
Fluoranthene	ND		0.00792	1	08/16/2016 10:01	WG898566
Fluorene	ND		0.00792	1	08/16/2016 10:01	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00792	1	08/16/2016 10:01	WG898566
Naphthalene	ND		0.0264	1	08/16/2016 10:01	WG898566
Phenanthrene	ND		0.00792	1	08/16/2016 10:01	WG898566
Pyrene	ND		0.00792	1	08/16/2016 10:01	WG898566
1-Methylnaphthalene	ND		0.0264	1	08/16/2016 10:01	WG898566
2-Methylnaphthalene	ND		0.0264	1	08/16/2016 10:01	WG898566
(S) Nitrobenzene-d5	94.6		22.1-146		08/16/2016 10:01	WG898566
(S) 2-Fluorobiphenyl	70.9		40.6-122		08/16/2016 10:01	WG898566
(S) p-Terphenyl-d14	68.8		32.2-131		08/16/2016 10:01	WG898566

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	82.3		1	08/11/2016 11:14	WG897846

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0243	1	08/12/2016 10:08	WG897578

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.43	1	08/12/2016 11:55	WG897988
Barium	95.2		0.607	1	08/12/2016 11:55	WG897988
Cadmium	ND		0.607	1	08/12/2016 11:55	WG897988
Chromium	16.6		1.21	1	08/12/2016 11:55	WG897988
Lead	7.99		0.607	1	08/12/2016 11:55	WG897988
Selenium	ND		2.43	1	08/12/2016 11:55	WG897988
Silver	ND		1.21	1	08/12/2016 11:55	WG897988

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		0.0607	1	08/14/2016 20:12	WG898711
Acrylonitrile	ND		0.0121	1	08/14/2016 20:12	WG898711
Benzene	0.00137		0.00121	1	08/14/2016 20:12	WG898711
Bromobenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
Bromodichloromethane	ND		0.00121	1	08/14/2016 20:12	WG898711
Bromoform	ND		0.00121	1	08/14/2016 20:12	WG898711
Bromomethane	ND		0.00607	1	08/14/2016 20:12	WG898711
n-Butylbenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
sec-Butylbenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
tert-Butylbenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
Carbon tetrachloride	ND		0.00121	1	08/14/2016 20:12	WG898711
Chlorobenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
Chlorodibromomethane	ND		0.00121	1	08/14/2016 20:12	WG898711
Chloroethane	ND		0.00607	1	08/14/2016 20:12	WG898711
2-Chloroethyl vinyl ether	ND		0.0607	1	08/14/2016 20:12	WG898711
Chloroform	ND		0.00607	1	08/14/2016 20:12	WG898711
Chloromethane	ND		0.00304	1	08/14/2016 20:12	WG898711
2-Chlorotoluene	ND		0.00121	1	08/14/2016 20:12	WG898711
4-Chlorotoluene	ND		0.00121	1	08/14/2016 20:12	WG898711
1,2-Dibromo-3-Chloropropane	ND		0.00607	1	08/14/2016 20:12	WG898711
1,2-Dibromoethane	ND		0.00121	1	08/14/2016 20:12	WG898711
Dibromomethane	ND		0.00121	1	08/14/2016 20:12	WG898711
1,2-Dichlorobenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
1,3-Dichlorobenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
1,4-Dichlorobenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
Dichlorodifluoromethane	ND		0.00607	1	08/14/2016 20:12	WG898711
1,1-Dichloroethane	ND		0.00121	1	08/14/2016 20:12	WG898711
1,2-Dichloroethane	ND		0.00121	1	08/14/2016 20:12	WG898711
1,1-Dichloroethene	ND		0.00121	1	08/14/2016 20:12	WG898711
cis-1,2-Dichloroethene	ND		0.00121	1	08/14/2016 20:12	WG898711
trans-1,2-Dichloroethene	ND		0.00121	1	08/14/2016 20:12	WG898711
1,2-Dichloropropane	ND		0.00121	1	08/14/2016 20:12	WG898711
1,1-Dichloropropene	ND		0.00121	1	08/14/2016 20:12	WG898711

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
1,3-Dichloropropane	ND		0.00121	1	08/14/2016 20:12	WG898711
cis-1,3-Dichloropropene	ND		0.00121	1	08/14/2016 20:12	WG898711
trans-1,3-Dichloropropene	ND		0.00121	1	08/14/2016 20:12	WG898711
2,2-Dichloropropane	ND		0.00121	1	08/14/2016 20:12	WG898711
Di-isopropyl ether	ND		0.00121	1	08/14/2016 20:12	WG898711
Ethylbenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
Hexachloro-1,3-butadiene	ND		0.00121	1	08/14/2016 20:12	WG898711
Isopropylbenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
p-Isopropyltoluene	ND		0.00121	1	08/14/2016 20:12	WG898711
2-Butanone (MEK)	ND		0.0121	1	08/14/2016 20:12	WG898711
Methylene Chloride	ND		0.00607	1	08/14/2016 20:12	WG898711
4-Methyl-2-pentanone (MIBK)	ND		0.0121	1	08/14/2016 20:12	WG898711
Methyl tert-butyl ether	ND		0.00121	1	08/14/2016 20:12	WG898711
Naphthalene	ND		0.00607	1	08/14/2016 20:12	WG898711
n-Propylbenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
Styrene	ND		0.00121	1	08/14/2016 20:12	WG898711
1,1,1,2-Tetrachloroethane	ND		0.00121	1	08/14/2016 20:12	WG898711
1,1,2,2-Tetrachloroethane	ND		0.00121	1	08/14/2016 20:12	WG898711
1,1,2-Trichlorotrifluoroethane	ND		0.00121	1	08/14/2016 20:12	WG898711
Tetrachloroethene	ND		0.00121	1	08/14/2016 20:12	WG898711
Toluene	ND		0.00607	1	08/14/2016 20:12	WG898711
1,2,3-Trichlorobenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
1,2,4-Trichlorobenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
1,1,1-Trichloroethane	ND		0.00121	1	08/14/2016 20:12	WG898711
1,1,2-Trichloroethane	ND		0.00121	1	08/14/2016 20:12	WG898711
Trichloroethene	ND		0.00121	1	08/14/2016 20:12	WG898711
Trichlorofluoromethane	ND		0.00607	1	08/14/2016 20:12	WG898711
1,2,3-Trichloropropane	ND		0.00304	1	08/14/2016 20:12	WG898711
1,2,4-Trimethylbenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
1,2,3-Trimethylbenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
Vinyl chloride	ND		0.00121	1	08/14/2016 20:12	WG898711
1,3,5-Trimethylbenzene	ND		0.00121	1	08/14/2016 20:12	WG898711
Xylenes, Total	ND		0.00364	1	08/14/2016 20:12	WG898711
(S) Toluene-d8	110		88.7-115		08/14/2016 20:12	WG898711
(S) Dibromofluoromethane	112		76.3-123		08/14/2016 20:12	WG898711
(S) 4-Bromofluorobenzene	94.0		69.7-129		08/14/2016 20:12	WG898711

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.86	1	08/16/2016 20:32	WG897835
Residual Range Organics (RRO)	ND		12.1	1	08/16/2016 20:32	WG897835
(S) o-Terphenyl	57.1		50.0-150		08/16/2016 20:32	WG897835

Sample Narrative:

NWTPHDX L852412-05 WG897835: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00729	1	08/16/2016 10:22	WG898566
Acenaphthene	ND		0.00729	1	08/16/2016 10:22	WG898566
Acenaphthylene	ND		0.00729	1	08/16/2016 10:22	WG898566
Benzo(a)anthracene	ND		0.00729	1	08/16/2016 10:22	WG898566
Benzo(a)pyrene	ND		0.00729	1	08/16/2016 10:22	WG898566



Collected date/time: 08/08/16 16:30

L852412

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00729	1	08/16/2016 10:22	WG898566
Benzo(g,h,i)perylene	ND		0.00729	1	08/16/2016 10:22	WG898566
Benzo(k)fluoranthene	ND		0.00729	1	08/16/2016 10:22	WG898566
Chrysene	ND		0.00729	1	08/16/2016 10:22	WG898566
Dibenz(a,h)anthracene	ND		0.00729	1	08/16/2016 10:22	WG898566
Fluoranthene	ND		0.00729	1	08/16/2016 10:22	WG898566
Fluorene	ND		0.00729	1	08/16/2016 10:22	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00729	1	08/16/2016 10:22	WG898566
Naphthalene	ND		0.0243	1	08/16/2016 10:22	WG898566
Phenanthrene	ND		0.00729	1	08/16/2016 10:22	WG898566
Pyrene	ND		0.00729	1	08/16/2016 10:22	WG898566
1-Methylnaphthalene	ND		0.0243	1	08/16/2016 10:22	WG898566
2-Methylnaphthalene	ND		0.0243	1	08/16/2016 10:22	WG898566
(S) Nitrobenzene-d5	95.4		22.1-146		08/16/2016 10:22	WG898566
(S) 2-Fluorobiphenyl	80.6		40.6-122		08/16/2016 10:22	WG898566
(S) p-Terphenyl-d14	67.8		32.2-131		08/16/2016 10:22	WG898566

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	79.6		1	08/11/2016 11:14	WG897846

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0251	1	08/12/2016 10:10	WG897578

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.51	1	08/12/2016 11:57	WG897988
Barium	78.6		0.628	1	08/12/2016 11:57	WG897988
Cadmium	ND		0.628	1	08/12/2016 11:57	WG897988
Chromium	12.9		1.26	1	08/12/2016 11:57	WG897988
Lead	3.79		0.628	1	08/12/2016 11:57	WG897988
Selenium	ND		2.51	1	08/12/2016 11:57	WG897988
Silver	ND		1.26	1	08/12/2016 11:57	WG897988

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		0.0628	1	08/14/2016 20:33	WG898711
Acrylonitrile	ND		0.0126	1	08/14/2016 20:33	WG898711
Benzene	ND		0.00126	1	08/14/2016 20:33	WG898711
Bromobenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
Bromodichloromethane	ND		0.00126	1	08/14/2016 20:33	WG898711
Bromoform	ND		0.00126	1	08/14/2016 20:33	WG898711
Bromomethane	ND		0.00628	1	08/14/2016 20:33	WG898711
n-Butylbenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
sec-Butylbenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
tert-Butylbenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
Carbon tetrachloride	ND		0.00126	1	08/14/2016 20:33	WG898711
Chlorobenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
Chlorodibromomethane	ND		0.00126	1	08/14/2016 20:33	WG898711
Chloroethane	ND		0.00628	1	08/14/2016 20:33	WG898711
2-Chloroethyl vinyl ether	ND		0.0628	1	08/14/2016 20:33	WG898711
Chloroform	ND		0.00628	1	08/14/2016 20:33	WG898711
Chloromethane	ND		0.00314	1	08/14/2016 20:33	WG898711
2-Chlorotoluene	ND		0.00126	1	08/14/2016 20:33	WG898711
4-Chlorotoluene	ND		0.00126	1	08/14/2016 20:33	WG898711
1,2-Dibromo-3-Chloropropane	ND		0.00628	1	08/14/2016 20:33	WG898711
1,2-Dibromoethane	ND		0.00126	1	08/14/2016 20:33	WG898711
Dibromomethane	ND		0.00126	1	08/14/2016 20:33	WG898711
1,2-Dichlorobenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
1,3-Dichlorobenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
1,4-Dichlorobenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
Dichlorodifluoromethane	ND		0.00628	1	08/14/2016 20:33	WG898711
1,1-Dichloroethane	ND		0.00126	1	08/14/2016 20:33	WG898711
1,2-Dichloroethane	ND		0.00126	1	08/14/2016 20:33	WG898711
1,1-Dichloroethene	ND		0.00126	1	08/14/2016 20:33	WG898711
cis-1,2-Dichloroethene	ND		0.00126	1	08/14/2016 20:33	WG898711
trans-1,2-Dichloroethene	ND		0.00126	1	08/14/2016 20:33	WG898711
1,2-Dichloropropane	ND		0.00126	1	08/14/2016 20:33	WG898711
1,1-Dichloropropene	ND		0.00126	1	08/14/2016 20:33	WG898711

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

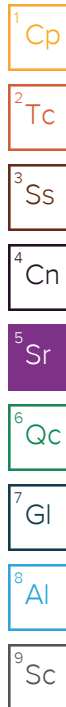


Collected date/time: 08/08/16 10:50

L852412

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00126	1	08/14/2016 20:33	WG898711
cis-1,3-Dichloropropene	ND		0.00126	1	08/14/2016 20:33	WG898711
trans-1,3-Dichloropropene	ND		0.00126	1	08/14/2016 20:33	WG898711
2,2-Dichloropropane	ND		0.00126	1	08/14/2016 20:33	WG898711
Di-isopropyl ether	ND		0.00126	1	08/14/2016 20:33	WG898711
Ethylbenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
Hexachloro-1,3-butadiene	ND		0.00126	1	08/14/2016 20:33	WG898711
Isopropylbenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
p-Isopropyltoluene	ND		0.00126	1	08/14/2016 20:33	WG898711
2-Butanone (MEK)	ND		0.0126	1	08/14/2016 20:33	WG898711
Methylene Chloride	ND		0.00628	1	08/14/2016 20:33	WG898711
4-Methyl-2-pentanone (MIBK)	ND		0.0126	1	08/14/2016 20:33	WG898711
Methyl tert-butyl ether	ND		0.00126	1	08/14/2016 20:33	WG898711
Naphthalene	ND		0.00628	1	08/14/2016 20:33	WG898711
n-Propylbenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
Styrene	ND		0.00126	1	08/14/2016 20:33	WG898711
1,1,1,2-Tetrachloroethane	ND		0.00126	1	08/14/2016 20:33	WG898711
1,1,2,2-Tetrachloroethane	ND		0.00126	1	08/14/2016 20:33	WG898711
1,1,2-Trichlorotrifluoroethane	ND		0.00126	1	08/14/2016 20:33	WG898711
Tetrachloroethene	ND		0.00126	1	08/14/2016 20:33	WG898711
Toluene	ND		0.00628	1	08/14/2016 20:33	WG898711
1,2,3-Trichlorobenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
1,2,4-Trichlorobenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
1,1,1-Trichloroethane	ND		0.00126	1	08/14/2016 20:33	WG898711
1,1,2-Trichloroethane	ND		0.00126	1	08/14/2016 20:33	WG898711
Trichloroethene	ND		0.00126	1	08/14/2016 20:33	WG898711
Trichlorofluoromethane	ND		0.00628	1	08/14/2016 20:33	WG898711
1,2,3-Trichloropropane	ND		0.00314	1	08/14/2016 20:33	WG898711
1,2,4-Trimethylbenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
1,2,3-Trimethylbenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
Vinyl chloride	ND		0.00126	1	08/14/2016 20:33	WG898711
1,3,5-Trimethylbenzene	ND		0.00126	1	08/14/2016 20:33	WG898711
Xylenes, Total	ND		0.00377	1	08/14/2016 20:33	WG898711
(S) Toluene-d8	109		88.7-115		08/14/2016 20:33	WG898711
(S) Dibromofluoromethane	110		76.3-123		08/14/2016 20:33	WG898711
(S) 4-Bromofluorobenzene	93.2		69.7-129		08/14/2016 20:33	WG898711



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.03	1	08/16/2016 20:44	WG897835
Residual Range Organics (RRO)	ND		12.6	1	08/16/2016 20:44	WG897835
(S) o-Terphenyl	82.0		50.0-150		08/16/2016 20:44	WG897835

Sample Narrative:

NWTPHDX L852412-06 WG897835: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00754	1	08/16/2016 10:43	WG898566
Acenaphthene	ND		0.00754	1	08/16/2016 10:43	WG898566
Acenaphthylene	ND		0.00754	1	08/16/2016 10:43	WG898566
Benzo(a)anthracene	ND		0.00754	1	08/16/2016 10:43	WG898566
Benzo(a)pyrene	ND		0.00754	1	08/16/2016 10:43	WG898566



Collected date/time: 08/08/16 10:50

L852412

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00754	1	08/16/2016 10:43	WG898566
Benzo(g,h,i)perylene	ND		0.00754	1	08/16/2016 10:43	WG898566
Benzo(k)fluoranthene	ND		0.00754	1	08/16/2016 10:43	WG898566
Chrysene	ND		0.00754	1	08/16/2016 10:43	WG898566
Dibenz(a,h)anthracene	ND		0.00754	1	08/16/2016 10:43	WG898566
Fluoranthene	ND		0.00754	1	08/16/2016 10:43	WG898566
Fluorene	ND		0.00754	1	08/16/2016 10:43	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00754	1	08/16/2016 10:43	WG898566
Naphthalene	ND		0.0251	1	08/16/2016 10:43	WG898566
Phenanthrene	ND		0.00754	1	08/16/2016 10:43	WG898566
Pyrene	ND		0.00754	1	08/16/2016 10:43	WG898566
1-Methylnaphthalene	ND		0.0251	1	08/16/2016 10:43	WG898566
2-Methylnaphthalene	ND		0.0251	1	08/16/2016 10:43	WG898566
(S) Nitrobenzene-d5	92.5		22.1-146		08/16/2016 10:43	WG898566
(S) 2-Fluorobiphenyl	71.3		40.6-122		08/16/2016 10:43	WG898566
(S) p-Terphenyl-d14	62.7		32.2-131		08/16/2016 10:43	WG898566

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	92.4		1	08/11/2016 11:14	WG897846

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0216	1	08/12/2016 10:13	WG897578

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.37		2.16	1	08/12/2016 12:00	WG897988
Barium	75.9		0.541	1	08/12/2016 12:00	WG897988
Cadmium	ND		0.541	1	08/12/2016 12:00	WG897988
Chromium	13.2		1.08	1	08/12/2016 12:00	WG897988
Lead	3.96		0.541	1	08/12/2016 12:00	WG897988
Selenium	ND		2.16	1	08/12/2016 12:00	WG897988
Silver	ND		1.08	1	08/12/2016 12:00	WG897988

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		0.0541	1	08/14/2016 20:53	WG898711
Acrylonitrile	ND		0.0108	1	08/14/2016 20:53	WG898711
Benzene	ND		0.00108	1	08/14/2016 20:53	WG898711
Bromobenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
Bromodichloromethane	ND		0.00108	1	08/14/2016 20:53	WG898711
Bromoform	ND		0.00108	1	08/14/2016 20:53	WG898711
Bromomethane	ND		0.00541	1	08/14/2016 20:53	WG898711
n-Butylbenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
sec-Butylbenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
tert-Butylbenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
Carbon tetrachloride	ND		0.00108	1	08/14/2016 20:53	WG898711
Chlorobenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
Chlorodibromomethane	ND		0.00108	1	08/14/2016 20:53	WG898711
Chloroethane	ND		0.00541	1	08/14/2016 20:53	WG898711
2-Chloroethyl vinyl ether	ND		0.0541	1	08/14/2016 20:53	WG898711
Chloroform	ND		0.00541	1	08/14/2016 20:53	WG898711
Chloromethane	ND		0.00271	1	08/14/2016 20:53	WG898711
2-Chlorotoluene	ND		0.00108	1	08/14/2016 20:53	WG898711
4-Chlorotoluene	ND		0.00108	1	08/14/2016 20:53	WG898711
1,2-Dibromo-3-Chloropropane	ND		0.00541	1	08/14/2016 20:53	WG898711
1,2-Dibromoethane	ND		0.00108	1	08/14/2016 20:53	WG898711
Dibromomethane	ND		0.00108	1	08/14/2016 20:53	WG898711
1,2-Dichlorobenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
1,3-Dichlorobenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
1,4-Dichlorobenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
Dichlorodifluoromethane	ND		0.00541	1	08/14/2016 20:53	WG898711
1,1-Dichloroethane	ND		0.00108	1	08/14/2016 20:53	WG898711
1,2-Dichloroethane	ND		0.00108	1	08/14/2016 20:53	WG898711
1,1-Dichloroethene	ND		0.00108	1	08/14/2016 20:53	WG898711
cis-1,2-Dichloroethene	ND		0.00108	1	08/14/2016 20:53	WG898711
trans-1,2-Dichloroethene	ND		0.00108	1	08/14/2016 20:53	WG898711
1,2-Dichloropropane	ND		0.00108	1	08/14/2016 20:53	WG898711
1,1-Dichloropropene	ND		0.00108	1	08/14/2016 20:53	WG898711

- 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
1,3-Dichloropropane	ND		0.00108	1	08/14/2016 20:53	WG898711
cis-1,3-Dichloropropene	ND		0.00108	1	08/14/2016 20:53	WG898711
trans-1,3-Dichloropropene	ND		0.00108	1	08/14/2016 20:53	WG898711
2,2-Dichloropropane	ND		0.00108	1	08/14/2016 20:53	WG898711
Di-isopropyl ether	ND		0.00108	1	08/14/2016 20:53	WG898711
Ethylbenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
Hexachloro-1,3-butadiene	ND		0.00108	1	08/14/2016 20:53	WG898711
Isopropylbenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
p-Isopropyltoluene	ND		0.00108	1	08/14/2016 20:53	WG898711
2-Butanone (MEK)	ND		0.0108	1	08/14/2016 20:53	WG898711
Methylene Chloride	ND		0.00541	1	08/14/2016 20:53	WG898711
4-Methyl-2-pentanone (MIBK)	ND		0.0108	1	08/14/2016 20:53	WG898711
Methyl tert-butyl ether	ND		0.00108	1	08/14/2016 20:53	WG898711
Naphthalene	ND		0.00541	1	08/14/2016 20:53	WG898711
n-Propylbenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
Styrene	ND		0.00108	1	08/14/2016 20:53	WG898711
1,1,1,2-Tetrachloroethane	ND		0.00108	1	08/14/2016 20:53	WG898711
1,1,2,2-Tetrachloroethane	ND		0.00108	1	08/14/2016 20:53	WG898711
1,1,2-Trichlorotrifluoroethane	ND		0.00108	1	08/14/2016 20:53	WG898711
Tetrachloroethene	ND		0.00108	1	08/14/2016 20:53	WG898711
Toluene	ND		0.00541	1	08/14/2016 20:53	WG898711
1,2,3-Trichlorobenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
1,2,4-Trichlorobenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
1,1,1-Trichloroethane	ND		0.00108	1	08/14/2016 20:53	WG898711
1,1,2-Trichloroethane	ND		0.00108	1	08/14/2016 20:53	WG898711
Trichloroethene	ND		0.00108	1	08/14/2016 20:53	WG898711
Trichlorofluoromethane	ND		0.00541	1	08/14/2016 20:53	WG898711
1,2,3-Trichloropropane	ND		0.00271	1	08/14/2016 20:53	WG898711
1,2,4-Trimethylbenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
1,2,3-Trimethylbenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
Vinyl chloride	ND		0.00108	1	08/14/2016 20:53	WG898711
1,3,5-Trimethylbenzene	ND		0.00108	1	08/14/2016 20:53	WG898711
Xylenes, Total	ND		0.00325	1	08/14/2016 20:53	WG898711
(S) Toluene-d8	109		88.7-115		08/14/2016 20:53	WG898711
(S) Dibromofluoromethane	111		76.3-123		08/14/2016 20:53	WG898711
(S) 4-Bromofluorobenzene	94.4		69.7-129		08/14/2016 20:53	WG898711

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.33	1	08/16/2016 20:56	WG897835
Residual Range Organics (RRO)	ND		10.8	1	08/16/2016 20:56	WG897835
(S) o-Terphenyl	92.2		50.0-150		08/16/2016 20:56	WG897835

Sample Narrative:

NWTPHDX L852412-07 WG897835: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00649	1	08/16/2016 11:04	WG898566
Acenaphthene	ND		0.00649	1	08/16/2016 11:04	WG898566
Acenaphthylene	ND		0.00649	1	08/16/2016 11:04	WG898566
Benzo(a)anthracene	ND		0.00649	1	08/16/2016 11:04	WG898566
Benzo(a)pyrene	ND		0.00649	1	08/16/2016 11:04	WG898566



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00649	1	08/16/2016 11:04	WG898566
Benzo(g,h,i)perylene	ND		0.00649	1	08/16/2016 11:04	WG898566
Benzo(k)fluoranthene	ND		0.00649	1	08/16/2016 11:04	WG898566
Chrysene	ND		0.00649	1	08/16/2016 11:04	WG898566
Dibenz(a,h)anthracene	ND		0.00649	1	08/16/2016 11:04	WG898566
Fluoranthene	ND		0.00649	1	08/16/2016 11:04	WG898566
Fluorene	ND		0.00649	1	08/16/2016 11:04	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00649	1	08/16/2016 11:04	WG898566
Naphthalene	ND		0.0216	1	08/16/2016 11:04	WG898566
Phenanthrene	ND		0.00649	1	08/16/2016 11:04	WG898566
Pyrene	ND		0.00649	1	08/16/2016 11:04	WG898566
1-Methylnaphthalene	ND		0.0216	1	08/16/2016 11:04	WG898566
2-Methylnaphthalene	ND		0.0216	1	08/16/2016 11:04	WG898566
(S) Nitrobenzene-d5	94.6		22.1-146		08/16/2016 11:04	WG898566
(S) 2-Fluorobiphenyl	80.9		40.6-122		08/16/2016 11:04	WG898566
(S) p-Terphenyl-d14	74.0		32.2-131		08/16/2016 11:04	WG898566

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	76.6		1	08/11/2016 11:14	WG897846

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0261	1	08/12/2016 10:15	WG897578

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.61	1	08/12/2016 12:03	WG897988
Barium	113		0.653	1	08/12/2016 12:03	WG897988
Cadmium	ND		0.653	1	08/12/2016 12:03	WG897988
Chromium	16.5		1.31	1	08/12/2016 12:03	WG897988
Lead	5.03		0.653	1	08/12/2016 12:03	WG897988
Selenium	ND		2.61	1	08/12/2016 12:03	WG897988
Silver	ND		1.31	1	08/12/2016 12:03	WG897988

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		0.0653	1	08/14/2016 21:13	WG898711
Acrylonitrile	ND		0.0131	1	08/14/2016 21:13	WG898711
Benzene	0.00180		0.00131	1	08/14/2016 21:13	WG898711
Bromobenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
Bromodichloromethane	ND		0.00131	1	08/14/2016 21:13	WG898711
Bromoform	ND		0.00131	1	08/14/2016 21:13	WG898711
Bromomethane	ND		0.00653	1	08/14/2016 21:13	WG898711
n-Butylbenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
sec-Butylbenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
tert-Butylbenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
Carbon tetrachloride	ND		0.00131	1	08/14/2016 21:13	WG898711
Chlorobenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
Chlorodibromomethane	ND		0.00131	1	08/14/2016 21:13	WG898711
Chloroethane	ND		0.00653	1	08/14/2016 21:13	WG898711
2-Chloroethyl vinyl ether	ND		0.0653	1	08/14/2016 21:13	WG898711
Chloroform	ND		0.00653	1	08/14/2016 21:13	WG898711
Chloromethane	ND		0.00326	1	08/14/2016 21:13	WG898711
2-Chlorotoluene	ND		0.00131	1	08/14/2016 21:13	WG898711
4-Chlorotoluene	ND		0.00131	1	08/14/2016 21:13	WG898711
1,2-Dibromo-3-Chloropropane	ND		0.00653	1	08/14/2016 21:13	WG898711
1,2-Dibromoethane	ND		0.00131	1	08/14/2016 21:13	WG898711
Dibromomethane	ND		0.00131	1	08/14/2016 21:13	WG898711
1,2-Dichlorobenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
1,3-Dichlorobenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
1,4-Dichlorobenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
Dichlorodifluoromethane	ND		0.00653	1	08/14/2016 21:13	WG898711
1,1-Dichloroethane	ND		0.00131	1	08/14/2016 21:13	WG898711
1,2-Dichloroethane	ND		0.00131	1	08/14/2016 21:13	WG898711
1,1-Dichloroethene	ND		0.00131	1	08/14/2016 21:13	WG898711
cis-1,2-Dichloroethene	ND		0.00131	1	08/14/2016 21:13	WG898711
trans-1,2-Dichloroethene	ND		0.00131	1	08/14/2016 21:13	WG898711
1,2-Dichloropropane	ND		0.00131	1	08/14/2016 21:13	WG898711
1,1-Dichloropropene	ND		0.00131	1	08/14/2016 21:13	WG898711

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/08/16 08:25

L852412

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00131	1	08/14/2016 21:13	WG898711
cis-1,3-Dichloropropene	ND		0.00131	1	08/14/2016 21:13	WG898711
trans-1,3-Dichloropropene	ND		0.00131	1	08/14/2016 21:13	WG898711
2,2-Dichloropropane	ND		0.00131	1	08/14/2016 21:13	WG898711
Di-isopropyl ether	ND		0.00131	1	08/14/2016 21:13	WG898711
Ethylbenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
Hexachloro-1,3-butadiene	ND		0.00131	1	08/14/2016 21:13	WG898711
Isopropylbenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
p-Isopropyltoluene	ND		0.00131	1	08/14/2016 21:13	WG898711
2-Butanone (MEK)	ND		0.0131	1	08/14/2016 21:13	WG898711
Methylene Chloride	ND		0.00653	1	08/14/2016 21:13	WG898711
4-Methyl-2-pentanone (MIBK)	ND		0.0131	1	08/14/2016 21:13	WG898711
Methyl tert-butyl ether	ND		0.00131	1	08/14/2016 21:13	WG898711
Naphthalene	ND		0.00653	1	08/14/2016 21:13	WG898711
n-Propylbenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
Styrene	ND		0.00131	1	08/14/2016 21:13	WG898711
1,1,1,2-Tetrachloroethane	ND		0.00131	1	08/14/2016 21:13	WG898711
1,1,2,2-Tetrachloroethane	ND		0.00131	1	08/14/2016 21:13	WG898711
1,1,2-Trichlorotrifluoroethane	ND		0.00131	1	08/14/2016 21:13	WG898711
Tetrachloroethene	ND		0.00131	1	08/14/2016 21:13	WG898711
Toluene	ND		0.00653	1	08/14/2016 21:13	WG898711
1,2,3-Trichlorobenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
1,2,4-Trichlorobenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
1,1,1-Trichloroethane	ND		0.00131	1	08/14/2016 21:13	WG898711
1,1,2-Trichloroethane	ND		0.00131	1	08/14/2016 21:13	WG898711
Trichloroethene	ND		0.00131	1	08/14/2016 21:13	WG898711
Trichlorofluoromethane	ND		0.00653	1	08/14/2016 21:13	WG898711
1,2,3-Trichloropropane	ND		0.00326	1	08/14/2016 21:13	WG898711
1,2,4-Trimethylbenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
1,2,3-Trimethylbenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
Vinyl chloride	ND		0.00131	1	08/14/2016 21:13	WG898711
1,3,5-Trimethylbenzene	ND		0.00131	1	08/14/2016 21:13	WG898711
Xylenes, Total	ND		0.00392	1	08/14/2016 21:13	WG898711
(S) Toluene-d8	108		88.7-115		08/14/2016 21:13	WG898711
(S) Dibromofluoromethane	111		76.3-123		08/14/2016 21:13	WG898711
(S) 4-Bromofluorobenzene	92.3		69.7-129		08/14/2016 21:13	WG898711

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.22	1	08/16/2016 21:09	WG897835
Residual Range Organics (RRO)	ND		13.1	1	08/16/2016 21:09	WG897835
(S) o-Terphenyl	57.0		50.0-150		08/16/2016 21:09	WG897835

Sample Narrative:

NWTPHDX L852412-08 WG897835: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00784	1	08/16/2016 11:25	WG898566
Acenaphthene	ND		0.00784	1	08/16/2016 11:25	WG898566
Acenaphthylene	ND		0.00784	1	08/16/2016 11:25	WG898566
Benzo(a)anthracene	ND		0.00784	1	08/16/2016 11:25	WG898566
Benzo(a)pyrene	ND		0.00784	1	08/16/2016 11:25	WG898566



Collected date/time: 08/08/16 08:25

L852412

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00784	1	08/16/2016 11:25	WG898566
Benzo(g,h,i)perylene	ND		0.00784	1	08/16/2016 11:25	WG898566
Benzo(k)fluoranthene	ND		0.00784	1	08/16/2016 11:25	WG898566
Chrysene	ND		0.00784	1	08/16/2016 11:25	WG898566
Dibenz(a,h)anthracene	ND		0.00784	1	08/16/2016 11:25	WG898566
Fluoranthene	ND		0.00784	1	08/16/2016 11:25	WG898566
Fluorene	ND		0.00784	1	08/16/2016 11:25	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00784	1	08/16/2016 11:25	WG898566
Naphthalene	ND		0.0261	1	08/16/2016 11:25	WG898566
Phenanthrene	ND		0.00784	1	08/16/2016 11:25	WG898566
Pyrene	ND		0.00784	1	08/16/2016 11:25	WG898566
1-Methylnaphthalene	ND		0.0261	1	08/16/2016 11:25	WG898566
2-Methylnaphthalene	ND		0.0261	1	08/16/2016 11:25	WG898566
(S) Nitrobenzene-d5	84.6		22.1-146		08/16/2016 11:25	WG898566
(S) 2-Fluorobiphenyl	76.0		40.6-122		08/16/2016 11:25	WG898566
(S) p-Terphenyl-d14	59.1		32.2-131		08/16/2016 11:25	WG898566

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	77.6		1	08/11/2016 11:14	WG897846

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0258	1	08/12/2016 10:18	WG897578

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.58	1	08/12/2016 12:05	WG897988
Barium	92.5		0.644	1	08/12/2016 12:05	WG897988
Cadmium	ND		0.644	1	08/12/2016 12:05	WG897988
Chromium	15.1		1.29	1	08/12/2016 12:05	WG897988
Lead	5.71		0.644	1	08/12/2016 12:05	WG897988
Selenium	ND		2.58	1	08/12/2016 12:05	WG897988
Silver	ND		1.29	1	08/12/2016 12:05	WG897988

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		0.0644	1	08/14/2016 21:34	WG898711
Acrylonitrile	ND		0.0129	1	08/14/2016 21:34	WG898711
Benzene	0.00135		0.00129	1	08/14/2016 21:34	WG898711
Bromobenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
Bromodichloromethane	ND		0.00129	1	08/14/2016 21:34	WG898711
Bromoform	ND		0.00129	1	08/14/2016 21:34	WG898711
Bromomethane	ND		0.00644	1	08/14/2016 21:34	WG898711
n-Butylbenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
sec-Butylbenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
tert-Butylbenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
Carbon tetrachloride	ND		0.00129	1	08/14/2016 21:34	WG898711
Chlorobenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
Chlorodibromomethane	ND		0.00129	1	08/14/2016 21:34	WG898711
Chloroethane	ND		0.00644	1	08/14/2016 21:34	WG898711
2-Chloroethyl vinyl ether	ND		0.0644	1	08/14/2016 21:34	WG898711
Chloroform	ND		0.00644	1	08/14/2016 21:34	WG898711
Chloromethane	ND		0.00322	1	08/14/2016 21:34	WG898711
2-Chlorotoluene	ND		0.00129	1	08/14/2016 21:34	WG898711
4-Chlorotoluene	ND		0.00129	1	08/14/2016 21:34	WG898711
1,2-Dibromo-3-Chloropropane	ND		0.00644	1	08/14/2016 21:34	WG898711
1,2-Dibromoethane	ND		0.00129	1	08/14/2016 21:34	WG898711
Dibromomethane	ND		0.00129	1	08/14/2016 21:34	WG898711
1,2-Dichlorobenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
1,3-Dichlorobenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
1,4-Dichlorobenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
Dichlorodifluoromethane	ND		0.00644	1	08/14/2016 21:34	WG898711
1,1-Dichloroethane	ND		0.00129	1	08/14/2016 21:34	WG898711
1,2-Dichloroethane	ND		0.00129	1	08/14/2016 21:34	WG898711
1,1-Dichloroethene	ND		0.00129	1	08/14/2016 21:34	WG898711
cis-1,2-Dichloroethene	ND		0.00129	1	08/14/2016 21:34	WG898711
trans-1,2-Dichloroethene	ND		0.00129	1	08/14/2016 21:34	WG898711
1,2-Dichloropropane	ND		0.00129	1	08/14/2016 21:34	WG898711
1,1-Dichloropropene	ND		0.00129	1	08/14/2016 21:34	WG898711

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
1,3-Dichloropropane	ND		0.00129	1	08/14/2016 21:34	WG898711
cis-1,3-Dichloropropene	ND		0.00129	1	08/14/2016 21:34	WG898711
trans-1,3-Dichloropropene	ND		0.00129	1	08/14/2016 21:34	WG898711
2,2-Dichloropropane	ND		0.00129	1	08/14/2016 21:34	WG898711
Di-isopropyl ether	ND		0.00129	1	08/14/2016 21:34	WG898711
Ethylbenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
Hexachloro-1,3-butadiene	ND		0.00129	1	08/14/2016 21:34	WG898711
Isopropylbenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
p-Isopropyltoluene	ND		0.00129	1	08/14/2016 21:34	WG898711
2-Butanone (MEK)	ND		0.0129	1	08/14/2016 21:34	WG898711
Methylene Chloride	ND		0.00644	1	08/14/2016 21:34	WG898711
4-Methyl-2-pentanone (MIBK)	ND		0.0129	1	08/14/2016 21:34	WG898711
Methyl tert-butyl ether	ND		0.00129	1	08/14/2016 21:34	WG898711
Naphthalene	ND		0.00644	1	08/14/2016 21:34	WG898711
n-Propylbenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
Styrene	ND		0.00129	1	08/14/2016 21:34	WG898711
1,1,1,2-Tetrachloroethane	ND		0.00129	1	08/14/2016 21:34	WG898711
1,1,2,2-Tetrachloroethane	ND		0.00129	1	08/14/2016 21:34	WG898711
1,1,2-Trichlorotrifluoroethane	ND		0.00129	1	08/14/2016 21:34	WG898711
Tetrachloroethene	ND		0.00129	1	08/14/2016 21:34	WG898711
Toluene	ND		0.00644	1	08/14/2016 21:34	WG898711
1,2,3-Trichlorobenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
1,2,4-Trichlorobenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
1,1,1-Trichloroethane	ND		0.00129	1	08/14/2016 21:34	WG898711
1,1,2-Trichloroethane	ND		0.00129	1	08/14/2016 21:34	WG898711
Trichloroethene	ND		0.00129	1	08/14/2016 21:34	WG898711
Trichlorofluoromethane	ND		0.00644	1	08/14/2016 21:34	WG898711
1,2,3-Trichloropropane	ND		0.00322	1	08/14/2016 21:34	WG898711
1,2,4-Trimethylbenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
1,2,3-Trimethylbenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
Vinyl chloride	ND		0.00129	1	08/14/2016 21:34	WG898711
1,3,5-Trimethylbenzene	ND		0.00129	1	08/14/2016 21:34	WG898711
Xylenes, Total	ND		0.00387	1	08/14/2016 21:34	WG898711
(S) Toluene-d8	110		88.7-115		08/14/2016 21:34	WG898711
(S) Dibromofluoromethane	111		76.3-123		08/14/2016 21:34	WG898711
(S) 4-Bromofluorobenzene	92.8		69.7-129		08/14/2016 21:34	WG898711

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.16	1	08/16/2016 21:21	WG897835
Residual Range Organics (RRO)	ND		12.9	1	08/16/2016 21:21	WG897835
(S) o-Terphenyl	68.5		50.0-150		08/16/2016 21:21	WG897835

Sample Narrative:

NWTPHDX L852412-09 WG897835: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00773	1	08/16/2016 11:46	WG898566
Acenaphthene	ND		0.00773	1	08/16/2016 11:46	WG898566
Acenaphthylene	ND		0.00773	1	08/16/2016 11:46	WG898566
Benzo(a)anthracene	ND		0.00773	1	08/16/2016 11:46	WG898566
Benzo(a)pyrene	ND		0.00773	1	08/16/2016 11:46	WG898566



Collected date/time: 08/09/16 08:20

L852412

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00773	1	08/16/2016 11:46	WG898566
Benzo(g,h,i)perylene	ND		0.00773	1	08/16/2016 11:46	WG898566
Benzo(k)fluoranthene	ND		0.00773	1	08/16/2016 11:46	WG898566
Chrysene	ND		0.00773	1	08/16/2016 11:46	WG898566
Dibenz(a,h)anthracene	ND		0.00773	1	08/16/2016 11:46	WG898566
Fluoranthene	ND		0.00773	1	08/16/2016 11:46	WG898566
Fluorene	ND		0.00773	1	08/16/2016 11:46	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00773	1	08/16/2016 11:46	WG898566
Naphthalene	ND		0.0258	1	08/16/2016 11:46	WG898566
Phenanthrene	ND		0.00773	1	08/16/2016 11:46	WG898566
Pyrene	ND		0.00773	1	08/16/2016 11:46	WG898566
1-Methylnaphthalene	ND		0.0258	1	08/16/2016 11:46	WG898566
2-Methylnaphthalene	ND		0.0258	1	08/16/2016 11:46	WG898566
(S) Nitrobenzene-d5	86.9		22.1-146		08/16/2016 11:46	WG898566
(S) 2-Fluorobiphenyl	75.8		40.6-122		08/16/2016 11:46	WG898566
(S) p-Terphenyl-d14	67.1		32.2-131		08/16/2016 11:46	WG898566

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.5		1	08/11/2016 11:14	WG897846

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.68	1	08/16/2016 21:33	WG897835
Residual Range Organics (RRO)	ND		11.7	1	08/16/2016 21:33	WG897835
(S) o-Terphenyl	83.9		50.0-150		08/16/2016 21:33	WG897835

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L852412-10 WG897835: NWTPHDX - No SGT

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	76.6		1	08/11/2016 11:14	WG897846

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0261	1	08/12/2016 10:20	WG897578

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.61	1	08/12/2016 12:08	WG897988
Barium	106		0.653	1	08/12/2016 12:08	WG897988
Cadmium	ND		0.653	1	08/12/2016 12:08	WG897988
Chromium	24.0		1.31	1	08/12/2016 12:08	WG897988
Lead	6.26		0.653	1	08/12/2016 12:08	WG897988
Selenium	ND		2.61	1	08/12/2016 12:08	WG897988
Silver	ND		1.31	1	08/12/2016 12:08	WG897988

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		0.0653	1	08/14/2016 21:54	WG898711
Acrylonitrile	ND		0.0131	1	08/14/2016 21:54	WG898711
Benzene	0.00176		0.00131	1	08/14/2016 21:54	WG898711
Bromobenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
Bromodichloromethane	ND		0.00131	1	08/14/2016 21:54	WG898711
Bromoform	ND		0.00131	1	08/14/2016 21:54	WG898711
Bromomethane	ND		0.00653	1	08/14/2016 21:54	WG898711
n-Butylbenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
sec-Butylbenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
tert-Butylbenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
Carbon tetrachloride	ND		0.00131	1	08/14/2016 21:54	WG898711
Chlorobenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
Chlorodibromomethane	ND		0.00131	1	08/14/2016 21:54	WG898711
Chloroethane	ND		0.00653	1	08/14/2016 21:54	WG898711
2-Chloroethyl vinyl ether	ND		0.0653	1	08/14/2016 21:54	WG898711
Chloroform	ND		0.00653	1	08/14/2016 21:54	WG898711
Chloromethane	ND		0.00326	1	08/14/2016 21:54	WG898711
2-Chlorotoluene	ND		0.00131	1	08/14/2016 21:54	WG898711
4-Chlorotoluene	ND		0.00131	1	08/14/2016 21:54	WG898711
1,2-Dibromo-3-Chloropropane	ND		0.00653	1	08/14/2016 21:54	WG898711
1,2-Dibromoethane	ND		0.00131	1	08/14/2016 21:54	WG898711
Dibromomethane	ND		0.00131	1	08/14/2016 21:54	WG898711
1,2-Dichlorobenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
1,3-Dichlorobenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
1,4-Dichlorobenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
Dichlorodifluoromethane	ND		0.00653	1	08/14/2016 21:54	WG898711
1,1-Dichloroethane	ND		0.00131	1	08/14/2016 21:54	WG898711
1,2-Dichloroethane	ND		0.00131	1	08/14/2016 21:54	WG898711
1,1-Dichloroethene	ND		0.00131	1	08/14/2016 21:54	WG898711
cis-1,2-Dichloroethene	ND		0.00131	1	08/14/2016 21:54	WG898711
trans-1,2-Dichloroethene	ND		0.00131	1	08/14/2016 21:54	WG898711
1,2-Dichloropropane	ND		0.00131	1	08/14/2016 21:54	WG898711
1,1-Dichloropropene	ND		0.00131	1	08/14/2016 21:54	WG898711

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



Collected date/time: 08/09/16 08:30

L852412

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00131	1	08/14/2016 21:54	WG898711
cis-1,3-Dichloropropene	ND		0.00131	1	08/14/2016 21:54	WG898711
trans-1,3-Dichloropropene	ND		0.00131	1	08/14/2016 21:54	WG898711
2,2-Dichloropropane	ND		0.00131	1	08/14/2016 21:54	WG898711
Di-isopropyl ether	ND		0.00131	1	08/14/2016 21:54	WG898711
Ethylbenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
Hexachloro-1,3-butadiene	ND		0.00131	1	08/14/2016 21:54	WG898711
Isopropylbenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
p-Isopropyltoluene	ND		0.00131	1	08/14/2016 21:54	WG898711
2-Butanone (MEK)	ND		0.0131	1	08/14/2016 21:54	WG898711
Methylene Chloride	ND		0.00653	1	08/14/2016 21:54	WG898711
4-Methyl-2-pentanone (MIBK)	ND		0.0131	1	08/14/2016 21:54	WG898711
Methyl tert-butyl ether	ND		0.00131	1	08/14/2016 21:54	WG898711
Naphthalene	ND		0.00653	1	08/14/2016 21:54	WG898711
n-Propylbenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
Styrene	ND		0.00131	1	08/14/2016 21:54	WG898711
1,1,1,2-Tetrachloroethane	ND		0.00131	1	08/14/2016 21:54	WG898711
1,1,2,2-Tetrachloroethane	ND		0.00131	1	08/14/2016 21:54	WG898711
1,1,2-Trichlorotrifluoroethane	ND		0.00131	1	08/14/2016 21:54	WG898711
Tetrachloroethene	ND		0.00131	1	08/14/2016 21:54	WG898711
Toluene	ND		0.00653	1	08/14/2016 21:54	WG898711
1,2,3-Trichlorobenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
1,2,4-Trichlorobenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
1,1,1-Trichloroethane	ND		0.00131	1	08/14/2016 21:54	WG898711
1,1,2-Trichloroethane	ND		0.00131	1	08/14/2016 21:54	WG898711
Trichloroethene	ND		0.00131	1	08/14/2016 21:54	WG898711
Trichlorofluoromethane	ND		0.00653	1	08/14/2016 21:54	WG898711
1,2,3-Trichloropropane	ND		0.00326	1	08/14/2016 21:54	WG898711
1,2,4-Trimethylbenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
1,2,3-Trimethylbenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
Vinyl chloride	ND		0.00131	1	08/14/2016 21:54	WG898711
1,3,5-Trimethylbenzene	ND		0.00131	1	08/14/2016 21:54	WG898711
Xylenes, Total	ND		0.00392	1	08/14/2016 21:54	WG898711
(S) Toluene-d8	108		88.7-115		08/14/2016 21:54	WG898711
(S) Dibromofluoromethane	111		76.3-123		08/14/2016 21:54	WG898711
(S) 4-Bromofluorobenzene	92.5		69.7-129		08/14/2016 21:54	WG898711

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.22	1	08/16/2016 21:45	WG897835
Residual Range Organics (RRO)	ND		13.1	1	08/16/2016 21:45	WG897835
(S) o-Terphenyl	62.7		50.0-150		08/16/2016 21:45	WG897835

Sample Narrative:

NWTPHDX L852412-11 WG897835: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00783	1	08/16/2016 12:07	WG898566
Acenaphthene	ND		0.00783	1	08/16/2016 12:07	WG898566
Acenaphthylene	ND		0.00783	1	08/16/2016 12:07	WG898566
Benzo(a)anthracene	ND		0.00783	1	08/16/2016 12:07	WG898566
Benzo(a)pyrene	ND		0.00783	1	08/16/2016 12:07	WG898566



Collected date/time: 08/09/16 08:30

L852412

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00783	1	08/16/2016 12:07	WG898566
Benzo(g,h,i)perylene	ND		0.00783	1	08/16/2016 12:07	WG898566
Benzo(k)fluoranthene	ND		0.00783	1	08/16/2016 12:07	WG898566
Chrysene	ND		0.00783	1	08/16/2016 12:07	WG898566
Dibenz(a,h)anthracene	ND		0.00783	1	08/16/2016 12:07	WG898566
Fluoranthene	ND		0.00783	1	08/16/2016 12:07	WG898566
Fluorene	ND		0.00783	1	08/16/2016 12:07	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00783	1	08/16/2016 12:07	WG898566
Naphthalene	ND		0.0261	1	08/16/2016 12:07	WG898566
Phenanthrene	ND		0.00783	1	08/16/2016 12:07	WG898566
Pyrene	ND		0.00783	1	08/16/2016 12:07	WG898566
1-Methylnaphthalene	ND		0.0261	1	08/16/2016 12:07	WG898566
2-Methylnaphthalene	ND		0.0261	1	08/16/2016 12:07	WG898566
(S) Nitrobenzene-d5	90.4		22.1-146		08/16/2016 12:07	WG898566
(S) 2-Fluorobiphenyl	73.6		40.6-122		08/16/2016 12:07	WG898566
(S) p-Terphenyl-d14	67.5		32.2-131		08/16/2016 12:07	WG898566

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.0		1	08/11/2016 11:01	WG897847

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		0.125	1	08/16/2016 18:19	WG899201
(S) a,a,a-Trifluorotoluene(FID)	95.8		59.0-128		08/16/2016 18:19	WG899201

3 Ss

4 Cn

5 Sr

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00125	1	08/17/2016 00:49	WG898715
Toluene	ND		0.00625	1	08/17/2016 00:49	WG898715
Ethylbenzene	ND		0.00125	1	08/17/2016 00:49	WG898715
Total Xylenes	ND		0.00375	1	08/17/2016 00:49	WG898715
(S) Toluene-d8	108		88.7-115		08/17/2016 00:49	WG898715
(S) Dibromofluoromethane	112		76.3-123		08/17/2016 00:49	WG898715
(S) a,a,a-Trifluorotoluene	98.4		87.2-117		08/17/2016 00:49	WG898715
(S) 4-Bromofluorobenzene	95.0		69.7-129		08/17/2016 00:49	WG898715

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.00	1	08/17/2016 11:25	WG899518
Residual Range Organics (RRO)	ND		12.5	1	08/17/2016 11:25	WG899518
(S) o-Terphenyl	65.7		50.0-150		08/17/2016 11:25	WG899518

Sample Narrative:

NWTPHDX L852412-12 WG899518: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00750	1	08/16/2016 12:28	WG898566
Acenaphthene	ND		0.00750	1	08/16/2016 12:28	WG898566
Acenaphthylene	ND		0.00750	1	08/16/2016 12:28	WG898566
Benzo(a)anthracene	ND		0.00750	1	08/16/2016 12:28	WG898566
Benzo(a)pyrene	ND		0.00750	1	08/16/2016 12:28	WG898566
Benzo(b)fluoranthene	ND		0.00750	1	08/16/2016 12:28	WG898566
Benzo(g,h,i)perylene	ND		0.00750	1	08/16/2016 12:28	WG898566
Benzo(k)fluoranthene	ND		0.00750	1	08/16/2016 12:28	WG898566
Chrysene	ND		0.00750	1	08/16/2016 12:28	WG898566
Dibenz(a,h)anthracene	ND		0.00750	1	08/16/2016 12:28	WG898566
Fluoranthene	ND		0.00750	1	08/16/2016 12:28	WG898566
Fluorene	ND		0.00750	1	08/16/2016 12:28	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00750	1	08/16/2016 12:28	WG898566
Naphthalene	ND		0.0250	1	08/16/2016 12:28	WG898566
Phenanthrene	ND		0.00750	1	08/16/2016 12:28	WG898566
Pyrene	ND		0.00750	1	08/16/2016 12:28	WG898566
1-Methylnaphthalene	ND		0.0250	1	08/16/2016 12:28	WG898566
2-Methylnaphthalene	ND		0.0250	1	08/16/2016 12:28	WG898566
(S) Nitrobenzene-d5	88.0		22.1-146		08/16/2016 12:28	WG898566
(S) 2-Fluorobiphenyl	77.9		40.6-122		08/16/2016 12:28	WG898566
(S) p-Terphenyl-d14	73.1		32.2-131		08/16/2016 12:28	WG898566



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.7		1	08/11/2016 11:01	WG897847

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		0.124	1	08/15/2016 05:48	WG898700
(S) a,a,a-Trifluorotoluene(FID)	102		59.0-128		08/15/2016 05:48	WG898700

3 Ss

4 Cn

5 Sr

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00124	1	08/14/2016 20:37	WG898709
Toluene	ND		0.00620	1	08/14/2016 20:37	WG898709
Ethylbenzene	ND		0.00124	1	08/14/2016 20:37	WG898709
Total Xylenes	ND		0.00372	1	08/14/2016 20:37	WG898709
(S) Toluene-d8	100		88.7-115		08/14/2016 20:37	WG898709
(S) Dibromofluoromethane	116		76.3-123		08/14/2016 20:37	WG898709
(S) a,a,a-Trifluorotoluene	103		87.2-117		08/14/2016 20:37	WG898709
(S) 4-Bromofluorobenzene	85.7		69.7-129		08/14/2016 20:37	WG898709

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.96	1	08/16/2016 22:09	WG897835
Residual Range Organics (RRO)	ND		12.4	1	08/16/2016 22:09	WG897835
(S) o-Terphenyl	59.0		50.0-150		08/16/2016 22:09	WG897835

Sample Narrative:

NWTPHDX L852412-13 WG897835: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00744	1	08/16/2016 12:50	WG898566
Acenaphthene	ND		0.00744	1	08/16/2016 12:50	WG898566
Acenaphthylene	ND		0.00744	1	08/16/2016 12:50	WG898566
Benzo(a)anthracene	ND		0.00744	1	08/16/2016 12:50	WG898566
Benzo(a)pyrene	ND		0.00744	1	08/16/2016 12:50	WG898566
Benzo(b)fluoranthene	ND		0.00744	1	08/16/2016 12:50	WG898566
Benzo(g,h,i)perylene	ND		0.00744	1	08/16/2016 12:50	WG898566
Benzo(k)fluoranthene	ND		0.00744	1	08/16/2016 12:50	WG898566
Chrysene	ND		0.00744	1	08/16/2016 12:50	WG898566
Dibenz(a,h)anthracene	ND		0.00744	1	08/16/2016 12:50	WG898566
Fluoranthene	ND		0.00744	1	08/16/2016 12:50	WG898566
Fluorene	ND		0.00744	1	08/16/2016 12:50	WG898566
Indeno(1,2,3-cd)pyrene	ND		0.00744	1	08/16/2016 12:50	WG898566
Naphthalene	ND		0.0248	1	08/16/2016 12:50	WG898566
Phenanthrene	ND		0.00744	1	08/16/2016 12:50	WG898566
Pyrene	ND		0.00744	1	08/16/2016 12:50	WG898566
1-Methylnaphthalene	ND		0.0248	1	08/16/2016 12:50	WG898566
2-Methylnaphthalene	ND		0.0248	1	08/16/2016 12:50	WG898566
(S) Nitrobenzene-d5	76.4		22.1-146		08/16/2016 12:50	WG898566
(S) 2-Fluorobiphenyl	72.7		40.6-122		08/16/2016 12:50	WG898566
(S) p-Terphenyl-d14	47.2		32.2-131		08/16/2016 12:50	WG898566



Method Blank (MB)

(MB) R3156267-1 08/11/16 13:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00140			

¹Cp

²Tc

³Ss

L852398-06 Original Sample (OS) • Duplicate (DUP)

(OS) L852398-06 08/11/16 13:46 • (DUP) R3156267-3 08/11/16 13:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	82.0	84.3	1	2.76		5

⁴Cn

⁵Sr

Laboratory Control Sample (LCS)

(LCS) R3156267-2 08/11/16 13:46

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

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3156265-1 08/11/16 11:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00140			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L852412-03 Original Sample (OS) • Duplicate (DUP)

(OS) L852412-03 08/11/16 11:14 • (DUP) R3156265-3 08/11/16 11:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	81.0	81.0	1	0.116		5

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R3156265-2 08/11/16 11:14

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	99.9	85.0-115	

⁹Sc



Method Blank (MB)

(MB) R3156264-1 08/11/16 11:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00150			

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

L852414-08 Original Sample (OS) • Duplicate (DUP)

(OS) L852414-08 08/11/16 11:01 • (DUP) R3156264-3 08/11/16 11:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	82.0	82.4	1	0.557		5

6 Qc

Laboratory Control Sample (LCS)

(LCS) R3156264-2 08/11/16 11:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	49.9	99.9	85.0-115	

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3156350-1 08/12/16 09:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0028	0.0200

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3156350-2 08/12/16 09:12 • (LCSD) R3156350-3 08/12/16 09:14

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.260	0.247	87	82	80-120			5	20

7 Gl

8 Al

L852363-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852363-01 08/12/16 09:17 • (MS) R3156350-4 08/12/16 09:20 • (MSD) R3156350-5 08/12/16 09:22

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.300	ND	0.271	0.278	88	90	1	75-125			2	20

9 Sc



Method Blank (MB)

(MB) R3156637-1 08/12/16 11:19

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	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) R3156637-2 08/12/16 11:21 • (LCSD) R3156637-3 08/12/16 11:23

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	%	%	%			%	%
Arsenic	100	98.6	97.3	99	97	80-120			1	20
Barium	100	101	99.9	101	100	80-120			1	20
Cadmium	100	98.7	97.9	99	98	80-120			1	20
Chromium	100	97.7	96.9	98	97	80-120			1	20
Lead	100	100	99.5	100	100	80-120			1	20
Selenium	100	101	100	101	100	80-120			1	20
Silver	100	95.5	95.1	95	95	80-120			0	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L852412-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852412-01 08/12/16 11:26 • (MS) R3156637-6 08/12/16 11:34 • (MSD) R3156637-7 08/12/16 11:36

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	%	%		%			%	%
Arsenic	121	ND	124	125	101	102	1	75-125			1	20
Barium	121	114	236	241	102	105	1	75-125			2	20
Cadmium	121	ND	123	124	102	103	1	75-125			1	20
Chromium	121	23.2	141	142	97	99	1	75-125			1	20
Lead	121	5.23	134	135	106	108	1	75-125			1	20
Selenium	121	ND	125	127	104	106	1	75-125			2	20
Silver	121	ND	121	121	100	101	1	75-125			1	20



Method Blank (MB)

(MB) R3156710-5 08/14/16 22:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
TPHG C6 - C12	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID) 103				59.0-128

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

(LCS) R3156710-3 08/14/16 20:28 • (LCSD) R3156710-4 08/14/16 20:49

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	%	%	%			%	%
TPHG C6 - C12	5.50	5.00	5.03	91.0	91.5	62.2-127			0.530	20
(S) a,a,a-Trifluorotoluene(FID)				103	103	59.0-128				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3157321-5 08/16/16 13:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHG C6 - C12	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	88.6			59.0-128

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) R3157321-3 08/16/16 11:59 • (LCSD) R3157321-4 08/16/16 12:21

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5.50	5.13	4.59	93.2	83.4	62.2-127			11.1	20
(S) a,a,a-Trifluorotoluene(FID)				90.2	97.2	59.0-128				

L852910-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852910-01 08/16/16 13:53 • (MS) R3157321-8 08/16/16 15:22 • (MSD) R3157321-9 08/16/16 15:44

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
TPHG C6 - C12	6.70	0.163	4.75	6.14	68.4	89.1	1	20.5-134		J3	25.5	23.8
(S) a,a,a-Trifluorotoluene(FID)					99.3	100		59.0-128				



Method Blank (MB)

(MB) R3156632-3 08/14/16 13:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000270	0.00100
Ethylbenzene	U		0.000297	0.00100
Toluene	U		0.000434	0.00500
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	99.0			88.7-115
(S) Dibromofluoromethane	101			76.3-123
(S) a,a,a-Trifluorotoluene	98.2			87.2-117
(S) 4-Bromofluorobenzene	93.8			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) R3156632-1 08/14/16 12:08 • (LCSD) R3156632-2 08/14/16 12:28

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	%	%	%			%	%
Benzene	0.0250	0.0255	0.0264	102	106	72.6-120			3.66	20
Ethylbenzene	0.0250	0.0236	0.0233	94.2	93.2	78.6-124			1.09	20
Toluene	0.0250	0.0251	0.0247	100	98.8	76.7-116			1.41	20
Xylenes, Total	0.0750	0.0694	0.0684	92.6	91.1	78.1-123			1.57	20
(S) Toluene-d8				101	100	88.7-115				
(S) Dibromofluoromethane				96.9	102	76.3-123				
(S) a,a,a-Trifluorotoluene				97.1	94.9	87.2-117				
(S) 4-Bromofluorobenzene				91.4	92.6	69.7-129				

L852457-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852457-04 08/14/16 17:23 • (MS) R3156632-4 08/14/16 17:42 • (MSD) R3156632-5 08/14/16 18:03

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	%	%		%			%	%
Benzene	0.0299	0.0788	0.787	0.790	97.7	98.0	24.25	47.8-131			0.350	22.8
Ethylbenzene	0.0299	0.865	1.44	1.32	79.4	62.4	24.25	44.8-135			8.93	26.9
Toluene	0.0299	ND	0.717	0.737	94.2	96.9	24.25	47.8-127			2.69	24.3
Xylenes, Total	0.0897	0.237	2.28	2.19	94.0	89.7	24.25	42.7-135			4.19	26.6
(S) Toluene-d8					109	108		88.7-115				
(S) Dibromofluoromethane					94.6	92.6		76.3-123				
(S) a,a,a-Trifluorotoluene					96.1	98.1		87.2-117				
(S) 4-Bromofluorobenzene					118	112		69.7-129				



Method Blank (MB)

(MB) R3156727-3 08/14/16 14:34

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 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
Hexachloro-1,3-butadiene	U		0.000342	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3156727-3 08/14/16 14:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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
<i>(S) Toluene-d8</i>	101			88.7-115
<i>(S) Dibromofluoromethane</i>	108			76.3-123
<i>(S) 4-Bromofluorobenzene</i>	105			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) R3156727-1 08/14/16 13:08 • (LCSD) R3156727-2 08/14/16 13:25

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	0.109	0.0958	87.1	76.6	25.3-178			12.8	22.9
Acrylonitrile	0.125	0.155	0.136	124	109	57.8-143			13.3	20
Benzene	0.0250	0.0271	0.0246	108	98.2	72.6-120			9.74	20
Bromobenzene	0.0250	0.0257	0.0230	103	91.9	80.3-115			11.3	20



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

(LCS) R3156727-1 08/14/16 13:08 • (LCSD) R3156727-2 08/14/16 13:25

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 %
Bromodichloromethane	0.0250	0.0257	0.0238	103	95.2	75.3-119			7.58	20
Bromoform	0.0250	0.0253	0.0242	101	96.8	69.1-135			4.53	20
Bromomethane	0.0250	0.0282	0.0233	113	93.0	23.0-191			19.2	20
n-Butylbenzene	0.0250	0.0215	0.0199	86.2	79.5	74.2-134			8.09	20
sec-Butylbenzene	0.0250	0.0269	0.0218	108	87.0	77.8-129		J3	21.3	20
tert-Butylbenzene	0.0250	0.0280	0.0227	112	90.6	77.2-129		J3	21.0	20
Carbon tetrachloride	0.0250	0.0274	0.0225	110	90.0	69.4-129			19.8	20
Chlorobenzene	0.0250	0.0256	0.0246	102	98.4	78.9-122			4.06	20
Chlorodibromomethane	0.0250	0.0258	0.0258	103	103	76.4-126			0.210	20
Chloroethane	0.0250	0.0285	0.0233	114	93.1	47.2-147		J3	20.2	20
2-Chloroethyl vinyl ether	0.125	0.130	0.148	104	119	16.7-162			13.4	23.7
Chloroform	0.0250	0.0274	0.0237	110	94.7	73.3-122			14.5	20
Chloromethane	0.0250	0.0270	0.0225	108	89.9	53.1-135			18.4	20
2-Chlorotoluene	0.0250	0.0261	0.0222	104	88.7	74.6-127			16.2	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0268	0.0252	107	101	64.9-131			6.16	20
4-Chlorotoluene	0.0250	0.0251	0.0219	100	87.7	79.5-123			13.3	20
1,2-Dibromoethane	0.0250	0.0259	0.0271	104	108	78.7-123			4.28	20
1,2-Dichlorobenzene	0.0250	0.0244	0.0234	97.7	93.7	83.6-119			4.20	20
Dibromomethane	0.0250	0.0277	0.0256	111	103	78.5-117			7.84	20
1,3-Dichlorobenzene	0.0250	0.0247	0.0213	98.6	85.3	75.9-129			14.5	20
1,4-Dichlorobenzene	0.0250	0.0222	0.0218	88.8	87.2	81.0-115			1.86	20
Dichlorodifluoromethane	0.0250	0.0300	0.0237	120	94.9	50.9-139		J3	23.4	20
1,1-Dichloroethane	0.0250	0.0286	0.0243	114	97.0	71.7-125			16.5	20
1,2-Dichloroethane	0.0250	0.0282	0.0264	113	106	67.2-121			6.40	20
1,1-Dichloroethene	0.0250	0.0279	0.0225	112	90.1	60.6-133		J3	21.4	20
cis-1,2-Dichloroethene	0.0250	0.0277	0.0240	111	96.0	76.1-121			14.2	20
trans-1,2-Dichloroethene	0.0250	0.0273	0.0231	109	92.5	70.7-124			16.4	20
1,2-Dichloropropane	0.0250	0.0266	0.0249	107	99.7	76.9-123			6.61	20
1,1-Dichloropropene	0.0250	0.0286	0.0248	114	99.1	71.2-126			14.3	20
1,3-Dichloropropane	0.0250	0.0258	0.0272	103	109	80.3-114			5.25	20
cis-1,3-Dichloropropene	0.0250	0.0258	0.0258	103	103	77.3-123			0.0100	20
trans-1,3-Dichloropropene	0.0250	0.0249	0.0264	99.4	105	73.0-127			5.84	20
2,2-Dichloropropane	0.0250	0.0247	0.0212	98.6	84.8	61.9-132			15.0	20
Di-isopropyl ether	0.0250	0.0264	0.0235	106	93.8	67.2-131			11.9	20
Ethylbenzene	0.0250	0.0257	0.0235	103	94.1	78.6-124			8.77	20
Hexachloro-1,3-butadiene	0.0250	0.0229	0.0210	91.4	84.0	69.2-136			8.45	20
Isopropylbenzene	0.0250	0.0267	0.0225	107	89.9	79.4-126			17.0	20
2-Butanone (MEK)	0.125	0.137	0.124	110	99.3	44.5-154			10.1	21.3
p-Isopropyltoluene	0.0250	0.0261	0.0215	104	86.1	75.4-132			19.3	20
Methylene Chloride	0.0250	0.0265	0.0226	106	90.3	68.2-119			16.0	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) R3156727-1 08/14/16 13:08 • (LCSD) R3156727-2 08/14/16 13:25

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 %
4-Methyl-2-pentanone (MIBK)	0.125	0.147	0.137	118	109	61.1-138			7.30	20
Methyl tert-butyl ether	0.0250	0.0284	0.0247	114	99.0	70.2-122			13.8	20
Naphthalene	0.0250	0.0250	0.0242	100	96.7	69.9-132			3.43	20
n-Propylbenzene	0.0250	0.0260	0.0222	104	88.7	80.2-124			15.7	20
Styrene	0.0250	0.0262	0.0246	105	98.5	79.4-124			6.17	20
1,1,1,2-Tetrachloroethane	0.0250	0.0268	0.0233	107	93.0	76.7-127			14.0	20
1,1,2,2-Tetrachloroethane	0.0250	0.0261	0.0231	104	92.2	78.8-124			12.4	20
Tetrachloroethene	0.0250	0.0262	0.0246	105	98.4	71.1-133			6.44	20
Toluene	0.0250	0.0251	0.0237	100	94.7	76.7-116			5.68	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0296	0.0236	119	94.2	62.6-138		J3	22.8	20
1,2,3-Trichlorobenzene	0.0250	0.0229	0.0220	91.5	88.0	72.5-137			3.91	20
1,1,1-Trichloroethane	0.0250	0.0286	0.0241	114	96.3	69.9-127			17.1	20
1,2,4-Trichlorobenzene	0.0250	0.0208	0.0202	83.3	80.7	74.0-137			3.21	20
1,1,2-Trichloroethane	0.0250	0.0254	0.0258	102	103	81.9-119			1.69	20
Trichloroethene	0.0250	0.0286	0.0249	115	99.6	77.2-122			14.0	20
Trichlorofluoromethane	0.0250	0.0287	0.0236	115	94.4	51.5-151			19.6	20
1,2,3-Trichloropropane	0.0250	0.0290	0.0262	116	105	74.0-124			10.1	20
1,2,3-Trimethylbenzene	0.0250	0.0241	0.0224	96.2	89.5	79.4-118			7.20	20
1,2,4-Trimethylbenzene	0.0250	0.0255	0.0214	102	85.7	77.1-124			17.4	20
1,3,5-Trimethylbenzene	0.0250	0.0260	0.0216	104	86.4	79.0-125			18.6	20
Vinyl chloride	0.0250	0.0290	0.0232	116	92.7	58.4-134		J3	22.4	20
Xylenes, Total	0.0750	0.0775	0.0702	103	93.7	78.1-123			9.84	20
(S) Toluene-d8				101	103	88.7-115				
(S) Dibromofluoromethane				105	98.6	76.3-123				
(S) 4-Bromofluorobenzene				99.6	96.3	69.7-129				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L852691-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852691-01 08/14/16 18:00 • (MS) R3156727-4 08/14/16 18:17 • (MSD) R3156727-5 08/14/16 18:34

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	823	821	911	0.000	80.3	870	10.0-130	V	E	10.4	31.5
Benzene	0.0250	U	20.6	21.6	94.7	99.3	870	47.8-131			4.73	22.8
Acrylonitrile	0.125	U	112	125	103	115	870	39.3-152			11.0	27.2
Bromobenzene	0.0250	U	20.7	21.5	95.4	98.7	870	40.0-130			3.45	27.4
Bromodichloromethane	0.0250	U	20.5	21.5	94.1	98.9	870	50.6-128			4.97	22.8
Bromoform	0.0250	U	19.7	21.3	90.6	97.9	870	43.3-139			7.73	25.9
Bromomethane	0.0250	U	18.2	18.6	83.8	85.3	870	5.00-189			1.74	26.7
n-Butylbenzene	0.0250	U	19.7	20.5	90.8	94.0	870	23.6-146			3.53	39.2



L852691-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852691-01 08/14/16 18:00 • (MS) R3156727-4 08/14/16 18:17 • (MSD) R3156727-5 08/14/16 18:34

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 %
sec-Butylbenzene	0.0250	0.950	20.3	21.1	89.1	92.7	870	31.0-142			3.78	34.7
Carbon tetrachloride	0.0250	U	18.7	20.0	86.2	92.1	870	46.0-140			6.70	27.2
tert-Butylbenzene	0.0250	U	20.1	20.8	92.3	95.8	870	36.9-142			3.73	31.7
Chlorobenzene	0.0250	U	21.3	22.0	97.7	101	870	44.1-134			3.25	25.7
Chlorodibromomethane	0.0250	U	21.7	23.0	99.7	106	870	49.7-134			6.01	24
Chloroethane	0.0250	U	16.9	17.5	77.5	80.7	870	5.00-164			3.99	28.4
Chloroform	0.0250	U	21.1	22.0	97.1	101	870	51.2-133			4.01	22.8
2-Chloroethyl vinyl ether	0.125	U	118	126	108	116	870	5.00-159			6.77	40
Chloromethane	0.0250	U	18.1	19.1	83.4	88.0	870	31.4-141			5.30	24.6
1,2-Dibromo-3-Chloropropane	0.0250	U	19.5	21.5	89.6	98.9	870	40.4-138			9.93	30.8
2-Chlorotoluene	0.0250	U	21.6	22.2	99.5	102	870	36.1-137			2.75	28.9
1,2-Dibromoethane	0.0250	U	21.8	23.0	100	106	870	50.2-133			5.35	23.6
4-Chlorotoluene	0.0250	U	20.3	20.9	93.3	96.3	870	35.4-137			3.15	29.8
1,2-Dichlorobenzene	0.0250	U	21.0	21.6	96.3	99.3	870	34.6-139			3.04	29.9
1,3-Dichlorobenzene	0.0250	U	20.4	21.1	93.7	97.1	870	28.4-142			3.51	31.2
Dibromomethane	0.0250	U	21.7	22.9	100	105	870	52.4-128			5.09	23
1,4-Dichlorobenzene	0.0250	U	20.1	20.9	92.4	96.0	870	35.0-133			3.80	31.1
1,1-Dichloroethane	0.0250	U	21.2	22.4	97.3	103	870	49.1-136			5.72	22.9
Dichlorodifluoromethane	0.0250	U	19.4	21.1	89.2	96.9	870	31.2-144			8.22	30.2
1,2-Dichloroethane	0.0250	U	22.6	23.8	104	109	870	47.1-129			4.99	22.7
1,1-Dichloroethene	0.0250	U	18.6	19.9	85.7	91.3	870	36.1-142			6.35	25.6
cis-1,2-Dichloroethene	0.0250	U	21.4	22.3	98.2	102	870	50.6-133			4.17	23
trans-1,2-Dichloroethene	0.0250	U	19.6	20.7	89.9	95.0	870	43.8-135			5.51	24.8
1,2-Dichloropropane	0.0250	U	21.1	22.2	97.1	102	870	50.3-134			5.05	22.7
1,1-Dichloropropene	0.0250	U	20.8	22.0	95.5	101	870	43.0-137			5.53	26.4
cis-1,3-Dichloropropene	0.0250	U	22.7	23.7	104	109	870	48.4-134			4.60	23.6
1,3-Dichloropropane	0.0250	U	22.4	23.5	103	108	870	51.4-127			4.96	23.1
trans-1,3-Dichloropropene	0.0250	U	22.5	24.0	104	110	870	46.6-135			6.42	25.3
2,2-Dichloropropane	0.0250	U	19.4	20.6	89.3	94.7	870	45.2-141			5.91	26.6
Di-isopropyl ether	0.0250	U	21.0	21.6	96.4	99.3	870	46.7-140			2.87	23.5
Ethylbenzene	0.0250	114	101	108	0.000	0.000	870	44.8-135	V	V	7.04	26.9
Hexachloro-1,3-butadiene	0.0250	U	20.2	20.9	92.8	96.0	870	10.0-149			3.38	40
2-Butanone (MEK)	0.125	U	107	120	98.4	111	870	23.9-170			11.6	28.3
Isopropylbenzene	0.0250	1.93	21.1	22.0	88.3	92.1	870	41.9-139			3.81	29.3
Methylene Chloride	0.0250	U	20.5	21.6	94.2	99.5	870	46.7-125			5.48	22.2
p-Isopropyltoluene	0.0250	0.345	21.7	22.4	98.3	101	870	27.3-146			3.00	35.1
4-Methyl-2-pentanone (MIBK)	0.125	1290	1300	1400	7.91	98.9	870	42.4-146	EV	E	7.34	26.7
Methyl tert-butyl ether	0.0250	U	21.7	22.8	99.9	105	870	50.4-131			4.75	24.8
Naphthalene	0.0250	0.948	20.7	22.2	90.7	97.8	870	18.4-145			7.24	34
n-Propylbenzene	0.0250	8.98	25.9	27.2	77.6	83.7	870	35.2-139			5.00	31.9

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L852691-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852691-01 08/14/16 18:00 • (MS) R3156727-4 08/14/16 18:17 • (MSD) R3156727-5 08/14/16 18:34

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 %
Styrene	0.0250	1.14	22.5	23.2	98.3	101	870	39.7-137			2.89	28.2
1,1,2,2-Tetrachloroethane	0.0250	U	19.0	20.3	87.5	93.3	870	45.7-140			6.43	26.4
1,1,1,2-Tetrachloroethane	0.0250	U	20.4	20.8	93.8	95.6	870	48.8-136			1.84	25.5
Tetrachloroethene	0.0250	U	20.0	21.0	91.9	96.5	870	37.7-140			4.88	29.2
Toluene	0.0250	57.1	61.7	65.6	20.9	39.1	870	47.8-127	J6	J6	6.23	24.3
1,1,2-Trichlorotrifluoroethane	0.0250	U	19.9	21.4	91.5	98.4	870	35.7-146			7.28	28.8
1,1,1-Trichloroethane	0.0250	U	20.8	22.0	95.7	101	870	49.0-138			5.73	25.3
1,2,3-Trichlorobenzene	0.0250	U	20.9	21.4	96.0	98.5	870	10.0-150			2.54	38.5
1,1,2-Trichloroethane	0.0250	U	21.6	22.5	99.3	104	870	52.3-132			4.18	23.4
1,2,4-Trichlorobenzene	0.0250	U	21.0	21.2	96.6	97.5	870	10.0-153			0.980	39.3
Trichloroethene	0.0250	U	20.9	21.8	96.0	100	870	48.0-132			4.42	24.8
1,2,3-Trimethylbenzene	0.0250	12.4	30.2	31.1	82.2	86.0	870	41.0-133			2.71	27.6
Trichlorofluoromethane	0.0250	U	19.2	20.7	88.1	95.2	870	12.8-169			7.69	29.7
1,2,3-Trichloropropane	0.0250	U	20.7	23.0	95.3	106	870	44.4-138			10.6	26.3
1,2,4-Trimethylbenzene	0.0250	96.4	94.6	97.5	0.000	4.98	870	32.9-139	V	V	3.02	30.6
1,3,5-Trimethylbenzene	0.0250	20.1	34.5	35.9	66.2	72.7	870	37.1-138			4.00	30.6
Vinyl chloride	0.0250	U	19.1	20.5	87.9	94.4	870	32.0-146			7.23	26.3
Xylenes, Total	0.0750	588	495	520	0.000	0.000	870	42.7-135	EV	EV	4.87	26.6
(S) Toluene-d8					103	103		88.7-115				
(S) Dibromofluoromethane					102	102		76.3-123				
(S) 4-Bromofluorobenzene					94.4	94.1		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) R3156994-3 08/14/16 14:28

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 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
Hexachloro-1,3-butadiene	U		0.000342	0.00100

1
Cp

2
Tc

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Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



Method Blank (MB)

(MB) R3156994-3 08/14/16 14:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100
Tetrachloroethene	U		0.000276	0.00100
Toluene	U		0.000434	0.00500
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100
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
1,2,4-Trimethylbenzene	U		0.000211	0.00100
1,3,5-Trimethylbenzene	U		0.000266	0.00100
1,2,3-Trichloropropane	U		0.000741	0.00250
1,2,3-Trimethylbenzene	U		0.000287	0.00100
Vinyl chloride	U		0.000291	0.00100
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	107			88.7-115
(S) Dibromofluoromethane	106			76.3-123
(S) 4-Bromofluorobenzene	96.1			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) R3156994-1 08/14/16 12:45 • (LCSD) R3156994-2 08/14/16 13:06

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	0.181	0.178	145	142	25.3-178			1.98	22.9
Acrylonitrile	0.125	0.142	0.141	113	113	57.8-143			0.580	20
Bromobenzene	0.0250	0.0255	0.0244	102	97.6	80.3-115			4.48	20
Benzene	0.0250	0.0270	0.0259	108	103	72.6-120			4.28	20



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

(LCS) R3156994-1 08/14/16 12:45 • (LCSD) R3156994-2 08/14/16 13:06

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 %
Bromodichloromethane	0.0250	0.0279	0.0271	112	109	75.3-119			2.87	20
Bromoform	0.0250	0.0247	0.0239	98.7	95.7	69.1-135			3.09	20
Bromomethane	0.0250	0.0269	0.0258	108	103	23.0-191			4.17	20
n-Butylbenzene	0.0250	0.0263	0.0249	105	99.4	74.2-134			5.74	20
sec-Butylbenzene	0.0250	0.0252	0.0238	101	95.3	77.8-129			5.57	20
tert-Butylbenzene	0.0250	0.0250	0.0236	100	94.3	77.2-129			5.98	20
Carbon tetrachloride	0.0250	0.0276	0.0266	110	106	69.4-129			3.76	20
Chlorobenzene	0.0250	0.0253	0.0238	101	95.3	78.9-122			5.97	20
2-Chloroethyl vinyl ether	0.125	0.175	0.172	140	137	16.7-162			2.04	23.7
Chlorodibromomethane	0.0250	0.0256	0.0250	102	100	76.4-126			2.21	20
Chloroethane	0.0250	0.0271	0.0255	108	102	47.2-147			5.86	20
2-Chlorotoluene	0.0250	0.0257	0.0242	103	96.8	74.6-127			6.08	20
Chloroform	0.0250	0.0278	0.0268	111	107	73.3-122			3.83	20
4-Chlorotoluene	0.0250	0.0257	0.0245	103	98.0	79.5-123			4.94	20
Chloromethane	0.0250	0.0266	0.0256	107	103	53.1-135			3.83	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0253	0.0255	101	102	64.9-131			0.570	20
Dibromomethane	0.0250	0.0266	0.0255	106	102	78.5-117			4.14	20
1,2-Dibromoethane	0.0250	0.0258	0.0249	103	99.5	78.7-123			3.72	20
1,2-Dichlorobenzene	0.0250	0.0266	0.0253	106	101	83.6-119			4.98	20
1,3-Dichlorobenzene	0.0250	0.0246	0.0230	98.5	92.1	75.9-129			6.72	20
1,4-Dichlorobenzene	0.0250	0.0253	0.0240	101	95.9	81.0-115			5.38	20
Dichlorodifluoromethane	0.0250	0.0267	0.0255	107	102	50.9-139			4.74	20
1,1-Dichloroethane	0.0250	0.0286	0.0275	114	110	71.7-125			3.71	20
1,2-Dichloroethane	0.0250	0.0282	0.0277	113	111	67.2-121			1.80	20
1,1-Dichloroethene	0.0250	0.0286	0.0271	114	108	60.6-133			5.60	20
cis-1,2-Dichloroethene	0.0250	0.0271	0.0257	108	103	76.1-121			5.15	20
1,1-Dichloropropene	0.0250	0.0287	0.0274	115	110	71.2-126			4.44	20
trans-1,2-Dichloroethene	0.0250	0.0275	0.0260	110	104	70.7-124			5.76	20
1,2-Dichloropropane	0.0250	0.0285	0.0271	114	108	76.9-123			5.01	20
1,3-Dichloropropane	0.0250	0.0265	0.0259	106	104	80.3-114			2.38	20
2,2-Dichloropropane	0.0250	0.0273	0.0264	109	105	61.9-132			3.32	20
cis-1,3-Dichloropropene	0.0250	0.0282	0.0273	113	109	77.3-123			3.10	20
trans-1,3-Dichloropropene	0.0250	0.0281	0.0269	112	108	73.0-127			4.24	20
Di-isopropyl ether	0.0250	0.0276	0.0267	110	107	67.2-131			3.24	20
Ethylbenzene	0.0250	0.0247	0.0232	98.9	92.6	78.6-124			6.53	20
Hexachloro-1,3-butadiene	0.0250	0.0249	0.0238	99.7	95.1	69.2-136			4.76	20
Isopropylbenzene	0.0250	0.0247	0.0234	98.8	93.5	79.4-126			5.56	20
p-Isopropyltoluene	0.0250	0.0255	0.0238	102	95.2	75.4-132			6.82	20
2-Butanone (MEK)	0.125	0.131	0.129	105	104	44.5-154			1.45	21.3
Methylene Chloride	0.0250	0.0268	0.0258	107	103	68.2-119			3.80	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) R3156994-1 08/14/16 12:45 • (LCSD) R3156994-2 08/14/16 13:06

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 %
4-Methyl-2-pentanone (MIBK)	0.125	0.139	0.138	111	111	61.1-138			0.200	20
Methyl tert-butyl ether	0.0250	0.0278	0.0272	111	109	70.2-122			2.17	20
Naphthalene	0.0250	0.0250	0.0247	100	99.0	69.9-132			1.14	20
1,1,1,2-Tetrachloroethane	0.0250	0.0253	0.0239	101	95.4	76.7-127			6.06	20
n-Propylbenzene	0.0250	0.0258	0.0240	103	96.0	80.2-124			7.24	20
Styrene	0.0250	0.0252	0.0240	101	96.0	79.4-124			4.82	20
1,1,2,2-Tetrachloroethane	0.0250	0.0251	0.0243	100	97.3	78.8-124			3.00	20
Tetrachloroethene	0.0250	0.0238	0.0225	95.4	89.9	71.1-133			5.91	20
Toluene	0.0250	0.0250	0.0238	99.9	95.1	76.7-116			4.91	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0304	0.0288	122	115	62.6-138			5.61	20
1,2,3-Trichlorobenzene	0.0250	0.0255	0.0246	102	98.6	72.5-137			3.33	20
1,2,4-Trichlorobenzene	0.0250	0.0254	0.0246	102	98.4	74.0-137			3.26	20
1,1,1-Trichloroethane	0.0250	0.0286	0.0271	114	108	69.9-127			5.42	20
1,1,2-Trichloroethane	0.0250	0.0254	0.0244	102	97.5	81.9-119			4.12	20
1,2,3-Trichloropropane	0.0250	0.0249	0.0237	99.6	94.8	74.0-124			4.88	20
Trichloroethene	0.0250	0.0267	0.0253	107	101	77.2-122			5.14	20
1,2,3-Trimethylbenzene	0.0250	0.0261	0.0247	104	98.7	79.4-118			5.59	20
Trichlorofluoromethane	0.0250	0.0279	0.0267	112	107	51.5-151			4.26	20
1,2,4-Trimethylbenzene	0.0250	0.0252	0.0238	101	95.0	77.1-124			5.77	20
1,3,5-Trimethylbenzene	0.0250	0.0253	0.0235	101	94.1	79.0-125			7.24	20
Vinyl chloride	0.0250	0.0288	0.0273	115	109	58.4-134			5.12	20
Xylenes, Total	0.0750	0.0738	0.0697	98.4	93.0	78.1-123			5.72	20
(S) Toluene-d8				107	105	88.7-115				
(S) Dibromofluoromethane				106	108	76.3-123				
(S) 4-Bromofluorobenzene				98.9	98.3	69.7-129				

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

L852481-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852481-04 08/14/16 16:09 • (MS) R3156994-4 08/14/16 15:09 • (MSD) R3156994-5 08/14/16 15:29

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 %
Acetone	0.159	0.0771	0.196	0.240	75.2	103	1	10.0-130			20.1	31.5
Acrylonitrile	0.159	ND	0.106	0.143	67.0	90.0	1	39.3-152		J3	29.3	27.2
Bromobenzene	0.0317	ND	0.00336	0.00550	10.6	17.3	1	40.0-130	J6	J3 J6	48.2	27.4
Benzene	0.0317	0.00264	0.0192	0.0237	52.3	66.4	1	47.8-131			20.8	22.8
Bromodichloromethane	0.0317	ND	0.0115	0.0178	36.2	56.0	1	50.6-128	J6	J3	43.0	22.8
Bromoform	0.0317	ND	0.00566	0.0103	17.8	32.3	1	43.3-139	J6	J3 J6	57.7	25.9
Bromomethane	0.0317	ND	0.0207	0.0249	65.3	78.5	1	5.00-189			18.3	26.7
n-Butylbenzene	0.0317	ND	0.00504	0.00811	15.9	25.6	1	23.6-146	J6	J3	46.8	39.2



L852481-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852481-04 08/14/16 16:09 • (MS) R3156994-4 08/14/16 15:09 • (MSD) R3156994-5 08/14/16 15:29

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 %
sec-Butylbenzene	0.0317	ND	0.00486	0.00776	15.3	24.5	1	31.0-142	J6	J3 J6	45.9	34.7
tert-Butylbenzene	0.0317	ND	0.00537	0.00842	16.9	26.5	1	36.9-142	J6	J3 J6	44.2	31.7
Carbon tetrachloride	0.0317	ND	0.0208	0.0255	65.5	80.4	1	46.0-140			20.4	27.2
Chlorobenzene	0.0317	ND	0.00454	0.00740	14.3	23.3	1	44.1-134	J6	J3 J6	47.9	25.7
2-Chloroethyl vinyl ether	0.159	ND	ND	ND	0.000	0.000	1	5.00-159	J6	J6	0.000	40
Chlorodibromomethane	0.0317	ND	0.00743	0.0126	23.4	39.8	1	49.7-134	J6	J3 J6	51.7	24
Chloroethane	0.0317	ND	0.0248	0.0279	78.2	88.0	1	5.00-164			11.8	28.4
2-Chlorotoluene	0.0317	ND	0.00400	0.00628	12.6	19.8	1	36.1-137	J6	J3 J6	44.3	28.9
Chloroform	0.0317	ND	0.0166	0.0225	52.2	70.9	1	51.2-133		J3	30.3	22.8
4-Chlorotoluene	0.0317	ND	0.00319	0.00513	10.0	16.2	1	35.4-137	J6	J3 J6	46.6	29.8
Chloromethane	0.0317	ND	0.0242	0.0280	76.3	88.3	1	31.4-141			14.5	24.6
1,2-Dibromo-3-Chloropropane	0.0317	ND	0.00670	0.0122	21.1	38.3	1	40.4-138	J6	J3 J6	58.0	30.8
Dibromomethane	0.0317	ND	0.0111	0.0174	35.1	54.8	1	52.4-128	J6	J3	43.8	23
1,2-Dibromoethane	0.0317	ND	0.00781	0.0125	24.6	39.3	1	50.2-133	J6	J3 J6	46.0	23.6
1,2-Dichlorobenzene	0.0317	ND	0.00310	0.00511	9.78	16.1	1	34.6-139	J6	J3 J6	48.8	29.9
1,3-Dichlorobenzene	0.0317	ND	0.00226	0.00378	7.11	11.9	1	28.4-142	J6	J3 J6	50.6	31.2
1,4-Dichlorobenzene	0.0317	ND	0.00299	0.00478	9.42	15.1	1	35.0-133	J6	J3 J6	46.1	31.1
Dichlorodifluoromethane	0.0317	ND	0.0258	0.0303	81.4	95.6	1	31.2-144			16.0	30.2
1,1-Dichloroethane	0.0317	ND	0.0202	0.0258	63.7	81.3	1	49.1-136		J3	24.2	22.9
1,2-Dichloroethane	0.0317	ND	0.0147	0.0211	46.3	66.6	1	47.1-129	J6	J3	36.1	22.7
1,1-Dichloroethene	0.0317	ND	0.0251	0.0291	79.2	91.6	1	36.1-142			14.6	25.6
cis-1,2-Dichloroethene	0.0317	ND	0.0132	0.0178	41.7	56.2	1	50.6-133	J6	J3	29.6	23
1,1-Dichloropropene	0.0317	ND	0.0180	0.0234	56.6	73.9	1	43.0-137			26.4	26.4
trans-1,2-Dichloroethene	0.0317	ND	0.0162	0.0203	51.0	63.8	1	43.8-135			22.3	24.8
1,2-Dichloropropane	0.0317	ND	0.0135	0.0203	42.7	64.1	1	50.3-134	J6	J3	40.2	22.7
1,3-Dichloropropane	0.0317	ND	0.00925	0.0147	29.1	46.3	1	51.4-127	J6	J3 J6	45.4	23.1
2,2-Dichloropropane	0.0317	ND	0.0236	0.0297	74.3	93.6	1	45.2-141			23.0	26.6
cis-1,3-Dichloropropene	0.0317	ND	0.00926	0.0145	29.2	45.8	1	48.4-134	J6	J3 J6	44.3	23.6
trans-1,3-Dichloropropene	0.0317	ND	0.00708	0.0118	22.3	37.3	1	46.6-135	J6	J3 J6	50.3	25.3
Di-isopropyl ether	0.0317	ND	0.0189	0.0246	59.5	77.7	1	46.7-140		J3	26.5	23.5
Ethylbenzene	0.0317	ND	0.00692	0.0102	21.8	32.0	1	44.8-135	J6	J3 J6	38.0	26.9
Hexachloro-1,3-butadiene	0.0317	ND	0.00359	0.00512	11.3	16.1	1	10.0-149			35.1	40
Isopropylbenzene	0.0317	ND	0.00595	0.00936	18.8	29.5	1	41.9-139	J6	J3 J6	44.5	29.3
p-Isopropyltoluene	0.0317	ND	0.00460	0.00724	14.5	22.8	1	27.3-146	J6	J3 J6	44.6	35.1
2-Butanone (MEK)	0.159	ND	0.104	0.138	59.0	80.4	1	23.9-170			27.9	28.3
Methylene Chloride	0.0317	ND	0.0170	0.0230	53.7	72.5	1	46.7-125		J3	29.9	22.2
4-Methyl-2-pentanone (MIBK)	0.159	ND	0.101	0.147	63.7	92.8	1	42.4-146		J3	37.2	26.7
Methyl tert-butyl ether	0.0317	ND	0.0202	0.0270	62.3	83.8	1	50.4-131		J3	28.9	24.8
Naphthalene	0.0317	ND	0.00257	0.00370	8.10	11.7	1	18.4-145	J6	J3 J6	36.0	34

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



L852481-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852481-04 08/14/16 16:09 • (MS) R3156994-4 08/14/16 15:09 • (MSD) R3156994-5 08/14/16 15:29

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
n-Propylbenzene	0.0317	ND	0.00514	0.00803	16.2	25.3	1	35.2-139	J6	J3 J6	43.9	31.9
1,1,1,2-Tetrachloroethane	0.0317	ND	0.00683	0.0114	21.5	36.0	1	48.8-136	J6	J3 J6	50.4	25.5
Styrene	0.0317	ND	0.00285	0.00464	8.98	14.6	1	39.7-137	J6	J3 J6	47.8	28.2
1,1,2,2-Tetrachloroethane	0.0317	ND	0.00664	0.0120	20.9	37.8	1	45.7-140	J6	J3 J6	57.5	26.4
Tetrachloroethene	0.0317	ND	0.00829	0.0119	26.1	37.4	1	37.7-140	J6	J3 J6	35.5	29.2
Toluene	0.0317	ND	0.0140	0.0174	34.4	44.9	1	47.8-127	J6	J6	21.4	24.3
1,1,2-Trichlorotrifluoroethane	0.0317	ND	0.0296	0.0363	93.4	115	1	35.7-146	J6	J3 J6	20.4	28.8
1,2,3-Trichlorobenzene	0.0317	ND	0.00189	0.00317	5.97	9.99	1	10.0-150	J6	J3 J6	50.3	38.5
1,2,4-Trichlorobenzene	0.0317	ND	0.00191	0.00331	6.04	10.4	1	10.0-153	J6	J3	53.3	39.3
1,1,1-Trichloroethane	0.0317	ND	0.0219	0.0284	69.1	89.6	1	49.0-138	J6	J3	25.8	25.3
1,1,2-Trichloroethane	0.0317	ND	0.00960	0.0154	30.2	48.5	1	52.3-132	J6	J3 J6	46.4	23.4
1,2,3-Trichloropropane	0.0317	ND	0.00739	0.0133	23.3	41.9	1	44.4-138	J6	J3 J6	57.0	26.3
Trichloroethene	0.0317	ND	0.0115	0.0166	36.2	52.4	1	48.0-132	J6	J3	36.6	24.8
1,2,3-Trimethylbenzene	0.0317	ND	0.00533	0.00826	15.2	24.4	1	41.0-133	J6	J3 J6	43.2	27.6
Trichlorofluoromethane	0.0317	ND	0.0292	0.0335	92.1	106	1	12.8-169	J6	J3 J6	13.7	29.7
1,2,4-Trimethylbenzene	0.0317	ND	0.00480	0.00746	12.4	20.8	1	32.9-139	J6	J3 J6	43.4	30.6
1,3,5-Trimethylbenzene	0.0317	ND	0.00525	0.00801	14.6	23.3	1	37.1-138	J6	J3 J6	41.6	30.6
Vinyl chloride	0.0317	ND	0.0285	0.0313	89.8	98.7	1	32.0-146	J6	J3 J6	9.37	26.3
Xylenes, Total	0.0952	ND	0.0197	0.0285	20.7	29.9	1	42.7-135	J6	J3 J6	36.3	26.6
(S) Toluene-d8					105	106		88.7-115				
(S) Dibromofluoromethane					111	112		76.3-123				
(S) 4-Bromofluorobenzene					86.7	87.2		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) R3156989-3 08/15/16 02:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000270	0.00100
Ethylbenzene	U		0.000297	0.00100
Toluene	U		0.000434	0.00500
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	107			88.7-115
(S) Dibromofluoromethane	105			76.3-123
(S) a,a,a-Trifluorotoluene	98.0			87.2-117
(S) 4-Bromofluorobenzene	98.7			69.7-129

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3156989-1 08/15/16 01:29 • (LCSD) R3156989-2 08/15/16 01:49

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 %
Benzene	0.0250	0.0231	0.0229	92.4	91.6	72.6-120			0.840	20
Ethylbenzene	0.0250	0.0227	0.0225	90.7	89.9	78.6-124			0.850	20
Toluene	0.0250	0.0223	0.0220	89.1	88.0	76.7-116			1.24	20
Xylenes, Total	0.0750	0.0667	0.0657	89.0	87.6	78.1-123			1.51	20
(S) Toluene-d8				106	107	88.7-115				
(S) Dibromofluoromethane				105	105	76.3-123				
(S) a,a,a-Trifluorotoluene				96.2	96.9	87.2-117				
(S) 4-Bromofluorobenzene				98.5	99.0	69.7-129				

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3157227-1 08/16/16 15:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	76.9			50.0-150

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

(LCS) R3157227-2 08/16/16 15:41 • (LCSD) R3157227-3 08/16/16 15:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	30.0	28.4	28.6	94.7	95.5	50.0-150			0.850	20
Residual Range Organics (RRO)	30.0	24.6	25.6	81.9	85.2	50.0-150			3.97	20
(S) o-Terphenyl				72.7	73.6	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) R3157413-1 08/17/16 10:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	116			50.0-150

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

(LCS) R3157413-2 08/17/16 10:26 • (LCSD) R3157413-3 08/17/16 10:41

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)	30.0	26.5	26.3	88.4	87.8	50.0-150			0.640	20
Residual Range Organics (RRO)	30.0	23.2	23.1	77.5	77.0	50.0-150			0.590	20
<i>(S) o-Terphenyl</i>				86.2	89.0	50.0-150				

L852412-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852412-12 08/17/16 11:25 • (MS) R3157413-4 08/17/16 11:40 • (MSD) R3157413-5 08/17/16 11:54

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	%	%		%			%	%
Diesel Range Organics (DRO)	37.5	ND	26.5	25.9	70.0	68.4	1	50.0-150			2.24	20
Residual Range Organics (RRO)	37.5	ND	20.1	19.3	53.5	51.6	1	50.0-150			3.67	20
<i>(S) o-Terphenyl</i>					73.9	76.5		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) R3157104-3 08/16/16 08:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.000600	0.00600
Acenaphthene	U		0.000600	0.00600
Acenaphthylene	U		0.000600	0.00600
Benzo(a)anthracene	U		0.000600	0.00600
Benzo(a)pyrene	U		0.000600	0.00600
Benzo(b)fluoranthene	U		0.000600	0.00600
Benzo(g,h,i)perylene	U		0.000600	0.00600
Benzo(k)fluoranthene	U		0.000600	0.00600
Chrysene	U		0.000600	0.00600
Dibenz(a,h)anthracene	U		0.000600	0.00600
Fluoranthene	U		0.000600	0.00600
Fluorene	U		0.000600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.000600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.000600	0.00600
Pyrene	U		0.000600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
(S) p-Terphenyl-d14	77.6			32.2-131
(S) Nitrobenzene-d5	93.5			22.1-146
(S) 2-Fluorobiphenyl	81.3			40.6-122

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) R3157104-1 08/16/16 07:54 • (LCSD) R3157104-2 08/16/16 08:15

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 %
Anthracene	0.0800	0.0672	0.0653	84.0	81.7	50.3-130			2.79	20
Acenaphthene	0.0800	0.0683	0.0663	85.4	82.9	52.4-120			2.96	20
Acenaphthylene	0.0800	0.0704	0.0681	88.0	85.1	49.6-120			3.24	20
Benzo(a)anthracene	0.0800	0.0649	0.0622	81.1	77.8	46.7-125			4.24	20
Benzo(a)pyrene	0.0800	0.0658	0.0634	82.2	79.3	42.3-119			3.68	20
Benzo(b)fluoranthene	0.0800	0.0712	0.0683	89.0	85.4	43.6-124			4.10	20
Benzo(g,h,i)perylene	0.0800	0.0621	0.0734	77.7	91.8	45.1-132			16.6	20
Benzo(k)fluoranthene	0.0800	0.0639	0.0630	79.9	78.7	46.1-131			1.52	20
Chrysene	0.0800	0.0651	0.0630	81.3	78.7	49.5-131			3.28	20
Dibenz(a,h)anthracene	0.0800	0.0612	0.0585	76.5	73.2	44.8-133			4.46	20
Fluoranthene	0.0800	0.0648	0.0638	81.0	79.7	49.3-128			1.53	20
Fluorene	0.0800	0.0657	0.0641	82.1	80.1	50.6-121			2.51	20



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

(LCS) R3157104-1 08/16/16 07:54 • (LCSD) R3157104-2 08/16/16 08:15

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 %
Indeno(1,2,3-cd)pyrene	0.0800	0.0633	0.0605	79.2	75.7	46.1-135			4.51	20
Naphthalene	0.0800	0.0669	0.0643	83.6	80.3	49.6-115			4.00	20
Phenanthrene	0.0800	0.0657	0.0650	82.1	81.2	48.8-121			1.04	20
Pyrene	0.0800	0.0793	0.0752	99.2	94.1	44.7-130			5.27	20
1-Methylnaphthalene	0.0800	0.0675	0.0650	84.4	81.2	50.6-122			3.80	20
2-Methylnaphthalene	0.0800	0.0665	0.0641	83.1	80.2	50.4-120			3.59	20
(S) p-Terphenyl-d14				76.7	72.2	32.2-131				
(S) Nitrobenzene-d5				93.5	85.4	22.1-146				
(S) 2-Fluorobiphenyl				82.5	79.4	40.6-122				

L852702-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852702-05 08/16/16 14:56 • (MS) R3157104-4 08/16/16 15:17 • (MSD) R3157104-5 08/16/16 15:38

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 %
Anthracene	0.0936	ND	0.0683	0.0677	73.0	72.3	1	26.5-141			0.920	21.2
Acenaphthene	0.0936	ND	0.0768	0.0754	82.1	80.6	1	31.9-130			1.90	20
Acenaphthylene	0.0936	ND	0.0771	0.0754	82.4	80.6	1	33.7-129			2.23	20
Benzo(a)anthracene	0.0936	ND	0.0575	0.0572	61.5	61.1	1	18.3-136			0.570	24.6
Benzo(a)pyrene	0.0936	ND	0.0634	0.0630	67.7	67.4	1	16.9-135			0.510	25.2
Benzo(b)fluoranthene	0.0936	ND	0.0621	0.0613	66.3	65.5	1	10.0-134			1.19	30.9
Benzo(g,h,i)perylene	0.0936	ND	0.0503	0.0488	53.8	52.2	1	14.1-140			3.04	25.5
Benzo(k)fluoranthene	0.0936	ND	0.0629	0.0630	67.2	67.3	1	18.2-138			0.190	25.6
Chrysene	0.0936	ND	0.0607	0.0605	64.8	64.7	1	17.1-145			0.210	24.2
Dibenz(a,h)anthracene	0.0936	ND	0.0503	0.0503	53.8	53.8	1	18.5-138			0.0100	24.3
Fluoranthene	0.0936	ND	0.0765	0.0631	81.7	67.4	1	15.4-144			19.2	27.1
Fluorene	0.0936	ND	0.0713	0.0707	76.2	75.5	1	23.5-136			0.850	20
Indeno(1,2,3-cd)pyrene	0.0936	ND	0.0516	0.0515	55.1	55.0	1	14.5-142			0.250	25.8
Naphthalene	0.0936	ND	0.0756	0.0751	80.8	80.3	1	29.2-128			0.630	20
Phenanthrene	0.0936	ND	0.0704	0.0694	75.2	74.2	1	20.1-134			1.31	23.6
Pyrene	0.0936	ND	0.0764	0.0758	81.6	81.0	1	11.0-148			0.730	26.1
1-Methylnaphthalene	0.0936	ND	0.0747	0.0739	79.8	79.0	1	28.4-137			1.11	20
2-Methylnaphthalene	0.0936	ND	0.0730	0.0721	78.0	77.1	1	26.6-137			1.17	20
(S) p-Terphenyl-d14					70.1	67.5		32.2-131				
(S) Nitrobenzene-d5					93.3	90.5		22.1-146				
(S) 2-Fluorobiphenyl					76.8	76.0		40.6-122				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
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.
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		

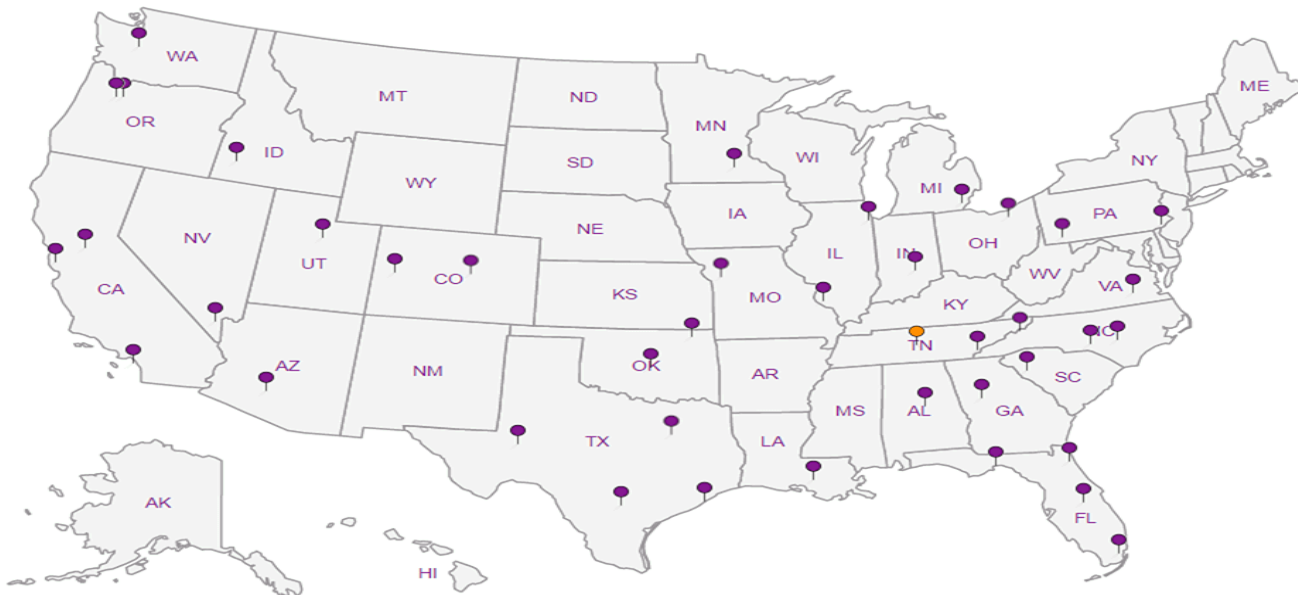
Third Party & Federal Accreditations

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.**



Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Avenue
 Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: **RyanHultgren@kennedyjenks.com,**
JosephSawdey@KennedyJenks.com,

Project
 Description: **BNSF - Wishram Railyard, WA**

City/State
 Collected:

Phone: **253-835-6400**
 Fax:

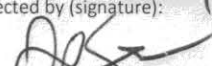
Client Project #
1696126

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joseph Sawdey

Site/Facility ID #
Wishram

P.O. #

Collected by (signature):

 Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed
 Email? No Yes
 FAX? No Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
B-16-20-10		SS	10	8/8	1420	7
B-16-23-10		SS	10		1320	
B-16-19-12		SS	12		1515	
B-16-13-11		SS	11		0915	
B-16-21-13		SS	13		1630	
B-16-11-12		SS	12		1050	
B-16-10-10		SS	10		1145	
B-16-11		SS	10		0825	
B-16-22-10		SS	10	8/9	0820	
B-16-17-10		SS	10	8/9	0940	

Analysis / Container / Preservative					
MRCR8 4ozClr-NoPres	NWTPHDX, TS 4ozClr-NoPres	SV8082 4ozClr-NoPres	SV8270 (Full List) 4ozClr-NoPres	SV8270PAHSIM 4ozClr-NoPres	V8260(Full List), Gx 40ml/NaHSO4/Syr/MeOH
				V8260BTEX, Gx 40ml/NaHSO4/Syr/MeOH	

Chain of Custody Page of



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **852412**
B249

Acctnum: **BNSF1KEN**
 Template: **T114450**
 Prelogin: **P562554**
 TSR: **134 - Mark W. Beasley**
 PB:


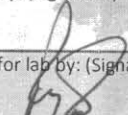
Shipped Via:

Rem./Contaminant	Sample # (lab only)
	- 01
	- 02
	- 03
	- 04
	- 05
	- 06
	- 07
	- 08
	- 09
	- 10

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other

Remarks: **8/10/16**

pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature) 	Date: 8/9/2016	Time: 1400	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use on) OK
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.2 °C Bottles Received: 83/10B	COC Seal Intact: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) 	Date: 8/10/16 Time: 9W	pH Checked: _____ NCF: _____

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Avenue
 Tacoma, WA 98421

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Report to:
Ryan Hultgren

Email To: **RyanHultgren@kennedyjenks.com,**
JosephSawdey@KennedyJenks.com,

Project Description: **BNSF - Wishram Railyard, WA**

City/State Collected:

Phone: **253-835-6400**
 Fax:

Client Project #
1696120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joseph Sawdey

Site/Facility ID #
Wishram

P.O. #

Collected by (signature):

 Immediately Packed on Ice N ___ Y **X**

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed
 Email? ___ No **X** Yes
 FAX? ___ No ___ Yes

MRCRA8 4ozClr-NoPres	NWTPHDX, TS 4ozClr-NoPres	SV8082 4ozClr-NoPres	SV8270 (Full List) 4ozClr-NoPres	SV8270PAHSIM 4ozClr-NoPres	V8260(Full List), Gx 40ml/NaHSO4/Syr/MeOH	V8260BTEX, Gx 40ml/NaHSO4/Syr/MeOH
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L# **L952412**
 Table #
 Acctnum: **BNSF1KEN**
 Template: **T114450**
 Prelogin: **P562554**
 TSR: **134 - Mark W. Beasley**
 PB:
 Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8 4ozClr-NoPres	NWTPHDX, TS 4ozClr-NoPres	SV8082 4ozClr-NoPres	SV8270 (Full List) 4ozClr-NoPres	SV8270PAHSIM 4ozClr-NoPres	V8260(Full List), Gx 40ml/NaHSO4/Syr/MeOH	V8260BTEX, Gx 40ml/NaHSO4/Syr/MeOH	Rem./Contaminant	Sample # (lab only)
Dup-0809		SS		8/9	0830	7	X	X			X	X			-11
B-16-15-12		SS	12	8/9	1050	6		X			X		X		-12
B-16-16-12		SS	12	8/9	1145	6		X			X		X		-13
		SS													
		SS													
		SS													
		SS													
		SS													
		SS													

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: **8/10/16** pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature) 	Date: 8/9	Time: 1400	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>	Condition: (lab use only) a
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C 3.2	Bottles Received: 83AB
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) 	Date: 8/10/16	Time: 1400
				pH Checked:	NCF:



YOUR LAB OF CHOICE

Cooler Receipt Checklist

Client: BNSFIKEN SDG# L852412

Cooler Received/Opened On 8/10/16 By [Signature]

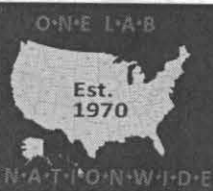
Temperature Upon Receipt: 3.2 °c [Signature] (Signature)

Cooler Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?			✓
Were custody papers properly filled out (ink, signed, etc.)?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were correct preservatives used?			✓
Were all applicable sample containers checked for preservation? (Any samples not in accepted pH range noted on COC.)			✓
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated? (If yes see attached NCF)		✓	



...Green Technology through Innovation

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Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L852414
Samples Received: 08/10/2016
Project Number: 169120
Description: BNSF - Wishram Railyard, WA
Site: WISHRAM
Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Jason Romer
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



B-16-07-11 L852414-01 Solid

Collected by
Joseph Sawdey
Collected date/time
08/05/16 14:10
Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	1	08/15/16 14:57	08/16/16 18:12	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 14:27	KLM
Total Solids by Method 2540 G-2011	WG897847	1	08/11/16 10:53	08/11/16 11:01	KDW

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

RMD-2-18 L852414-02 Solid

Collected by
Joseph Sawdey
Collected date/time
08/04/16 13:45
Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG897813	50	08/11/16 22:54	08/14/16 23:12	SNR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	10	08/15/16 14:57	08/16/16 17:48	KMP
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	10	08/15/16 14:57	08/17/16 12:19	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	20	08/16/16 05:27	08/16/16 18:31	KLM
Total Solids by Method 2540 G-2011	WG897847	1	08/11/16 10:53	08/11/16 11:01	KDW

RMD-2-39 L852414-03 Solid

Collected by
Joseph Sawdey
Collected date/time
08/04/16 14:50
Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG897813	1	08/11/16 22:54	08/14/16 19:03	SNR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	1	08/15/16 14:57	08/16/16 17:03	ADF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 14:39	KLM
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	5	08/16/16 05:27	08/16/16 22:21	KLM
Total Solids by Method 2540 G-2011	WG897847	1	08/11/16 10:53	08/11/16 11:01	KDW

B-16-06-07 L852414-04 Solid

Collected by
Joseph Sawdey
Collected date/time
08/05/16 13:50
Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	1	08/15/16 14:57	08/16/16 17:24	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 17:42	KLM
Total Solids by Method 2540 G-2011	WG897847	1	08/11/16 10:53	08/11/16 11:01	KDW

RMD-1-39 L852414-05 Solid

Collected by
Joseph Sawdey
Collected date/time
08/05/16 12:00
Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG897813	1	08/11/16 22:54	08/14/16 19:28	SNR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	1	08/15/16 14:57	08/16/16 17:45	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 14:51	KLM
Total Solids by Method 2540 G-2011	WG897847	1	08/11/16 10:53	08/11/16 11:01	KDW

RMD-1-44.5 L852414-06 Solid

Collected by
Joseph Sawdey
Collected date/time
08/05/16 12:00
Received date/time
08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 15:03	KLM
Total Solids by Method 2540 G-2011	WG897847	1	08/11/16 10:53	08/11/16 11:01	KDW

SAMPLE SUMMARY



B-16-08-25 L852414-07 Solid

Collected by Joseph Sawdey
Collected date/time 08/05/16 15:00
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	1	08/15/16 14:57	08/16/16 18:06	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 15:16	KLM
Total Solids by Method 2540 G-2011	WG897847	1	08/11/16 10:53	08/11/16 11:01	KDW

1
Cp

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Tc

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Ss

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Cn

5
Sr

6
Qc

7
Gl

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Al

9
Sc

B-16-07-17 L852414-08 Solid

Collected by Joseph Sawdey
Collected date/time 08/05/16 14:15
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	1	08/15/16 14:57	08/16/16 18:27	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 16:05	KLM
Total Solids by Method 2540 G-2011	WG897847	1	08/11/16 10:53	08/11/16 11:01	KDW

B-16-06-05 L852414-09 Solid

Collected by Joseph Sawdey
Collected date/time 08/05/16 13:40
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	5	08/15/16 14:57	08/16/16 17:23	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	10	08/16/16 05:27	08/16/16 18:19	KLM
Total Solids by Method 2540 G-2011	WG897849	1	08/11/16 10:28	08/11/16 10:38	KDW

RMD-2-51 L852414-10 Solid

Collected by Joseph Sawdey
Collected date/time 08/05/16 09:20
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	1	08/15/16 14:57	08/16/16 16:59	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 17:54	KLM
Total Solids by Method 2540 G-2011	WG897849	1	08/11/16 10:28	08/11/16 10:38	KDW

B-16-08-14 L852414-11 Solid

Collected by Joseph Sawdey
Collected date/time 08/05/16 14:45
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898739	1	08/15/16 14:57	08/16/16 18:48	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 16:17	KLM
Total Solids by Method 2540 G-2011	WG897849	1	08/11/16 10:28	08/11/16 10:38	KDW

RMD-4-30 L852414-12 Solid

Collected by Joseph Sawdey
Collected date/time 08/02/16 15:15
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 16:30	KLM
Total Solids by Method 2540 G-2011	WG897849	1	08/11/16 10:28	08/11/16 10:38	KDW

RMD-3-60 L852414-13 Solid

Collected by Joseph Sawdey
Collected date/time 08/04/16 11:00
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 17:06	KLM
Total Solids by Method 2540 G-2011	WG897849	1	08/11/16 10:28	08/11/16 10:38	KDW

SAMPLE SUMMARY



RMD-3-19 L852414-14 Solid

Collected by Joseph Sawdey
Collected date/time 08/03/16 15:45
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 17:18	KLM
Total Solids by Method 2540 G-2011	WG897849	1	08/11/16 10:28	08/11/16 10:38	KDW

1
Cp

2
Tc

3
Ss

RIVER-NAPL L852414-15 Solid

Collected by Joseph Sawdey
Collected date/time 08/04/16 09:10
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG898513	48.75	08/13/16 22:43	08/15/16 09:10	DWR

4
Cn

5
Sr

6
Qc

RMD-4-60 L852414-16 Solid

Collected by Joseph Sawdey
Collected date/time 08/03/16 08:45
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	10	08/16/16 05:27	08/16/16 18:07	KLM
Total Solids by Method 2540 G-2011	WG897849	1	08/11/16 10:28	08/11/16 10:38	KDW

7
Gl

8
Al

9
Sc

RMD-1-18 L852414-17 Solid

Collected by Joseph Sawdey
Collected date/time 08/05/16 10:15
Received date/time 08/10/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG897836	1	08/16/16 05:27	08/16/16 17:30	KLM
Total Solids by Method 2540 G-2011	WG897849	1	08/11/16 10:28	08/11/16 10:38	KDW



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jason Romer
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.0		1	08/11/2016 11:01	WG897847

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.21	1	08/16/2016 14:27	WG897836
Residual Range Organics (RRO)	ND		10.5	1	08/16/2016 14:27	WG897836
(S) o-Terphenyl	88.8		50.0-150		08/16/2016 14:27	WG897836

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L852414-01 WG897836: NWTPHDX - No SGT

6 Qc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00632	1	08/16/2016 18:12	WG898739
Acenaphthene	ND		0.00632	1	08/16/2016 18:12	WG898739
Acenaphthylene	ND		0.00632	1	08/16/2016 18:12	WG898739
Benzo(a)anthracene	ND		0.00632	1	08/16/2016 18:12	WG898739
Benzo(a)pyrene	ND		0.00632	1	08/16/2016 18:12	WG898739
Benzo(b)fluoranthene	ND		0.00632	1	08/16/2016 18:12	WG898739
Benzo(g,h,i)perylene	ND		0.00632	1	08/16/2016 18:12	WG898739
Benzo(k)fluoranthene	ND		0.00632	1	08/16/2016 18:12	WG898739
Chrysene	ND		0.00632	1	08/16/2016 18:12	WG898739
Dibenz(a,h)anthracene	ND		0.00632	1	08/16/2016 18:12	WG898739
Fluoranthene	ND		0.00632	1	08/16/2016 18:12	WG898739
Fluorene	ND		0.00632	1	08/16/2016 18:12	WG898739
Indeno(1,2,3-cd)pyrene	ND		0.00632	1	08/16/2016 18:12	WG898739
Naphthalene	ND		0.0211	1	08/16/2016 18:12	WG898739
Phenanthrene	ND		0.00632	1	08/16/2016 18:12	WG898739
Pyrene	ND		0.00632	1	08/16/2016 18:12	WG898739
1-Methylnaphthalene	ND		0.0211	1	08/16/2016 18:12	WG898739
2-Methylnaphthalene	ND		0.0211	1	08/16/2016 18:12	WG898739
(S) Nitrobenzene-d5	80.8		22.1-146		08/16/2016 18:12	WG898739
(S) 2-Fluorobiphenyl	78.8		40.6-122		08/16/2016 18:12	WG898739
(S) p-Terphenyl-d14	70.2		32.2-131		08/16/2016 18:12	WG898739

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.0		1	08/11/2016 11:01	WG897847

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	827		95.2	20	08/16/2016 18:31	WG897836
Residual Range Organics (RRO)	1330		238	20	08/16/2016 18:31	WG897836
(S) o-Terphenyl	82.8		50.0-150		08/16/2016 18:31	WG897836

Sample Narrative:

NWTPHDX L852414-02 WG897836: NWTPHDX - No SGT

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		1.96	50	08/14/2016 23:12	WG897813
Acenaphthylene	ND		1.96	50	08/14/2016 23:12	WG897813
Anthracene	ND		1.96	50	08/14/2016 23:12	WG897813
Benazidine	ND		19.8	50	08/14/2016 23:12	WG897813
Benzo(a)anthracene	ND		1.96	50	08/14/2016 23:12	WG897813
Benzo(b)fluoranthene	ND		1.96	50	08/14/2016 23:12	WG897813
Benzo(k)fluoranthene	ND		1.96	50	08/14/2016 23:12	WG897813
Benzo(g,h,i)perylene	ND		1.96	50	08/14/2016 23:12	WG897813
Benzo(a)pyrene	ND		1.96	50	08/14/2016 23:12	WG897813
Bis(2-chlorethoxy)methane	ND		19.8	50	08/14/2016 23:12	WG897813
Bis(2-chloroethyl)ether	ND		19.8	50	08/14/2016 23:12	WG897813
Bis(2-chloroisopropyl)ether	ND		19.8	50	08/14/2016 23:12	WG897813
4-Bromophenyl-phenylether	ND		19.8	50	08/14/2016 23:12	WG897813
2-Chloronaphthalene	ND		1.96	50	08/14/2016 23:12	WG897813
4-Chlorophenyl-phenylether	ND		19.8	50	08/14/2016 23:12	WG897813
Chrysene	ND		1.96	50	08/14/2016 23:12	WG897813
Dibenz(a,h)anthracene	ND		1.96	50	08/14/2016 23:12	WG897813
3,3-Dichlorobenzidine	ND		19.8	50	08/14/2016 23:12	WG897813
2,4-Dinitrotoluene	ND		19.8	50	08/14/2016 23:12	WG897813
2,6-Dinitrotoluene	ND		19.8	50	08/14/2016 23:12	WG897813
Fluoranthene	ND		1.96	50	08/14/2016 23:12	WG897813
Fluorene	ND		1.96	50	08/14/2016 23:12	WG897813
Hexachlorobenzene	ND		19.8	50	08/14/2016 23:12	WG897813
Hexachloro-1,3-butadiene	ND		19.8	50	08/14/2016 23:12	WG897813
Hexachlorocyclopentadiene	ND		19.8	50	08/14/2016 23:12	WG897813
Hexachloroethane	ND		19.8	50	08/14/2016 23:12	WG897813
Indeno(1,2,3-cd)pyrene	ND		1.96	50	08/14/2016 23:12	WG897813
Isophorone	ND		19.8	50	08/14/2016 23:12	WG897813
Naphthalene	ND		1.96	50	08/14/2016 23:12	WG897813
Nitrobenzene	ND		19.8	50	08/14/2016 23:12	WG897813
n-Nitrosodimethylamine	ND		19.8	50	08/14/2016 23:12	WG897813
n-Nitrosodiphenylamine	ND		19.8	50	08/14/2016 23:12	WG897813
n-Nitrosodi-n-propylamine	ND		19.8	50	08/14/2016 23:12	WG897813
Phenanthrene	ND		1.96	50	08/14/2016 23:12	WG897813
Benzylbutyl phthalate	ND		19.8	50	08/14/2016 23:12	WG897813
Bis(2-ethylhexyl)phthalate	ND		19.8	50	08/14/2016 23:12	WG897813
Di-n-butyl phthalate	ND		19.8	50	08/14/2016 23:12	WG897813
Diethyl phthalate	ND		19.8	50	08/14/2016 23:12	WG897813
Dimethyl phthalate	ND		19.8	50	08/14/2016 23:12	WG897813
Di-n-octyl phthalate	ND		19.8	50	08/14/2016 23:12	WG897813

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Pyrene	ND		1.96	50	08/14/2016 23:12	WG897813
1,2,4-Trichlorobenzene	ND		19.8	50	08/14/2016 23:12	WG897813
4-Chloro-3-methylphenol	ND		19.8	50	08/14/2016 23:12	WG897813
2-Chlorophenol	ND		19.8	50	08/14/2016 23:12	WG897813
3&4-Methyl Phenol	ND		19.8	50	08/14/2016 23:12	WG897813
2-Methylphenol	ND		19.8	50	08/14/2016 23:12	WG897813
2,4-Dichlorophenol	ND		19.8	50	08/14/2016 23:12	WG897813
2,4-Dimethylphenol	ND		19.8	50	08/14/2016 23:12	WG897813
4,6-Dinitro-2-methylphenol	ND		19.8	50	08/14/2016 23:12	WG897813
2,4-Dinitrophenol	ND		19.8	50	08/14/2016 23:12	WG897813
2-Nitrophenol	ND		19.8	50	08/14/2016 23:12	WG897813
4-Nitrophenol	ND		19.8	50	08/14/2016 23:12	WG897813
Pentachlorophenol	ND		19.8	50	08/14/2016 23:12	WG897813
Phenol	ND		19.8	50	08/14/2016 23:12	WG897813
2,4,6-Trichlorophenol	ND		19.8	50	08/14/2016 23:12	WG897813
(S) 2-Fluorophenol	70.4	J7	21.1-116		08/14/2016 23:12	WG897813
(S) Phenol-d5	79.0	J7	26.3-121		08/14/2016 23:12	WG897813
(S) Nitrobenzene-d5	124	J7	21.9-129		08/14/2016 23:12	WG897813
(S) 2-Fluorobiphenyl	93.3	J7	34.9-129		08/14/2016 23:12	WG897813
(S) 2,4,6-Tribromophenol	77.1	J7	21.6-142		08/14/2016 23:12	WG897813
(S) p-Terphenyl-d14	163	J7	21.5-128		08/14/2016 23:12	WG897813

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

Sample Narrative:

8270C L852414-02 WG897813: Dilution due to matrix

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.117		0.0714	10	08/16/2016 17:48	WG898739
Acenaphthene	0.118		0.0714	10	08/16/2016 17:48	WG898739
Acenaphthylene	ND		0.0714	10	08/16/2016 17:48	WG898739
Benzo(a)anthracene	ND		0.0714	10	08/16/2016 17:48	WG898739
Benzo(a)pyrene	0.0874		0.0714	10	08/17/2016 12:19	WG898739
Benzo(b)fluoranthene	ND		0.0714	10	08/17/2016 12:19	WG898739
Benzo(g,h,i)perylene	0.107		0.0714	10	08/17/2016 12:19	WG898739
Benzo(k)fluoranthene	ND		0.0714	10	08/17/2016 12:19	WG898739
Chrysene	ND		0.0714	10	08/16/2016 17:48	WG898739
Dibenz(a,h)anthracene	ND		0.0714	10	08/17/2016 12:19	WG898739
Fluoranthene	ND		0.0714	10	08/16/2016 17:48	WG898739
Fluorene	0.115		0.0714	10	08/16/2016 17:48	WG898739
Indeno(1,2,3-cd)pyrene	ND		0.0714	10	08/17/2016 12:19	WG898739
Naphthalene	ND		0.238	10	08/16/2016 17:48	WG898739
Phenanthrene	0.117		0.0714	10	08/16/2016 17:48	WG898739
Pyrene	0.214		0.0714	10	08/16/2016 17:48	WG898739
1-Methylnaphthalene	0.281		0.238	10	08/16/2016 17:48	WG898739
2-Methylnaphthalene	ND		0.238	10	08/16/2016 17:48	WG898739
(S) Nitrobenzene-d5	73.2		22.1-146		08/16/2016 17:48	WG898739
(S) Nitrobenzene-d5	56.2		22.1-146		08/17/2016 12:19	WG898739
(S) 2-Fluorobiphenyl	84.0		40.6-122		08/17/2016 12:19	WG898739
(S) 2-Fluorobiphenyl	69.7		40.6-122		08/16/2016 17:48	WG898739
(S) p-Terphenyl-d14	58.4		32.2-131		08/16/2016 17:48	WG898739
(S) p-Terphenyl-d14	64.9		32.2-131		08/17/2016 12:19	WG898739



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.5		1	08/11/2016 11:01	WG897847

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	935		26.1	5	08/16/2016 22:21	WG897836
Residual Range Organics (RRO)	70.6		13.1	1	08/16/2016 14:39	WG897836
(S) o-Terphenyl	100		50.0-150		08/16/2016 14:39	WG897836
(S) o-Terphenyl	74.7		50.0-150		08/16/2016 22:21	WG897836

Sample Narrative:

NWTPHDX L852414-03 WG897836: NWTPHDX - No SGT

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.0431	1	08/14/2016 19:03	WG897813
Acenaphthylene	ND		0.0431	1	08/14/2016 19:03	WG897813
Anthracene	ND		0.0431	1	08/14/2016 19:03	WG897813
Benzidine	ND		0.435	1	08/14/2016 19:03	WG897813
Benzo(a)anthracene	ND		0.0431	1	08/14/2016 19:03	WG897813
Benzo(b)fluoranthene	ND		0.0431	1	08/14/2016 19:03	WG897813
Benzo(k)fluoranthene	ND		0.0431	1	08/14/2016 19:03	WG897813
Benzo(g,h,i)perylene	ND		0.0431	1	08/14/2016 19:03	WG897813
Benzo(a)pyrene	ND		0.0431	1	08/14/2016 19:03	WG897813
Bis(2-chlorethoxy)methane	ND		0.435	1	08/14/2016 19:03	WG897813
Bis(2-chloroethyl)ether	ND		0.435	1	08/14/2016 19:03	WG897813
Bis(2-chloroisopropyl)ether	ND		0.435	1	08/14/2016 19:03	WG897813
4-Bromophenyl-phenylether	ND		0.435	1	08/14/2016 19:03	WG897813
2-Chloronaphthalene	ND		0.0431	1	08/14/2016 19:03	WG897813
4-Chlorophenyl-phenylether	ND		0.435	1	08/14/2016 19:03	WG897813
Chrysene	ND		0.0431	1	08/14/2016 19:03	WG897813
Dibenz(a,h)anthracene	ND		0.0431	1	08/14/2016 19:03	WG897813
3,3-Dichlorobenzidine	ND		0.435	1	08/14/2016 19:03	WG897813
2,4-Dinitrotoluene	ND		0.435	1	08/14/2016 19:03	WG897813
2,6-Dinitrotoluene	ND		0.435	1	08/14/2016 19:03	WG897813
Fluoranthene	ND		0.0431	1	08/14/2016 19:03	WG897813
Fluorene	ND		0.0431	1	08/14/2016 19:03	WG897813
Hexachlorobenzene	ND		0.435	1	08/14/2016 19:03	WG897813
Hexachloro-1,3-butadiene	ND		0.435	1	08/14/2016 19:03	WG897813
Hexachlorocyclopentadiene	ND		0.435	1	08/14/2016 19:03	WG897813
Hexachloroethane	ND		0.435	1	08/14/2016 19:03	WG897813
Indeno(1,2,3-cd)pyrene	ND		0.0431	1	08/14/2016 19:03	WG897813
Isophorone	ND		0.435	1	08/14/2016 19:03	WG897813
Naphthalene	ND		0.0431	1	08/14/2016 19:03	WG897813
Nitrobenzene	ND		0.435	1	08/14/2016 19:03	WG897813
n-Nitrosodimethylamine	ND		0.435	1	08/14/2016 19:03	WG897813
n-Nitrosodiphenylamine	ND		0.435	1	08/14/2016 19:03	WG897813
n-Nitrosodi-n-propylamine	ND		0.435	1	08/14/2016 19:03	WG897813
Phenanthrene	ND		0.0431	1	08/14/2016 19:03	WG897813
Benzylbutyl phthalate	ND		0.435	1	08/14/2016 19:03	WG897813
Bis(2-ethylhexyl)phthalate	ND		0.435	1	08/14/2016 19:03	WG897813
Di-n-butyl phthalate	ND		0.435	1	08/14/2016 19:03	WG897813
Diethyl phthalate	ND		0.435	1	08/14/2016 19:03	WG897813
Dimethyl phthalate	ND		0.435	1	08/14/2016 19:03	WG897813

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/04/16 14:50

L852414

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Di-n-octyl phthalate	ND		0.435	1	08/14/2016 19:03	WG897813
Pyrene	ND		0.0431	1	08/14/2016 19:03	WG897813
1,2,4-Trichlorobenzene	ND		0.435	1	08/14/2016 19:03	WG897813
4-Chloro-3-methylphenol	ND		0.435	1	08/14/2016 19:03	WG897813
2-Chlorophenol	ND		0.435	1	08/14/2016 19:03	WG897813
3&4-Methyl Phenol	ND		0.435	1	08/14/2016 19:03	WG897813
2-Methylphenol	ND		0.435	1	08/14/2016 19:03	WG897813
2,4-Dichlorophenol	ND		0.435	1	08/14/2016 19:03	WG897813
2,4-Dimethylphenol	ND		0.435	1	08/14/2016 19:03	WG897813
4,6-Dinitro-2-methylphenol	ND		0.435	1	08/14/2016 19:03	WG897813
2,4-Dinitrophenol	ND		0.435	1	08/14/2016 19:03	WG897813
2-Nitrophenol	ND		0.435	1	08/14/2016 19:03	WG897813
4-Nitrophenol	ND		0.435	1	08/14/2016 19:03	WG897813
Pentachlorophenol	ND		0.435	1	08/14/2016 19:03	WG897813
Phenol	ND		0.435	1	08/14/2016 19:03	WG897813
2,4,6-Trichlorophenol	ND		0.435	1	08/14/2016 19:03	WG897813
(S) 2-Fluorophenol	83.2		21.1-116		08/14/2016 19:03	WG897813
(S) Phenol-d5	71.0		26.3-121		08/14/2016 19:03	WG897813
(S) Nitrobenzene-d5	85.0		21.9-129		08/14/2016 19:03	WG897813
(S) 2-Fluorobiphenyl	65.8		34.9-129		08/14/2016 19:03	WG897813
(S) 2,4,6-Tribromophenol	104		21.6-142		08/14/2016 19:03	WG897813
(S) p-Terphenyl-d14	72.7		21.5-128		08/14/2016 19:03	WG897813

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0325		0.00784	1	08/16/2016 17:03	WG898739
Acenaphthene	0.00807		0.00784	1	08/16/2016 17:03	WG898739
Acenaphthylene	ND		0.00784	1	08/16/2016 17:03	WG898739
Benzo(a)anthracene	ND		0.00784	1	08/16/2016 17:03	WG898739
Benzo(a)pyrene	ND		0.00784	1	08/16/2016 17:03	WG898739
Benzo(b)fluoranthene	ND		0.00784	1	08/16/2016 17:03	WG898739
Benzo(g,h,i)perylene	ND		0.00784	1	08/16/2016 17:03	WG898739
Benzo(k)fluoranthene	ND		0.00784	1	08/16/2016 17:03	WG898739
Chrysene	ND		0.00784	1	08/16/2016 17:03	WG898739
Dibenz(a,h)anthracene	ND		0.00784	1	08/16/2016 17:03	WG898739
Fluoranthene	ND		0.00784	1	08/16/2016 17:03	WG898739
Fluorene	ND		0.00784	1	08/16/2016 17:03	WG898739
Indeno(1,2,3-cd)pyrene	ND		0.00784	1	08/16/2016 17:03	WG898739
Naphthalene	0.0281		0.0261	1	08/16/2016 17:03	WG898739
Phenanthrene	0.0324		0.00784	1	08/16/2016 17:03	WG898739
Pyrene	0.0124		0.00784	1	08/16/2016 17:03	WG898739
1-Methylnaphthalene	ND		0.0261	1	08/16/2016 17:03	WG898739
2-Methylnaphthalene	ND		0.0261	1	08/16/2016 17:03	WG898739
(S) Nitrobenzene-d5	84.3		22.1-146		08/16/2016 17:03	WG898739
(S) 2-Fluorobiphenyl	78.4		40.6-122		08/16/2016 17:03	WG898739
(S) p-Terphenyl-d14	59.1		32.2-131		08/16/2016 17:03	WG898739



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.7		1	08/11/2016 11:01	WG897847

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.22	1	08/16/2016 17:42	WG897836
Residual Range Organics (RRO)	ND		10.6	1	08/16/2016 17:42	WG897836
(S) o-Terphenyl	82.2		50.0-150		08/16/2016 17:42	WG897836

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L852414-04 WG897836: NWTPHDX - No SGT

6 Qc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00633	1	08/16/2016 17:24	WG898739
Acenaphthene	ND		0.00633	1	08/16/2016 17:24	WG898739
Acenaphthylene	ND		0.00633	1	08/16/2016 17:24	WG898739
Benzo(a)anthracene	ND		0.00633	1	08/16/2016 17:24	WG898739
Benzo(a)pyrene	ND		0.00633	1	08/16/2016 17:24	WG898739
Benzo(b)fluoranthene	ND		0.00633	1	08/16/2016 17:24	WG898739
Benzo(g,h,i)perylene	ND		0.00633	1	08/16/2016 17:24	WG898739
Benzo(k)fluoranthene	ND		0.00633	1	08/16/2016 17:24	WG898739
Chrysene	ND		0.00633	1	08/16/2016 17:24	WG898739
Dibenz(a,h)anthracene	ND		0.00633	1	08/16/2016 17:24	WG898739
Fluoranthene	ND		0.00633	1	08/16/2016 17:24	WG898739
Fluorene	ND		0.00633	1	08/16/2016 17:24	WG898739
Indeno(1,2,3-cd)pyrene	ND		0.00633	1	08/16/2016 17:24	WG898739
Naphthalene	ND		0.0211	1	08/16/2016 17:24	WG898739
Phenanthrene	ND		0.00633	1	08/16/2016 17:24	WG898739
Pyrene	ND		0.00633	1	08/16/2016 17:24	WG898739
1-Methylnaphthalene	ND		0.0211	1	08/16/2016 17:24	WG898739
2-Methylnaphthalene	ND		0.0211	1	08/16/2016 17:24	WG898739
(S) Nitrobenzene-d5	84.7		22.1-146		08/16/2016 17:24	WG898739
(S) 2-Fluorobiphenyl	78.4		40.6-122		08/16/2016 17:24	WG898739
(S) p-Terphenyl-d14	58.9		32.2-131		08/16/2016 17:24	WG898739

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.7		1	08/11/2016 11:01	WG897847

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	ND		4.90	1	08/16/2016 14:51	WG897836
Residual Range Organics (RRO)	ND		12.2	1	08/16/2016 14:51	WG897836
(S) o-Terphenyl	92.0		50.0-150		08/16/2016 14:51	WG897836

Sample Narrative:

NWTPHDX L852414-05 WG897836: NWTPHDX - No SGT

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acenaphthene	ND		0.0404	1	08/14/2016 19:28	WG897813
Acenaphthylene	ND		0.0404	1	08/14/2016 19:28	WG897813
Anthracene	ND		0.0404	1	08/14/2016 19:28	WG897813
Benzidine	ND		0.408	1	08/14/2016 19:28	WG897813
Benzo(a)anthracene	ND		0.0404	1	08/14/2016 19:28	WG897813
Benzo(b)fluoranthene	ND		0.0404	1	08/14/2016 19:28	WG897813
Benzo(k)fluoranthene	ND		0.0404	1	08/14/2016 19:28	WG897813
Benzo(g,h,i)perylene	ND		0.0404	1	08/14/2016 19:28	WG897813
Benzo(a)pyrene	ND		0.0404	1	08/14/2016 19:28	WG897813
Bis(2-chlorethoxy)methane	ND		0.408	1	08/14/2016 19:28	WG897813
Bis(2-chloroethyl)ether	ND		0.408	1	08/14/2016 19:28	WG897813
Bis(2-chloroisopropyl)ether	ND		0.408	1	08/14/2016 19:28	WG897813
4-Bromophenyl-phenylether	ND		0.408	1	08/14/2016 19:28	WG897813
2-Chloronaphthalene	ND		0.0404	1	08/14/2016 19:28	WG897813
4-Chlorophenyl-phenylether	ND		0.408	1	08/14/2016 19:28	WG897813
Chrysene	ND		0.0404	1	08/14/2016 19:28	WG897813
Dibenz(a,h)anthracene	ND		0.0404	1	08/14/2016 19:28	WG897813
3,3-Dichlorobenzidine	ND		0.408	1	08/14/2016 19:28	WG897813
2,4-Dinitrotoluene	ND		0.408	1	08/14/2016 19:28	WG897813
2,6-Dinitrotoluene	ND		0.408	1	08/14/2016 19:28	WG897813
Fluoranthene	ND		0.0404	1	08/14/2016 19:28	WG897813
Fluorene	ND		0.0404	1	08/14/2016 19:28	WG897813
Hexachlorobenzene	ND		0.408	1	08/14/2016 19:28	WG897813
Hexachloro-1,3-butadiene	ND		0.408	1	08/14/2016 19:28	WG897813
Hexachlorocyclopentadiene	ND		0.408	1	08/14/2016 19:28	WG897813
Hexachloroethane	ND		0.408	1	08/14/2016 19:28	WG897813
Indeno(1,2,3-cd)pyrene	ND		0.0404	1	08/14/2016 19:28	WG897813
Isophorone	ND		0.408	1	08/14/2016 19:28	WG897813
Naphthalene	ND		0.0404	1	08/14/2016 19:28	WG897813
Nitrobenzene	ND		0.408	1	08/14/2016 19:28	WG897813
n-Nitrosodimethylamine	ND		0.408	1	08/14/2016 19:28	WG897813
n-Nitrosodiphenylamine	ND		0.408	1	08/14/2016 19:28	WG897813
n-Nitrosodi-n-propylamine	ND		0.408	1	08/14/2016 19:28	WG897813
Phenanthrene	ND		0.0404	1	08/14/2016 19:28	WG897813
Benzylbutyl phthalate	ND		0.408	1	08/14/2016 19:28	WG897813
Bis(2-ethylhexyl)phthalate	ND		0.408	1	08/14/2016 19:28	WG897813
Di-n-butyl phthalate	ND		0.408	1	08/14/2016 19:28	WG897813
Diethyl phthalate	ND		0.408	1	08/14/2016 19:28	WG897813
Dimethyl phthalate	ND		0.408	1	08/14/2016 19:28	WG897813
Di-n-octyl phthalate	ND		0.408	1	08/14/2016 19:28	WG897813

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/05/16 12:00

L852414

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Pyrene	ND		0.0404	1	08/14/2016 19:28	WG897813
1,2,4-Trichlorobenzene	ND		0.408	1	08/14/2016 19:28	WG897813
4-Chloro-3-methylphenol	ND		0.408	1	08/14/2016 19:28	WG897813
2-Chlorophenol	ND		0.408	1	08/14/2016 19:28	WG897813
3&4-Methyl Phenol	ND		0.408	1	08/14/2016 19:28	WG897813
2-Methylphenol	ND		0.408	1	08/14/2016 19:28	WG897813
2,4-Dichlorophenol	ND		0.408	1	08/14/2016 19:28	WG897813
2,4-Dimethylphenol	ND		0.408	1	08/14/2016 19:28	WG897813
4,6-Dinitro-2-methylphenol	ND		0.408	1	08/14/2016 19:28	WG897813
2,4-Dinitrophenol	ND		0.408	1	08/14/2016 19:28	WG897813
2-Nitrophenol	ND		0.408	1	08/14/2016 19:28	WG897813
4-Nitrophenol	ND		0.408	1	08/14/2016 19:28	WG897813
Pentachlorophenol	ND		0.408	1	08/14/2016 19:28	WG897813
Phenol	ND		0.408	1	08/14/2016 19:28	WG897813
2,4,6-Trichlorophenol	ND		0.408	1	08/14/2016 19:28	WG897813
(S) 2-Fluorophenol	74.0		21.1-116		08/14/2016 19:28	WG897813
(S) Phenol-d5	79.4		26.3-121		08/14/2016 19:28	WG897813
(S) Nitrobenzene-d5	108		21.9-129		08/14/2016 19:28	WG897813
(S) 2-Fluorobiphenyl	90.0		34.9-129		08/14/2016 19:28	WG897813
(S) 2,4,6-Tribromophenol	109		21.6-142		08/14/2016 19:28	WG897813
(S) p-Terphenyl-d14	88.4		21.5-128		08/14/2016 19:28	WG897813

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00734	1	08/16/2016 17:45	WG898739
Acenaphthene	ND		0.00734	1	08/16/2016 17:45	WG898739
Acenaphthylene	ND		0.00734	1	08/16/2016 17:45	WG898739
Benzo(a)anthracene	ND		0.00734	1	08/16/2016 17:45	WG898739
Benzo(a)pyrene	ND		0.00734	1	08/16/2016 17:45	WG898739
Benzo(b)fluoranthene	ND		0.00734	1	08/16/2016 17:45	WG898739
Benzo(g,h,i)perylene	ND		0.00734	1	08/16/2016 17:45	WG898739
Benzo(k)fluoranthene	ND		0.00734	1	08/16/2016 17:45	WG898739
Chrysene	ND		0.00734	1	08/16/2016 17:45	WG898739
Dibenz(a,h)anthracene	ND		0.00734	1	08/16/2016 17:45	WG898739
Fluoranthene	ND		0.00734	1	08/16/2016 17:45	WG898739
Fluorene	ND		0.00734	1	08/16/2016 17:45	WG898739
Indeno(1,2,3-cd)pyrene	ND		0.00734	1	08/16/2016 17:45	WG898739
Naphthalene	ND		0.0245	1	08/16/2016 17:45	WG898739
Phenanthrene	ND		0.00734	1	08/16/2016 17:45	WG898739
Pyrene	ND		0.00734	1	08/16/2016 17:45	WG898739
1-Methylnaphthalene	ND		0.0245	1	08/16/2016 17:45	WG898739
2-Methylnaphthalene	ND		0.0245	1	08/16/2016 17:45	WG898739
(S) Nitrobenzene-d5	92.8		22.1-146		08/16/2016 17:45	WG898739
(S) 2-Fluorobiphenyl	67.4		40.6-122		08/16/2016 17:45	WG898739
(S) p-Terphenyl-d14	71.0		32.2-131		08/16/2016 17:45	WG898739



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	78.0		1	08/11/2016 11:01	WG897847

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.13	1	08/16/2016 15:03	WG897836
Residual Range Organics (RRO)	ND		12.8	1	08/16/2016 15:03	WG897836
(S) o-Terphenyl	92.1		50.0-150		08/16/2016 15:03	WG897836

Sample Narrative:

NWTPHDX L852414-06 WG897836: NWTPHDX - No SGT



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.8		1	08/11/2016 11:01	WG897847

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.21	1	08/16/2016 15:16	WG897836
Residual Range Organics (RRO)	ND		13.0	1	08/16/2016 15:16	WG897836
(S) o-Terphenyl	87.6		50.0-150		08/16/2016 15:16	WG897836

Sample Narrative:

NWTPHDX L852414-07 WG897836: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00781	1	08/16/2016 18:06	WG898739
Acenaphthene	ND		0.00781	1	08/16/2016 18:06	WG898739
Acenaphthylene	ND		0.00781	1	08/16/2016 18:06	WG898739
Benzo(a)anthracene	ND		0.00781	1	08/16/2016 18:06	WG898739
Benzo(a)pyrene	ND		0.00781	1	08/16/2016 18:06	WG898739
Benzo(b)fluoranthene	ND		0.00781	1	08/16/2016 18:06	WG898739
Benzo(g,h,i)perylene	ND		0.00781	1	08/16/2016 18:06	WG898739
Benzo(k)fluoranthene	ND		0.00781	1	08/16/2016 18:06	WG898739
Chrysene	ND		0.00781	1	08/16/2016 18:06	WG898739
Dibenz(a,h)anthracene	ND		0.00781	1	08/16/2016 18:06	WG898739
Fluoranthene	ND		0.00781	1	08/16/2016 18:06	WG898739
Fluorene	ND		0.00781	1	08/16/2016 18:06	WG898739
Indeno(1,2,3-cd)pyrene	ND		0.00781	1	08/16/2016 18:06	WG898739
Naphthalene	ND		0.0260	1	08/16/2016 18:06	WG898739
Phenanthrene	ND		0.00781	1	08/16/2016 18:06	WG898739
Pyrene	ND		0.00781	1	08/16/2016 18:06	WG898739
1-Methylnaphthalene	ND		0.0260	1	08/16/2016 18:06	WG898739
2-Methylnaphthalene	ND		0.0260	1	08/16/2016 18:06	WG898739
(S) Nitrobenzene-d5	82.3		22.1-146		08/16/2016 18:06	WG898739
(S) 2-Fluorobiphenyl	77.2		40.6-122		08/16/2016 18:06	WG898739
(S) p-Terphenyl-d14	66.6		32.2-131		08/16/2016 18:06	WG898739

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	82.0		1	08/11/2016 11:01	WG897847

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.88	1	08/16/2016 16:05	WG897836
Residual Range Organics (RRO)	ND		12.2	1	08/16/2016 16:05	WG897836
(S) o-Terphenyl	73.6		50.0-150		08/16/2016 16:05	WG897836

Sample Narrative:

NWTPHDX L852414-08 WG897836: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00732	1	08/16/2016 18:27	WG898739
Acenaphthene	ND		0.00732	1	08/16/2016 18:27	WG898739
Acenaphthylene	ND		0.00732	1	08/16/2016 18:27	WG898739
Benzo(a)anthracene	ND		0.00732	1	08/16/2016 18:27	WG898739
Benzo(a)pyrene	ND		0.00732	1	08/16/2016 18:27	WG898739
Benzo(b)fluoranthene	ND		0.00732	1	08/16/2016 18:27	WG898739
Benzo(g,h,i)perylene	ND		0.00732	1	08/16/2016 18:27	WG898739
Benzo(k)fluoranthene	ND		0.00732	1	08/16/2016 18:27	WG898739
Chrysene	ND		0.00732	1	08/16/2016 18:27	WG898739
Dibenz(a,h)anthracene	ND		0.00732	1	08/16/2016 18:27	WG898739
Fluoranthene	ND		0.00732	1	08/16/2016 18:27	WG898739
Fluorene	ND		0.00732	1	08/16/2016 18:27	WG898739
Indeno(1,2,3-cd)pyrene	ND		0.00732	1	08/16/2016 18:27	WG898739
Naphthalene	ND		0.0244	1	08/16/2016 18:27	WG898739
Phenanthrene	ND		0.00732	1	08/16/2016 18:27	WG898739
Pyrene	ND		0.00732	1	08/16/2016 18:27	WG898739
1-Methylnaphthalene	ND		0.0244	1	08/16/2016 18:27	WG898739
2-Methylnaphthalene	ND		0.0244	1	08/16/2016 18:27	WG898739
(S) Nitrobenzene-d5	89.1		22.1-146		08/16/2016 18:27	WG898739
(S) 2-Fluorobiphenyl	80.0		40.6-122		08/16/2016 18:27	WG898739
(S) p-Terphenyl-d14	55.8		32.2-131		08/16/2016 18:27	WG898739



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.1		1	08/11/2016 10:38	WG897849

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	ND		42.1	10	08/16/2016 18:19	WG897836
Residual Range Organics (RRO)	113		105	10	08/16/2016 18:19	WG897836
<i>(S) o-Terphenyl</i>	95.9		50.0-150		08/16/2016 18:19	WG897836

Sample Narrative:

NWTPHDX L852414-09 WG897836: Cannot run at lower dilution due to viscosity of extract - NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.0315	5	08/16/2016 17:23	WG898739
Acenaphthene	ND		0.0315	5	08/16/2016 17:23	WG898739
Acenaphthylene	ND		0.0315	5	08/16/2016 17:23	WG898739
Benzo(a)anthracene	ND		0.0315	5	08/16/2016 17:23	WG898739
Benzo(a)pyrene	ND		0.0315	5	08/16/2016 17:23	WG898739
Benzo(b)fluoranthene	ND		0.0315	5	08/16/2016 17:23	WG898739
Benzo(g,h,i)perylene	0.0566		0.0315	5	08/16/2016 17:23	WG898739
Benzo(k)fluoranthene	ND		0.0315	5	08/16/2016 17:23	WG898739
Chrysene	ND		0.0315	5	08/16/2016 17:23	WG898739
Dibenz(a,h)anthracene	ND		0.0315	5	08/16/2016 17:23	WG898739
Fluoranthene	ND		0.0315	5	08/16/2016 17:23	WG898739
Fluorene	ND		0.0315	5	08/16/2016 17:23	WG898739
Indeno(1,2,3-cd)pyrene	ND		0.0315	5	08/16/2016 17:23	WG898739
Naphthalene	ND		0.105	5	08/16/2016 17:23	WG898739
Phenanthrene	ND		0.0315	5	08/16/2016 17:23	WG898739
Pyrene	ND		0.0315	5	08/16/2016 17:23	WG898739
1-Methylnaphthalene	ND		0.105	5	08/16/2016 17:23	WG898739
2-Methylnaphthalene	ND		0.105	5	08/16/2016 17:23	WG898739
<i>(S) Nitrobenzene-d5</i>	74.4		22.1-146		08/16/2016 17:23	WG898739
<i>(S) 2-Fluorobiphenyl</i>	72.5		40.6-122		08/16/2016 17:23	WG898739
<i>(S) p-Terphenyl-d14</i>	58.7		32.2-131		08/16/2016 17:23	WG898739

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	75.3		1	08/11/2016 10:38	WG897849

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	22.7		5.31	1	08/16/2016 17:54	WG897836
Residual Range Organics (RRO)	23.5		13.3	1	08/16/2016 17:54	WG897836
(S) o-Terphenyl	54.9		50.0-150		08/16/2016 17:54	WG897836

Sample Narrative:

NWTPHDX L852414-10 WG897836: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00797	1	08/16/2016 16:59	WG898739
Acenaphthene	ND		0.00797	1	08/16/2016 16:59	WG898739
Acenaphthylene	ND		0.00797	1	08/16/2016 16:59	WG898739
Benzo(a)anthracene	ND		0.00797	1	08/16/2016 16:59	WG898739
Benzo(a)pyrene	ND		0.00797	1	08/16/2016 16:59	WG898739
Benzo(b)fluoranthene	ND		0.00797	1	08/16/2016 16:59	WG898739
Benzo(g,h,i)perylene	ND		0.00797	1	08/16/2016 16:59	WG898739
Benzo(k)fluoranthene	ND		0.00797	1	08/16/2016 16:59	WG898739
Chrysene	ND		0.00797	1	08/16/2016 16:59	WG898739
Dibenz(a,h)anthracene	ND		0.00797	1	08/16/2016 16:59	WG898739
Fluoranthene	ND		0.00797	1	08/16/2016 16:59	WG898739
Fluorene	0.0105		0.00797	1	08/16/2016 16:59	WG898739
Indeno(1,2,3-cd)pyrene	ND		0.00797	1	08/16/2016 16:59	WG898739
Naphthalene	ND		0.0266	1	08/16/2016 16:59	WG898739
Phenanthrene	0.00960		0.00797	1	08/16/2016 16:59	WG898739
Pyrene	ND		0.00797	1	08/16/2016 16:59	WG898739
1-Methylnaphthalene	0.0449		0.0266	1	08/16/2016 16:59	WG898739
2-Methylnaphthalene	0.0279		0.0266	1	08/16/2016 16:59	WG898739
(S) Nitrobenzene-d5	70.3		22.1-146		08/16/2016 16:59	WG898739
(S) 2-Fluorobiphenyl	74.2		40.6-122		08/16/2016 16:59	WG898739
(S) p-Terphenyl-d14	51.6		32.2-131		08/16/2016 16:59	WG898739

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.1		1	08/11/2016 10:38	WG897849

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.93	1	08/16/2016 16:17	WG897836
Residual Range Organics (RRO)	ND		12.3	1	08/16/2016 16:17	WG897836
(S) o-Terphenyl	91.4		50.0-150		08/16/2016 16:17	WG897836

Sample Narrative:

NWTPHDX L852414-11 WG897836: NWTPHDX - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00740	1	08/16/2016 18:48	WG898739
Acenaphthene	ND		0.00740	1	08/16/2016 18:48	WG898739
Acenaphthylene	ND		0.00740	1	08/16/2016 18:48	WG898739
Benzo(a)anthracene	ND		0.00740	1	08/16/2016 18:48	WG898739
Benzo(a)pyrene	ND		0.00740	1	08/16/2016 18:48	WG898739
Benzo(b)fluoranthene	ND		0.00740	1	08/16/2016 18:48	WG898739
Benzo(g,h,i)perylene	ND		0.00740	1	08/16/2016 18:48	WG898739
Benzo(k)fluoranthene	ND		0.00740	1	08/16/2016 18:48	WG898739
Chrysene	ND		0.00740	1	08/16/2016 18:48	WG898739
Dibenz(a,h)anthracene	ND		0.00740	1	08/16/2016 18:48	WG898739
Fluoranthene	ND		0.00740	1	08/16/2016 18:48	WG898739
Fluorene	ND		0.00740	1	08/16/2016 18:48	WG898739
Indeno(1,2,3-cd)pyrene	ND		0.00740	1	08/16/2016 18:48	WG898739
Naphthalene	ND		0.0247	1	08/16/2016 18:48	WG898739
Phenanthrene	ND		0.00740	1	08/16/2016 18:48	WG898739
Pyrene	ND		0.00740	1	08/16/2016 18:48	WG898739
1-Methylnaphthalene	ND		0.0247	1	08/16/2016 18:48	WG898739
2-Methylnaphthalene	ND		0.0247	1	08/16/2016 18:48	WG898739
(S) Nitrobenzene-d5	82.8		22.1-146		08/16/2016 18:48	WG898739
(S) 2-Fluorobiphenyl	76.1		40.6-122		08/16/2016 18:48	WG898739
(S) p-Terphenyl-d14	56.1		32.2-131		08/16/2016 18:48	WG898739

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	83.3		1	08/11/2016 10:38	WG897849

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND	J3	4.80	1	08/16/2016 16:30	WG897836
Residual Range Organics (RRO)	ND	J3 J6	12.0	1	08/16/2016 16:30	WG897836
(S) o-Terphenyl	77.5		50.0-150		08/16/2016 16:30	WG897836

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L852414-12 WG897836: NWTPHDX - No SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.9		1	08/11/2016 10:38	WG897849

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.20	1	08/16/2016 17:06	WG897836
Residual Range Organics (RRO)	ND		13.0	1	08/16/2016 17:06	WG897836
(S) o-Terphenyl	94.2		50.0-150		08/16/2016 17:06	WG897836

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L852414-13 WG897836: NWTPHDX - No SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.5		1	08/11/2016 10:38	WG897849

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.42	1	08/16/2016 17:18	WG897836
Residual Range Organics (RRO)	ND		11.0	1	08/16/2016 17:18	WG897836
(S) o-Terphenyl	69.4		50.0-150		08/16/2016 17:18	WG897836

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L852414-14 WG897836: NWTPHDX - No SGT

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		2.44	48.75	08/15/2016 09:10	WG898513
Acrylonitrile	ND		0.488	48.75	08/15/2016 09:10	WG898513
Benzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Bromobenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Bromodichloromethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Bromoform	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Bromomethane	ND		0.244	48.75	08/15/2016 09:10	WG898513
n-Butylbenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
sec-Butylbenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
tert-Butylbenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Carbon tetrachloride	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Chlorobenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Chlorodibromomethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Chloroethane	ND		0.244	48.75	08/15/2016 09:10	WG898513
2-Chloroethyl vinyl ether	ND		2.44	48.75	08/15/2016 09:10	WG898513
Chloroform	ND		0.244	48.75	08/15/2016 09:10	WG898513
Chloromethane	ND		0.122	48.75	08/15/2016 09:10	WG898513
2-Chlorotoluene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
4-Chlorotoluene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,2-Dibromo-3-Chloropropane	ND		0.244	48.75	08/15/2016 09:10	WG898513
1,2-Dibromoethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Dibromomethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,2-Dichlorobenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,3-Dichlorobenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,4-Dichlorobenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Dichlorodifluoromethane	ND		0.244	48.75	08/15/2016 09:10	WG898513
1,1-Dichloroethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,2-Dichloroethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,1-Dichloroethene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
cis-1,2-Dichloroethene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
trans-1,2-Dichloroethene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,2-Dichloropropane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,1-Dichloropropene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,3-Dichloropropane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
cis-1,3-Dichloropropene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
trans-1,3-Dichloropropene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
2,2-Dichloropropane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Di-isopropyl ether	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Ethylbenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Hexachloro-1,3-butadiene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Isopropylbenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
p-Isopropyltoluene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
2-Butanone (MEK)	ND		0.488	48.75	08/15/2016 09:10	WG898513
Methylene Chloride	ND		0.244	48.75	08/15/2016 09:10	WG898513
4-Methyl-2-pentanone (MIBK)	ND		0.488	48.75	08/15/2016 09:10	WG898513
Methyl tert-butyl ether	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Naphthalene	ND		0.244	48.75	08/15/2016 09:10	WG898513
n-Propylbenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Styrene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,1,1,2-Tetrachloroethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,1,2,2-Tetrachloroethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,1,2-Trichlorotrifluoroethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Tetrachloroethene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Toluene	ND		0.244	48.75	08/15/2016 09:10	WG898513
1,2,3-Trichlorobenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,2,4-Trichlorobenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/04/16 09:10

L852414

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,1,2-Trichloroethane	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Trichloroethene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Trichlorofluoromethane	ND		0.244	48.75	08/15/2016 09:10	WG898513
1,2,3-Trichloropropane	ND		0.122	48.75	08/15/2016 09:10	WG898513
1,2,4-Trimethylbenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,2,3-Trimethylbenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Vinyl chloride	ND		0.0488	48.75	08/15/2016 09:10	WG898513
1,3,5-Trimethylbenzene	ND		0.0488	48.75	08/15/2016 09:10	WG898513
Xylenes, Total	ND		0.146	48.75	08/15/2016 09:10	WG898513
(S) Toluene-d8	99.7		88.7-115		08/15/2016 09:10	WG898513
(S) Dibromofluoromethane	105		76.3-123		08/15/2016 09:10	WG898513
(S) 4-Bromofluorobenzene	101		69.7-129		08/15/2016 09:10	WG898513

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

Sample Narrative:

8260B L852414-15 WG898513: Lowest possible dilution due to sample matrix.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.1		1	08/11/2016 10:38	WG897849

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	322		49.3	10	08/16/2016 18:07	WG897836
Residual Range Organics (RRO)	1610		123	10	08/16/2016 18:07	WG897836
(S) o-Terphenyl	46.5	J2	50.0-150		08/16/2016 18:07	WG897836

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L852414-16 WG897836: NWTPHDX - No SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.2		1	08/11/2016 10:38	WG897849

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.99	1	08/16/2016 17:30	WG897836
Residual Range Organics (RRO)	ND		12.5	1	08/16/2016 17:30	WG897836
(S) o-Terphenyl	85.9		50.0-150		08/16/2016 17:30	WG897836

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L852414-17 WG897836: NWTPHDX - No SGT

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3156264-1 08/11/16 11:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00150			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

L852414-08 Original Sample (OS) • Duplicate (DUP)

(OS) L852414-08 08/11/16 11:01 • (DUP) R3156264-3 08/11/16 11:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	82.0	82.4	1	0.557		5

⁶ Qc

Laboratory Control Sample (LCS)

(LCS) R3156264-2 08/11/16 11:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	49.9	99.9	85.0-115	

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3156262-1 08/11/16 10:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000300			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

L852436-02 Original Sample (OS) • Duplicate (DUP)

(OS) L852436-02 08/11/16 10:38 • (DUP) R3156262-3 08/11/16 10:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	92.6	90.5	1	2.29		5

⁶ Qc

Laboratory Control Sample (LCS)

(LCS) R3156262-2 08/11/16 10:38

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	99.9	85.0-115	

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3156881-2 08/15/16 01:34

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 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
Hexachloro-1,3-butadiene	U		0.000342	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3156881-2 08/15/16 01:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	98.3			76.3-123
(S) 4-Bromofluorobenzene	96.9			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) R3156881-1 08/15/16 00:07 • (LCSD) R3156881-3 08/15/16 02:37

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	0.102	0.0924	81.9	73.9	25.3-178			10.3	22.9
Acrylonitrile	0.125	0.138	0.132	111	106	57.8-143			4.30	20
Benzene	0.0250	0.0228	0.0228	91.1	91.2	72.6-120			0.120	20
Bromobenzene	0.0250	0.0232	0.0234	93.0	93.8	80.3-115			0.820	20



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

(LCS) R3156881-1 08/15/16 00:07 • (LCSD) R3156881-3 08/15/16 02:37

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 %
Bromodichloromethane	0.0250	0.0223	0.0222	89.1	88.7	75.3-119			0.420	20
Bromoform	0.0250	0.0232	0.0222	92.8	88.7	69.1-135			4.62	20
Bromomethane	0.0250	0.0238	0.0243	95.2	97.0	23.0-191			1.88	20
n-Butylbenzene	0.0250	0.0219	0.0219	87.7	87.7	74.2-134			0.0200	20
sec-Butylbenzene	0.0250	0.0238	0.0242	95.3	96.8	77.8-129			1.58	20
tert-Butylbenzene	0.0250	0.0241	0.0245	96.2	98.1	77.2-129			1.89	20
Carbon tetrachloride	0.0250	0.0226	0.0224	90.2	89.6	69.4-129			0.680	20
Chlorobenzene	0.0250	0.0226	0.0225	90.3	90.2	78.9-122			0.0900	20
Chlorodibromomethane	0.0250	0.0230	0.0226	92.0	90.2	76.4-126			1.97	20
Chloroethane	0.0250	0.0236	0.0233	94.2	93.1	47.2-147			1.19	20
2-Chloroethyl vinyl ether	0.125	0.116	0.113	92.8	90.2	16.7-162			2.85	23.7
Chloroform	0.0250	0.0239	0.0241	95.8	96.3	73.3-122			0.550	20
Chloromethane	0.0250	0.0211	0.0215	84.4	86.0	53.1-135			1.88	20
2-Chlorotoluene	0.0250	0.0235	0.0240	93.8	95.8	74.6-127			2.15	20
4-Chlorotoluene	0.0250	0.0235	0.0240	94.1	96.1	79.5-123			2.06	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0241	0.0226	96.5	90.5	64.9-131			6.44	20
1,2-Dibromoethane	0.0250	0.0230	0.0223	91.9	89.2	78.7-123			3.08	20
Dibromomethane	0.0250	0.0245	0.0240	97.9	95.9	78.5-117			1.97	20
1,2-Dichlorobenzene	0.0250	0.0225	0.0225	89.9	90.0	83.6-119			0.160	20
1,3-Dichlorobenzene	0.0250	0.0241	0.0243	96.3	97.0	75.9-129			0.710	20
1,4-Dichlorobenzene	0.0250	0.0219	0.0218	87.6	87.0	81.0-115			0.660	20
Dichlorodifluoromethane	0.0250	0.0229	0.0237	91.7	94.9	50.9-139			3.40	20
1,1-Dichloroethane	0.0250	0.0242	0.0247	96.9	98.8	71.7-125			1.95	20
1,2-Dichloroethane	0.0250	0.0248	0.0246	99.1	98.5	67.2-121			0.580	20
1,1-Dichloroethene	0.0250	0.0221	0.0220	88.6	88.1	60.6-133			0.520	20
cis-1,2-Dichloroethene	0.0250	0.0241	0.0244	96.3	97.4	76.1-121			1.17	20
trans-1,2-Dichloroethene	0.0250	0.0228	0.0229	91.3	91.6	70.7-124			0.230	20
1,2-Dichloropropane	0.0250	0.0230	0.0232	92.1	92.7	76.9-123			0.550	20
1,1-Dichloropropene	0.0250	0.0239	0.0237	95.6	94.8	71.2-126			0.800	20
1,3-Dichloropropane	0.0250	0.0225	0.0222	90.0	88.8	80.3-114			1.33	20
cis-1,3-Dichloropropene	0.0250	0.0231	0.0226	92.5	90.3	77.3-123			2.36	20
trans-1,3-Dichloropropene	0.0250	0.0227	0.0223	90.7	89.0	73.0-127			1.85	20
2,2-Dichloropropane	0.0250	0.0233	0.0243	93.1	97.1	61.9-132			4.22	20
Di-isopropyl ether	0.0250	0.0231	0.0235	92.3	94.1	67.2-131			1.95	20
Ethylbenzene	0.0250	0.0225	0.0224	89.8	89.6	78.6-124			0.220	20
Hexachloro-1,3-butadiene	0.0250	0.0223	0.0220	89.3	87.9	69.2-136			1.56	20
Isopropylbenzene	0.0250	0.0231	0.0234	92.5	93.6	79.4-126			1.26	20
p-Isopropyltoluene	0.0250	0.0243	0.0249	97.4	99.7	75.4-132			2.33	20
2-Butanone (MEK)	0.125	0.136	0.128	109	102	44.5-154			6.73	21.3
Methylene Chloride	0.0250	0.0229	0.0231	91.4	92.4	68.2-119			1.11	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) R3156881-1 08/15/16 00:07 • (LCSD) R3156881-3 08/15/16 02:37

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 %
4-Methyl-2-pentanone (MIBK)	0.125	0.130	0.126	104	101	61.1-138			2.74	20
Methyl tert-butyl ether	0.0250	0.0250	0.0250	99.8	99.9	70.2-122			0.120	20
Naphthalene	0.0250	0.0233	0.0226	93.1	90.3	69.9-132			3.07	20
n-Propylbenzene	0.0250	0.0238	0.0241	95.1	96.2	80.2-124			1.14	20
Styrene	0.0250	0.0240	0.0236	95.9	94.3	79.4-124			1.72	20
1,1,1,2-Tetrachloroethane	0.0250	0.0236	0.0235	94.4	93.9	76.7-127			0.570	20
1,1,2,2-Tetrachloroethane	0.0250	0.0241	0.0235	96.4	93.9	78.8-124			2.61	20
Tetrachloroethene	0.0250	0.0230	0.0223	91.9	89.0	71.1-133			3.12	20
Toluene	0.0250	0.0214	0.0212	85.6	85.0	76.7-116			0.700	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0240	0.0243	95.9	97.3	62.6-138			1.45	20
1,2,3-Trichlorobenzene	0.0250	0.0231	0.0231	92.5	92.4	72.5-137			0.0900	20
1,2,4-Trichlorobenzene	0.0250	0.0232	0.0231	93.0	92.5	74.0-137			0.570	20
1,1,1-Trichloroethane	0.0250	0.0243	0.0251	97.2	100	69.9-127			3.25	20
1,1,2-Trichloroethane	0.0250	0.0226	0.0223	90.4	89.1	81.9-119			1.45	20
Trichloroethene	0.0250	0.0240	0.0236	95.9	94.6	77.2-122			1.34	20
Trichlorofluoromethane	0.0250	0.0242	0.0243	96.7	97.4	51.5-151			0.730	20
1,2,3-Trichloropropane	0.0250	0.0265	0.0251	106	100	74.0-124			5.27	20
1,2,3-Trimethylbenzene	0.0250	0.0215	0.0215	86.1	86.0	79.4-118			0.0100	20
1,2,4-Trimethylbenzene	0.0250	0.0238	0.0240	95.1	96.0	77.1-124			1.01	20
1,3,5-Trimethylbenzene	0.0250	0.0233	0.0238	93.3	95.1	79.0-125			1.94	20
Vinyl chloride	0.0250	0.0227	0.0229	90.8	91.5	58.4-134			0.830	20
Xylenes, Total	0.0750	0.0683	0.0686	91.1	91.5	78.1-123			0.450	20
(S) Toluene-d8				102	101	88.7-115				
(S) Dibromofluoromethane				107	107	76.3-123				
(S) 4-Bromofluorobenzene				100	101	69.7-129				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L851720-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L851720-12 08/15/16 04:00 • (MS) R3156881-4 08/15/16 03:08 • (MSD) R3156881-5 08/15/16 03:26

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.146	0.0418	ND	ND	0.000	0.000	1	10.0-130	J6	J6	0.000	31.5
Acrylonitrile	0.146	U	0.00562	0.00419	3.86	2.87	1	39.3-152	J6	J3 J6	29.2	27.2
Benzene	0.0292	U	0.000940	0.000361	3.22	1.24	1	47.8-131	J6	J3 J6	89.0	22.8
Bromobenzene	0.0292	U	0.000712	ND	2.44	0.000	1	40.0-130	J6	J3 J6	200	27.4
Bromodichloromethane	0.0292	U	0.000934	ND	3.20	0.000	1	50.6-128	J6	J3 J6	200	22.8
Bromoform	0.0292	U	0.000768	ND	2.63	0.000	1	43.3-139	J6	J3 J6	200	25.9
Bromomethane	0.0292	U	ND	ND	0.000	0.000	1	5.00-189	J6	J6	0.000	26.7
n-Butylbenzene	0.0292	U	0.000342	ND	1.17	0.000	1	23.6-146	J6	J3 J6	200	39.2



L851720-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L851720-12 08/15/16 04:00 • (MS) R3156881-4 08/15/16 03:08 • (MSD) R3156881-5 08/15/16 03:26

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
sec-Butylbenzene	0.0292	U	0.000480	ND	1.64	0.000	1	31.0-142	J6	J3 J6	200	34.7
tert-Butylbenzene	0.0292	U	0.000583	ND	2.00	0.000	1	36.9-142	J6	J3 J6	200	31.7
Carbon tetrachloride	0.0292	U	0.000817	ND	2.80	0.000	1	46.0-140	J6	J3 J6	200	27.2
Chlorobenzene	0.0292	U	0.000802	ND	2.75	0.000	1	44.1-134	J6	J3 J6	200	25.7
Chlorodibromomethane	0.0292	U	0.000908	ND	3.11	0.000	1	49.7-134	J6	J3 J6	200	24
Chloroethane	0.0292	U	ND	ND	0.000	0.000	1	5.00-164	J6	J6	0.000	28.4
2-Chloroethyl vinyl ether	0.146	U	0.00535	ND	3.66	0.000	1	5.00-159	J6	J3 J6	200	40
Chloroform	0.0292	U	0.000935	0.000428	3.20	1.47	1	51.2-133	J6	J3 J6	74.3	22.8
Chloromethane	0.0292	U	0.000994	0.000939	3.41	3.22	1	31.4-141	J6	J6	5.72	24.6
2-Chlorotoluene	0.0292	U	0.000565	ND	1.94	0.000	1	36.1-137	J6	J3 J6	200	28.9
4-Chlorotoluene	0.0292	U	0.000577	ND	1.98	0.000	1	35.4-137	J6	J3 J6	200	29.8
1,2-Dibromo-3-Chloropropane	0.0292	U	ND	ND	0.000	0.000	1	40.4-138	J6	J6	0.000	30.8
1,2-Dibromoethane	0.0292	U	0.00112	ND	3.82	0.000	1	50.2-133	J6	J3 J6	200	23.6
Dibromomethane	0.0292	U	0.00106	0.000457	3.64	1.57	1	52.4-128	J6	J3 J6	79.6	23
1,2-Dichlorobenzene	0.0292	U	0.000554	ND	1.90	0.000	1	34.6-139	J6	J3 J6	200	29.9
1,3-Dichlorobenzene	0.0292	U	0.000527	ND	1.81	0.000	1	28.4-142	J6	J3 J6	200	31.2
1,4-Dichlorobenzene	0.0292	U	0.000550	ND	1.89	0.000	1	35.0-133	J6	J3 J6	200	31.1
Dichlorodifluoromethane	0.0292	U	ND	ND	0.000	0.000	1	31.2-144	J6	J6	0.000	30.2
1,1-Dichloroethane	0.0292	U	0.00116	0.000732	3.97	2.51	1	49.1-136	J6	J3 J6	45.3	22.9
1,2-Dichloroethane	0.0292	U	0.00109	0.000540	3.75	1.85	1	47.1-129	J6	J3 J6	67.9	22.7
1,1-Dichloroethene	0.0292	U	0.000763	0.000402	2.62	1.38	1	36.1-142	J6	J3 J6	62.0	25.6
cis-1,2-Dichloroethene	0.0292	U	0.000922	0.000476	3.16	1.63	1	50.6-133	J6	J3 J6	63.9	23
trans-1,2-Dichloroethene	0.0292	U	0.000772	0.000460	2.65	1.58	1	43.8-135	J6	J3 J6	50.8	24.8
1,2-Dichloropropane	0.0292	U	0.00106	ND	3.63	0.000	1	50.3-134	J6	J3 J6	200	22.7
1,1-Dichloropropene	0.0292	U	0.000762	ND	2.61	0.000	1	43.0-137	J6	J3 J6	200	26.4
1,3-Dichloropropane	0.0292	U	0.00108	0.000314	3.70	1.08	1	51.4-127	J6	J3 J6	110	23.1
cis-1,3-Dichloropropene	0.0292	U	0.00103	ND	3.52	0.000	1	48.4-134	J6	J3 J6	200	23.6
trans-1,3-Dichloropropene	0.0292	U	0.000977	ND	3.35	0.000	1	46.6-135	J6	J3 J6	200	25.3
2,2-Dichloropropane	0.0292	U	0.000929	0.000464	3.18	1.59	1	45.2-141	J6	J3 J6	66.8	26.6
Di-isopropyl ether	0.0292	U	0.000976	0.000320	3.34	1.10	1	46.7-140	J6	J3 J6	101	23.5
Ethylbenzene	0.0292	U	0.000723	ND	2.48	0.000	1	44.8-135	J6	J3 J6	200	26.9
Hexachloro-1,3-butadiene	0.0292	U	ND	ND	0.000	0.000	1	10.0-149	J6	J6	0.000	40
Isopropylbenzene	0.0292	U	0.000583	ND	2.00	0.000	1	41.9-139	J6	J3 J6	200	29.3
p-Isopropyltoluene	0.0292	U	0.000466	ND	1.60	0.000	1	27.3-146	J6	J3 J6	200	35.1
2-Butanone (MEK)	0.146	U	ND	ND	0.000	0.000	1	23.9-170	J6	J6	0.000	28.3
Methylene Chloride	0.0292	U	0.00137	0.00120	4.69	4.12	1	46.7-125	J6	J6	12.9	22.2
4-Methyl-2-pentanone (MIBK)	0.146	U	0.00592	ND	4.06	0.000	1	42.4-146	J6	J3 J6	200	26.7
Methyl tert-butyl ether	0.0292	U	0.00102	0.000422	3.48	1.45	1	50.4-131	J6	J3 J6	82.7	24.8
Naphthalene	0.0292	U	ND	ND	0.000	0.000	1	18.4-145	J6	J6	0.000	34

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L851720-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L851720-12 08/15/16 04:00 • (MS) R3156881-4 08/15/16 03:08 • (MSD) R3156881-5 08/15/16 03:26

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
n-Propylbenzene	0.0292	U	0.000523	ND	1.79	0.000	1	35.2-139	J6	J3 J6	200	31.9
Styrene	0.0292	U	0.000766	ND	2.63	0.000	1	39.7-137	J6	J3 J6	200	28.2
1,1,1,2-Tetrachloroethane	0.0292	U	0.000830	ND	2.85	0.000	1	48.8-136	J6	J3 J6	200	25.5
1,1,2,2-Tetrachloroethane	0.0292	U	0.000955	ND	3.27	0.000	1	45.7-140	J6	J3 J6	200	26.4
Tetrachloroethene	0.0292	0.000992	0.000857	ND	0.000	0.000	1	37.7-140	J6	J3 J6	200	29.2
Toluene	0.0292	U	0.000950	ND	3.26	0.000	1	47.8-127	J6	J3 J6	200	24.3
1,1,2-Trichlorotrifluoroethane	0.0292	U	0.000617	ND	2.12	0.000	1	35.7-146	J6	J3 J6	200	28.8
1,2,3-Trichlorobenzene	0.0292	U	0.000463	ND	1.59	0.000	1	10.0-150	J6	J3 J6	200	38.5
1,2,4-Trichlorobenzene	0.0292	U	ND	ND	0.000	0.000	1	10.0-153	J6	J6	0.000	39.3
1,1,1-Trichloroethane	0.0292	U	0.00131	0.000661	4.50	2.26	1	49.0-138	J6	J3 J6	66.1	25.3
1,1,2-Trichloroethane	0.0292	U	0.00101	ND	3.45	0.000	1	52.3-132	J6	J3 J6	200	23.4
Trichloroethene	0.0292	U	0.000858	ND	2.94	0.000	1	48.0-132	J6	J3 J6	200	24.8
Trichlorofluoromethane	0.0292	U	0.000755	ND	2.59	0.000	1	12.8-169	J6	J3 J6	200	29.7
1,2,3-Trichloropropane	0.0292	U	0.000934	ND	3.20	0.000	1	44.4-138	J6	J3 J6	200	26.3
1,2,3-Trimethylbenzene	0.0292	U	0.000623	ND	2.13	0.000	1	41.0-133	J6	J3 J6	200	27.6
1,2,4-Trimethylbenzene	0.0292	U	0.000567	ND	1.94	0.000	1	32.9-139	J6	J3 J6	200	30.6
1,3,5-Trimethylbenzene	0.0292	U	0.000564	ND	1.93	0.000	1	37.1-138	J6	J3 J6	200	30.6
Vinyl chloride	0.0292	U	0.000821	0.000777	2.81	2.66	1	32.0-146	J6	J6	5.54	26.3
Xylenes, Total	0.0875	U	0.00219	ND	2.50	0.000	1	42.7-135	J6	J3 J6	200	26.6
<i>(S) Toluene-d8</i>					100	101		88.7-115				
<i>(S) Dibromofluoromethane</i>					108	110		76.3-123				
<i>(S) 4-Bromofluorobenzene</i>					98.9	101		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) R3157228-1 08/16/16 13:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	96.5			50.0-150

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

(LCS) R3157228-2 08/16/16 14:02 • (LCSD) R3157228-3 08/16/16 14:15

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)	30.0	26.4	25.8	88.0	86.1	50.0-150			2.22	20
Residual Range Organics (RRO)	30.0	25.2	22.4	84.2	74.5	50.0-150			12.2	20
<i>(S) o-Terphenyl</i>				72.2	69.8	50.0-150				

L852414-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852414-12 08/16/16 16:30 • (MS) R3157228-4 08/16/16 16:42 • (MSD) R3157228-5 08/16/16 16:54

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	%	%		%			%	%
Diesel Range Organics (DRO)	36.0	ND	20.3	27.8	56.1	77.1	1	50.0-150		<u>J3</u>	31.4	20
Residual Range Organics (RRO)	36.0	ND	15.9	24.6	44.3	68.5	1	50.0-150	<u>J6</u>	<u>J3</u>	42.9	20
<i>(S) o-Terphenyl</i>					48.9	59.8		50.0-150	<u>J2</u>			

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3156705-3 08/14/16 14:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0330
Acenaphthylene	U		0.00671	0.0330
Anthracene	U		0.00632	0.0330
Benzidine	U		0.0637	0.333
Benzo(a)anthracene	U		0.00428	0.0330
Benzo(b)fluoranthene	U		0.00695	0.0330
Benzo(k)fluoranthene	U		0.00582	0.0330
Benzo(g,h,i)perylene	U		0.00721	0.0330
Benzo(a)pyrene	U		0.00548	0.0330
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
2-Chloronaphthalene	U		0.00639	0.0330
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0330
Dibenz(a,h)anthracene	U		0.00821	0.0330
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0330
Fluorene	U		0.00682	0.0330
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0330
Isophorone	U		0.00522	0.333
Naphthalene	U		0.00889	0.0330
Nitrobenzene	U		0.00695	0.333
n-Nitrosodimethylamine	U		0.0647	0.333
n-Nitrosodiphenylamine	U		0.00594	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0330
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3156705-3 08/14/16 14:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyrene	U		0.0123	0.0330
1,2,4-Trichlorobenzene	U		0.00876	0.333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2-Methylphenol	U		0.00986	0.333
3&4-Methyl Phenol	U		0.00783	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	82.9			21.9-129
(S) 2-Fluorobiphenyl	82.2			34.9-129
(S) p-Terphenyl-d14	98.4			21.5-128
(S) Phenol-d5	72.1			26.3-121
(S) 2-Fluorophenol	71.5			21.1-116
(S) 2,4,6-Tribromophenol	97.5			21.6-142

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) R3156705-1 08/14/16 13:37 • (LCSD) R3156705-2 08/14/16 14:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.667	0.531	0.554	79.6	83.0	48.9-107			4.17	20
Acenaphthylene	0.667	0.544	0.590	81.6	88.4	49.2-111			8.02	20
Anthracene	0.667	0.506	0.560	75.8	83.9	52.0-112			10.1	20
Benzidine	0.667	0.150	0.199	22.5	29.8	0.000-48.0			28.1	40
Benzo(a)anthracene	0.667	0.513	0.562	76.9	84.2	52.3-106			9.00	20
Benzo(b)fluoranthene	0.667	0.547	0.581	82.1	87.1	51.3-106			6.00	20
Benzo(k)fluoranthene	0.667	0.578	0.613	86.6	91.9	52.9-107			5.91	20
Benzo(g,h,i)perylene	0.667	0.566	0.594	84.8	89.1	45.8-108			4.91	20
Benzo(a)pyrene	0.667	0.576	0.624	86.3	93.5	51.9-106			8.04	20
Bis(2-chlorethoxy)methane	0.667	0.498	0.547	74.7	82.0	44.9-108			9.28	20
Bis(2-chloroethyl)ether	0.667	0.456	0.499	68.4	74.9	32.5-112			9.05	26
Bis(2-chloroisopropyl)ether	0.667	0.475	0.500	71.2	75.0	40.4-99.0			5.23	20.7



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

(LCS) R3156705-1 08/14/16 13:37 • (LCSD) R3156705-2 08/14/16 14:02

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 %
4-Bromophenyl-phenylether	0.667	0.544	0.607	81.6	91.0	51.4-110			10.9	20
2-Chloronaphthalene	0.667	0.511	0.542	76.6	81.2	47.1-105			5.80	20
4-Chlorophenyl-phenylether	0.667	0.528	0.555	79.2	83.2	48.1-108			4.96	20
Chrysene	0.667	0.515	0.569	77.1	85.3	54.4-110			9.98	20
Dibenz(a,h)anthracene	0.667	0.581	0.606	87.1	90.9	45.7-111			4.31	20
3,3-Dichlorobenzidine	0.667	0.605	0.669	90.7	100	21.0-101			10.1	22
2,4-Dinitrotoluene	0.667	0.586	0.615	87.8	92.1	53.0-112			4.79	20
2,6-Dinitrotoluene	0.667	0.528	0.556	79.1	83.3	51.6-110			5.20	20
Fluoranthene	0.667	0.520	0.579	77.9	86.7	53.7-110			10.7	20
Fluorene	0.667	0.529	0.579	79.3	86.8	51.1-109			8.99	20
Hexachlorobenzene	0.667	0.541	0.597	81.1	89.5	43.2-104			9.80	20.1
Hexachloro-1,3-butadiene	0.667	0.563	0.627	84.5	94.0	41.5-112			10.7	20
Hexachlorocyclopentadiene	0.667	0.512	0.557	76.8	83.5	13.5-123			8.29	20.7
Hexachloroethane	0.667	0.430	0.484	64.5	72.6	36.2-103			11.8	22.7
Indeno(1,2,3-cd)pyrene	0.667	0.584	0.612	87.5	91.8	47.5-109			4.76	20
Isophorone	0.667	0.517	0.571	77.5	85.7	28.8-104			9.97	20
Naphthalene	0.667	0.476	0.525	71.3	78.8	43.4-103			9.98	20
Nitrobenzene	0.667	0.489	0.548	73.3	82.1	40.7-109			11.3	21
n-Nitrosodimethylamine	0.667	0.419	0.467	62.8	70.0	18.1-122			10.9	23.5
n-Nitrosodiphenylamine	0.667	0.488	0.553	73.2	82.9	48.8-107			12.5	20
n-Nitrosodi-n-propylamine	0.667	0.475	0.516	71.2	77.4	43.3-109			8.34	20
Phenanthrene	0.667	0.483	0.548	72.4	82.2	51.6-107			12.7	20
Benzylbutyl phthalate	0.667	0.556	0.602	83.4	90.2	47.5-115			7.85	20
Bis(2-ethylhexyl)phthalate	0.667	0.552	0.604	82.8	90.6	48.1-116			8.95	20.5
Di-n-butyl phthalate	0.667	0.526	0.596	78.9	89.4	49.7-113			12.4	20
Diethyl phthalate	0.667	0.542	0.578	81.2	86.7	52.0-112			6.52	20
Dimethyl phthalate	0.667	0.514	0.560	77.1	83.9	51.4-108			8.50	20
2-Methylphenol	0.667	0.449	0.491	67.3	73.6	42.4-100			8.93	20
Di-n-octyl phthalate	0.667	0.552	0.605	82.8	90.7	49.6-112			9.13	22
3&4-Methyl Phenol	0.667	0.500	0.538	74.9	80.7	50.5-115			7.47	20
Pyrene	0.667	0.508	0.572	76.2	85.8	47.1-108			11.8	20
1,2,4-Trichlorobenzene	0.667	0.499	0.550	74.8	82.5	39.8-100			9.74	20
4-Chloro-3-methylphenol	0.667	0.514	0.578	77.0	86.7	51.1-113			11.8	20
2-Chlorophenol	0.667	0.423	0.486	63.4	72.9	40.8-103			13.9	20
2,4-Dichlorophenol	0.667	0.528	0.585	79.1	87.7	46.2-109			10.3	20
2,4-Dimethylphenol	0.667	0.504	0.553	75.6	82.9	42.2-110			9.16	20
4,6-Dinitro-2-methylphenol	0.667	0.494	0.562	74.1	84.2	23.1-119			12.8	23.7
2,4-Dinitrophenol	0.667	0.474	0.522	71.0	78.2	10.0-105			9.63	36.5
2-Nitrophenol	0.667	0.512	0.564	76.8	84.6	44.2-113			9.69	20.9
4-Nitrophenol	0.667	0.511	0.549	76.7	82.3	34.8-109			7.08	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) R3156705-1 08/14/16 13:37 • (LCSD) R3156705-2 08/14/16 14:02

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 %
Pentachlorophenol	0.667	0.499	0.553	74.8	82.9	16.2-102			10.3	22.9
Phenol	0.667	0.429	0.470	64.3	70.5	41.5-106			9.17	20
2,4,6-Trichlorophenol	0.667	0.599	0.646	89.9	96.8	44.4-108			7.41	20
(S) Nitrobenzene-d5				79.2	82.9	21.9-129				
(S) 2-Fluorobiphenyl				81.4	85.6	34.9-129				
(S) p-Terphenyl-d14				85.1	93.2	21.5-128				
(S) Phenol-d5				66.9	72.6	26.3-121				
(S) 2-Fluorophenol				67.4	72.4	21.1-116				
(S) 2,4,6-Tribromophenol				91.1	101	21.6-142				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L852392-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852392-04 08/14/16 16:08 • (MS) R3156705-4 08/14/16 16:33 • (MSD) R3156705-5 08/14/16 16:58

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 %
Acenaphthene	0.819	ND	0.677	0.703	82.7	85.9	1	32.2-134			3.74	27.3
Acenaphthylene	0.819	ND	0.696	0.728	85.0	88.9	1	38.7-129			4.40	25.9
Anthracene	0.819	ND	0.659	0.683	80.5	83.4	1	32.3-137			3.57	28.4
Benzidine	0.819	ND	0.239	0.255	29.2	31.1	1	0.000-49.9			6.24	40
Benzo(a)anthracene	0.819	ND	0.684	0.684	83.5	83.5	1	33.3-124			0.0200	29
Benzo(b)fluoranthene	0.819	ND	0.723	0.771	88.3	94.2	1	23.3-133			6.52	30.3
Benzo(k)fluoranthene	0.819	ND	0.755	0.754	92.2	92.0	1	31.0-129			0.210	26.7
Benzo(g,h,i)perylene	0.819	ND	0.743	0.773	90.8	94.4	1	10.0-127			3.95	31.9
Benzo(a)pyrene	0.819	ND	0.757	0.756	92.4	92.3	1	28.2-128			0.120	28.4
Bis(2-chlorethoxy)methane	0.819	ND	0.659	0.687	80.4	83.8	1	35.0-132			4.14	26.1
Bis(2-chloroethyl)ether	0.819	ND	0.616	0.648	75.3	79.1	1	28.8-128			4.98	33.6
Bis(2-chloroisopropyl)ether	0.819	ND	0.633	0.639	77.3	78.0	1	31.8-118			0.970	31.7
4-Bromophenyl-phenylether	0.819	ND	0.721	0.756	88.0	92.4	1	39.0-130			4.83	26
2-Chloronaphthalene	0.819	ND	0.652	0.664	79.6	81.1	1	37.5-123			1.86	26.5
4-Chlorophenyl-phenylether	0.819	ND	0.651	0.681	79.5	83.2	1	37.9-123			4.62	25.9
Chrysene	0.819	ND	0.678	0.690	82.8	84.3	1	36.3-129			1.79	28
Dibenz(a,h)anthracene	0.819	ND	0.762	0.809	93.1	98.9	1	10.5-128			6.03	29.5
3,3-Dichlorobenzidine	0.819	ND	0.786	0.788	95.9	96.2	1	10.0-129			0.250	40
2,4-Dinitrotoluene	0.819	ND	0.712	0.730	86.9	89.2	1	27.8-147			2.57	29.7
2,6-Dinitrotoluene	0.819	ND	0.677	0.694	82.7	84.8	1	36.5-137			2.48	29.7
Fluoranthene	0.819	ND	0.715	0.708	87.3	86.4	1	27.9-138			1.01	26.9
Fluorene	0.819	ND	0.687	0.710	83.9	86.8	1	34.0-133			3.30	27.1
Hexachlorobenzene	0.819	ND	0.714	0.741	87.2	90.5	1	34.4-116			3.69	25.4
Hexachloro-1,3-butadiene	0.819	ND	0.741	0.777	90.4	94.9	1	36.5-125			4.79	29.7



L852392-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852392-04 08/14/16 16:08 • (MS) R3156705-4 08/14/16 16:33 • (MSD) R3156705-5 08/14/16 16:58

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 %
Hexachlorocyclopentadiene	0.819	ND	0.631	0.681	77.0	83.1	1	10.0-124			7.62	37.5
Hexachloroethane	0.819	ND	0.571	0.597	69.8	72.9	1	11.3-143			4.40	31.9
Indeno(1,2,3-cd)pyrene	0.819	ND	0.769	0.810	93.9	98.9	1	10.0-128			5.18	31.5
Isophorone	0.819	ND	0.686	0.706	83.7	86.2	1	25.7-116			2.97	27.7
Naphthalene	0.819	ND	0.637	0.658	77.8	80.3	1	36.4-121			3.21	27.2
2-Methylphenol	0.819	ND	0.602	0.623	73.5	76.1	1	30.3-118			3.46	25.1
Nitrobenzene	0.819	ND	0.657	0.687	80.2	83.9	1	30.9-134			4.54	27.8
3&4-Methyl Phenol	0.819	ND	0.668	0.694	81.6	84.7	1	33.3-141			3.73	25.7
n-Nitrosodimethylamine	0.819	ND	0.553	0.587	67.5	71.7	1	19.2-127			5.99	32
n-Nitrosodiphenylamine	0.819	ND	0.653	0.686	79.7	83.7	1	26.8-133			4.90	25.9
n-Nitrosodi-n-propylamine	0.819	ND	0.625	0.652	76.3	79.7	1	33.0-134			4.30	28.2
Phenanthrene	0.819	ND	0.646	0.659	78.9	80.5	1	30.8-137			2.01	26.5
Benzylbutyl phthalate	0.819	ND	0.709	0.734	86.6	89.6	1	33.4-128			3.38	28.5
Bis(2-ethylhexyl)phthalate	0.819	ND	0.729	0.758	89.1	92.5	1	21.8-141			3.79	35.2
Di-n-butyl phthalate	0.819	ND	0.717	0.729	87.6	89.1	1	32.2-133			1.69	25.9
Diethyl phthalate	0.819	ND	0.691	0.731	84.4	89.3	1	39.4-136			5.60	25.5
Dimethyl phthalate	0.819	ND	0.653	0.681	79.7	83.2	1	35.8-137			4.28	25.4
Di-n-octyl phthalate	0.819	ND	0.728	0.754	89.0	92.0	1	28.5-128			3.41	32.5
Pyrene	0.819	ND	0.667	0.692	81.5	84.4	1	24.1-130			3.54	29.9
1,2,4-Trichlorobenzene	0.819	ND	0.665	0.685	81.2	83.7	1	36.5-114			3.04	28.4
4-Chloro-3-methylphenol	0.819	ND	0.693	0.715	84.7	87.3	1	27.0-154			3.09	26.6
2-Chlorophenol	0.819	ND	0.571	0.604	69.7	73.8	1	33.2-121			5.74	29.3
2,4-Dichlorophenol	0.819	ND	0.693	0.727	84.6	88.8	1	34.8-134			4.79	27.3
2,4-Dimethylphenol	0.819	ND	0.669	0.703	81.7	85.9	1	12.3-149			5.05	32.3
4,6-Dinitro-2-methylphenol	0.819	ND	0.520	0.483	63.5	59.0	1	10.0-144			7.30	32.7
2,4-Dinitrophenol	0.819	ND	0.192	0.165	23.5	20.1	1	10.0-121			15.3	39.4
2-Nitrophenol	0.819	ND	0.669	0.705	81.7	86.1	1	29.5-144			5.20	29.9
4-Nitrophenol	0.819	ND	0.584	0.609	71.3	74.3	1	20.0-133			4.13	30.2
Pentachlorophenol	0.819	ND	0.616	0.632	75.2	77.2	1	10.0-139			2.62	28.3
Phenol	0.819	ND	0.566	0.601	69.1	73.4	1	25.1-130			6.11	29.6
2,4,6-Trichlorophenol	0.819	ND	0.736	0.774	89.8	94.5	1	33.8-133			5.11	28.1
(S) Nitrobenzene-d5					83.9	85.5		21.9-129				
(S) 2-Fluorobiphenyl					84.7	87.8		34.9-129				
(S) p-Terphenyl-d14					85.8	91.9		21.5-128				
(S) Phenol-d5					73.1	73.8		26.3-121				
(S) 2-Fluorophenol					74.2	75.3		21.1-116				
(S) 2,4,6-Tribromophenol					101	102		21.6-142				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3157048-3 08/16/16 08:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.000600	0.00600
Acenaphthene	U		0.000600	0.00600
Acenaphthylene	U		0.000600	0.00600
Benzo(a)anthracene	U		0.000600	0.00600
Benzo(a)pyrene	U		0.000600	0.00600
Benzo(b)fluoranthene	U		0.000600	0.00600
Benzo(g,h,i)perylene	U		0.000600	0.00600
Benzo(k)fluoranthene	U		0.000600	0.00600
Chrysene	U		0.000600	0.00600
Dibenz(a,h)anthracene	U		0.000600	0.00600
Fluoranthene	U		0.000600	0.00600
Fluorene	U		0.000600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.000600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.000600	0.00600
Pyrene	U		0.000600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
(S) p-Terphenyl-d14	67.7			32.2-131
(S) Nitrobenzene-d5	76.3			22.1-146
(S) 2-Fluorobiphenyl	76.1			40.6-122

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) R3157048-1 08/16/16 07:59 • (LCSD) R3157048-2 08/16/16 08:24

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 %
Anthracene	0.0800	0.0604	0.0617	75.5	77.1	50.3-130			2.15	20
Acenaphthene	0.0800	0.0622	0.0635	77.7	79.3	52.4-120			2.02	20
Acenaphthylene	0.0800	0.0606	0.0617	75.8	77.1	49.6-120			1.76	20
Benzo(a)anthracene	0.0800	0.0561	0.0573	70.1	71.6	46.7-125			2.07	20
Benzo(a)pyrene	0.0800	0.0530	0.0551	66.3	68.9	42.3-119			3.93	20
Benzo(b)fluoranthene	0.0800	0.0563	0.0575	70.4	71.8	43.6-124			2.07	20
Benzo(g,h,i)perylene	0.0800	0.0591	0.0592	73.9	74.0	45.1-132			0.150	20
Benzo(k)fluoranthene	0.0800	0.0528	0.0543	66.0	67.8	46.1-131			2.65	20
Chrysene	0.0800	0.0574	0.0589	71.7	73.7	49.5-131			2.61	20
Dibenz(a,h)anthracene	0.0800	0.0569	0.0570	71.2	71.3	44.8-133			0.130	20
Fluoranthene	0.0800	0.0603	0.0607	75.4	75.9	49.3-128			0.670	20
Fluorene	0.0800	0.0603	0.0614	75.4	76.7	50.6-121			1.79	20



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

(LCS) R3157048-1 08/16/16 07:59 • (LCSD) R3157048-2 08/16/16 08:24

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 %
Indeno(1,2,3-cd)pyrene	0.0800	0.0576	0.0578	72.0	72.3	46.1-135			0.400	20
Naphthalene	0.0800	0.0587	0.0599	73.4	74.9	49.6-115			2.00	20
Phenanthrene	0.0800	0.0609	0.0622	76.2	77.7	48.8-121			2.03	20
Pyrene	0.0800	0.0636	0.0661	79.4	82.7	44.7-130			4.00	20
1-Methylnaphthalene	0.0800	0.0635	0.0642	79.3	80.3	50.6-122			1.20	20
2-Methylnaphthalene	0.0800	0.0620	0.0629	77.4	78.6	50.4-120			1.47	20
(S) p-Terphenyl-d14				66.3	67.4	32.2-131				
(S) Nitrobenzene-d5				79.7	81.6	22.1-146				
(S) 2-Fluorobiphenyl				77.9	80.9	40.6-122				

L852414-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L852414-01 08/16/16 18:12 • (MS) R3157048-4 08/16/16 18:37 • (MSD) R3157048-5 08/16/16 19:01

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 %
Anthracene	0.0843	ND	0.0634	0.0600	75.2	71.2	1	26.5-141			5.43	21.2
Acenaphthene	0.0843	ND	0.0640	0.0622	76.0	73.8	1	31.9-130			2.88	20
Acenaphthylene	0.0843	ND	0.0632	0.0609	75.0	72.3	1	33.7-129			3.61	20
Benzo(a)anthracene	0.0843	ND	0.0578	0.0559	68.6	66.4	1	18.3-136			3.30	24.6
Benzo(a)pyrene	0.0843	ND	0.0604	0.0582	71.7	69.1	1	16.9-135			3.72	25.2
Benzo(b)fluoranthene	0.0843	ND	0.0564	0.0540	66.9	64.1	1	10.0-134			4.36	30.9
Benzo(g,h,i)perylene	0.0843	ND	0.0599	0.0581	71.1	68.9	1	14.1-140			3.08	25.5
Benzo(k)fluoranthene	0.0843	ND	0.0539	0.0548	64.0	65.1	1	18.2-138			1.74	25.6
Chrysene	0.0843	ND	0.0586	0.0570	69.6	67.7	1	17.1-145			2.72	24.2
Dibenz(a,h)anthracene	0.0843	ND	0.0579	0.0555	68.8	65.9	1	18.5-138			4.32	24.3
Fluoranthene	0.0843	ND	0.0646	0.0579	76.6	68.7	1	15.4-144			10.9	27.1
Fluorene	0.0843	ND	0.0595	0.0596	70.6	70.8	1	23.5-136			0.200	20
Indeno(1,2,3-cd)pyrene	0.0843	ND	0.0580	0.0559	68.9	66.4	1	14.5-142			3.67	25.8
Naphthalene	0.0843	ND	0.0616	0.0605	70.5	69.1	1	29.2-128			1.81	20
Phenanthrene	0.0843	ND	0.0627	0.0596	74.4	70.8	1	20.1-134			4.94	23.6
Pyrene	0.0843	ND	0.0658	0.0638	78.2	75.8	1	11.0-148			3.09	26.1
1-Methylnaphthalene	0.0843	ND	0.0652	0.0628	77.4	74.6	1	28.4-137			3.72	20
2-Methylnaphthalene	0.0843	ND	0.0638	0.0613	75.7	72.7	1	26.6-137			4.04	20
(S) p-Terphenyl-d14					63.8	61.6		32.2-131				
(S) Nitrobenzene-d5					78.6	76.2		22.1-146				
(S) 2-Fluorobiphenyl					78.5	76.3		40.6-122				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
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.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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		

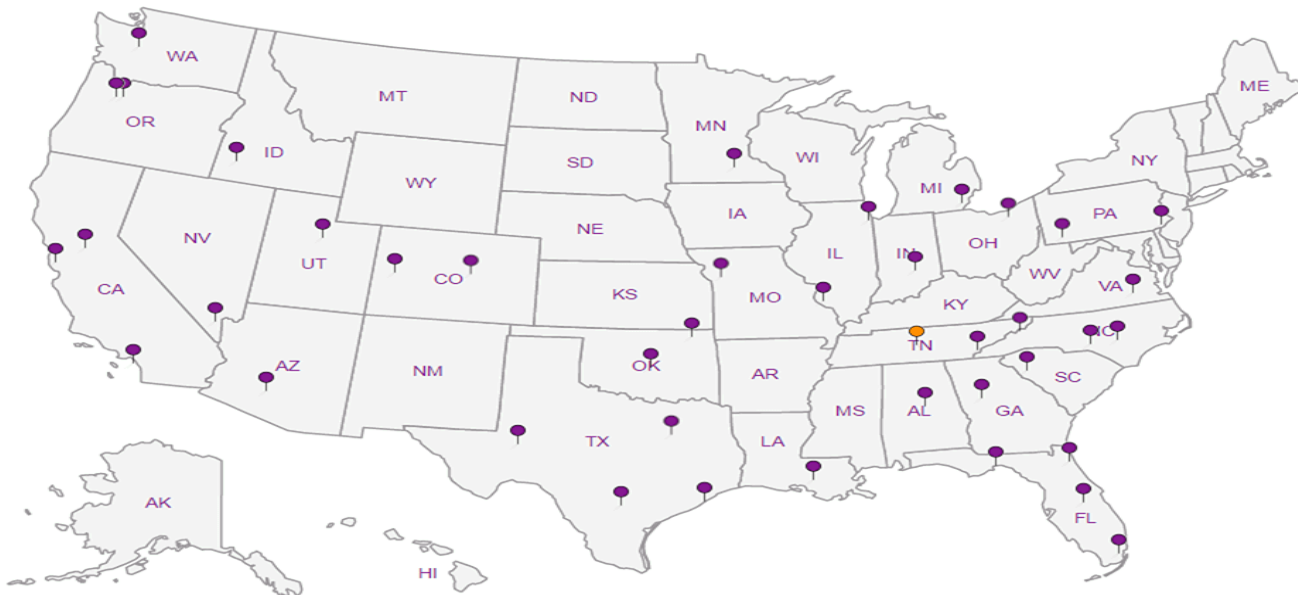
Third Party & Federal Accreditations

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.**



Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:

Shane DeGross
605 Puyallup Avenue
Tacoma, WA 98421

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project
Description: **BNSF - Wishram Railyard, WA**

City/State
Collected:

Phone: **253-835-6400**
Fax:

Client Project #
1696120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joseph Sawdey

Site/Facility ID #
Wishram

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed

Email? No Yes
 FAX? No Yes

No. of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	NWTPHDX, TS 4ozClr-NoPres	SV8270 4ozClr-NoPres	SV8270PAHSIM 4ozClr-NoPres											
B-16-07-11		SS	11	815	1410	2	X		X											-9
RMD-2-18		SS	18	814	1345	3	X	X	X											02
RMD-2-39		SS	39	814	1450	3	X	X	X											03
B-16-06-07		SS	7	815	1350	2	X		X											04
RMD-1-39		SS	39	815	1200	3	X	X	X											05
RMD-1-44.5		SS	44.5	815	1200	1	X													06
B-16-08-25		SS	25	815	1500	2	X		X											07
B-16-07-17		SS	17	815	1415	2	X		X											08
B-16-06-05		SS	5	815	1340	2	X		X											09
RMD-2-51		SS	51	815	0920	2	X		X											10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

6777 0000 5454

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 24°C Bottles Received: 30 + TB	<i>[Signature]</i> N 8/10/16
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8-10-16 Time: 0900	COC Seal Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA pH Checked: YES

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Avenue
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project
Description: BNSF - Wishram Railyard, WA

City/State
Collected:

Phone: 253-835-6400
Fax:

Client Project #
1696120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joseph Sawdey

Site/Facility ID #
Wishram

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed

Email? No Yes
 FAX? No Yes

No. of
Cntrs

Immediately
Packed on Ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX, TS 4ozClr-NoPres	SV8270 4ozClr-NoPres	SV8270PAHSIM 4ozClr-NoPres	UOLS	EPH (WA)	Rem./Contaminant	Sample # (lab only)
B-1608-14		SS	14	815	1445	2	X		X				11
RMD-4-30		SS	30	812	1515	1	X						12
RMD-3-60		SS	60	814	1100	1	X						13
RMD-3-19		SS	19	813	1545	1	X						14
River - NARL		SS	-	814	0910	1	X	X	X	X			15
RMD-4-60		SS	60	813	0845	1	X						16
RMD-1-18		SS	18	815	1015	1	X						17
		SS											
		SS											
		SS											

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: Sample River - NARL to be sampled analyzed in following order of priority NWTPH-Dx, EPH (WA), PAHS, UOLS

pH _____ Temp _____

Flow _____ Other _____

6777 0000 5454

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.40 °C Bottles Received:	Hold #
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8-10-14 Time: 0900	COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA pH Checked: <input type="checkbox"/> NCF: YES



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# 1852Y14

Table #

Acctnum: BNSF1KEN

Template: T114341

Prelogin: P562191

TSR: 134 - Mark W. Beasley

PB:

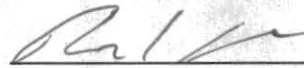
Shipped Via:

Cooler Receipt Checklist

Client: BNSF/KEN SDG# LB52814

Cooler Received/Opened On: 8-10-16 By Richard Hughes

Temperature Upon Receipt: 2.4 °C



(Signature)

Cooler Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?	✓		
Were custody papers properly filled out (ink, signed, etc.)?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were correct preservatives used?			✓
Were all applicable sample containers checked for preservation? (Any samples not in accepted pH range noted on COC.)			✓
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated? (If yes see attached NCF)	✓	✓	

N
8/10/16



Andy Vann



Login #:L852414	Client: BNSF1KEN	Date:08/10/16	Evaluated by:Andy Vann
-----------------	------------------	---------------	------------------------

Non-Conformance (check applicable items)

Sample Integrity		Chain of Custody Clarification	
Parameter(s) past holding time	x	Login Clarification Needed	If Broken Container:
Improper temperature		Chain of custody is incomplete	Insufficient packing material around container
Improper container type		Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation		Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Couri
Insufficient sample volume.		Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.		Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.		Trip Blank not received.	If no Chain of Custody:
Broken container		Client did not "X" analysis.	Received by:
Broken container:		Chain of Custody is missing	Date/Time:
Sufficient sample remains			Temp./Cont. Rec./pH:
			Carrier:
			Tracking#

Login Comments:Client requests EPH (WA) for sample id River Napl.

Client informed by:	Call	Email	Voice Mail	Date: 8/11/16	Time: 0800
TSR Initials: MB	Client Contact:				

Login Instructions:

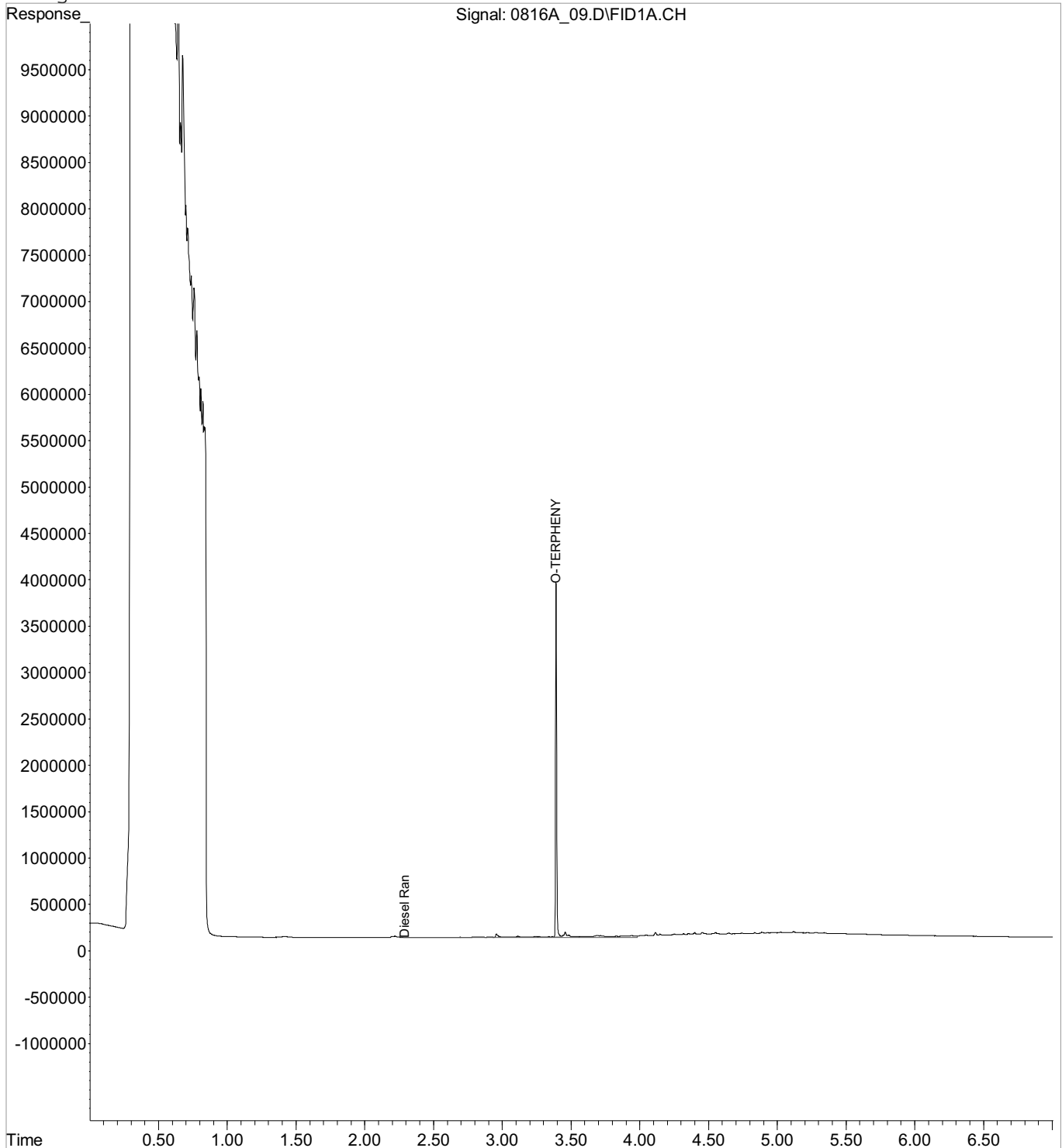
Log for MISC-SUB for WA EPH @ \$630.
From: Mark Beasley
Sent: Wednesday, August 17, 2016 6:14 PM
To: Andy Vann
Subject: RE: L852414 BNSF1KEN NCF

Cancel this subout...

Data File : C:\MSDCHEM\1\DATA\081616A\0816A 09.D Vial: 8
Acq On : 16 Aug 2016 2:27 pm Operator: 614
Sample : L852414-01 1x WG897836 12.5-0.5 Inst : SVGC13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 15:23 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

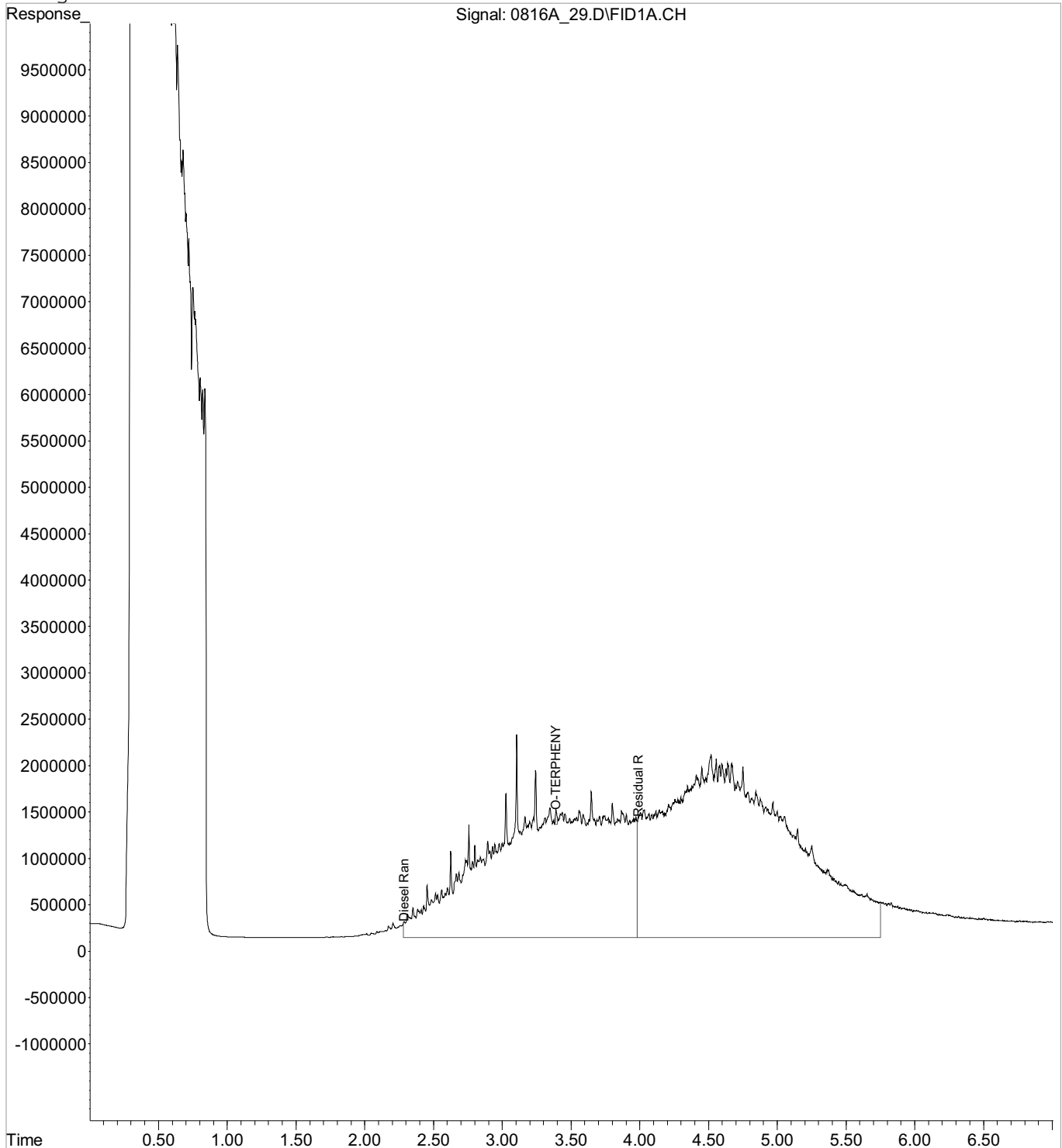
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 29.D Vial: 25
Acq On : 16 Aug 2016 6:31 pm Operator: 614
Sample : L852414-02 20x WG897836 12.5-5 Inst : SVGC13
Misc : soil Multiplr: 0.80
IntFile : events.e
Quant Time: Aug 16 18:40 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

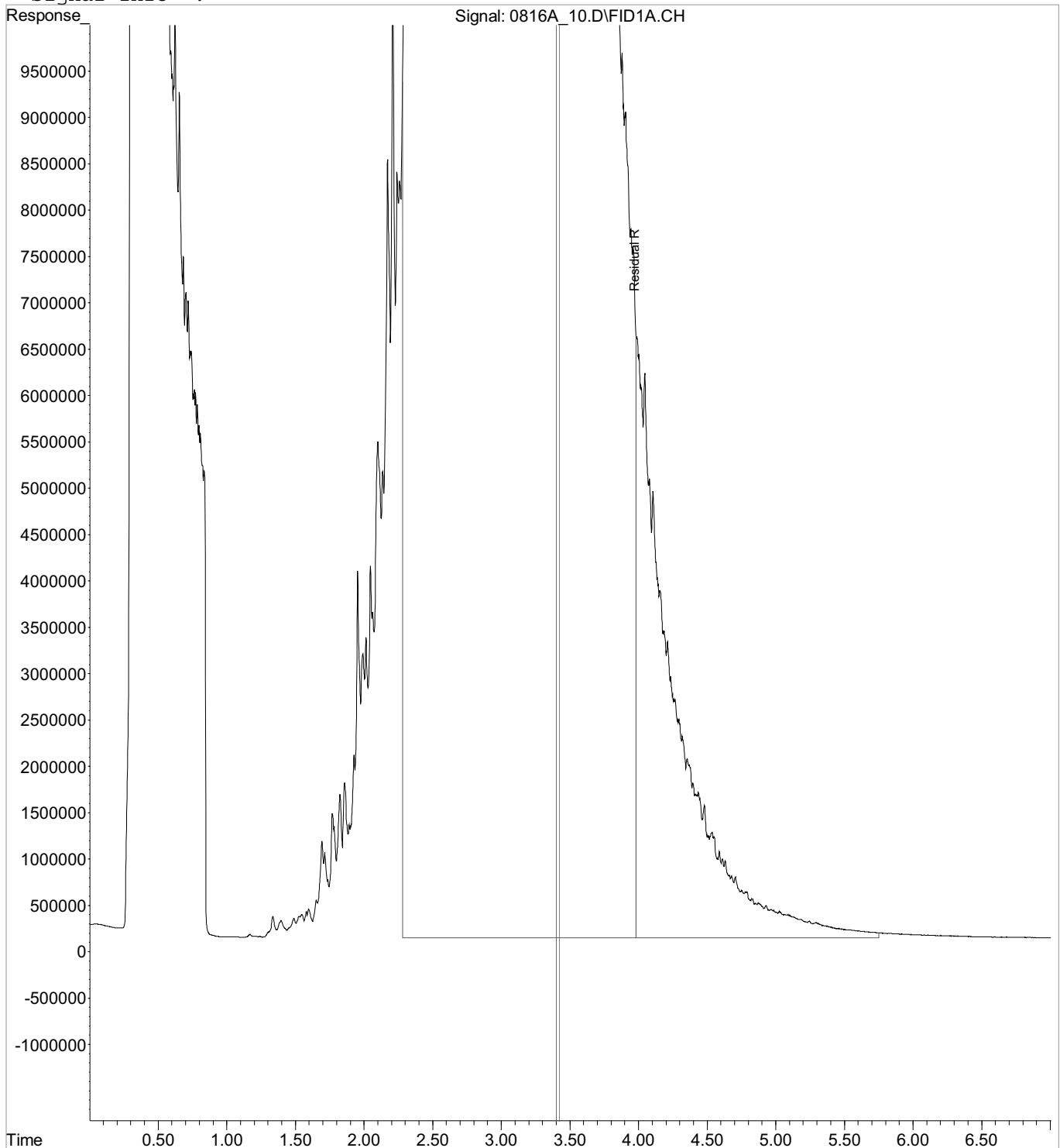
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 10.D Vial: 9
Acq On : 16 Aug 2016 2:39 pm Operator: 614
Sample : L852414-03 1x WG897836 12.5-0.5 Inst : SVG13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 15:24 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

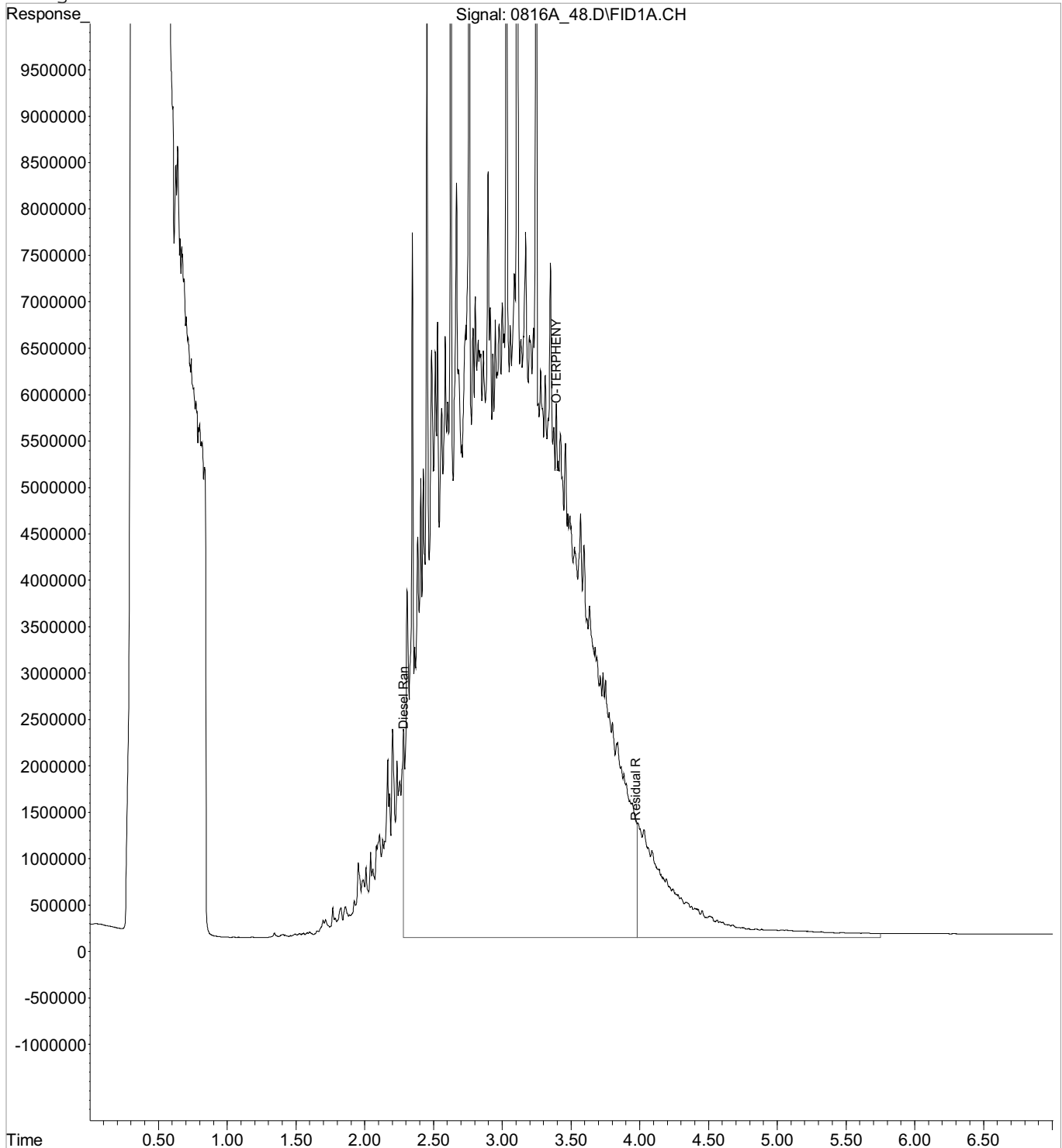
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 48.D Vial: 9
 Acq On : 16 Aug 2016 10:21 pm Operator: 614
 Sample : L852414-03 5x WG897836 12.5-0.5 Inst : SVGC13
 Misc : soil Multiplr: 0.20
 IntFile : events.e
 Quant Time: Aug 16 22:40 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
 Title :
 Last Update : Tue Aug 16 12:03:45 2016
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

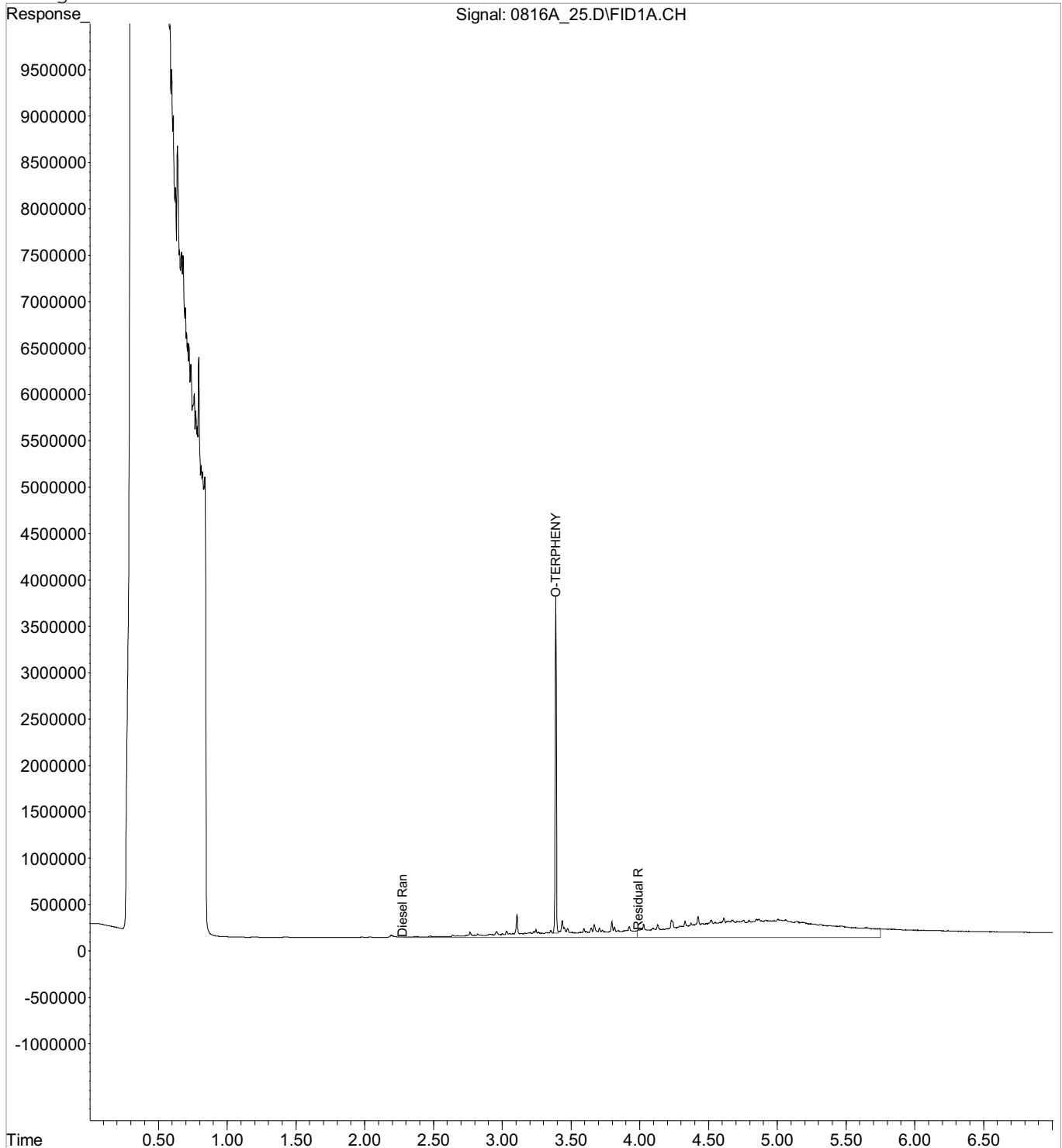
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 25.D Vial: 21
Acq On : 16 Aug 2016 5:42 pm Operator: 614
Sample : L852414-04 1x WG897836 12.5-0.5 Inst : SVGC13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 17:52 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

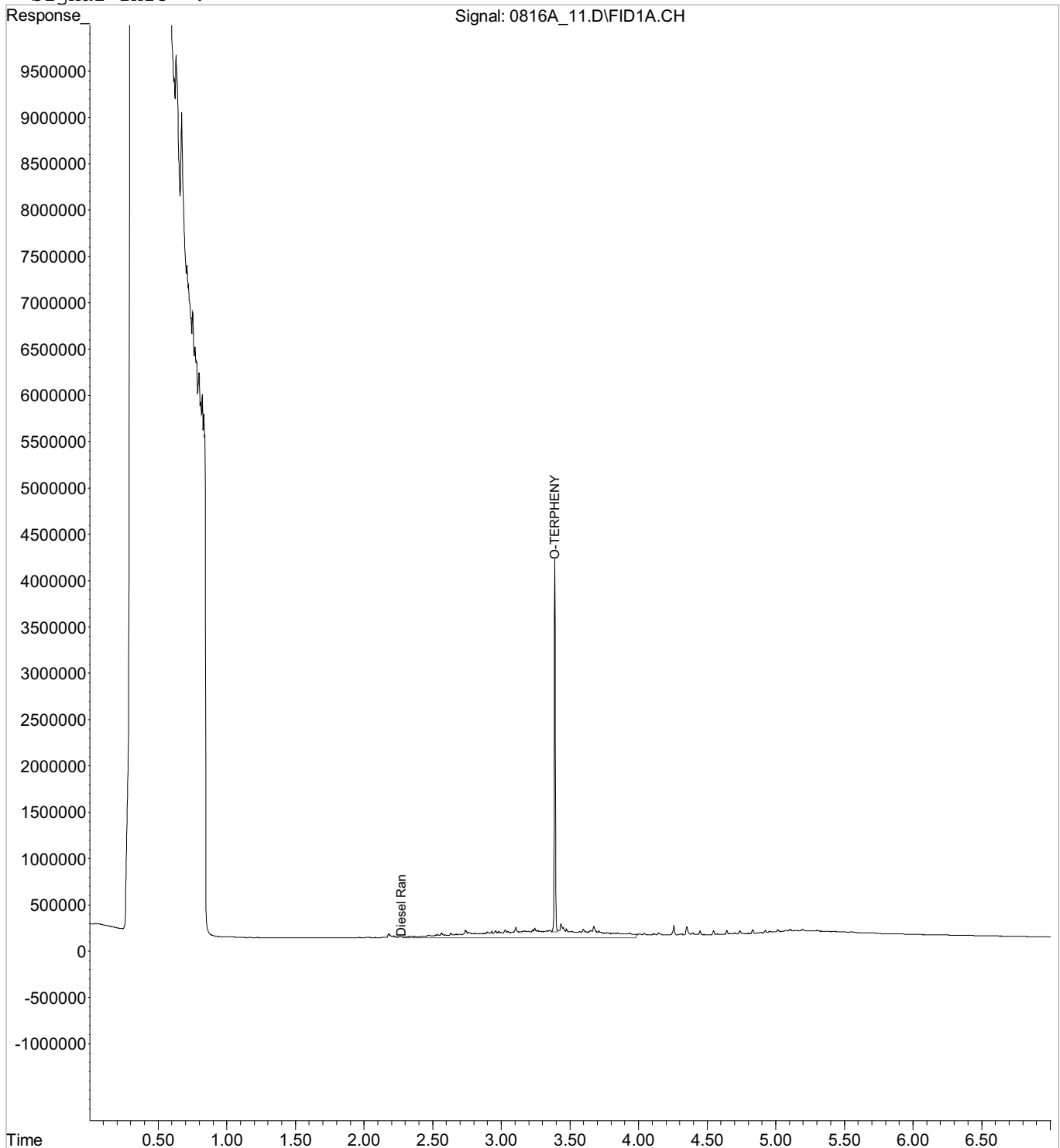
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 11.D Vial: 10
Acq On : 16 Aug 2016 2:51 pm Operator: 614
Sample : L852414-05 1x WG897836 12.5-0.5 Inst : SVG13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 15:36 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

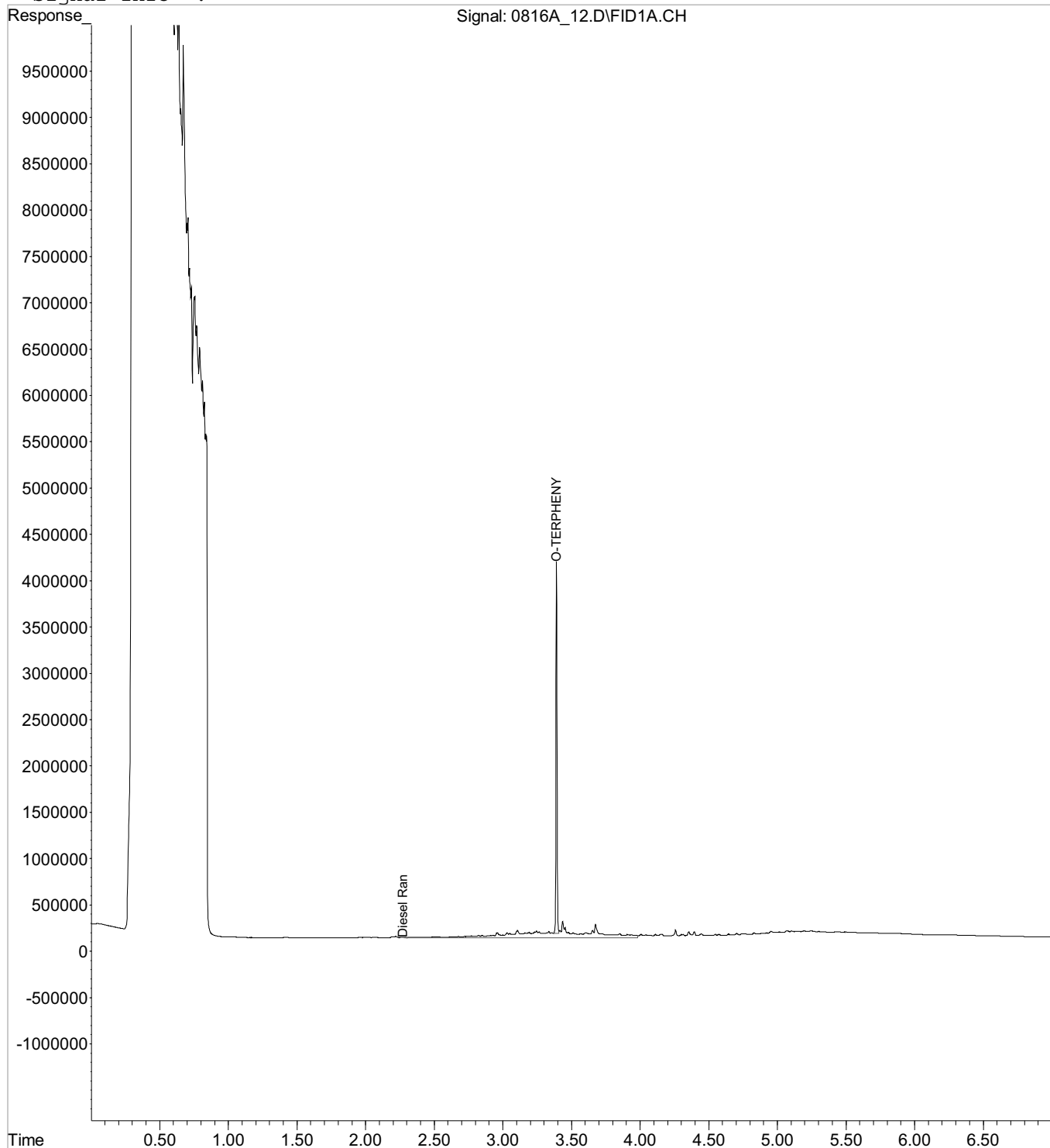
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 12.D Vial: 11
Acq On : 16 Aug 2016 3:03 pm Operator: 614
Sample : L852414-06 1x WG897836 12.5-0.5 Inst : SVGC13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 15:36 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

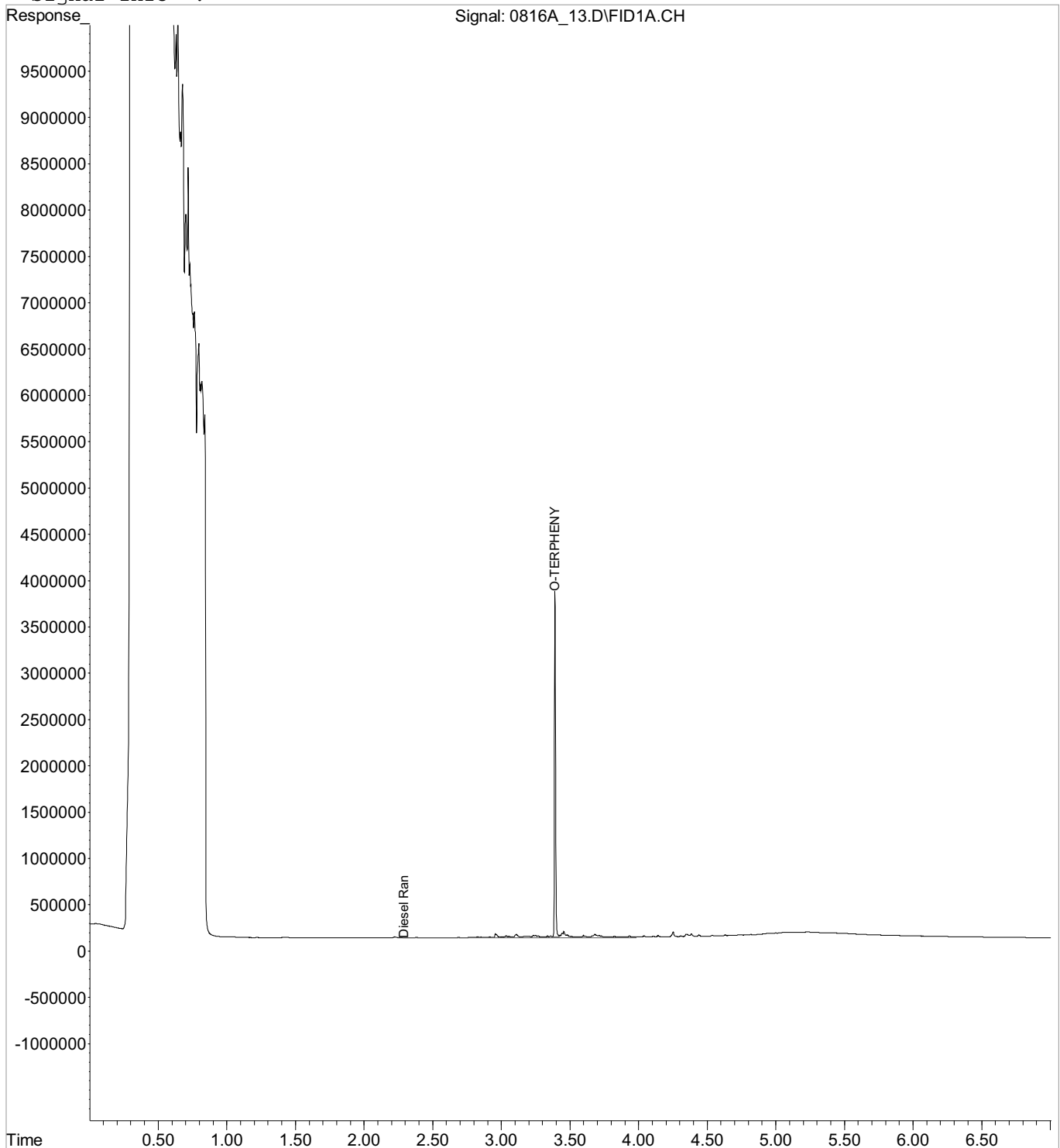
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 13.D Vial: 12
Acq On : 16 Aug 2016 3:16 pm Operator: 614
Sample : L852414-07 1x WG897836 12.5-0.5 Inst : SVGC13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 15:36 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

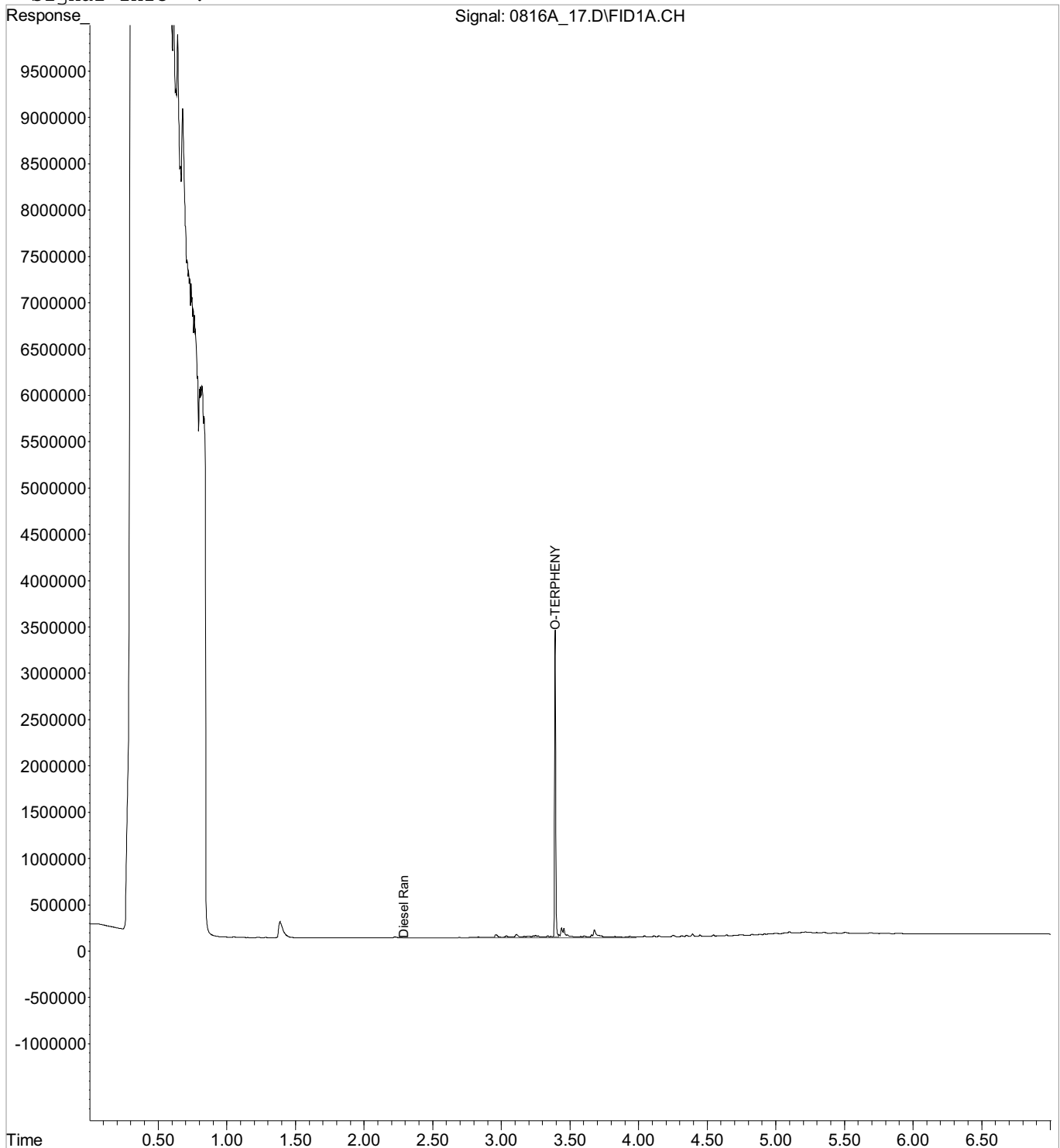
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 17.D Vial: 13
Acq On : 16 Aug 2016 4:05 pm Operator: 614
Sample : L852414-08 1x WG897836 12.5-0.5 Inst : SVGC13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 16:29 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

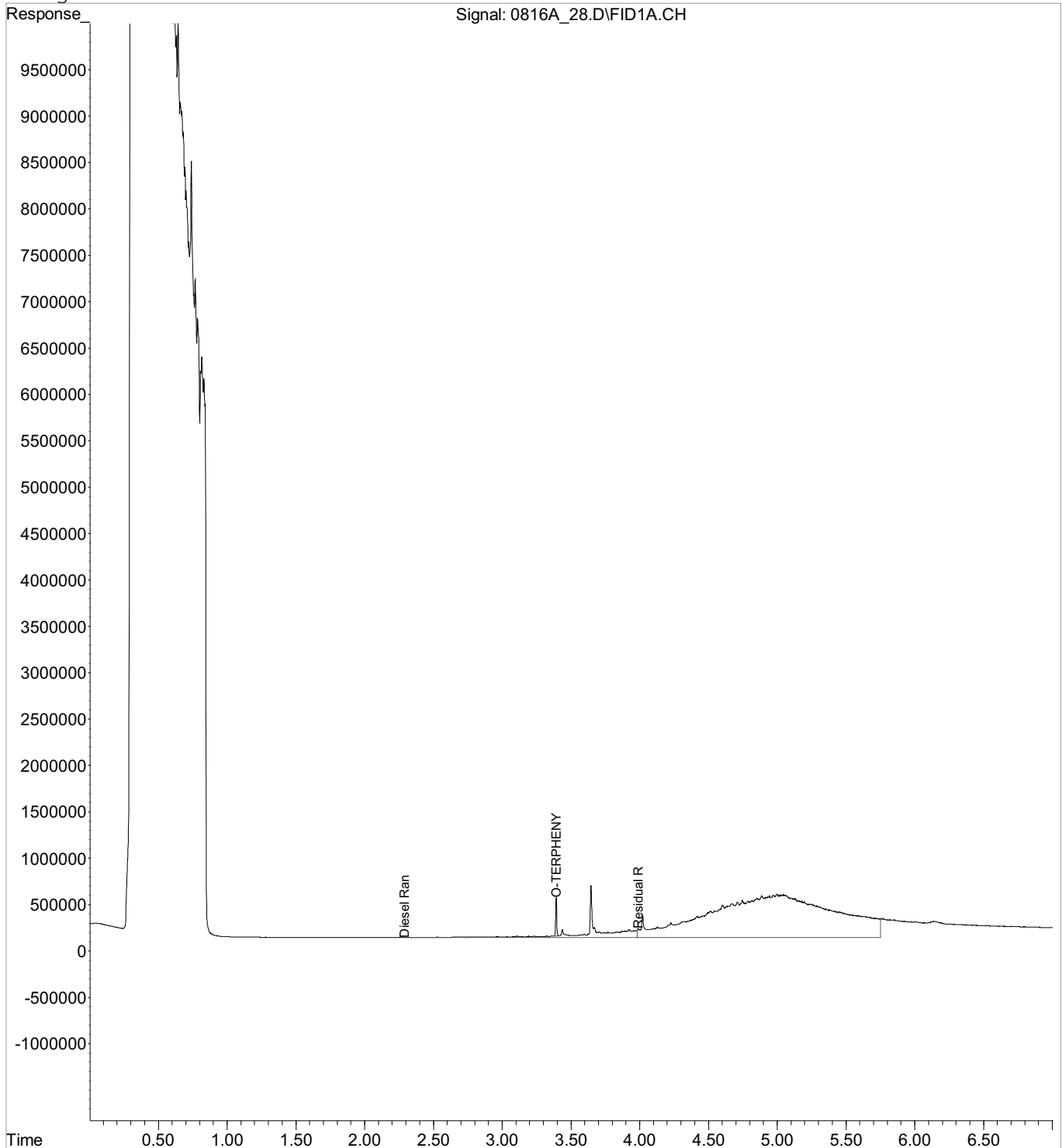
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 28.D Vial: 24
Acq On : 16 Aug 2016 6:19 pm Operator: 614
Sample : L852414-09 10x WG897836 12.5-1 Inst : SVGC13
Misc : soil Multiplr: 0.40
IntFile : events.e
Quant Time: Aug 16 18:27 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

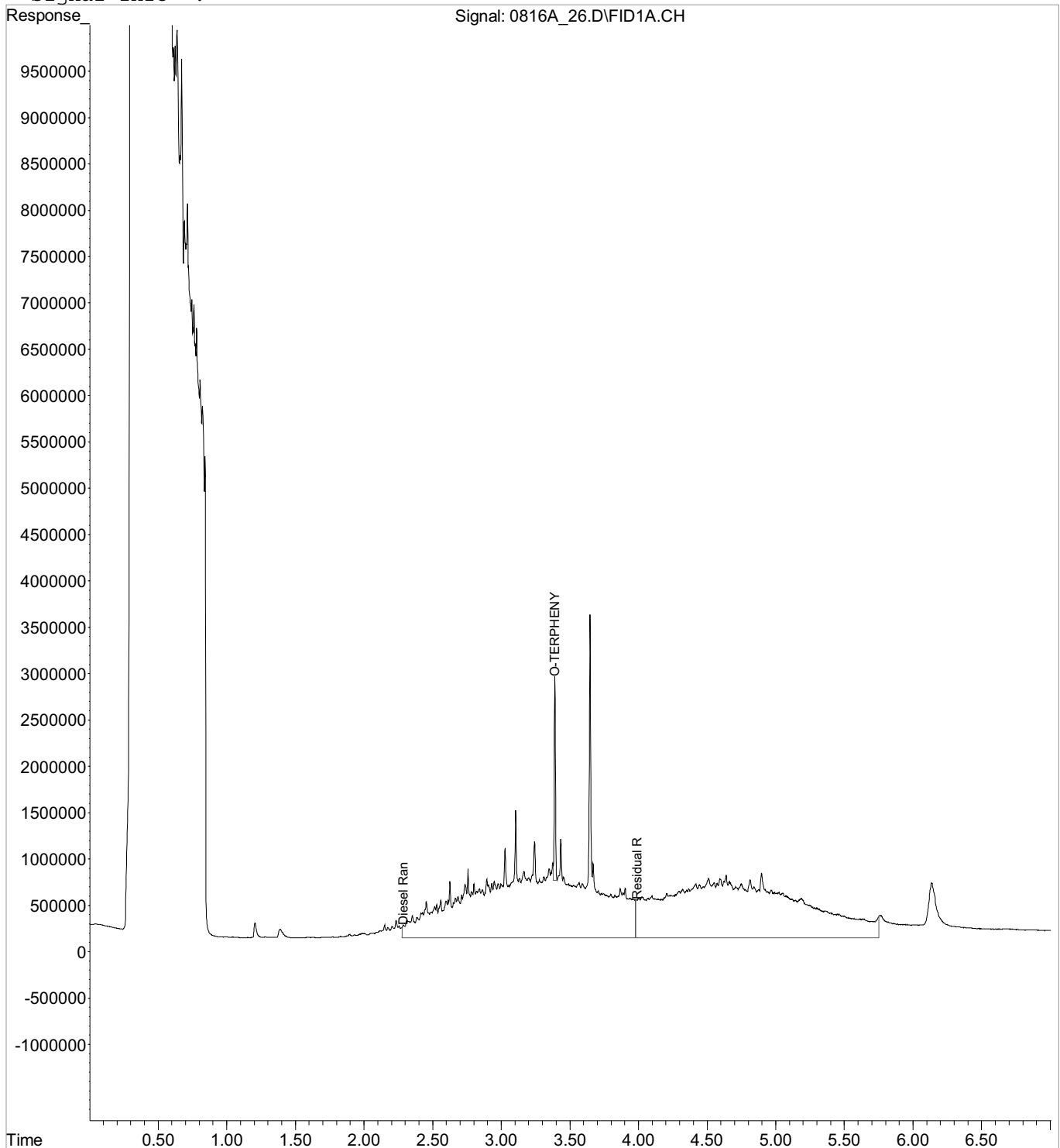
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 26.D Vial: 22
Acq On : 16 Aug 2016 5:54 pm Operator: 614
Sample : L852414-10 1x WG897836 12.5-0.5 Inst : SVGC13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 18:03 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

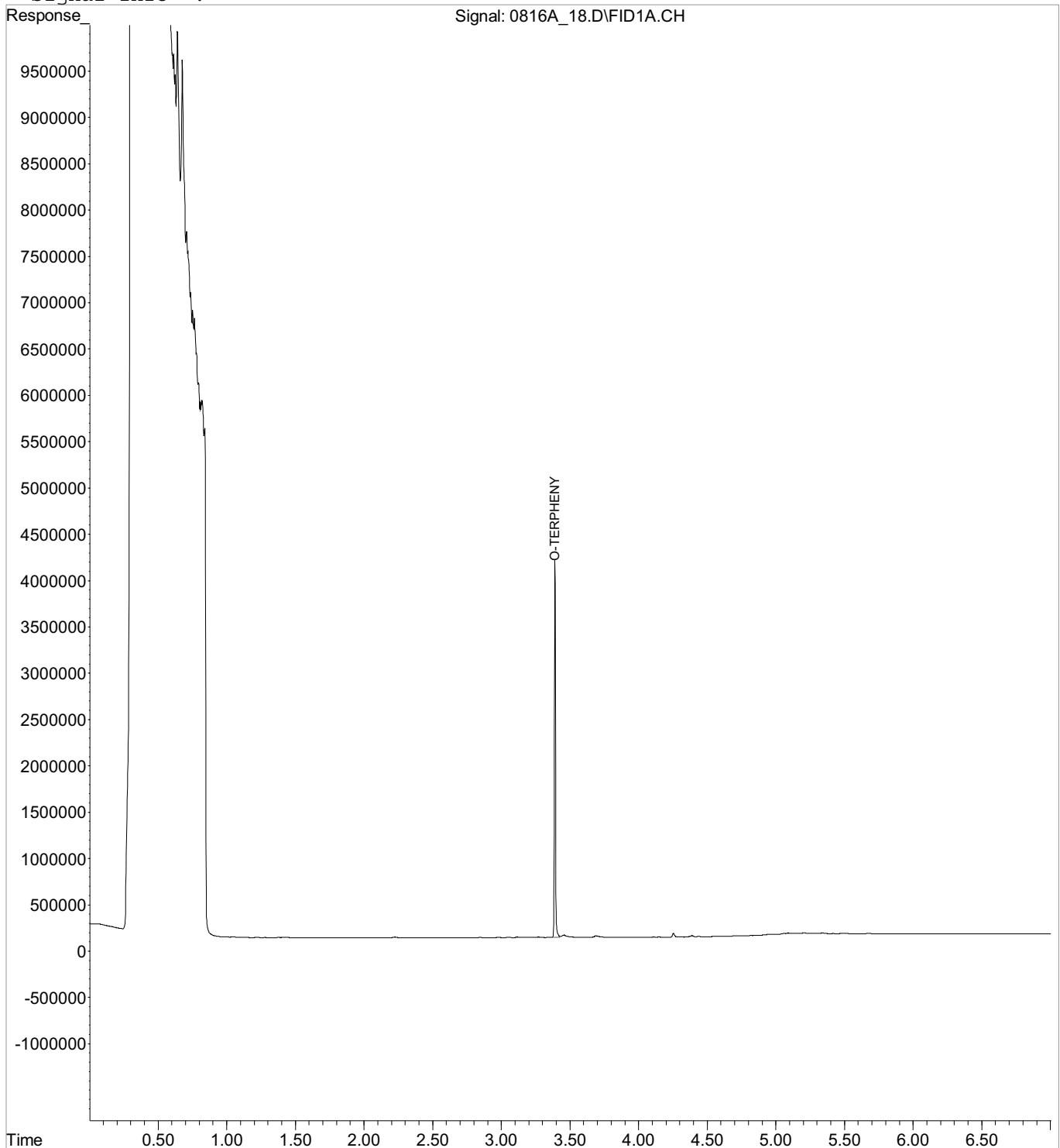
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 18.D Vial: 14
Acq On : 16 Aug 2016 4:17 pm Operator: 614
Sample : L852414-11 1x WG897836 12.5-0.5 Inst : SVG13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 16:29 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

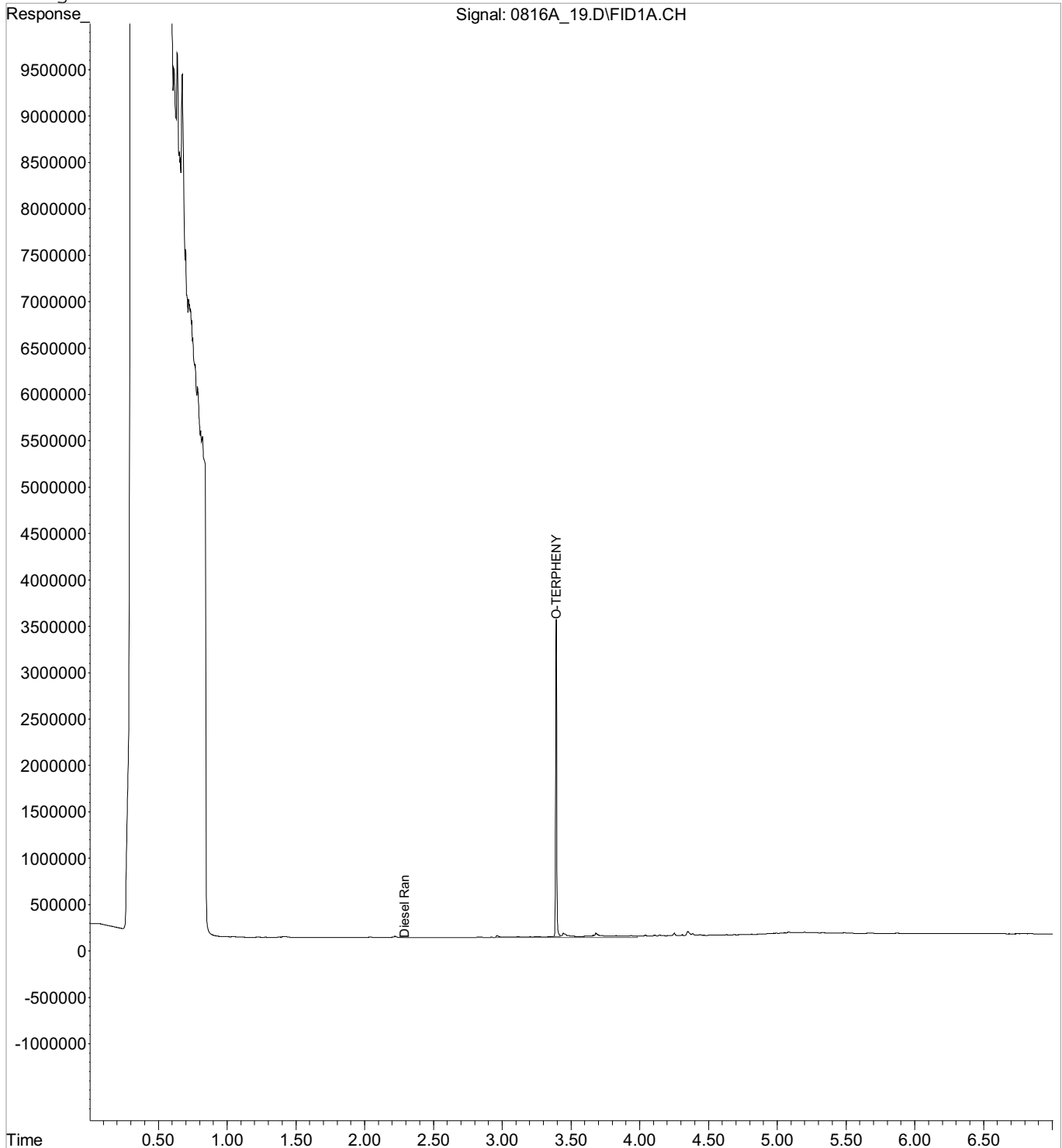
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 19.D Vial: 15
Acq On : 16 Aug 2016 4:30 pm Operator: 614
Sample : L852414-12 1x WG897836 12.5-0.5 Inst : SVGC13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 16:40 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

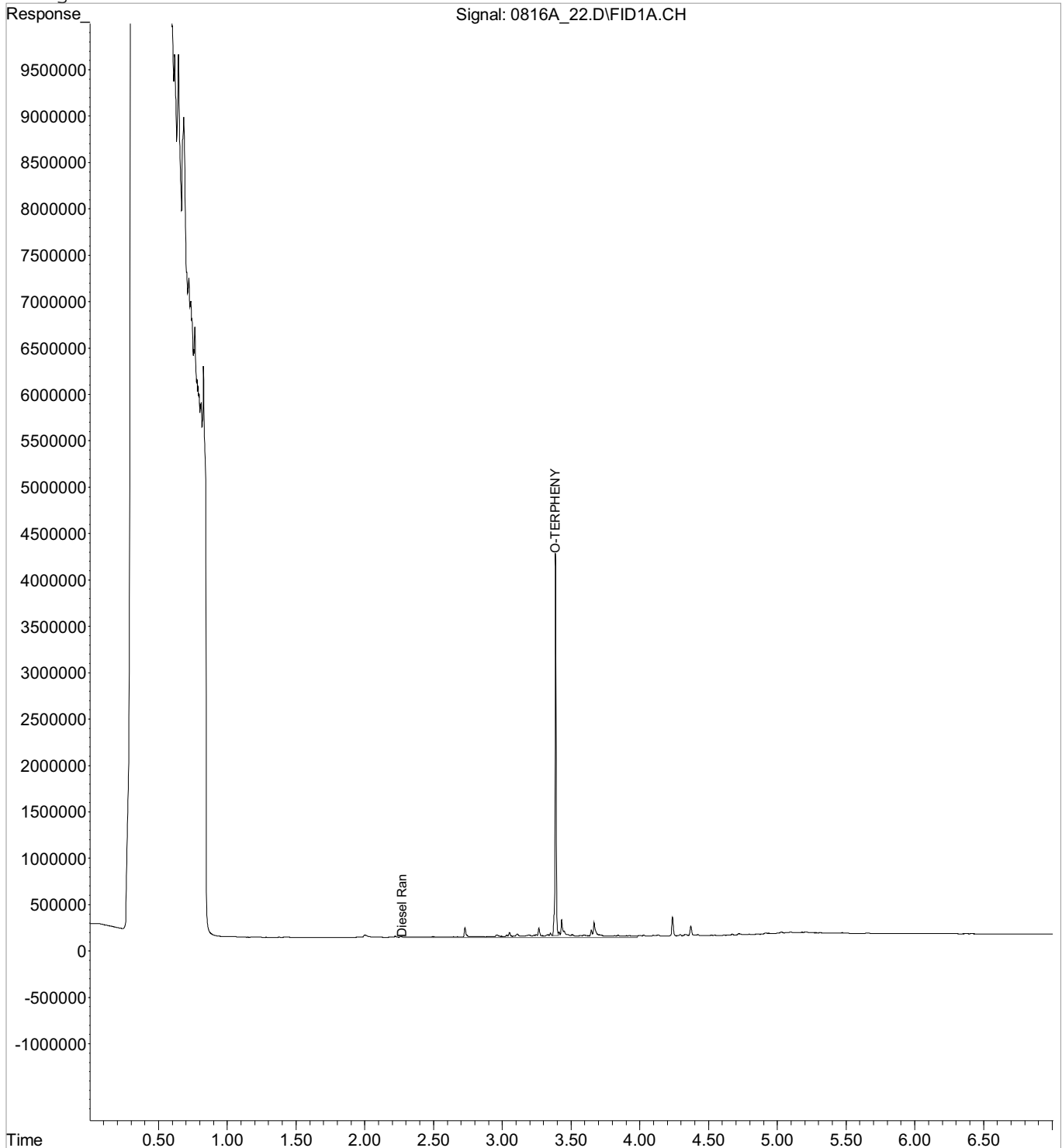
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 22.D Vial: 18
Acq On : 16 Aug 2016 5:06 pm Operator: 614
Sample : L852414-13 1x WG897836 12.5-0.5 Inst : SVG13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 17:15 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

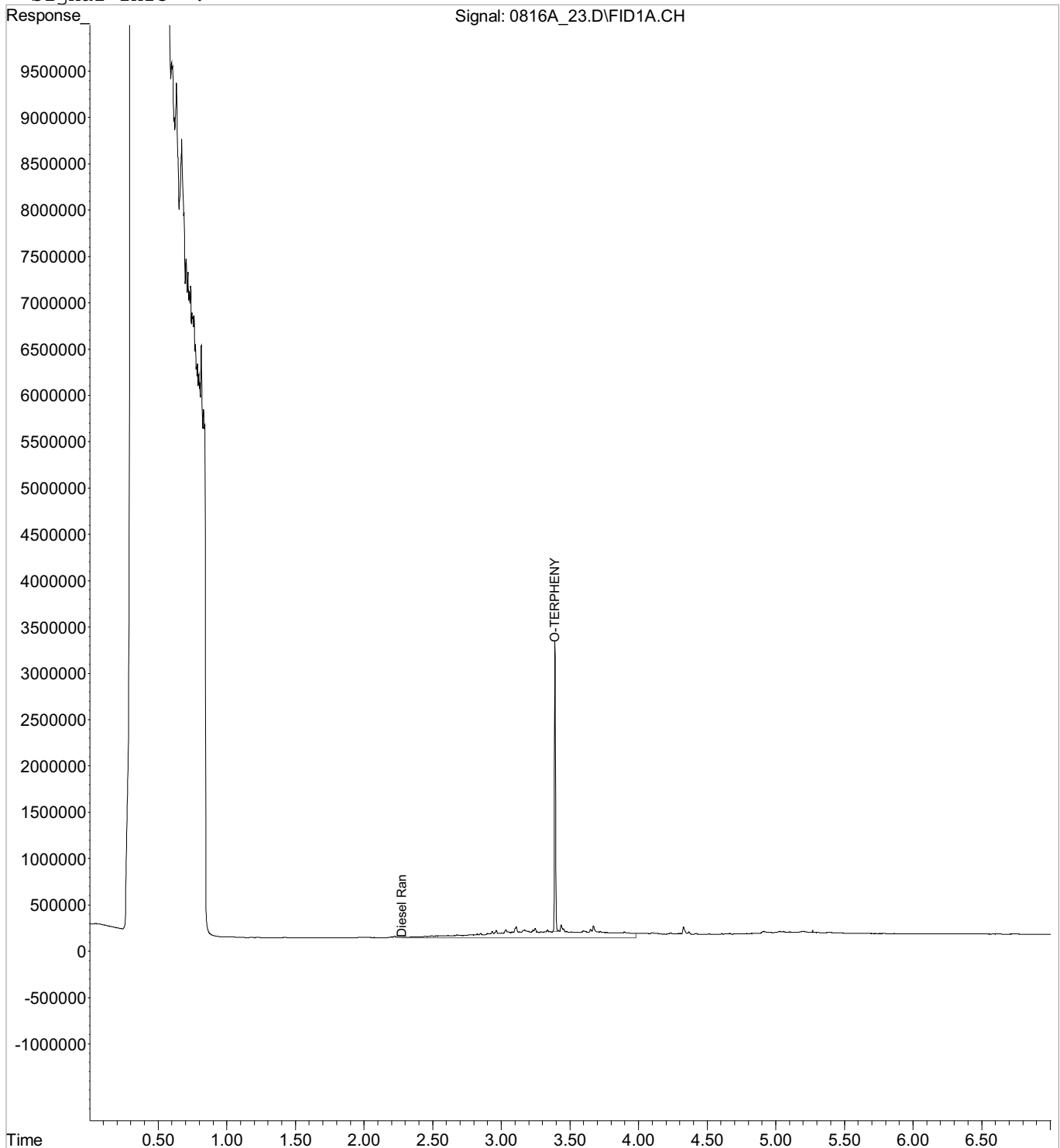
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 23.D Vial: 19
Acq On : 16 Aug 2016 5:18 pm Operator: 614
Sample : L852414-14 1x WG897836 12.5-0.5 Inst : SVGC13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 17:33 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

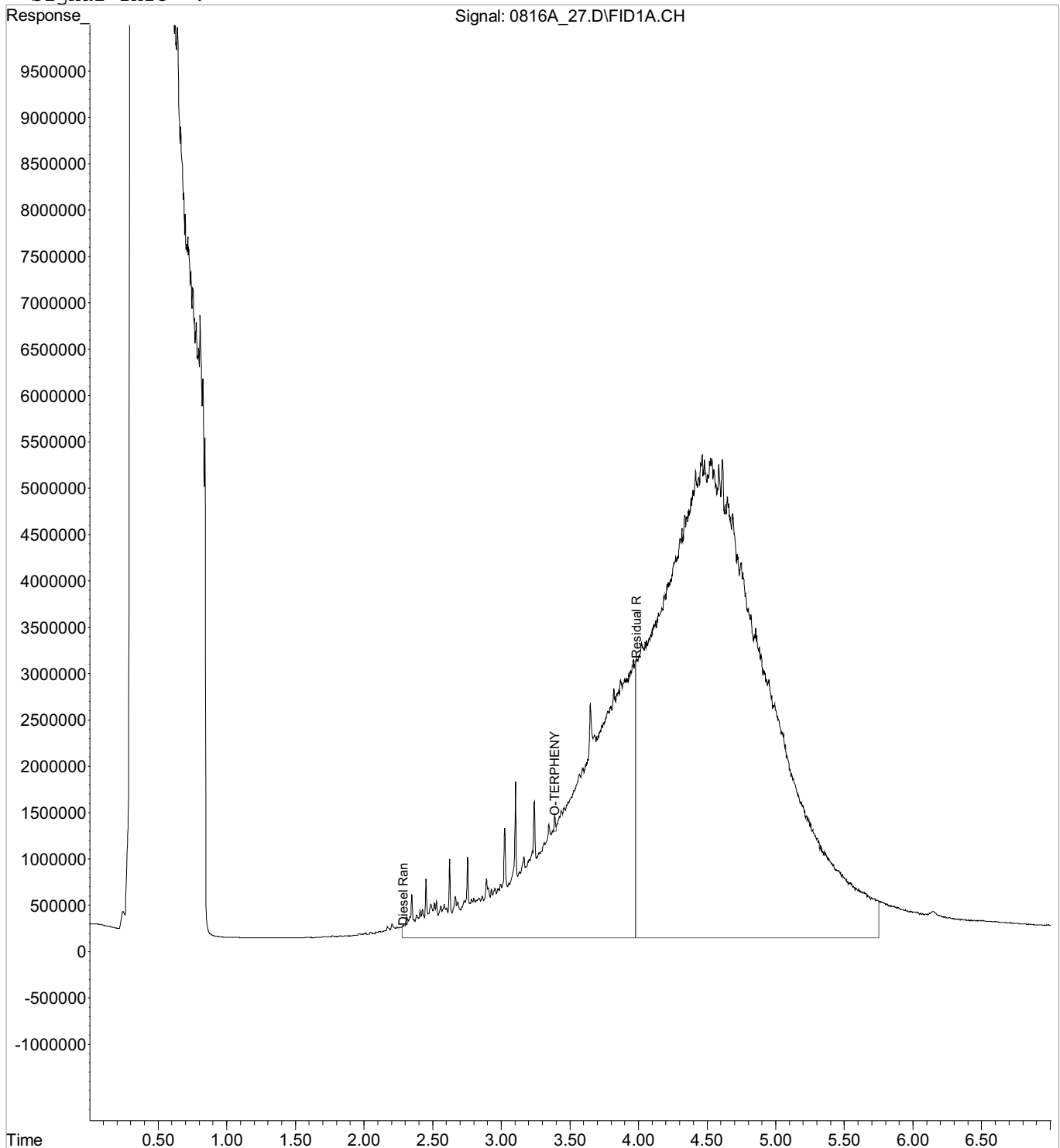
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 27.D Vial: 23
 Acq On : 16 Aug 2016 6:07 pm Operator: 614
 Sample : L852414-16 10x WG897836 12.5-1 Inst : SVGC13
 Misc : soil Multiplr: 0.40
 IntFile : events.e
 Quant Time: Aug 16 18:21 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
 Title :
 Last Update : Tue Aug 16 12:03:45 2016
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

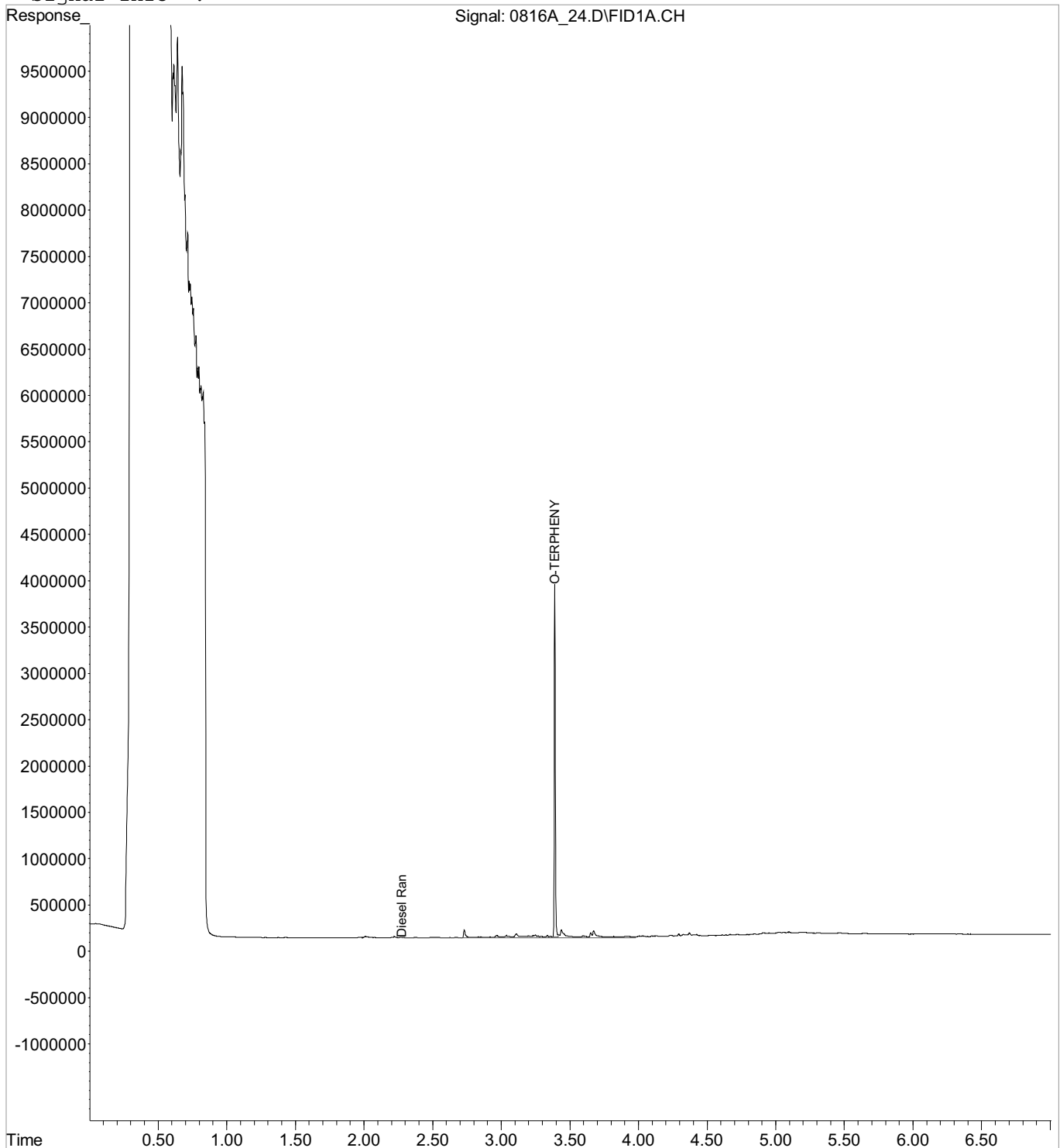
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\081616A\0816A 24.D Vial: 20
Acq On : 16 Aug 2016 5:30 pm Operator: 614
Sample : L852414-17 1x WG897836 12.5-0.5 Inst : SVGC13
Misc : soil Multiplr: 0.04
IntFile : events.e
Quant Time: Aug 16 17:47 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

Volume Inj. :
Signal Phase :
Signal Info :



Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L853409
Samples Received: 08/13/2016
Project Number:
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



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

SAMPLE SUMMARY



B-16-24-29 L853409-01 Solid

Collected by
Joe Sawdey
Collected date/time
08/10/16 16:45
Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG898878	1	08/15/16 11:46	08/16/16 09:28	NJB
Metals (ICP) by Method 6010C	WG899354	1	08/16/16 16:37	08/17/16 11:43	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG899444	1	08/18/16 11:18	08/19/16 08:12	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898728	1	08/15/16 08:09	08/15/16 22:34	DMG
Total Solids by Method 2540 G-2011	WG899139	1	08/16/16 08:36	08/16/16 08:57	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG900475	1	08/20/16 17:14	08/20/16 20:12	JHH

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

B-16-24-12 L853409-02 Solid

Collected by
Joe Sawdey
Collected date/time
08/10/16 16:20
Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG898878	1	08/15/16 11:46	08/16/16 09:54	NJB
Metals (ICP) by Method 6010C	WG899354	1	08/16/16 16:37	08/17/16 13:31	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG899444	1	08/18/16 11:18	08/19/16 11:27	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898728	1	08/15/16 08:09	08/15/16 22:48	DMG
Total Solids by Method 2540 G-2011	WG899139	1	08/16/16 08:36	08/16/16 08:57	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG900475	1	08/20/16 17:14	08/20/16 20:33	JHH

B-16-09-15 L853409-03 Solid

Collected by
Joe Sawdey
Collected date/time
08/09/16 14:05
Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG898878	1	08/15/16 11:46	08/16/16 09:56	NJB
Metals (ICP) by Method 6010C	WG899354	1	08/16/16 16:37	08/17/16 13:33	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG899444	1	08/18/16 11:18	08/19/16 11:49	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898728	1	08/15/16 08:09	08/15/16 23:02	DMG
Total Solids by Method 2540 G-2011	WG899139	1	08/16/16 08:36	08/16/16 08:57	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG900475	1	08/20/16 17:14	08/20/16 20:53	JHH

B-16-12-10 L853409-04 Solid

Collected by
Joe Sawdey
Collected date/time
08/09/16 15:20
Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG898878	1	08/15/16 11:46	08/16/16 09:59	NJB
Metals (ICP) by Method 6010C	WG899354	1	08/16/16 16:37	08/17/16 13:36	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG899444	1	08/18/16 11:18	08/19/16 12:11	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898728	1	08/15/16 08:09	08/15/16 23:16	DMG
Total Solids by Method 2540 G-2011	WG899139	1	08/16/16 08:36	08/16/16 08:57	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG900475	1	08/20/16 17:14	08/20/16 21:14	JHH

B-16-05-04 L853409-05 Solid

Collected by
Joe Sawdey
Collected date/time
08/11/16 10:20
Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Polychlorinated Biphenyls (GC) by Method 8082	WG898735	1	08/15/16 17:59	08/16/16 16:38	JNS
Total Solids by Method 2540 G-2011	WG899139	1	08/16/16 08:36	08/16/16 08:57	MEL

SAMPLE SUMMARY



B-16-05-10 L853409-06 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Polychlorinated Biphenyls (GC) by Method 8082	WG898735	1	08/15/16 17:59	08/16/16 16:51	JNS
Total Solids by Method 2540 G-2011	WG899139	1	08/16/16 08:36	08/16/16 08:57	MEL

Collected by
Joe Sawdey

Collected date/time
08/11/16 10:30

Received date/time
08/13/16 09:00

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

B-16-18-10 L853409-07 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG898878	1	08/15/16 11:46	08/16/16 10:01	NJB
Metals (ICP) by Method 6010C	WG899354	1	08/16/16 16:37	08/17/16 13:39	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG899444	1	08/18/16 11:18	08/19/16 12:33	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898728	1	08/15/16 08:09	08/15/16 23:31	DMG
Total Solids by Method 2540 G-2011	WG899139	1	08/16/16 08:36	08/16/16 08:57	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG900475	1	08/20/16 17:14	08/20/16 21:34	JHH

Collected by
Joe Sawdey

Collected date/time
08/11/16 12:30

Received date/time
08/13/16 09:00

B-16-04-04 L853409-08 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Polychlorinated Biphenyls (GC) by Method 8082	WG898735	1	08/15/16 17:59	08/16/16 17:03	JNS
Total Solids by Method 2540 G-2011	WG899139	1	08/16/16 08:36	08/16/16 08:57	MEL

Collected by
Joe Sawdey

Collected date/time
08/11/16 10:50

Received date/time
08/13/16 09:00

B-16-04-10 L853409-09 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Polychlorinated Biphenyls (GC) by Method 8082	WG898735	1	08/15/16 17:59	08/16/16 17:15	JNS
Total Solids by Method 2540 G-2011	WG899139	1	08/16/16 08:36	08/16/16 08:57	MEL

Collected by
Joe Sawdey

Collected date/time
08/11/16 10:55

Received date/time
08/13/16 09:00

DUP-0811 L853409-10 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG898878	1	08/15/16 11:46	08/16/16 10:04	NJB
Metals (ICP) by Method 6010C	WG899354	1	08/16/16 16:37	08/17/16 11:12	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG899444	1	08/18/16 11:18	08/19/16 12:54	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898728	1	08/15/16 08:09	08/15/16 23:45	DMG
Total Solids by Method 2540 G-2011	WG899139	1	08/16/16 08:36	08/16/16 08:57	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG900475	1	08/20/16 17:14	08/20/16 21:55	JHH

Collected by
Joe Sawdey

Collected date/time
08/11/16 00:00

Received date/time
08/13/16 09:00

B-16-18(10.0)(20160811) L853409-11 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG898825	1	08/15/16 10:55	08/16/16 10:24	NJB
Mercury by Method 7470A	WG899309	1	08/16/16 15:44	08/17/16 10:43	NJB
Metals (ICP) by Method 6010C	WG899105	1	08/16/16 10:52	08/16/16 13:18	LTB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 17:22	JDG
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898738	1	08/15/16 08:37	08/16/16 06:34	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898726	1	08/15/16 19:59	08/20/16 12:14	JM
Volatile Organic Compounds (GC) by Method NWTPHGX	WG899623	1	08/17/16 21:45	08/17/16 21:45	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG899815	1	08/18/16 05:01	08/18/16 05:01	DWR

Collected by
Joe Sawdey

Collected date/time
08/11/16 13:15

Received date/time
08/13/16 09:00

SAMPLE SUMMARY



B-16-18(10.0)(20160811) L853409-11 GW

Collected by
Joe Sawdey
Collected date/time
08/11/16 13:15
Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG900390	1	08/20/16 20:18	08/20/16 20:18	DWR

1
Cp

2
Tc

3
Ss

B-16-24(25.0)(20160810) L853409-12 GW

Collected by
Joe Sawdey
Collected date/time
08/10/16 17:15
Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG898825	1	08/15/16 10:55	08/16/16 10:27	NJB
Mercury by Method 7470A	WG899309	1	08/16/16 15:44	08/17/16 10:46	NJB
Metals (ICP) by Method 6010C	WG899105	1	08/16/16 10:52	08/16/16 12:34	LTB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 17:30	JDG
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898738	1	08/15/16 08:37	08/16/16 06:55	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898726	1	08/15/16 19:59	08/20/16 05:39	JM
Volatile Organic Compounds (GC) by Method NWTPHGX	WG899623	1	08/17/16 22:07	08/17/16 22:07	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG899815	1	08/18/16 05:22	08/18/16 05:22	DWR

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

B-16-24(10.0)(20160811) L853409-13 GW

Collected by
Joe Sawdey
Collected date/time
08/11/16 07:45
Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG899218	1	08/16/16 12:40	08/16/16 16:58	TRB
Mercury by Method 7470A	WG899309	1	08/16/16 15:44	08/17/16 10:49	NJB
Metals (ICP) by Method 6010C	WG899105	1	08/16/16 10:52	08/16/16 13:21	LTB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 17:33	JDG
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898738	1	08/15/16 08:37	08/16/16 07:17	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898726	1	08/15/16 19:59	08/20/16 06:03	JM
Volatile Organic Compounds (GC) by Method NWTPHGX	WG899623	1	08/17/16 22:29	08/17/16 22:29	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG899815	1	08/18/16 05:42	08/18/16 05:42	DWR

9
Sc

B-16-09(10.0)(20160809) L853409-14 GW

Collected by
Joe Sawdey
Collected date/time
08/09/16 14:20
Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898738	2	08/15/16 08:37	08/16/16 07:39	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898726	1.11	08/15/16 19:59	08/20/16 06:26	JM
Volatile Organic Compounds (GC) by Method NWTPHGX	WG899623	1	08/17/16 22:51	08/17/16 22:51	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG900390	1	08/20/16 20:40	08/20/16 20:40	DWR

B-16-12(10.0)(20160809) L853409-15 GW

Collected by
Joe Sawdey
Collected date/time
08/09/16 15:15
Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG898738	1	08/15/16 08:37	08/16/16 08:01	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG898726	1	08/15/16 19:59	08/20/16 06:50	JM
Volatile Organic Compounds (GC) by Method NWTPHGX	WG899623	1	08/17/16 23:13	08/17/16 23:13	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG900390	1	08/20/16 21:03	08/20/16 21:03	DWR

SAMPLE SUMMARY



TRIP BLANK-01 L853409-16 GW

Collected by
Joe Sawdey

Collected date/time
08/10/16 00:00

Received date/time
08/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG899815	1	08/18/16 00:16	08/18/16 00:16	DWR

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



All MDL (LOD) and RDL (LOG) 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.

Jason Romer
Technical Service Representative

Sample Handling and Receiving

The analysis for 2-Chloroethyl Vinyl Ether was conducted from a chemically preserved container.

ESC Sample ID	Project Sample ID	Method
L853409-11	B-16-18(10.0)(20160811)	8260C
L853409-12	B-16-24(25.0)(20160810)	8260C
L853409-13	B-16-24(10.0)(20160811)	8260C
L853409-15	B-16-12(10.0)(20160809)	8260C
L853409-16	TRIP BLANK-01	8260C

VOC pH outside of method requirement.

ESC Sample ID	Project Sample ID	Method
L853409-14	B-16-09(10.0)(20160809)	8260C

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	70.6		1	08/16/2016 08:57	WG899139

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0283	1	08/16/2016 09:28	WG898878

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.83		2.83	1	08/17/2016 11:43	WG899354
Barium	156		0.709	1	08/17/2016 11:43	WG899354
Cadmium	ND		0.709	1	08/17/2016 11:43	WG899354
Chromium	20.5		1.42	1	08/17/2016 11:43	WG899354
Lead	6.58		0.709	1	08/17/2016 11:43	WG899354
Selenium	ND		2.83	1	08/17/2016 11:43	WG899354
Silver	ND		1.42	1	08/17/2016 11:43	WG899354

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0709	1	08/20/2016 20:12	WG900475
Acrylonitrile	ND		0.0142	1	08/20/2016 20:12	WG900475
Benzene	ND		0.00142	1	08/20/2016 20:12	WG900475
Bromobenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
Bromodichloromethane	ND		0.00142	1	08/20/2016 20:12	WG900475
Bromoform	ND		0.00142	1	08/20/2016 20:12	WG900475
Bromomethane	ND		0.00709	1	08/20/2016 20:12	WG900475
n-Butylbenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
sec-Butylbenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
tert-Butylbenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
Carbon tetrachloride	ND		0.00142	1	08/20/2016 20:12	WG900475
Chlorobenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
Chlorodibromomethane	ND		0.00142	1	08/20/2016 20:12	WG900475
Chloroethane	ND		0.00709	1	08/20/2016 20:12	WG900475
2-Chloroethyl vinyl ether	ND		0.0709	1	08/20/2016 20:12	WG900475
Chloroform	ND		0.00709	1	08/20/2016 20:12	WG900475
Chloromethane	ND		0.00354	1	08/20/2016 20:12	WG900475
2-Chlorotoluene	ND		0.00142	1	08/20/2016 20:12	WG900475
4-Chlorotoluene	ND		0.00142	1	08/20/2016 20:12	WG900475
1,2-Dibromo-3-Chloropropane	ND		0.00709	1	08/20/2016 20:12	WG900475
1,2-Dibromoethane	ND		0.00142	1	08/20/2016 20:12	WG900475
Dibromomethane	ND		0.00142	1	08/20/2016 20:12	WG900475
1,2-Dichlorobenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
1,3-Dichlorobenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
1,4-Dichlorobenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
Dichlorodifluoromethane	ND		0.00709	1	08/20/2016 20:12	WG900475
1,1-Dichloroethane	ND		0.00142	1	08/20/2016 20:12	WG900475
1,2-Dichloroethane	ND		0.00142	1	08/20/2016 20:12	WG900475
1,1-Dichloroethene	ND		0.00142	1	08/20/2016 20:12	WG900475
cis-1,2-Dichloroethene	ND		0.00142	1	08/20/2016 20:12	WG900475
trans-1,2-Dichloroethene	ND		0.00142	1	08/20/2016 20:12	WG900475
1,2-Dichloropropane	ND		0.00142	1	08/20/2016 20:12	WG900475
1,1-Dichloropropene	ND		0.00142	1	08/20/2016 20:12	WG900475

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/10/16 16:45

L853409

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00142	1	08/20/2016 20:12	WG900475
cis-1,3-Dichloropropene	ND		0.00142	1	08/20/2016 20:12	WG900475
trans-1,3-Dichloropropene	ND		0.00142	1	08/20/2016 20:12	WG900475
2,2-Dichloropropane	ND		0.00142	1	08/20/2016 20:12	WG900475
Di-isopropyl ether	ND		0.00142	1	08/20/2016 20:12	WG900475
Ethylbenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
Hexachloro-1,3-butadiene	ND		0.00142	1	08/20/2016 20:12	WG900475
Isopropylbenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
p-Isopropyltoluene	ND		0.00142	1	08/20/2016 20:12	WG900475
2-Butanone (MEK)	ND		0.0142	1	08/20/2016 20:12	WG900475
Methylene Chloride	ND		0.00709	1	08/20/2016 20:12	WG900475
4-Methyl-2-pentanone (MIBK)	ND		0.0142	1	08/20/2016 20:12	WG900475
Methyl tert-butyl ether	ND		0.00142	1	08/20/2016 20:12	WG900475
Naphthalene	ND		0.00709	1	08/20/2016 20:12	WG900475
n-Propylbenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
Styrene	ND		0.00142	1	08/20/2016 20:12	WG900475
1,1,1,2-Tetrachloroethane	ND		0.00142	1	08/20/2016 20:12	WG900475
1,1,2,2-Tetrachloroethane	ND		0.00142	1	08/20/2016 20:12	WG900475
1,1,2-Trichlorotrifluoroethane	ND		0.00142	1	08/20/2016 20:12	WG900475
Tetrachloroethene	ND		0.00142	1	08/20/2016 20:12	WG900475
Toluene	ND		0.00709	1	08/20/2016 20:12	WG900475
1,2,3-Trichlorobenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
1,2,4-Trichlorobenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
1,1,1-Trichloroethane	ND		0.00142	1	08/20/2016 20:12	WG900475
1,1,2-Trichloroethane	ND		0.00142	1	08/20/2016 20:12	WG900475
Trichloroethene	ND		0.00142	1	08/20/2016 20:12	WG900475
Trichlorofluoromethane	ND		0.00709	1	08/20/2016 20:12	WG900475
1,2,3-Trichloropropane	ND		0.00354	1	08/20/2016 20:12	WG900475
1,2,4-Trimethylbenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
1,2,3-Trimethylbenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
Vinyl chloride	ND		0.00142	1	08/20/2016 20:12	WG900475
1,3,5-Trimethylbenzene	ND		0.00142	1	08/20/2016 20:12	WG900475
Xylenes, Total	ND		0.00425	1	08/20/2016 20:12	WG900475
(S) Toluene-d8	104		88.7-115		08/20/2016 20:12	WG900475
(S) Dibromofluoromethane	102		76.3-123		08/20/2016 20:12	WG900475
(S) 4-Bromofluorobenzene	95.1		69.7-129		08/20/2016 20:12	WG900475

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.67	1	08/15/2016 22:34	WG898728
Residual Range Organics (RRO)	ND	J3	14.2	1	08/15/2016 22:34	WG898728
(S) o-Terphenyl	95.7		50.0-150		08/15/2016 22:34	WG898728

Sample Narrative:

NWTPHDX L853409-01 WG898728: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00850	1	08/19/2016 08:12	WG899444
Acenaphthene	ND		0.00850	1	08/19/2016 08:12	WG899444
Acenaphthylene	ND		0.00850	1	08/19/2016 08:12	WG899444
Benzo(a)anthracene	ND		0.00850	1	08/19/2016 08:12	WG899444
Benzo(a)pyrene	ND		0.00850	1	08/19/2016 08:12	WG899444



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00850	1	08/19/2016 08:12	WG899444
Benzo(g,h,i)perylene	ND		0.00850	1	08/19/2016 08:12	WG899444
Benzo(k)fluoranthene	ND		0.00850	1	08/19/2016 08:12	WG899444
Chrysene	ND		0.00850	1	08/19/2016 08:12	WG899444
Dibenz(a,h)anthracene	ND		0.00850	1	08/19/2016 08:12	WG899444
Fluoranthene	ND		0.00850	1	08/19/2016 08:12	WG899444
Fluorene	ND		0.00850	1	08/19/2016 08:12	WG899444
Indeno(1,2,3-cd)pyrene	ND		0.00850	1	08/19/2016 08:12	WG899444
Naphthalene	ND		0.0283	1	08/19/2016 08:12	WG899444
Phenanthrene	ND		0.00850	1	08/19/2016 08:12	WG899444
Pyrene	ND		0.00850	1	08/19/2016 08:12	WG899444
1-Methylnaphthalene	ND		0.0283	1	08/19/2016 08:12	WG899444
2-Methylnaphthalene	ND		0.0283	1	08/19/2016 08:12	WG899444
(S) Nitrobenzene-d5	66.0		22.1-146		08/19/2016 08:12	WG899444
(S) 2-Fluorobiphenyl	79.0		40.6-122		08/19/2016 08:12	WG899444
(S) p-Terphenyl-d14	69.4		32.2-131		08/19/2016 08:12	WG899444

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.2		1	08/16/2016 08:57	WG899139

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Mercury	ND		0.0249	1	08/16/2016 09:54	WG898878

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Arsenic	ND		2.49	1	08/17/2016 13:31	WG899354
Barium	120		0.624	1	08/17/2016 13:31	WG899354
Cadmium	ND		0.624	1	08/17/2016 13:31	WG899354
Chromium	15.1		1.25	1	08/17/2016 13:31	WG899354
Lead	4.30		0.624	1	08/17/2016 13:31	WG899354
Selenium	ND		2.49	1	08/17/2016 13:31	WG899354
Silver	ND		1.25	1	08/17/2016 13:31	WG899354

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Acetone	ND		0.0624	1	08/20/2016 20:33	WG900475
Acrylonitrile	ND		0.0125	1	08/20/2016 20:33	WG900475
Benzene	0.00163		0.00125	1	08/20/2016 20:33	WG900475
Bromobenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
Bromodichloromethane	ND		0.00125	1	08/20/2016 20:33	WG900475
Bromoform	ND		0.00125	1	08/20/2016 20:33	WG900475
Bromomethane	ND		0.00624	1	08/20/2016 20:33	WG900475
n-Butylbenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
sec-Butylbenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
tert-Butylbenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
Carbon tetrachloride	ND		0.00125	1	08/20/2016 20:33	WG900475
Chlorobenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
Chlorodibromomethane	ND		0.00125	1	08/20/2016 20:33	WG900475
Chloroethane	ND		0.00624	1	08/20/2016 20:33	WG900475
2-Chloroethyl vinyl ether	ND		0.0624	1	08/20/2016 20:33	WG900475
Chloroform	ND		0.00624	1	08/20/2016 20:33	WG900475
Chloromethane	ND		0.00312	1	08/20/2016 20:33	WG900475
2-Chlorotoluene	ND		0.00125	1	08/20/2016 20:33	WG900475
4-Chlorotoluene	ND		0.00125	1	08/20/2016 20:33	WG900475
1,2-Dibromo-3-Chloropropane	ND		0.00624	1	08/20/2016 20:33	WG900475
1,2-Dibromoethane	ND		0.00125	1	08/20/2016 20:33	WG900475
Dibromomethane	ND		0.00125	1	08/20/2016 20:33	WG900475
1,2-Dichlorobenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
1,3-Dichlorobenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
1,4-Dichlorobenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
Dichlorodifluoromethane	ND		0.00624	1	08/20/2016 20:33	WG900475
1,1-Dichloroethane	ND		0.00125	1	08/20/2016 20:33	WG900475
1,2-Dichloroethane	ND		0.00125	1	08/20/2016 20:33	WG900475
1,1-Dichloroethene	ND		0.00125	1	08/20/2016 20:33	WG900475
cis-1,2-Dichloroethene	ND		0.00125	1	08/20/2016 20:33	WG900475
trans-1,2-Dichloroethene	ND		0.00125	1	08/20/2016 20:33	WG900475
1,2-Dichloropropane	ND		0.00125	1	08/20/2016 20:33	WG900475
1,1-Dichloropropene	ND		0.00125	1	08/20/2016 20:33	WG900475

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/10/16 16:20

L853409

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00125	1	08/20/2016 20:33	WG900475
cis-1,3-Dichloropropene	ND		0.00125	1	08/20/2016 20:33	WG900475
trans-1,3-Dichloropropene	ND		0.00125	1	08/20/2016 20:33	WG900475
2,2-Dichloropropane	ND		0.00125	1	08/20/2016 20:33	WG900475
Di-isopropyl ether	ND		0.00125	1	08/20/2016 20:33	WG900475
Ethylbenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
Hexachloro-1,3-butadiene	ND		0.00125	1	08/20/2016 20:33	WG900475
Isopropylbenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
p-Isopropyltoluene	ND		0.00125	1	08/20/2016 20:33	WG900475
2-Butanone (MEK)	ND		0.0125	1	08/20/2016 20:33	WG900475
Methylene Chloride	ND		0.00624	1	08/20/2016 20:33	WG900475
4-Methyl-2-pentanone (MIBK)	ND		0.0125	1	08/20/2016 20:33	WG900475
Methyl tert-butyl ether	ND		0.00125	1	08/20/2016 20:33	WG900475
Naphthalene	ND		0.00624	1	08/20/2016 20:33	WG900475
n-Propylbenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
Styrene	ND		0.00125	1	08/20/2016 20:33	WG900475
1,1,1,2-Tetrachloroethane	ND		0.00125	1	08/20/2016 20:33	WG900475
1,1,2,2-Tetrachloroethane	ND		0.00125	1	08/20/2016 20:33	WG900475
1,1,2-Trichlorotrifluoroethane	ND		0.00125	1	08/20/2016 20:33	WG900475
Tetrachloroethene	ND		0.00125	1	08/20/2016 20:33	WG900475
Toluene	ND		0.00624	1	08/20/2016 20:33	WG900475
1,2,3-Trichlorobenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
1,2,4-Trichlorobenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
1,1,1-Trichloroethane	ND		0.00125	1	08/20/2016 20:33	WG900475
1,1,2-Trichloroethane	ND		0.00125	1	08/20/2016 20:33	WG900475
Trichloroethene	ND		0.00125	1	08/20/2016 20:33	WG900475
Trichlorofluoromethane	ND		0.00624	1	08/20/2016 20:33	WG900475
1,2,3-Trichloropropane	ND		0.00312	1	08/20/2016 20:33	WG900475
1,2,4-Trimethylbenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
1,2,3-Trimethylbenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
Vinyl chloride	ND		0.00125	1	08/20/2016 20:33	WG900475
1,3,5-Trimethylbenzene	ND		0.00125	1	08/20/2016 20:33	WG900475
Xylenes, Total	ND		0.00374	1	08/20/2016 20:33	WG900475
(S) Toluene-d8	104		88.7-115		08/20/2016 20:33	WG900475
(S) Dibromofluoromethane	105		76.3-123		08/20/2016 20:33	WG900475
(S) 4-Bromofluorobenzene	93.3		69.7-129		08/20/2016 20:33	WG900475

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.99	1	08/15/2016 22:48	WG898728
Residual Range Organics (RRO)	ND	J3	12.5	1	08/15/2016 22:48	WG898728
(S) o-Terphenyl	69.8		50.0-150		08/15/2016 22:48	WG898728

Sample Narrative:

NWTPHDX L853409-02 WG898728: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00748	1	08/19/2016 11:27	WG899444
Acenaphthene	ND		0.00748	1	08/19/2016 11:27	WG899444
Acenaphthylene	ND		0.00748	1	08/19/2016 11:27	WG899444
Benzo(a)anthracene	ND		0.00748	1	08/19/2016 11:27	WG899444
Benzo(a)pyrene	ND		0.00748	1	08/19/2016 11:27	WG899444



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00748	1	08/19/2016 11:27	WG899444
Benzo(g,h,i)perylene	ND		0.00748	1	08/19/2016 11:27	WG899444
Benzo(k)fluoranthene	ND		0.00748	1	08/19/2016 11:27	WG899444
Chrysene	ND		0.00748	1	08/19/2016 11:27	WG899444
Dibenz(a,h)anthracene	ND		0.00748	1	08/19/2016 11:27	WG899444
Fluoranthene	ND		0.00748	1	08/19/2016 11:27	WG899444
Fluorene	ND		0.00748	1	08/19/2016 11:27	WG899444
Indeno(1,2,3-cd)pyrene	ND		0.00748	1	08/19/2016 11:27	WG899444
Naphthalene	ND		0.0249	1	08/19/2016 11:27	WG899444
Phenanthrene	ND		0.00748	1	08/19/2016 11:27	WG899444
Pyrene	ND		0.00748	1	08/19/2016 11:27	WG899444
1-Methylnaphthalene	ND		0.0249	1	08/19/2016 11:27	WG899444
2-Methylnaphthalene	ND		0.0249	1	08/19/2016 11:27	WG899444
(S) Nitrobenzene-d5	67.0		22.1-146		08/19/2016 11:27	WG899444
(S) 2-Fluorobiphenyl	82.0		40.6-122		08/19/2016 11:27	WG899444
(S) p-Terphenyl-d14	79.6		32.2-131		08/19/2016 11:27	WG899444

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	80.9		1	08/16/2016 08:57	WG899139

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0247	1	08/16/2016 09:56	WG898878

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.60		2.47	1	08/17/2016 13:33	WG899354
Barium	83.8		0.618	1	08/17/2016 13:33	WG899354
Cadmium	ND		0.618	1	08/17/2016 13:33	WG899354
Chromium	13.8		1.24	1	08/17/2016 13:33	WG899354
Lead	2.71		0.618	1	08/17/2016 13:33	WG899354
Selenium	ND		2.47	1	08/17/2016 13:33	WG899354
Silver	ND		1.24	1	08/17/2016 13:33	WG899354

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0618	1	08/20/2016 20:53	WG900475
Acrylonitrile	ND		0.0124	1	08/20/2016 20:53	WG900475
Benzene	ND		0.00124	1	08/20/2016 20:53	WG900475
Bromobenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
Bromodichloromethane	ND		0.00124	1	08/20/2016 20:53	WG900475
Bromoform	ND		0.00124	1	08/20/2016 20:53	WG900475
Bromomethane	ND		0.00618	1	08/20/2016 20:53	WG900475
n-Butylbenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
sec-Butylbenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
tert-Butylbenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
Carbon tetrachloride	ND		0.00124	1	08/20/2016 20:53	WG900475
Chlorobenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
Chlorodibromomethane	ND		0.00124	1	08/20/2016 20:53	WG900475
Chloroethane	ND		0.00618	1	08/20/2016 20:53	WG900475
2-Chloroethyl vinyl ether	ND		0.0618	1	08/20/2016 20:53	WG900475
Chloroform	ND		0.00618	1	08/20/2016 20:53	WG900475
Chloromethane	ND		0.00309	1	08/20/2016 20:53	WG900475
2-Chlorotoluene	ND		0.00124	1	08/20/2016 20:53	WG900475
4-Chlorotoluene	ND		0.00124	1	08/20/2016 20:53	WG900475
1,2-Dibromo-3-Chloropropane	ND		0.00618	1	08/20/2016 20:53	WG900475
1,2-Dibromoethane	ND		0.00124	1	08/20/2016 20:53	WG900475
Dibromomethane	ND		0.00124	1	08/20/2016 20:53	WG900475
1,2-Dichlorobenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
1,3-Dichlorobenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
1,4-Dichlorobenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
Dichlorodifluoromethane	ND		0.00618	1	08/20/2016 20:53	WG900475
1,1-Dichloroethane	ND		0.00124	1	08/20/2016 20:53	WG900475
1,2-Dichloroethane	ND		0.00124	1	08/20/2016 20:53	WG900475
1,1-Dichloroethene	ND		0.00124	1	08/20/2016 20:53	WG900475
cis-1,2-Dichloroethene	ND		0.00124	1	08/20/2016 20:53	WG900475
trans-1,2-Dichloroethene	ND		0.00124	1	08/20/2016 20:53	WG900475
1,2-Dichloropropane	ND		0.00124	1	08/20/2016 20:53	WG900475
1,1-Dichloropropene	ND		0.00124	1	08/20/2016 20:53	WG900475

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/09/16 14:05

L853409

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00124	1	08/20/2016 20:53	WG900475
cis-1,3-Dichloropropene	ND		0.00124	1	08/20/2016 20:53	WG900475
trans-1,3-Dichloropropene	ND		0.00124	1	08/20/2016 20:53	WG900475
2,2-Dichloropropane	ND		0.00124	1	08/20/2016 20:53	WG900475
Di-isopropyl ether	ND		0.00124	1	08/20/2016 20:53	WG900475
Ethylbenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
Hexachloro-1,3-butadiene	ND		0.00124	1	08/20/2016 20:53	WG900475
Isopropylbenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
p-Isopropyltoluene	ND		0.00124	1	08/20/2016 20:53	WG900475
2-Butanone (MEK)	ND		0.0124	1	08/20/2016 20:53	WG900475
Methylene Chloride	ND		0.00618	1	08/20/2016 20:53	WG900475
4-Methyl-2-pentanone (MIBK)	ND		0.0124	1	08/20/2016 20:53	WG900475
Methyl tert-butyl ether	ND		0.00124	1	08/20/2016 20:53	WG900475
Naphthalene	ND		0.00618	1	08/20/2016 20:53	WG900475
n-Propylbenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
Styrene	ND		0.00124	1	08/20/2016 20:53	WG900475
1,1,1,2-Tetrachloroethane	ND		0.00124	1	08/20/2016 20:53	WG900475
1,1,2,2-Tetrachloroethane	ND		0.00124	1	08/20/2016 20:53	WG900475
1,1,2-Trichlorotrifluoroethane	ND		0.00124	1	08/20/2016 20:53	WG900475
Tetrachloroethene	ND		0.00124	1	08/20/2016 20:53	WG900475
Toluene	ND		0.00618	1	08/20/2016 20:53	WG900475
1,2,3-Trichlorobenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
1,2,4-Trichlorobenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
1,1,1-Trichloroethane	ND		0.00124	1	08/20/2016 20:53	WG900475
1,1,2-Trichloroethane	ND		0.00124	1	08/20/2016 20:53	WG900475
Trichloroethene	ND		0.00124	1	08/20/2016 20:53	WG900475
Trichlorofluoromethane	ND		0.00618	1	08/20/2016 20:53	WG900475
1,2,3-Trichloropropane	ND		0.00309	1	08/20/2016 20:53	WG900475
1,2,4-Trimethylbenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
1,2,3-Trimethylbenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
Vinyl chloride	ND		0.00124	1	08/20/2016 20:53	WG900475
1,3,5-Trimethylbenzene	ND		0.00124	1	08/20/2016 20:53	WG900475
Xylenes, Total	ND		0.00371	1	08/20/2016 20:53	WG900475
(S) Toluene-d8	105		88.7-115		08/20/2016 20:53	WG900475
(S) Dibromofluoromethane	105		76.3-123		08/20/2016 20:53	WG900475
(S) 4-Bromofluorobenzene	94.2		69.7-129		08/20/2016 20:53	WG900475

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.94	1	08/15/2016 23:02	WG898728
Residual Range Organics (RRO)	ND	J3	12.4	1	08/15/2016 23:02	WG898728
(S) o-Terphenyl	81.0		50.0-150		08/15/2016 23:02	WG898728

Sample Narrative:

NWTPHDX L853409-03 WG898728: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00742	1	08/19/2016 11:49	WG899444
Acenaphthene	ND		0.00742	1	08/19/2016 11:49	WG899444
Acenaphthylene	ND		0.00742	1	08/19/2016 11:49	WG899444
Benzo(a)anthracene	ND		0.00742	1	08/19/2016 11:49	WG899444
Benzo(a)pyrene	ND		0.00742	1	08/19/2016 11:49	WG899444



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00742	1	08/19/2016 11:49	WG899444
Benzo(g,h,i)perylene	ND		0.00742	1	08/19/2016 11:49	WG899444
Benzo(k)fluoranthene	ND		0.00742	1	08/19/2016 11:49	WG899444
Chrysene	ND		0.00742	1	08/19/2016 11:49	WG899444
Dibenz(a,h)anthracene	ND		0.00742	1	08/19/2016 11:49	WG899444
Fluoranthene	ND		0.00742	1	08/19/2016 11:49	WG899444
Fluorene	ND		0.00742	1	08/19/2016 11:49	WG899444
Indeno(1,2,3-cd)pyrene	ND		0.00742	1	08/19/2016 11:49	WG899444
Naphthalene	ND		0.0247	1	08/19/2016 11:49	WG899444
Phenanthrene	ND		0.00742	1	08/19/2016 11:49	WG899444
Pyrene	ND		0.00742	1	08/19/2016 11:49	WG899444
1-Methylnaphthalene	ND		0.0247	1	08/19/2016 11:49	WG899444
2-Methylnaphthalene	ND		0.0247	1	08/19/2016 11:49	WG899444
(S) Nitrobenzene-d5	63.1		22.1-146		08/19/2016 11:49	WG899444
(S) 2-Fluorobiphenyl	80.8		40.6-122		08/19/2016 11:49	WG899444
(S) p-Terphenyl-d14	82.6		32.2-131		08/19/2016 11:49	WG899444

- 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	83.3		1	08/16/2016 08:57	WG899139

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0240	1	08/16/2016 09:59	WG898878

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.40	1	08/17/2016 13:36	WG899354
Barium	120		0.600	1	08/17/2016 13:36	WG899354
Cadmium	ND		0.600	1	08/17/2016 13:36	WG899354
Chromium	17.8		1.20	1	08/17/2016 13:36	WG899354
Lead	3.98		0.600	1	08/17/2016 13:36	WG899354
Selenium	ND		2.40	1	08/17/2016 13:36	WG899354
Silver	ND		1.20	1	08/17/2016 13:36	WG899354

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0600	1	08/20/2016 21:14	WG900475
Acrylonitrile	ND		0.0120	1	08/20/2016 21:14	WG900475
Benzene	0.00167		0.00120	1	08/20/2016 21:14	WG900475
Bromobenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
Bromodichloromethane	ND		0.00120	1	08/20/2016 21:14	WG900475
Bromoform	ND		0.00120	1	08/20/2016 21:14	WG900475
Bromomethane	ND		0.00600	1	08/20/2016 21:14	WG900475
n-Butylbenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
sec-Butylbenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
tert-Butylbenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
Carbon tetrachloride	ND		0.00120	1	08/20/2016 21:14	WG900475
Chlorobenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
Chlorodibromomethane	ND		0.00120	1	08/20/2016 21:14	WG900475
Chloroethane	ND		0.00600	1	08/20/2016 21:14	WG900475
2-Chloroethyl vinyl ether	ND		0.0600	1	08/20/2016 21:14	WG900475
Chloroform	ND		0.00600	1	08/20/2016 21:14	WG900475
Chloromethane	ND		0.00300	1	08/20/2016 21:14	WG900475
2-Chlorotoluene	ND		0.00120	1	08/20/2016 21:14	WG900475
4-Chlorotoluene	ND		0.00120	1	08/20/2016 21:14	WG900475
1,2-Dibromo-3-Chloropropane	ND		0.00600	1	08/20/2016 21:14	WG900475
1,2-Dibromoethane	ND		0.00120	1	08/20/2016 21:14	WG900475
Dibromomethane	ND		0.00120	1	08/20/2016 21:14	WG900475
1,2-Dichlorobenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
1,3-Dichlorobenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
1,4-Dichlorobenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
Dichlorodifluoromethane	ND		0.00600	1	08/20/2016 21:14	WG900475
1,1-Dichloroethane	ND		0.00120	1	08/20/2016 21:14	WG900475
1,2-Dichloroethane	ND		0.00120	1	08/20/2016 21:14	WG900475
1,1-Dichloroethene	ND		0.00120	1	08/20/2016 21:14	WG900475
cis-1,2-Dichloroethene	ND		0.00120	1	08/20/2016 21:14	WG900475
trans-1,2-Dichloroethene	ND		0.00120	1	08/20/2016 21:14	WG900475
1,2-Dichloropropane	ND		0.00120	1	08/20/2016 21:14	WG900475
1,1-Dichloropropene	ND		0.00120	1	08/20/2016 21:14	WG900475

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/09/16 15:20

L853409

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00120	1	08/20/2016 21:14	WG900475
cis-1,3-Dichloropropene	ND		0.00120	1	08/20/2016 21:14	WG900475
trans-1,3-Dichloropropene	ND		0.00120	1	08/20/2016 21:14	WG900475
2,2-Dichloropropane	ND		0.00120	1	08/20/2016 21:14	WG900475
Di-isopropyl ether	ND		0.00120	1	08/20/2016 21:14	WG900475
Ethylbenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
Hexachloro-1,3-butadiene	ND		0.00120	1	08/20/2016 21:14	WG900475
Isopropylbenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
p-Isopropyltoluene	ND		0.00120	1	08/20/2016 21:14	WG900475
2-Butanone (MEK)	ND		0.0120	1	08/20/2016 21:14	WG900475
Methylene Chloride	ND		0.00600	1	08/20/2016 21:14	WG900475
4-Methyl-2-pentanone (MIBK)	ND		0.0120	1	08/20/2016 21:14	WG900475
Methyl tert-butyl ether	ND		0.00120	1	08/20/2016 21:14	WG900475
Naphthalene	ND		0.00600	1	08/20/2016 21:14	WG900475
n-Propylbenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
Styrene	ND		0.00120	1	08/20/2016 21:14	WG900475
1,1,1,2-Tetrachloroethane	ND		0.00120	1	08/20/2016 21:14	WG900475
1,1,2,2-Tetrachloroethane	ND		0.00120	1	08/20/2016 21:14	WG900475
1,1,2-Trichlorotrifluoroethane	ND		0.00120	1	08/20/2016 21:14	WG900475
Tetrachloroethene	ND		0.00120	1	08/20/2016 21:14	WG900475
Toluene	ND		0.00600	1	08/20/2016 21:14	WG900475
1,2,3-Trichlorobenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
1,2,4-Trichlorobenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
1,1,1-Trichloroethane	ND		0.00120	1	08/20/2016 21:14	WG900475
1,1,2-Trichloroethane	ND		0.00120	1	08/20/2016 21:14	WG900475
Trichloroethene	ND		0.00120	1	08/20/2016 21:14	WG900475
Trichlorofluoromethane	ND		0.00600	1	08/20/2016 21:14	WG900475
1,2,3-Trichloropropane	ND		0.00300	1	08/20/2016 21:14	WG900475
1,2,4-Trimethylbenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
1,2,3-Trimethylbenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
Vinyl chloride	ND		0.00120	1	08/20/2016 21:14	WG900475
1,3,5-Trimethylbenzene	ND		0.00120	1	08/20/2016 21:14	WG900475
Xylenes, Total	ND		0.00360	1	08/20/2016 21:14	WG900475
(S) Toluene-d8	105		88.7-115		08/20/2016 21:14	WG900475
(S) Dibromofluoromethane	106		76.3-123		08/20/2016 21:14	WG900475
(S) 4-Bromofluorobenzene	93.1		69.7-129		08/20/2016 21:14	WG900475

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.80	1	08/15/2016 23:16	WG898728
Residual Range Organics (RRO)	ND	J3	12.0	1	08/15/2016 23:16	WG898728
(S) o-Terphenyl	92.4		50.0-150		08/15/2016 23:16	WG898728

Sample Narrative:

NWTPHDX L853409-04 WG898728: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00720	1	08/19/2016 12:11	WG899444
Acenaphthene	ND		0.00720	1	08/19/2016 12:11	WG899444
Acenaphthylene	ND		0.00720	1	08/19/2016 12:11	WG899444
Benzo(a)anthracene	ND		0.00720	1	08/19/2016 12:11	WG899444
Benzo(a)pyrene	ND		0.00720	1	08/19/2016 12:11	WG899444



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00720	1	08/19/2016 12:11	WG899444
Benzo(g,h,i)perylene	ND		0.00720	1	08/19/2016 12:11	WG899444
Benzo(k)fluoranthene	ND		0.00720	1	08/19/2016 12:11	WG899444
Chrysene	ND		0.00720	1	08/19/2016 12:11	WG899444
Dibenz(a,h)anthracene	ND		0.00720	1	08/19/2016 12:11	WG899444
Fluoranthene	ND		0.00720	1	08/19/2016 12:11	WG899444
Fluorene	ND		0.00720	1	08/19/2016 12:11	WG899444
Indeno(1,2,3-cd)pyrene	ND		0.00720	1	08/19/2016 12:11	WG899444
Naphthalene	ND		0.0240	1	08/19/2016 12:11	WG899444
Phenanthrene	ND		0.00720	1	08/19/2016 12:11	WG899444
Pyrene	ND		0.00720	1	08/19/2016 12:11	WG899444
1-Methylnaphthalene	ND		0.0240	1	08/19/2016 12:11	WG899444
2-Methylnaphthalene	ND		0.0240	1	08/19/2016 12:11	WG899444
(S) Nitrobenzene-d5	65.6		22.1-146		08/19/2016 12:11	WG899444
(S) 2-Fluorobiphenyl	76.9		40.6-122		08/19/2016 12:11	WG899444
(S) p-Terphenyl-d14	74.5		32.2-131		08/19/2016 12:11	WG899444

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.3		1	08/16/2016 08:57	WG899139

1 Cp

2 Tc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	ND		0.0178	1	08/16/2016 16:38	WG898735
PCB 1221	ND		0.0178	1	08/16/2016 16:38	WG898735
PCB 1232	ND		0.0178	1	08/16/2016 16:38	WG898735
PCB 1242	ND		0.0178	1	08/16/2016 16:38	WG898735
PCB 1248	ND		0.0178	1	08/16/2016 16:38	WG898735
PCB 1254	ND		0.0178	1	08/16/2016 16:38	WG898735
PCB 1260	ND		0.0178	1	08/16/2016 16:38	WG898735
(S) Decachlorobiphenyl	78.4		10.0-143		08/16/2016 16:38	WG898735
(S) Tetrachloro-m-xylene	84.0		29.2-144		08/16/2016 16:38	WG898735

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	82.3		1	08/16/2016 08:57	WG899139

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

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	ND		0.0207	1	08/16/2016 16:51	WG898735
PCB 1221	ND		0.0207	1	08/16/2016 16:51	WG898735
PCB 1232	ND		0.0207	1	08/16/2016 16:51	WG898735
PCB 1242	ND		0.0207	1	08/16/2016 16:51	WG898735
PCB 1248	ND		0.0207	1	08/16/2016 16:51	WG898735
PCB 1254	ND		0.0207	1	08/16/2016 16:51	WG898735
PCB 1260	ND		0.0207	1	08/16/2016 16:51	WG898735
(S) Decachlorobiphenyl	62.1		10.0-143		08/16/2016 16:51	WG898735
(S) Tetrachloro-m-xylene	86.2		29.2-144		08/16/2016 16:51	WG898735



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.4		1	08/16/2016 08:57	WG899139

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0243	1	08/16/2016 10:01	WG898878

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	5.81		2.43	1	08/17/2016 13:39	WG899354
Barium	92.9		0.607	1	08/17/2016 13:39	WG899354
Cadmium	ND		0.607	1	08/17/2016 13:39	WG899354
Chromium	14.1		1.21	1	08/17/2016 13:39	WG899354
Lead	3.01		0.607	1	08/17/2016 13:39	WG899354
Selenium	ND		2.43	1	08/17/2016 13:39	WG899354
Silver	ND		1.21	1	08/17/2016 13:39	WG899354

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0607	1	08/20/2016 21:34	WG900475
Acrylonitrile	ND		0.0121	1	08/20/2016 21:34	WG900475
Benzene	ND		0.00121	1	08/20/2016 21:34	WG900475
Bromobenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
Bromodichloromethane	ND		0.00121	1	08/20/2016 21:34	WG900475
Bromoform	ND		0.00121	1	08/20/2016 21:34	WG900475
Bromomethane	ND		0.00607	1	08/20/2016 21:34	WG900475
n-Butylbenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
sec-Butylbenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
tert-Butylbenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
Carbon tetrachloride	ND		0.00121	1	08/20/2016 21:34	WG900475
Chlorobenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
Chlorodibromomethane	ND		0.00121	1	08/20/2016 21:34	WG900475
Chloroethane	ND		0.00607	1	08/20/2016 21:34	WG900475
2-Chloroethyl vinyl ether	ND		0.0607	1	08/20/2016 21:34	WG900475
Chloroform	ND		0.00607	1	08/20/2016 21:34	WG900475
Chloromethane	ND		0.00303	1	08/20/2016 21:34	WG900475
2-Chlorotoluene	ND		0.00121	1	08/20/2016 21:34	WG900475
4-Chlorotoluene	ND		0.00121	1	08/20/2016 21:34	WG900475
1,2-Dibromo-3-Chloropropane	ND		0.00607	1	08/20/2016 21:34	WG900475
1,2-Dibromoethane	ND		0.00121	1	08/20/2016 21:34	WG900475
Dibromomethane	ND		0.00121	1	08/20/2016 21:34	WG900475
1,2-Dichlorobenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
1,3-Dichlorobenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
1,4-Dichlorobenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
Dichlorodifluoromethane	ND		0.00607	1	08/20/2016 21:34	WG900475
1,1-Dichloroethane	ND		0.00121	1	08/20/2016 21:34	WG900475
1,2-Dichloroethane	ND		0.00121	1	08/20/2016 21:34	WG900475
1,1-Dichloroethene	ND		0.00121	1	08/20/2016 21:34	WG900475
cis-1,2-Dichloroethene	ND		0.00121	1	08/20/2016 21:34	WG900475
trans-1,2-Dichloroethene	ND		0.00121	1	08/20/2016 21:34	WG900475
1,2-Dichloropropane	ND		0.00121	1	08/20/2016 21:34	WG900475
1,1-Dichloropropene	ND		0.00121	1	08/20/2016 21:34	WG900475

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00121	1	08/20/2016 21:34	WG900475
cis-1,3-Dichloropropene	ND		0.00121	1	08/20/2016 21:34	WG900475
trans-1,3-Dichloropropene	ND		0.00121	1	08/20/2016 21:34	WG900475
2,2-Dichloropropane	ND		0.00121	1	08/20/2016 21:34	WG900475
Di-isopropyl ether	ND		0.00121	1	08/20/2016 21:34	WG900475
Ethylbenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
Hexachloro-1,3-butadiene	ND		0.00121	1	08/20/2016 21:34	WG900475
Isopropylbenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
p-Isopropyltoluene	ND		0.00121	1	08/20/2016 21:34	WG900475
2-Butanone (MEK)	ND		0.0121	1	08/20/2016 21:34	WG900475
Methylene Chloride	ND		0.00607	1	08/20/2016 21:34	WG900475
4-Methyl-2-pentanone (MIBK)	ND		0.0121	1	08/20/2016 21:34	WG900475
Methyl tert-butyl ether	ND		0.00121	1	08/20/2016 21:34	WG900475
Naphthalene	ND		0.00607	1	08/20/2016 21:34	WG900475
n-Propylbenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
Styrene	ND		0.00121	1	08/20/2016 21:34	WG900475
1,1,1,2-Tetrachloroethane	ND		0.00121	1	08/20/2016 21:34	WG900475
1,1,2,2-Tetrachloroethane	ND		0.00121	1	08/20/2016 21:34	WG900475
1,1,2-Trichlorotrifluoroethane	ND		0.00121	1	08/20/2016 21:34	WG900475
Tetrachloroethene	ND		0.00121	1	08/20/2016 21:34	WG900475
Toluene	ND		0.00607	1	08/20/2016 21:34	WG900475
1,2,3-Trichlorobenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
1,2,4-Trichlorobenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
1,1,1-Trichloroethane	ND		0.00121	1	08/20/2016 21:34	WG900475
1,1,2-Trichloroethane	ND		0.00121	1	08/20/2016 21:34	WG900475
Trichloroethene	ND		0.00121	1	08/20/2016 21:34	WG900475
Trichlorofluoromethane	ND		0.00607	1	08/20/2016 21:34	WG900475
1,2,3-Trichloropropane	ND		0.00303	1	08/20/2016 21:34	WG900475
1,2,4-Trimethylbenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
1,2,3-Trimethylbenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
Vinyl chloride	ND		0.00121	1	08/20/2016 21:34	WG900475
1,3,5-Trimethylbenzene	ND		0.00121	1	08/20/2016 21:34	WG900475
Xylenes, Total	ND		0.00364	1	08/20/2016 21:34	WG900475
(S) Toluene-d8	106		88.7-115		08/20/2016 21:34	WG900475
(S) Dibromofluoromethane	104		76.3-123		08/20/2016 21:34	WG900475
(S) 4-Bromofluorobenzene	94.4		69.7-129		08/20/2016 21:34	WG900475

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.85	1	08/15/2016 23:31	WG898728
Residual Range Organics (RRO)	ND	J3	12.1	1	08/15/2016 23:31	WG898728
(S) o-Terphenyl	83.8		50.0-150		08/15/2016 23:31	WG898728

Sample Narrative:

NWTPHDX L853409-07 WG898728: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00728	1	08/19/2016 12:33	WG899444
Acenaphthene	ND		0.00728	1	08/19/2016 12:33	WG899444
Acenaphthylene	ND		0.00728	1	08/19/2016 12:33	WG899444
Benzo(a)anthracene	ND		0.00728	1	08/19/2016 12:33	WG899444
Benzo(a)pyrene	ND		0.00728	1	08/19/2016 12:33	WG899444



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00728	1	08/19/2016 12:33	WG899444
Benzo(g,h,i)perylene	ND		0.00728	1	08/19/2016 12:33	WG899444
Benzo(k)fluoranthene	ND		0.00728	1	08/19/2016 12:33	WG899444
Chrysene	ND		0.00728	1	08/19/2016 12:33	WG899444
Dibenz(a,h)anthracene	ND		0.00728	1	08/19/2016 12:33	WG899444
Fluoranthene	ND		0.00728	1	08/19/2016 12:33	WG899444
Fluorene	ND		0.00728	1	08/19/2016 12:33	WG899444
Indeno(1,2,3-cd)pyrene	ND		0.00728	1	08/19/2016 12:33	WG899444
Naphthalene	ND		0.0243	1	08/19/2016 12:33	WG899444
Phenanthrene	ND		0.00728	1	08/19/2016 12:33	WG899444
Pyrene	ND		0.00728	1	08/19/2016 12:33	WG899444
1-Methylnaphthalene	ND		0.0243	1	08/19/2016 12:33	WG899444
2-Methylnaphthalene	ND		0.0243	1	08/19/2016 12:33	WG899444
(S) Nitrobenzene-d5	52.3		22.1-146		08/19/2016 12:33	WG899444
(S) 2-Fluorobiphenyl	72.7		40.6-122		08/19/2016 12:33	WG899444
(S) p-Terphenyl-d14	74.1		32.2-131		08/19/2016 12:33	WG899444

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	88.5		1	08/16/2016 08:57	WG899139

1 Cp

2 Tc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	ND		0.0192	1	08/16/2016 17:03	WG898735
PCB 1221	ND		0.0192	1	08/16/2016 17:03	WG898735
PCB 1232	ND		0.0192	1	08/16/2016 17:03	WG898735
PCB 1242	ND		0.0192	1	08/16/2016 17:03	WG898735
PCB 1248	ND		0.0192	1	08/16/2016 17:03	WG898735
PCB 1254	ND		0.0192	1	08/16/2016 17:03	WG898735
PCB 1260	ND		0.0192	1	08/16/2016 17:03	WG898735
(S) Decachlorobiphenyl	74.8		10.0-143		08/16/2016 17:03	WG898735
(S) Tetrachloro-m-xylene	85.1		29.2-144		08/16/2016 17:03	WG898735

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.9		1	08/16/2016 08:57	WG899139

1 Cp

2 Tc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	ND		0.0196	1	08/16/2016 17:15	WG898735
PCB 1221	ND		0.0196	1	08/16/2016 17:15	WG898735
PCB 1232	ND		0.0196	1	08/16/2016 17:15	WG898735
PCB 1242	ND		0.0196	1	08/16/2016 17:15	WG898735
PCB 1248	ND		0.0196	1	08/16/2016 17:15	WG898735
PCB 1254	ND		0.0196	1	08/16/2016 17:15	WG898735
PCB 1260	ND		0.0196	1	08/16/2016 17:15	WG898735
(S) Decachlorobiphenyl	78.2		10.0-143		08/16/2016 17:15	WG898735
(S) Tetrachloro-m-xylene	93.9		29.2-144		08/16/2016 17:15	WG898735

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	93.0		1	08/16/2016 08:57	WG899139

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0215	1	08/16/2016 10:04	WG898878

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	4.64		2.15	1	08/17/2016 11:12	WG899354
Barium	74.1		0.537	1	08/17/2016 11:12	WG899354
Cadmium	ND		0.537	1	08/17/2016 11:12	WG899354
Chromium	12.5		1.07	1	08/17/2016 11:12	WG899354
Lead	3.35		0.537	1	08/17/2016 11:12	WG899354
Selenium	ND		2.15	1	08/17/2016 11:12	WG899354
Silver	ND		1.07	1	08/17/2016 11:12	WG899354

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0537	1	08/20/2016 21:55	WG900475
Acrylonitrile	ND		0.0107	1	08/20/2016 21:55	WG900475
Benzene	ND		0.00107	1	08/20/2016 21:55	WG900475
Bromobenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
Bromodichloromethane	ND		0.00107	1	08/20/2016 21:55	WG900475
Bromoform	ND		0.00107	1	08/20/2016 21:55	WG900475
Bromomethane	ND		0.00537	1	08/20/2016 21:55	WG900475
n-Butylbenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
sec-Butylbenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
tert-Butylbenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
Carbon tetrachloride	ND		0.00107	1	08/20/2016 21:55	WG900475
Chlorobenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
Chlorodibromomethane	ND		0.00107	1	08/20/2016 21:55	WG900475
Chloroethane	ND		0.00537	1	08/20/2016 21:55	WG900475
2-Chloroethyl vinyl ether	ND		0.0537	1	08/20/2016 21:55	WG900475
Chloroform	ND		0.00537	1	08/20/2016 21:55	WG900475
Chloromethane	ND		0.00269	1	08/20/2016 21:55	WG900475
2-Chlorotoluene	ND		0.00107	1	08/20/2016 21:55	WG900475
4-Chlorotoluene	ND		0.00107	1	08/20/2016 21:55	WG900475
1,2-Dibromo-3-Chloropropane	ND		0.00537	1	08/20/2016 21:55	WG900475
1,2-Dibromoethane	ND		0.00107	1	08/20/2016 21:55	WG900475
Dibromomethane	ND		0.00107	1	08/20/2016 21:55	WG900475
1,2-Dichlorobenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
1,3-Dichlorobenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
1,4-Dichlorobenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
Dichlorodifluoromethane	ND		0.00537	1	08/20/2016 21:55	WG900475
1,1-Dichloroethane	ND		0.00107	1	08/20/2016 21:55	WG900475
1,2-Dichloroethane	ND		0.00107	1	08/20/2016 21:55	WG900475
1,1-Dichloroethene	ND		0.00107	1	08/20/2016 21:55	WG900475
cis-1,2-Dichloroethene	ND		0.00107	1	08/20/2016 21:55	WG900475
trans-1,2-Dichloroethene	ND		0.00107	1	08/20/2016 21:55	WG900475
1,2-Dichloropropane	ND		0.00107	1	08/20/2016 21:55	WG900475
1,1-Dichloropropene	ND		0.00107	1	08/20/2016 21:55	WG900475

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00107	1	08/20/2016 21:55	WG900475
cis-1,3-Dichloropropene	ND		0.00107	1	08/20/2016 21:55	WG900475
trans-1,3-Dichloropropene	ND		0.00107	1	08/20/2016 21:55	WG900475
2,2-Dichloropropane	ND		0.00107	1	08/20/2016 21:55	WG900475
Di-isopropyl ether	ND		0.00107	1	08/20/2016 21:55	WG900475
Ethylbenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
Hexachloro-1,3-butadiene	ND		0.00107	1	08/20/2016 21:55	WG900475
Isopropylbenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
p-Isopropyltoluene	ND		0.00107	1	08/20/2016 21:55	WG900475
2-Butanone (MEK)	ND		0.0107	1	08/20/2016 21:55	WG900475
Methylene Chloride	ND		0.00537	1	08/20/2016 21:55	WG900475
4-Methyl-2-pentanone (MIBK)	ND		0.0107	1	08/20/2016 21:55	WG900475
Methyl tert-butyl ether	ND		0.00107	1	08/20/2016 21:55	WG900475
Naphthalene	ND		0.00537	1	08/20/2016 21:55	WG900475
n-Propylbenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
Styrene	ND		0.00107	1	08/20/2016 21:55	WG900475
1,1,1,2-Tetrachloroethane	ND		0.00107	1	08/20/2016 21:55	WG900475
1,1,2,2-Tetrachloroethane	ND		0.00107	1	08/20/2016 21:55	WG900475
1,1,2-Trichlorotrifluoroethane	ND		0.00107	1	08/20/2016 21:55	WG900475
Tetrachloroethene	ND		0.00107	1	08/20/2016 21:55	WG900475
Toluene	ND		0.00537	1	08/20/2016 21:55	WG900475
1,2,3-Trichlorobenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
1,2,4-Trichlorobenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
1,1,1-Trichloroethane	ND		0.00107	1	08/20/2016 21:55	WG900475
1,1,2-Trichloroethane	ND		0.00107	1	08/20/2016 21:55	WG900475
Trichloroethene	ND		0.00107	1	08/20/2016 21:55	WG900475
Trichlorofluoromethane	ND		0.00537	1	08/20/2016 21:55	WG900475
1,2,3-Trichloropropane	ND		0.00269	1	08/20/2016 21:55	WG900475
1,2,4-Trimethylbenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
1,2,3-Trimethylbenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
Vinyl chloride	ND		0.00107	1	08/20/2016 21:55	WG900475
1,3,5-Trimethylbenzene	ND		0.00107	1	08/20/2016 21:55	WG900475
Xylenes, Total	ND		0.00322	1	08/20/2016 21:55	WG900475
(S) Toluene-d8	105		88.7-115		08/20/2016 21:55	WG900475
(S) Dibromofluoromethane	105		76.3-123		08/20/2016 21:55	WG900475
(S) 4-Bromofluorobenzene	94.6		69.7-129		08/20/2016 21:55	WG900475

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.30	1	08/15/2016 23:45	WG898728
Residual Range Organics (RRO)	ND	J3	10.7	1	08/15/2016 23:45	WG898728
(S) o-Terphenyl	84.4		50.0-150		08/15/2016 23:45	WG898728

Sample Narrative:

NWTPHDX L853409-10 WG898728: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00645	1	08/19/2016 12:54	WG899444
Acenaphthene	ND		0.00645	1	08/19/2016 12:54	WG899444
Acenaphthylene	ND		0.00645	1	08/19/2016 12:54	WG899444
Benzo(a)anthracene	ND		0.00645	1	08/19/2016 12:54	WG899444
Benzo(a)pyrene	ND		0.00645	1	08/19/2016 12:54	WG899444



Collected date/time: 08/11/16 00:00

L853409

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00645	1	08/19/2016 12:54	WG899444
Benzo(g,h,i)perylene	ND		0.00645	1	08/19/2016 12:54	WG899444
Benzo(k)fluoranthene	ND		0.00645	1	08/19/2016 12:54	WG899444
Chrysene	ND		0.00645	1	08/19/2016 12:54	WG899444
Dibenz(a,h)anthracene	ND		0.00645	1	08/19/2016 12:54	WG899444
Fluoranthene	ND		0.00645	1	08/19/2016 12:54	WG899444
Fluorene	ND		0.00645	1	08/19/2016 12:54	WG899444
Indeno(1,2,3-cd)pyrene	ND		0.00645	1	08/19/2016 12:54	WG899444
Naphthalene	ND		0.0215	1	08/19/2016 12:54	WG899444
Phenanthrene	ND		0.00645	1	08/19/2016 12:54	WG899444
Pyrene	ND		0.00645	1	08/19/2016 12:54	WG899444
1-Methylnaphthalene	ND		0.0215	1	08/19/2016 12:54	WG899444
2-Methylnaphthalene	ND		0.0215	1	08/19/2016 12:54	WG899444
(S) Nitrobenzene-d5	58.0		22.1-146		08/19/2016 12:54	WG899444
(S) 2-Fluorobiphenyl	75.3		40.6-122		08/19/2016 12:54	WG899444
(S) p-Terphenyl-d14	76.4		32.2-131		08/19/2016 12:54	WG899444

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



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/16/2016 10:24	WG898825
Mercury,Dissolved	ND		0.200	1	08/17/2016 10:43	WG899309

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	10.1		10.0	1	08/18/2016 17:22	WG899489
Arsenic,Dissolved	ND		10.0	1	08/16/2016 13:18	WG899105
Barium	228		5.00	1	08/18/2016 17:22	WG899489
Barium,Dissolved	36.6		5.00	1	08/16/2016 13:18	WG899105
Cadmium	ND		2.00	1	08/18/2016 17:22	WG899489
Cadmium,Dissolved	ND		2.00	1	08/16/2016 13:18	WG899105
Chromium	26.5		10.0	1	08/18/2016 17:22	WG899489
Chromium,Dissolved	ND		10.0	1	08/16/2016 13:18	WG899105
Lead	68.0		5.00	1	08/18/2016 17:22	WG899489
Lead,Dissolved	ND		5.00	1	08/16/2016 13:18	WG899105
Selenium	ND		10.0	1	08/18/2016 17:22	WG899489
Selenium,Dissolved	ND		10.0	1	08/16/2016 13:18	WG899105
Silver	ND		5.00	1	08/18/2016 17:22	WG899489
Silver,Dissolved	ND		5.00	1	08/16/2016 13:18	WG899105

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	08/17/2016 21:45	WG899623
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		08/17/2016 21:45	WG899623

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2016 05:01	WG899815
Acrolein	ND		50.0	1	08/18/2016 05:01	WG899815
Acrylonitrile	ND	J3	10.0	1	08/18/2016 05:01	WG899815
Benzene	ND		1.00	1	08/18/2016 05:01	WG899815
Bromobenzene	ND		1.00	1	08/18/2016 05:01	WG899815
Bromodichloromethane	ND		1.00	1	08/18/2016 05:01	WG899815
Bromoform	ND	J3	1.00	1	08/18/2016 05:01	WG899815
Bromomethane	ND		5.00	1	08/18/2016 05:01	WG899815
n-Butylbenzene	ND		1.00	1	08/18/2016 05:01	WG899815
sec-Butylbenzene	ND		1.00	1	08/18/2016 05:01	WG899815
tert-Butylbenzene	ND		1.00	1	08/18/2016 05:01	WG899815
Carbon tetrachloride	ND		1.00	1	08/18/2016 05:01	WG899815
Chlorobenzene	ND		1.00	1	08/18/2016 05:01	WG899815
Chlorodibromomethane	ND		1.00	1	08/18/2016 05:01	WG899815
Chloroethane	ND		5.00	1	08/18/2016 05:01	WG899815
2-Chloroethyl vinyl ether	ND	J0	50.0	1	08/18/2016 05:01	WG899815
Chloroform	ND		5.00	1	08/18/2016 05:01	WG899815
Chloromethane	ND		2.50	1	08/18/2016 05:01	WG899815
2-Chlorotoluene	ND		1.00	1	08/18/2016 05:01	WG899815
4-Chlorotoluene	ND		1.00	1	08/18/2016 05:01	WG899815
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2016 05:01	WG899815
1,2-Dibromoethane	ND		1.00	1	08/18/2016 05:01	WG899815
Dibromomethane	ND		1.00	1	08/18/2016 05:01	WG899815
1,2-Dichlorobenzene	ND		1.00	1	08/18/2016 05:01	WG899815



Collected date/time: 08/11/16 13:15

L853409

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,3-Dichlorobenzene	ND		1.00	1	08/18/2016 05:01	WG899815
1,4-Dichlorobenzene	ND	J4	1.00	1	08/18/2016 05:01	WG899815
Dichlorodifluoromethane	ND		5.00	1	08/18/2016 05:01	WG899815
1,1-Dichloroethane	ND		1.00	1	08/18/2016 05:01	WG899815
1,2-Dichloroethane	ND		1.00	1	08/18/2016 05:01	WG899815
1,1-Dichloroethene	ND		1.00	1	08/18/2016 05:01	WG899815
cis-1,2-Dichloroethene	ND		1.00	1	08/20/2016 20:18	WG900390
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2016 05:01	WG899815
1,2-Dichloropropane	ND		1.00	1	08/18/2016 05:01	WG899815
1,1-Dichloropropene	ND		1.00	1	08/18/2016 05:01	WG899815
1,3-Dichloropropane	ND	J3	1.00	1	08/18/2016 05:01	WG899815
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2016 05:01	WG899815
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2016 05:01	WG899815
2,2-Dichloropropane	ND		1.00	1	08/18/2016 05:01	WG899815
Di-isopropyl ether	ND		1.00	1	08/18/2016 05:01	WG899815
Ethylbenzene	ND	J4	1.00	1	08/18/2016 05:01	WG899815
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2016 05:01	WG899815
Isopropylbenzene	ND		1.00	1	08/18/2016 05:01	WG899815
p-Isopropyltoluene	ND		1.00	1	08/18/2016 05:01	WG899815
2-Butanone (MEK)	ND		10.0	1	08/18/2016 05:01	WG899815
Methylene Chloride	ND		5.00	1	08/18/2016 05:01	WG899815
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2016 05:01	WG899815
Methyl tert-butyl ether	ND		1.00	1	08/18/2016 05:01	WG899815
Naphthalene	ND		5.00	1	08/18/2016 05:01	WG899815
n-Propylbenzene	ND		1.00	1	08/18/2016 05:01	WG899815
Styrene	ND		1.00	1	08/18/2016 05:01	WG899815
1,1,1,2-Tetrachloroethane	ND	J3	1.00	1	08/18/2016 05:01	WG899815
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2016 05:01	WG899815
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2016 05:01	WG899815
Tetrachloroethene	ND		1.00	1	08/18/2016 05:01	WG899815
Toluene	ND		5.00	1	08/18/2016 05:01	WG899815
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2016 05:01	WG899815
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2016 05:01	WG899815
1,1,1-Trichloroethane	ND		1.00	1	08/18/2016 05:01	WG899815
1,1,2-Trichloroethane	ND		1.00	1	08/18/2016 05:01	WG899815
Trichloroethene	ND		1.00	1	08/18/2016 05:01	WG899815
Trichlorofluoromethane	ND		5.00	1	08/18/2016 05:01	WG899815
1,2,3-Trichloropropane	ND		2.50	1	08/18/2016 05:01	WG899815
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2016 05:01	WG899815
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2016 05:01	WG899815
1,3,5-Trimethylbenzene	ND	J4	1.00	1	08/18/2016 05:01	WG899815
Vinyl chloride	ND		1.00	1	08/18/2016 05:01	WG899815
Xylenes, Total	ND		3.00	1	08/18/2016 05:01	WG899815
(S) Toluene-d8	101		90.0-115		08/20/2016 20:18	WG900390
(S) Toluene-d8	102		90.0-115		08/18/2016 05:01	WG899815
(S) Dibromofluoromethane	95.6		79.0-121		08/18/2016 05:01	WG899815
(S) Dibromofluoromethane	104		79.0-121		08/20/2016 20:18	WG900390
(S) 4-Bromofluorobenzene	100		80.1-120		08/20/2016 20:18	WG900390
(S) 4-Bromofluorobenzene	100		80.1-120		08/18/2016 05:01	WG899815

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/11/16 13:15

L853409

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	336		100	1	08/20/2016 12:14	WG898726
Residual Range Organics (RRO)	945		250	1	08/20/2016 12:14	WG898726
(S) o-Terphenyl	106		50.0-150		08/20/2016 12:14	WG898726

Sample Narrative:

NWTPHDX L853409-11 WG898726: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/16/2016 06:34	WG898738
Acenaphthene	ND		0.0500	1	08/16/2016 06:34	WG898738
Acenaphthylene	ND		0.0500	1	08/16/2016 06:34	WG898738
Benzo(a)anthracene	ND		0.0500	1	08/16/2016 06:34	WG898738
Benzo(a)pyrene	ND		0.0500	1	08/16/2016 06:34	WG898738
Benzo(b)fluoranthene	ND		0.0500	1	08/16/2016 06:34	WG898738
Benzo(g,h,i)perylene	ND		0.0500	1	08/16/2016 06:34	WG898738
Benzo(k)fluoranthene	ND		0.0500	1	08/16/2016 06:34	WG898738
Chrysene	ND		0.0500	1	08/16/2016 06:34	WG898738
Dibenz(a,h)anthracene	ND		0.0500	1	08/16/2016 06:34	WG898738
Fluoranthene	ND		0.0500	1	08/16/2016 06:34	WG898738
Fluorene	ND		0.0500	1	08/16/2016 06:34	WG898738
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/16/2016 06:34	WG898738
Naphthalene	ND		0.250	1	08/16/2016 06:34	WG898738
Phenanthrene	ND		0.0500	1	08/16/2016 06:34	WG898738
Pyrene	ND		0.0500	1	08/16/2016 06:34	WG898738
1-Methylnaphthalene	ND		0.250	1	08/16/2016 06:34	WG898738
2-Methylnaphthalene	ND		0.250	1	08/16/2016 06:34	WG898738
(S) Nitrobenzene-d5	61.9		33.8-179		08/16/2016 06:34	WG898738
(S) 2-Fluorobiphenyl	96.9		55.5-150		08/16/2016 06:34	WG898738
(S) p-Terphenyl-d14	85.3		46.2-163		08/16/2016 06:34	WG898738

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



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/16/2016 10:27	WG898825
Mercury,Dissolved	ND		0.200	1	08/17/2016 10:46	WG899309

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

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		10.0	1	08/18/2016 17:30	WG899489
Arsenic,Dissolved	ND		10.0	1	08/16/2016 12:34	WG899105
Barium	247		5.00	1	08/18/2016 17:30	WG899489
Barium,Dissolved	84.4		5.00	1	08/16/2016 12:34	WG899105
Cadmium	ND		2.00	1	08/18/2016 17:30	WG899489
Cadmium,Dissolved	ND		2.00	1	08/16/2016 12:34	WG899105
Chromium	14.4		10.0	1	08/18/2016 17:30	WG899489
Chromium,Dissolved	ND		10.0	1	08/16/2016 12:34	WG899105
Lead	6.87		5.00	1	08/18/2016 17:30	WG899489
Lead,Dissolved	ND		5.00	1	08/16/2016 12:34	WG899105
Selenium	ND		10.0	1	08/18/2016 17:30	WG899489
Selenium,Dissolved	ND		10.0	1	08/16/2016 12:34	WG899105
Silver	ND		5.00	1	08/18/2016 17:30	WG899489
Silver,Dissolved	ND		5.00	1	08/16/2016 12:34	WG899105

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	08/17/2016 22:07	WG899623
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		08/17/2016 22:07	WG899623

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2016 05:22	WG899815
Acrolein	ND		50.0	1	08/18/2016 05:22	WG899815
Acrylonitrile	ND	J3	10.0	1	08/18/2016 05:22	WG899815
Benzene	ND		1.00	1	08/18/2016 05:22	WG899815
Bromobenzene	ND		1.00	1	08/18/2016 05:22	WG899815
Bromodichloromethane	ND		1.00	1	08/18/2016 05:22	WG899815
Bromoform	ND	J3	1.00	1	08/18/2016 05:22	WG899815
Bromomethane	ND		5.00	1	08/18/2016 05:22	WG899815
n-Butylbenzene	ND		1.00	1	08/18/2016 05:22	WG899815
sec-Butylbenzene	ND		1.00	1	08/18/2016 05:22	WG899815
tert-Butylbenzene	ND		1.00	1	08/18/2016 05:22	WG899815
Carbon tetrachloride	ND		1.00	1	08/18/2016 05:22	WG899815
Chlorobenzene	ND		1.00	1	08/18/2016 05:22	WG899815
Chlorodibromomethane	ND		1.00	1	08/18/2016 05:22	WG899815
Chloroethane	ND		5.00	1	08/18/2016 05:22	WG899815
2-Chloroethyl vinyl ether	ND	J0	50.0	1	08/18/2016 05:22	WG899815
Chloroform	ND		5.00	1	08/18/2016 05:22	WG899815
Chloromethane	ND		2.50	1	08/18/2016 05:22	WG899815
2-Chlorotoluene	ND		1.00	1	08/18/2016 05:22	WG899815
4-Chlorotoluene	ND		1.00	1	08/18/2016 05:22	WG899815
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2016 05:22	WG899815
1,2-Dibromoethane	ND		1.00	1	08/18/2016 05:22	WG899815
Dibromomethane	ND		1.00	1	08/18/2016 05:22	WG899815
1,2-Dichlorobenzene	ND		1.00	1	08/18/2016 05:22	WG899815



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,3-Dichlorobenzene	ND		1.00	1	08/18/2016 05:22	WG899815
1,4-Dichlorobenzene	ND	J4	1.00	1	08/18/2016 05:22	WG899815
Dichlorodifluoromethane	ND		5.00	1	08/18/2016 05:22	WG899815
1,1-Dichloroethane	ND		1.00	1	08/18/2016 05:22	WG899815
1,2-Dichloroethane	ND		1.00	1	08/18/2016 05:22	WG899815
1,1-Dichloroethene	ND		1.00	1	08/18/2016 05:22	WG899815
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2016 05:22	WG899815
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2016 05:22	WG899815
1,2-Dichloropropane	ND		1.00	1	08/18/2016 05:22	WG899815
1,1-Dichloropropene	ND		1.00	1	08/18/2016 05:22	WG899815
1,3-Dichloropropane	ND	J3	1.00	1	08/18/2016 05:22	WG899815
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2016 05:22	WG899815
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2016 05:22	WG899815
2,2-Dichloropropane	ND		1.00	1	08/18/2016 05:22	WG899815
Di-isopropyl ether	ND		1.00	1	08/18/2016 05:22	WG899815
Ethylbenzene	ND	J4	1.00	1	08/18/2016 05:22	WG899815
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2016 05:22	WG899815
Isopropylbenzene	ND		1.00	1	08/18/2016 05:22	WG899815
p-Isopropyltoluene	ND		1.00	1	08/18/2016 05:22	WG899815
2-Butanone (MEK)	ND		10.0	1	08/18/2016 05:22	WG899815
Methylene Chloride	ND		5.00	1	08/18/2016 05:22	WG899815
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2016 05:22	WG899815
Methyl tert-butyl ether	ND		1.00	1	08/18/2016 05:22	WG899815
Naphthalene	ND		5.00	1	08/18/2016 05:22	WG899815
n-Propylbenzene	ND		1.00	1	08/18/2016 05:22	WG899815
Styrene	ND		1.00	1	08/18/2016 05:22	WG899815
1,1,1,2-Tetrachloroethane	ND	J3	1.00	1	08/18/2016 05:22	WG899815
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2016 05:22	WG899815
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2016 05:22	WG899815
Tetrachloroethene	ND		1.00	1	08/18/2016 05:22	WG899815
Toluene	ND		5.00	1	08/18/2016 05:22	WG899815
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2016 05:22	WG899815
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2016 05:22	WG899815
1,1,1-Trichloroethane	ND		1.00	1	08/18/2016 05:22	WG899815
1,1,2-Trichloroethane	ND		1.00	1	08/18/2016 05:22	WG899815
Trichloroethene	ND		1.00	1	08/18/2016 05:22	WG899815
Trichlorofluoromethane	ND		5.00	1	08/18/2016 05:22	WG899815
1,2,3-Trichloropropane	ND		2.50	1	08/18/2016 05:22	WG899815
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2016 05:22	WG899815
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2016 05:22	WG899815
1,3,5-Trimethylbenzene	ND	J4	1.00	1	08/18/2016 05:22	WG899815
Vinyl chloride	ND		1.00	1	08/18/2016 05:22	WG899815
Xylenes, Total	ND		3.00	1	08/18/2016 05:22	WG899815
(S) Toluene-d8	103		90.0-115		08/18/2016 05:22	WG899815
(S) Dibromofluoromethane	99.7		79.0-121		08/18/2016 05:22	WG899815
(S) 4-Bromofluorobenzene	97.8		80.1-120		08/18/2016 05:22	WG899815

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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		100	1	08/20/2016 05:39	WG898726
Residual Range Organics (RRO)	ND		250	1	08/20/2016 05:39	WG898726
(S) o-Terphenyl	97.0		50.0-150		08/20/2016 05:39	WG898726

Sample Narrative:

NWTPHDX L853409-12 WG898726: NWTPHDX - SGT was performed



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/16/2016 06:55	WG898738
Acenaphthene	ND		0.0500	1	08/16/2016 06:55	WG898738
Acenaphthylene	ND		0.0500	1	08/16/2016 06:55	WG898738
Benzo(a)anthracene	ND		0.0500	1	08/16/2016 06:55	WG898738
Benzo(a)pyrene	ND		0.0500	1	08/16/2016 06:55	WG898738
Benzo(b)fluoranthene	ND		0.0500	1	08/16/2016 06:55	WG898738
Benzo(g,h,i)perylene	ND		0.0500	1	08/16/2016 06:55	WG898738
Benzo(k)fluoranthene	ND		0.0500	1	08/16/2016 06:55	WG898738
Chrysene	ND		0.0500	1	08/16/2016 06:55	WG898738
Dibenz(a,h)anthracene	ND		0.0500	1	08/16/2016 06:55	WG898738
Fluoranthene	ND		0.0500	1	08/16/2016 06:55	WG898738
Fluorene	ND		0.0500	1	08/16/2016 06:55	WG898738
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/16/2016 06:55	WG898738
Naphthalene	ND		0.250	1	08/16/2016 06:55	WG898738
Phenanthrene	ND		0.0500	1	08/16/2016 06:55	WG898738
Pyrene	ND		0.0500	1	08/16/2016 06:55	WG898738
1-Methylnaphthalene	ND		0.250	1	08/16/2016 06:55	WG898738
2-Methylnaphthalene	ND		0.250	1	08/16/2016 06:55	WG898738
(S) Nitrobenzene-d5	61.2		33.8-179		08/16/2016 06:55	WG898738
(S) 2-Fluorobiphenyl	97.7		55.5-150		08/16/2016 06:55	WG898738
(S) p-Terphenyl-d14	87.5		46.2-163		08/16/2016 06:55	WG898738

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/16/2016 16:58	WG899218
Mercury,Dissolved	ND		0.200	1	08/17/2016 10:49	WG899309

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		10.0	1	08/18/2016 17:33	WG899489
Arsenic,Dissolved	ND		10.0	1	08/16/2016 13:21	WG899105
Barium	138		5.00	1	08/18/2016 17:33	WG899489
Barium,Dissolved	111		5.00	1	08/16/2016 13:21	WG899105
Cadmium	ND		2.00	1	08/18/2016 17:33	WG899489
Cadmium,Dissolved	ND		2.00	1	08/16/2016 13:21	WG899105
Chromium	ND		10.0	1	08/18/2016 17:33	WG899489
Chromium,Dissolved	ND		10.0	1	08/16/2016 13:21	WG899105
Lead	30.5		5.00	1	08/18/2016 17:33	WG899489
Lead,Dissolved	ND		5.00	1	08/16/2016 13:21	WG899105
Selenium	ND		10.0	1	08/18/2016 17:33	WG899489
Selenium,Dissolved	ND		10.0	1	08/16/2016 13:21	WG899105
Silver	ND		5.00	1	08/18/2016 17:33	WG899489
Silver,Dissolved	ND		5.00	1	08/16/2016 13:21	WG899105

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	08/17/2016 22:29	WG899623
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		08/17/2016 22:29	WG899623

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2016 05:42	WG899815
Acrolein	ND		50.0	1	08/18/2016 05:42	WG899815
Acrylonitrile	ND	J3	10.0	1	08/18/2016 05:42	WG899815
Benzene	ND		1.00	1	08/18/2016 05:42	WG899815
Bromobenzene	ND		1.00	1	08/18/2016 05:42	WG899815
Bromodichloromethane	ND		1.00	1	08/18/2016 05:42	WG899815
Bromoform	ND	J3	1.00	1	08/18/2016 05:42	WG899815
Bromomethane	ND		5.00	1	08/18/2016 05:42	WG899815
n-Butylbenzene	ND		1.00	1	08/18/2016 05:42	WG899815
sec-Butylbenzene	ND		1.00	1	08/18/2016 05:42	WG899815
tert-Butylbenzene	ND		1.00	1	08/18/2016 05:42	WG899815
Carbon tetrachloride	ND		1.00	1	08/18/2016 05:42	WG899815
Chlorobenzene	ND		1.00	1	08/18/2016 05:42	WG899815
Chlorodibromomethane	ND		1.00	1	08/18/2016 05:42	WG899815
Chloroethane	ND		5.00	1	08/18/2016 05:42	WG899815
2-Chloroethyl vinyl ether	ND	J0	50.0	1	08/18/2016 05:42	WG899815
Chloroform	ND		5.00	1	08/18/2016 05:42	WG899815
Chloromethane	ND		2.50	1	08/18/2016 05:42	WG899815
2-Chlorotoluene	ND		1.00	1	08/18/2016 05:42	WG899815
4-Chlorotoluene	ND		1.00	1	08/18/2016 05:42	WG899815
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2016 05:42	WG899815
1,2-Dibromoethane	ND		1.00	1	08/18/2016 05:42	WG899815
Dibromomethane	ND		1.00	1	08/18/2016 05:42	WG899815
1,2-Dichlorobenzene	ND		1.00	1	08/18/2016 05:42	WG899815



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,3-Dichlorobenzene	ND		1.00	1	08/18/2016 05:42	WG899815
1,4-Dichlorobenzene	ND	J4	1.00	1	08/18/2016 05:42	WG899815
Dichlorodifluoromethane	ND		5.00	1	08/18/2016 05:42	WG899815
1,1-Dichloroethane	ND		1.00	1	08/18/2016 05:42	WG899815
1,2-Dichloroethane	ND		1.00	1	08/18/2016 05:42	WG899815
1,1-Dichloroethene	ND		1.00	1	08/18/2016 05:42	WG899815
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2016 05:42	WG899815
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2016 05:42	WG899815
1,2-Dichloropropane	ND		1.00	1	08/18/2016 05:42	WG899815
1,1-Dichloropropene	ND		1.00	1	08/18/2016 05:42	WG899815
1,3-Dichloropropane	ND	J3	1.00	1	08/18/2016 05:42	WG899815
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2016 05:42	WG899815
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2016 05:42	WG899815
2,2-Dichloropropane	ND		1.00	1	08/18/2016 05:42	WG899815
Di-isopropyl ether	ND		1.00	1	08/18/2016 05:42	WG899815
Ethylbenzene	ND	J4	1.00	1	08/18/2016 05:42	WG899815
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2016 05:42	WG899815
Isopropylbenzene	ND		1.00	1	08/18/2016 05:42	WG899815
p-Isopropyltoluene	ND		1.00	1	08/18/2016 05:42	WG899815
2-Butanone (MEK)	ND		10.0	1	08/18/2016 05:42	WG899815
Methylene Chloride	ND		5.00	1	08/18/2016 05:42	WG899815
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2016 05:42	WG899815
Methyl tert-butyl ether	ND		1.00	1	08/18/2016 05:42	WG899815
Naphthalene	ND		5.00	1	08/18/2016 05:42	WG899815
n-Propylbenzene	ND		1.00	1	08/18/2016 05:42	WG899815
Styrene	ND		1.00	1	08/18/2016 05:42	WG899815
1,1,1,2-Tetrachloroethane	ND	J3	1.00	1	08/18/2016 05:42	WG899815
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2016 05:42	WG899815
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2016 05:42	WG899815
Tetrachloroethene	ND		1.00	1	08/18/2016 05:42	WG899815
Toluene	ND		5.00	1	08/18/2016 05:42	WG899815
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2016 05:42	WG899815
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2016 05:42	WG899815
1,1,1-Trichloroethane	ND		1.00	1	08/18/2016 05:42	WG899815
1,1,2-Trichloroethane	ND		1.00	1	08/18/2016 05:42	WG899815
Trichloroethene	ND		1.00	1	08/18/2016 05:42	WG899815
Trichlorofluoromethane	ND		5.00	1	08/18/2016 05:42	WG899815
1,2,3-Trichloropropane	ND		2.50	1	08/18/2016 05:42	WG899815
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2016 05:42	WG899815
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2016 05:42	WG899815
1,3,5-Trimethylbenzene	ND	J4	1.00	1	08/18/2016 05:42	WG899815
Vinyl chloride	ND		1.00	1	08/18/2016 05:42	WG899815
Xylenes, Total	ND		3.00	1	08/18/2016 05:42	WG899815
(S) Toluene-d8	105		90.0-115		08/18/2016 05:42	WG899815
(S) Dibromofluoromethane	98.8		79.0-121		08/18/2016 05:42	WG899815
(S) 4-Bromofluorobenzene	101		80.1-120		08/18/2016 05:42	WG899815

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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2840		100	1	08/20/2016 06:03	WG898726
Residual Range Organics (RRO)	3180		250	1	08/20/2016 06:03	WG898726
(S) o-Terphenyl	104		50.0-150		08/20/2016 06:03	WG898726

Sample Narrative:

NWTPHDX L853409-13 WG898726: NWTPHDX - SGT was performed



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.0664		0.0500	1	08/16/2016 07:17	WG898738
Acenaphthene	ND		0.0500	1	08/16/2016 07:17	WG898738
Acenaphthylene	ND		0.0500	1	08/16/2016 07:17	WG898738
Benzo(a)anthracene	ND		0.0500	1	08/16/2016 07:17	WG898738
Benzo(a)pyrene	ND		0.0500	1	08/16/2016 07:17	WG898738
Benzo(b)fluoranthene	ND		0.0500	1	08/16/2016 07:17	WG898738
Benzo(g,h,i)perylene	ND		0.0500	1	08/16/2016 07:17	WG898738
Benzo(k)fluoranthene	ND		0.0500	1	08/16/2016 07:17	WG898738
Chrysene	ND		0.0500	1	08/16/2016 07:17	WG898738
Dibenz(a,h)anthracene	ND		0.0500	1	08/16/2016 07:17	WG898738
Fluoranthene	ND		0.0500	1	08/16/2016 07:17	WG898738
Fluorene	ND		0.0500	1	08/16/2016 07:17	WG898738
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/16/2016 07:17	WG898738
Naphthalene	ND		0.250	1	08/16/2016 07:17	WG898738
Phenanthrene	ND		0.0500	1	08/16/2016 07:17	WG898738
Pyrene	ND		0.0500	1	08/16/2016 07:17	WG898738
1-Methylnaphthalene	ND		0.250	1	08/16/2016 07:17	WG898738
2-Methylnaphthalene	ND		0.250	1	08/16/2016 07:17	WG898738
(S) Nitrobenzene-d5	64.5		33.8-179		08/16/2016 07:17	WG898738
(S) 2-Fluorobiphenyl	99.5		55.5-150		08/16/2016 07:17	WG898738
(S) p-Terphenyl-d14	87.4		46.2-163		08/16/2016 07:17	WG898738

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	08/17/2016 22:51	WG899623
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		08/17/2016 22:51	WG899623

1 Cp

2 Tc

3 Ss

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/20/2016 20:40	WG900390
Acrolein	ND		50.0	1	08/20/2016 20:40	WG900390
Acrylonitrile	ND		10.0	1	08/20/2016 20:40	WG900390
Benzene	ND		1.00	1	08/20/2016 20:40	WG900390
Bromobenzene	ND		1.00	1	08/20/2016 20:40	WG900390
Bromodichloromethane	ND		1.00	1	08/20/2016 20:40	WG900390
Bromoform	ND		1.00	1	08/20/2016 20:40	WG900390
Bromomethane	ND		5.00	1	08/20/2016 20:40	WG900390
n-Butylbenzene	ND		1.00	1	08/20/2016 20:40	WG900390
sec-Butylbenzene	ND		1.00	1	08/20/2016 20:40	WG900390
tert-Butylbenzene	ND		1.00	1	08/20/2016 20:40	WG900390
Carbon tetrachloride	ND		1.00	1	08/20/2016 20:40	WG900390
Chlorobenzene	ND		1.00	1	08/20/2016 20:40	WG900390
Chlorodibromomethane	ND		1.00	1	08/20/2016 20:40	WG900390
Chloroethane	ND		5.00	1	08/20/2016 20:40	WG900390
2-Chloroethyl vinyl ether	ND		50.0	1	08/20/2016 20:40	WG900390
Chloroform	ND		5.00	1	08/20/2016 20:40	WG900390
Chloromethane	ND		2.50	1	08/20/2016 20:40	WG900390
2-Chlorotoluene	ND		1.00	1	08/20/2016 20:40	WG900390
4-Chlorotoluene	ND		1.00	1	08/20/2016 20:40	WG900390
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/20/2016 20:40	WG900390
1,2-Dibromoethane	ND		1.00	1	08/20/2016 20:40	WG900390
Dibromomethane	ND		1.00	1	08/20/2016 20:40	WG900390
1,2-Dichlorobenzene	ND		1.00	1	08/20/2016 20:40	WG900390
1,3-Dichlorobenzene	ND		1.00	1	08/20/2016 20:40	WG900390
1,4-Dichlorobenzene	ND		1.00	1	08/20/2016 20:40	WG900390
Dichlorodifluoromethane	ND	J4	5.00	1	08/20/2016 20:40	WG900390
1,1-Dichloroethane	ND		1.00	1	08/20/2016 20:40	WG900390
1,2-Dichloroethane	ND		1.00	1	08/20/2016 20:40	WG900390
1,1-Dichloroethene	ND		1.00	1	08/20/2016 20:40	WG900390
cis-1,2-Dichloroethene	ND		1.00	1	08/20/2016 20:40	WG900390
trans-1,2-Dichloroethene	ND		1.00	1	08/20/2016 20:40	WG900390
1,2-Dichloropropane	ND		1.00	1	08/20/2016 20:40	WG900390
1,1-Dichloropropene	ND		1.00	1	08/20/2016 20:40	WG900390
1,3-Dichloropropane	ND		1.00	1	08/20/2016 20:40	WG900390
cis-1,3-Dichloropropene	ND		1.00	1	08/20/2016 20:40	WG900390
trans-1,3-Dichloropropene	ND		1.00	1	08/20/2016 20:40	WG900390
2,2-Dichloropropane	ND		1.00	1	08/20/2016 20:40	WG900390
Di-isopropyl ether	ND		1.00	1	08/20/2016 20:40	WG900390
Ethylbenzene	ND		1.00	1	08/20/2016 20:40	WG900390
Hexachloro-1,3-butadiene	ND		1.00	1	08/20/2016 20:40	WG900390
Isopropylbenzene	ND		1.00	1	08/20/2016 20:40	WG900390
p-Isopropyltoluene	ND		1.00	1	08/20/2016 20:40	WG900390
2-Butanone (MEK)	ND		10.0	1	08/20/2016 20:40	WG900390
Methylene Chloride	ND		5.00	1	08/20/2016 20:40	WG900390
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/20/2016 20:40	WG900390
Methyl tert-butyl ether	ND		1.00	1	08/20/2016 20:40	WG900390
Naphthalene	ND		5.00	1	08/20/2016 20:40	WG900390
n-Propylbenzene	ND		1.00	1	08/20/2016 20:40	WG900390

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Styrene	ND		1.00	1	08/20/2016 20:40	WG900390
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/20/2016 20:40	WG900390
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/20/2016 20:40	WG900390
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/20/2016 20:40	WG900390
Tetrachloroethene	ND		1.00	1	08/20/2016 20:40	WG900390
Toluene	ND		5.00	1	08/20/2016 20:40	WG900390
1,2,3-Trichlorobenzene	ND		1.00	1	08/20/2016 20:40	WG900390
1,2,4-Trichlorobenzene	ND		1.00	1	08/20/2016 20:40	WG900390
1,1,1-Trichloroethane	ND		1.00	1	08/20/2016 20:40	WG900390
1,1,2-Trichloroethane	ND		1.00	1	08/20/2016 20:40	WG900390
Trichloroethene	ND		1.00	1	08/20/2016 20:40	WG900390
Trichlorofluoromethane	ND		5.00	1	08/20/2016 20:40	WG900390
1,2,3-Trichloropropane	ND		2.50	1	08/20/2016 20:40	WG900390
1,2,4-Trimethylbenzene	ND		1.00	1	08/20/2016 20:40	WG900390
1,2,3-Trimethylbenzene	ND		1.00	1	08/20/2016 20:40	WG900390
1,3,5-Trimethylbenzene	ND		1.00	1	08/20/2016 20:40	WG900390
Vinyl chloride	ND		1.00	1	08/20/2016 20:40	WG900390
Xylenes, Total	ND		3.00	1	08/20/2016 20:40	WG900390
(S) Toluene-d8	101		90.0-115		08/20/2016 20:40	WG900390
(S) Dibromofluoromethane	105		79.0-121		08/20/2016 20:40	WG900390
(S) 4-Bromofluorobenzene	103		80.1-120		08/20/2016 20:40	WG900390

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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	126		111	1.11	08/20/2016 06:26	WG898726
Residual Range Organics (RRO)	419		278	1.11	08/20/2016 06:26	WG898726
(S) o-Terphenyl	104		50.0-150		08/20/2016 06:26	WG898726

Sample Narrative:

NWTPHDX L853409-14 WG898726: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.100	2	08/16/2016 07:39	WG898738
Acenaphthene	ND		0.100	2	08/16/2016 07:39	WG898738
Acenaphthylene	ND		0.100	2	08/16/2016 07:39	WG898738
Benzo(a)anthracene	ND		0.100	2	08/16/2016 07:39	WG898738
Benzo(a)pyrene	ND		0.100	2	08/16/2016 07:39	WG898738
Benzo(b)fluoranthene	ND		0.100	2	08/16/2016 07:39	WG898738
Benzo(g,h,i)perylene	ND		0.100	2	08/16/2016 07:39	WG898738
Benzo(k)fluoranthene	ND		0.100	2	08/16/2016 07:39	WG898738
Chrysene	ND		0.100	2	08/16/2016 07:39	WG898738
Dibenz(a,h)anthracene	ND		0.100	2	08/16/2016 07:39	WG898738
Fluoranthene	ND		0.100	2	08/16/2016 07:39	WG898738
Fluorene	ND		0.100	2	08/16/2016 07:39	WG898738
Indeno(1,2,3-cd)pyrene	ND		0.100	2	08/16/2016 07:39	WG898738
Naphthalene	ND		0.500	2	08/16/2016 07:39	WG898738
Phenanthrene	ND		0.100	2	08/16/2016 07:39	WG898738
Pyrene	ND		0.100	2	08/16/2016 07:39	WG898738
1-Methylnaphthalene	ND		0.500	2	08/16/2016 07:39	WG898738
2-Methylnaphthalene	ND		0.500	2	08/16/2016 07:39	WG898738
(S) Nitrobenzene-d5	66.5		33.8-179		08/16/2016 07:39	WG898738
(S) 2-Fluorobiphenyl	102		55.5-150		08/16/2016 07:39	WG898738



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	89.0		46.2-163		08/16/2016 07:39	WG898738

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	08/17/2016 23:13	WG899623
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		08/17/2016 23:13	WG899623

1 Cp

2 Tc

3 Ss

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/20/2016 21:03	WG900390
Acrolein	ND		50.0	1	08/20/2016 21:03	WG900390
Acrylonitrile	ND		10.0	1	08/20/2016 21:03	WG900390
Benzene	ND		1.00	1	08/20/2016 21:03	WG900390
Bromobenzene	ND		1.00	1	08/20/2016 21:03	WG900390
Bromodichloromethane	ND		1.00	1	08/20/2016 21:03	WG900390
Bromoform	ND		1.00	1	08/20/2016 21:03	WG900390
Bromomethane	ND		5.00	1	08/20/2016 21:03	WG900390
n-Butylbenzene	ND		1.00	1	08/20/2016 21:03	WG900390
sec-Butylbenzene	ND		1.00	1	08/20/2016 21:03	WG900390
tert-Butylbenzene	ND		1.00	1	08/20/2016 21:03	WG900390
Carbon tetrachloride	ND		1.00	1	08/20/2016 21:03	WG900390
Chlorobenzene	ND		1.00	1	08/20/2016 21:03	WG900390
Chlorodibromomethane	ND		1.00	1	08/20/2016 21:03	WG900390
Chloroethane	ND		5.00	1	08/20/2016 21:03	WG900390
2-Chloroethyl vinyl ether	ND	J0	50.0	1	08/20/2016 21:03	WG900390
Chloroform	ND		5.00	1	08/20/2016 21:03	WG900390
Chloromethane	ND		2.50	1	08/20/2016 21:03	WG900390
2-Chlorotoluene	ND		1.00	1	08/20/2016 21:03	WG900390
4-Chlorotoluene	ND		1.00	1	08/20/2016 21:03	WG900390
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/20/2016 21:03	WG900390
1,2-Dibromoethane	ND		1.00	1	08/20/2016 21:03	WG900390
Dibromomethane	ND		1.00	1	08/20/2016 21:03	WG900390
1,2-Dichlorobenzene	ND		1.00	1	08/20/2016 21:03	WG900390
1,3-Dichlorobenzene	ND		1.00	1	08/20/2016 21:03	WG900390
1,4-Dichlorobenzene	ND		1.00	1	08/20/2016 21:03	WG900390
Dichlorodifluoromethane	ND	J4	5.00	1	08/20/2016 21:03	WG900390
1,1-Dichloroethane	ND		1.00	1	08/20/2016 21:03	WG900390
1,2-Dichloroethane	ND		1.00	1	08/20/2016 21:03	WG900390
1,1-Dichloroethene	ND		1.00	1	08/20/2016 21:03	WG900390
cis-1,2-Dichloroethene	ND		1.00	1	08/20/2016 21:03	WG900390
trans-1,2-Dichloroethene	ND		1.00	1	08/20/2016 21:03	WG900390
1,2-Dichloropropane	ND		1.00	1	08/20/2016 21:03	WG900390
1,1-Dichloropropene	ND		1.00	1	08/20/2016 21:03	WG900390
1,3-Dichloropropane	ND		1.00	1	08/20/2016 21:03	WG900390
cis-1,3-Dichloropropene	ND		1.00	1	08/20/2016 21:03	WG900390
trans-1,3-Dichloropropene	ND		1.00	1	08/20/2016 21:03	WG900390
2,2-Dichloropropane	ND		1.00	1	08/20/2016 21:03	WG900390
Di-isopropyl ether	ND		1.00	1	08/20/2016 21:03	WG900390
Ethylbenzene	ND		1.00	1	08/20/2016 21:03	WG900390
Hexachloro-1,3-butadiene	ND		1.00	1	08/20/2016 21:03	WG900390
Isopropylbenzene	ND		1.00	1	08/20/2016 21:03	WG900390
p-Isopropyltoluene	ND		1.00	1	08/20/2016 21:03	WG900390
2-Butanone (MEK)	ND		10.0	1	08/20/2016 21:03	WG900390
Methylene Chloride	ND		5.00	1	08/20/2016 21:03	WG900390
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/20/2016 21:03	WG900390
Methyl tert-butyl ether	ND		1.00	1	08/20/2016 21:03	WG900390
Naphthalene	ND		5.00	1	08/20/2016 21:03	WG900390
n-Propylbenzene	ND		1.00	1	08/20/2016 21:03	WG900390

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Styrene	ND		1.00	1	08/20/2016 21:03	WG900390
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/20/2016 21:03	WG900390
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/20/2016 21:03	WG900390
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/20/2016 21:03	WG900390
Tetrachloroethene	ND		1.00	1	08/20/2016 21:03	WG900390
Toluene	ND		5.00	1	08/20/2016 21:03	WG900390
1,2,3-Trichlorobenzene	ND		1.00	1	08/20/2016 21:03	WG900390
1,2,4-Trichlorobenzene	ND		1.00	1	08/20/2016 21:03	WG900390
1,1,1-Trichloroethane	ND		1.00	1	08/20/2016 21:03	WG900390
1,1,2-Trichloroethane	ND		1.00	1	08/20/2016 21:03	WG900390
Trichloroethene	ND		1.00	1	08/20/2016 21:03	WG900390
Trichlorofluoromethane	ND		5.00	1	08/20/2016 21:03	WG900390
1,2,3-Trichloropropane	ND		2.50	1	08/20/2016 21:03	WG900390
1,2,4-Trimethylbenzene	ND		1.00	1	08/20/2016 21:03	WG900390
1,2,3-Trimethylbenzene	ND		1.00	1	08/20/2016 21:03	WG900390
1,3,5-Trimethylbenzene	ND		1.00	1	08/20/2016 21:03	WG900390
Vinyl chloride	ND		1.00	1	08/20/2016 21:03	WG900390
Xylenes, Total	ND		3.00	1	08/20/2016 21:03	WG900390
(S) Toluene-d8	100		90.0-115		08/20/2016 21:03	WG900390
(S) Dibromofluoromethane	102		79.0-121		08/20/2016 21:03	WG900390
(S) 4-Bromofluorobenzene	106		80.1-120		08/20/2016 21:03	WG900390

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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2280		100	1	08/20/2016 06:50	WG898726
Residual Range Organics (RRO)	2010		250	1	08/20/2016 06:50	WG898726
(S) o-Terphenyl	101		50.0-150		08/20/2016 06:50	WG898726

Sample Narrative:

NWTPHDX L853409-15 WG898726: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.0960		0.0500	1	08/16/2016 08:01	WG898738
Acenaphthene	1.12		0.0500	1	08/16/2016 08:01	WG898738
Acenaphthylene	0.0602		0.0500	1	08/16/2016 08:01	WG898738
Benzo(a)anthracene	ND		0.0500	1	08/16/2016 08:01	WG898738
Benzo(a)pyrene	ND		0.0500	1	08/16/2016 08:01	WG898738
Benzo(b)fluoranthene	ND		0.0500	1	08/16/2016 08:01	WG898738
Benzo(g,h,i)perylene	ND		0.0500	1	08/16/2016 08:01	WG898738
Benzo(k)fluoranthene	ND		0.0500	1	08/16/2016 08:01	WG898738
Chrysene	ND		0.0500	1	08/16/2016 08:01	WG898738
Dibenz(a,h)anthracene	ND		0.0500	1	08/16/2016 08:01	WG898738
Fluoranthene	0.136		0.0500	1	08/16/2016 08:01	WG898738
Fluorene	0.155		0.0500	1	08/16/2016 08:01	WG898738
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/16/2016 08:01	WG898738
Naphthalene	1.80		0.250	1	08/16/2016 08:01	WG898738
Phenanthrene	0.0607	B	0.0500	1	08/16/2016 08:01	WG898738
Pyrene	0.128		0.0500	1	08/16/2016 08:01	WG898738
1-Methylnaphthalene	0.313		0.250	1	08/16/2016 08:01	WG898738
2-Methylnaphthalene	ND		0.250	1	08/16/2016 08:01	WG898738
(S) Nitrobenzene-d5	67.4		33.8-179		08/16/2016 08:01	WG898738
(S) 2-Fluorobiphenyl	103		55.5-150		08/16/2016 08:01	WG898738



Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	87.8		46.2-163		08/16/2016 08:01	WG898738

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2016 00:16	WG899815
Acrolein	ND		50.0	1	08/18/2016 00:16	WG899815
Acrylonitrile	ND	J3	10.0	1	08/18/2016 00:16	WG899815
Benzene	ND		1.00	1	08/18/2016 00:16	WG899815
Bromobenzene	ND		1.00	1	08/18/2016 00:16	WG899815
Bromodichloromethane	ND		1.00	1	08/18/2016 00:16	WG899815
Bromoform	ND	J3	1.00	1	08/18/2016 00:16	WG899815
Bromomethane	ND		5.00	1	08/18/2016 00:16	WG899815
n-Butylbenzene	ND		1.00	1	08/18/2016 00:16	WG899815
sec-Butylbenzene	ND		1.00	1	08/18/2016 00:16	WG899815
tert-Butylbenzene	ND		1.00	1	08/18/2016 00:16	WG899815
Carbon tetrachloride	ND		1.00	1	08/18/2016 00:16	WG899815
Chlorobenzene	ND		1.00	1	08/18/2016 00:16	WG899815
Chlorodibromomethane	ND		1.00	1	08/18/2016 00:16	WG899815
Chloroethane	ND		5.00	1	08/18/2016 00:16	WG899815
2-Chloroethyl vinyl ether	ND	J0	50.0	1	08/18/2016 00:16	WG899815
Chloroform	ND		5.00	1	08/18/2016 00:16	WG899815
Chloromethane	ND		2.50	1	08/18/2016 00:16	WG899815
2-Chlorotoluene	ND		1.00	1	08/18/2016 00:16	WG899815
4-Chlorotoluene	ND		1.00	1	08/18/2016 00:16	WG899815
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2016 00:16	WG899815
1,2-Dibromoethane	ND		1.00	1	08/18/2016 00:16	WG899815
Dibromomethane	ND		1.00	1	08/18/2016 00:16	WG899815
1,2-Dichlorobenzene	ND		1.00	1	08/18/2016 00:16	WG899815
1,3-Dichlorobenzene	ND		1.00	1	08/18/2016 00:16	WG899815
1,4-Dichlorobenzene	ND	J4	1.00	1	08/18/2016 00:16	WG899815
Dichlorodifluoromethane	ND		5.00	1	08/18/2016 00:16	WG899815
1,1-Dichloroethane	ND		1.00	1	08/18/2016 00:16	WG899815
1,2-Dichloroethane	ND		1.00	1	08/18/2016 00:16	WG899815
1,1-Dichloroethene	ND		1.00	1	08/18/2016 00:16	WG899815
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2016 00:16	WG899815
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2016 00:16	WG899815
1,2-Dichloropropane	ND		1.00	1	08/18/2016 00:16	WG899815
1,1-Dichloropropene	ND		1.00	1	08/18/2016 00:16	WG899815
1,3-Dichloropropane	ND	J3	1.00	1	08/18/2016 00:16	WG899815
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2016 00:16	WG899815
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2016 00:16	WG899815
2,2-Dichloropropane	ND		1.00	1	08/18/2016 00:16	WG899815
Di-isopropyl ether	ND		1.00	1	08/18/2016 00:16	WG899815
Ethylbenzene	ND	J4	1.00	1	08/18/2016 00:16	WG899815
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2016 00:16	WG899815
Isopropylbenzene	ND		1.00	1	08/18/2016 00:16	WG899815
p-Isopropyltoluene	ND		1.00	1	08/18/2016 00:16	WG899815
2-Butanone (MEK)	ND		10.0	1	08/18/2016 00:16	WG899815
Methylene Chloride	ND		5.00	1	08/18/2016 00:16	WG899815
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2016 00:16	WG899815
Methyl tert-butyl ether	ND		1.00	1	08/18/2016 00:16	WG899815
Naphthalene	ND		5.00	1	08/18/2016 00:16	WG899815
n-Propylbenzene	ND		1.00	1	08/18/2016 00:16	WG899815
Styrene	ND		1.00	1	08/18/2016 00:16	WG899815
1,1,1,2-Tetrachloroethane	ND	J3	1.00	1	08/18/2016 00:16	WG899815
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2016 00:16	WG899815
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2016 00:16	WG899815
Tetrachloroethene	ND		1.00	1	08/18/2016 00:16	WG899815
Toluene	ND		5.00	1	08/18/2016 00:16	WG899815
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2016 00:16	WG899815

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/10/16 00:00

L853409

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2016 00:16	WG899815
1,1,1-Trichloroethane	ND		1.00	1	08/18/2016 00:16	WG899815
1,1,2-Trichloroethane	ND		1.00	1	08/18/2016 00:16	WG899815
Trichloroethene	ND		1.00	1	08/18/2016 00:16	WG899815
Trichlorofluoromethane	ND		5.00	1	08/18/2016 00:16	WG899815
1,2,3-Trichloropropane	ND		2.50	1	08/18/2016 00:16	WG899815
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2016 00:16	WG899815
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2016 00:16	WG899815
1,3,5-Trimethylbenzene	ND	J4	1.00	1	08/18/2016 00:16	WG899815
Vinyl chloride	ND		1.00	1	08/18/2016 00:16	WG899815
Xylenes, Total	ND		3.00	1	08/18/2016 00:16	WG899815
(S) Toluene-d8	103		90.0-115		08/18/2016 00:16	WG899815
(S) Dibromofluoromethane	99.6		79.0-121		08/18/2016 00:16	WG899815
(S) 4-Bromofluorobenzene	102		80.1-120		08/18/2016 00:16	WG899815

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



Method Blank (MB)

(MB) R3157247-1 08/16/16 08:57

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000900			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L853409-06 Original Sample (OS) • Duplicate (DUP)

(OS) L853409-06 08/16/16 08:57 • (DUP) R3157247-3 08/16/16 08:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	82.3	82.1	1	0.234		5

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R3157247-2 08/16/16 08:57

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

⁹Sc



Method Blank (MB)

(MB) R3157074-1 08/16/16 09:43

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) R3157074-2 08/16/16 09:46 • (LCSD) R3157074-3 08/16/16 09:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	3.00	2.89	2.91	96	97	80-120			1	20

L853420-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853420-01 08/16/16 09:52 • (MS) R3157074-4 08/16/16 09:55 • (MSD) R3157074-5 08/16/16 09:58

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	ND	2.83	2.28	94	76	1	75-125		J3	21	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3157210-1 08/16/16 16:27

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) R3157210-2 08/16/16 16:30 • (LCSD) R3157210-3 08/16/16 16:32

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	3.00	3.18	3.20	106	107	80-120			1	20

⁷ Gl

⁸ Al

L853521-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853521-01 08/16/16 16:40 • (MS) R3157210-4 08/16/16 16:42 • (MSD) R3157210-5 08/16/16 16:45

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	3.13	3.19	104	106	1	75-125			2	20

⁹ Sc



Method Blank (MB)

(MB) R3157351-1 08/17/16 10:19

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury,Dissolved	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) R3157351-2 08/17/16 10:22 • (LCSD) R3157351-3 08/17/16 10:25

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	%	%	%			%	%
Mercury,Dissolved	3.00	3.10	2.87	103	96	80-120			8	20

L853431-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853431-02 08/17/16 10:28 • (MS) R3157351-4 08/17/16 10:37 • (MSD) R3157351-5 08/17/16 10:40

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	%	%		%			%	%
Mercury,Dissolved	3.00	ND	3.06	2.89	102	96	1	75-125			6	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3157072-1 08/16/16 09:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0028	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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

(LCS) R3157072-2 08/16/16 09:23 • (LCSD) R3157072-3 08/16/16 09:26

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.274	0.256	91	85	80-120			6	20

⁷ Gl

⁸ Al

L853409-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853409-01 08/16/16 09:28 • (MS) R3157072-4 08/16/16 09:31 • (MSD) R3157072-5 08/16/16 09:33

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
Mercury	0.425	ND	0.395	0.351	92	81	1	75-125			12	20

⁹ Sc



Method Blank (MB)

(MB) R3157094-1 08/16/16 12:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		6.50	10.0
Barium,Dissolved	U		1.70	5.00
Cadmium,Dissolved	U		0.700	2.00
Chromium,Dissolved	1.80	J	1.40	10.0
Lead,Dissolved	U		1.90	5.00
Selenium,Dissolved	U		7.40	10.0
Silver,Dissolved	U		2.80	5.00

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

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

(LCS) R3157094-2 08/16/16 12:29 • (LCSD) R3157094-3 08/16/16 12:32

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,Dissolved	1000	1020	1030	102	103	80-120			1	20
Barium,Dissolved	1000	1040	1040	104	104	80-120			0	20
Cadmium,Dissolved	1000	1020	1030	102	103	80-120			1	20
Chromium,Dissolved	1000	969	970	97	97	80-120			0	20
Lead,Dissolved	1000	1040	1040	104	104	80-120			0	20
Selenium,Dissolved	1000	1060	1060	106	106	80-120			1	20
Silver,Dissolved	1000	1000	1000	100	100	80-120			0	20

L853409-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853409-12 08/16/16 12:34 • (MS) R3157094-5 08/16/16 12:39 • (MSD) R3157094-6 08/16/16 12:42

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,Dissolved	1000	ND	1080	1090	108	109	1	75-125			1	20
Barium,Dissolved	1000	84.4	1110	1120	103	104	1	75-125			1	20
Cadmium,Dissolved	1000	ND	1060	1070	106	107	1	75-125			1	20
Chromium,Dissolved	1000	ND	965	968	96	97	1	75-125			0	20
Lead,Dissolved	1000	ND	1050	1070	105	107	1	75-125			2	20
Selenium,Dissolved	1000	ND	1110	1120	111	112	1	75-125			1	20
Silver,Dissolved	1000	ND	1040	1050	104	105	1	75-125			1	20



Method Blank (MB)

(MB) R3157967-1 08/18/16 16:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		6.50	10.0
Barium	5.55		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) R3157967-2 08/18/16 17:02 • (LCSD) R3157967-3 08/18/16 17:04

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	1010	1010	101	101	80-120			0	20
Barium	1000	1030	1030	103	103	80-120			1	20
Cadmium	1000	1020	1030	102	103	80-120			0	20
Chromium	1000	971	972	97	97	80-120			0	20
Lead	1000	1030	1040	103	104	80-120			1	20
Selenium	1000	1050	1060	105	106	80-120			1	20
Silver	1000	970	970	97	97	80-120			0	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3157358-1 08/17/16 10:59

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) R3157358-2 08/17/16 11:02 • (LCSD) R3157358-3 08/17/16 11:04

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	90.8	101	91	80-120			11	20
Barium	100	104	92.8	104	93	80-120			11	20
Cadmium	100	104	93.0	104	93	80-120			11	20
Chromium	100	110	97.9	110	98	80-120			12	20
Lead	100	111	100	111	100	80-120			11	20
Selenium	100	103	92.0	103	92	80-120			11	20
Silver	100	104	92.3	104	92	80-120			12	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L853409-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853409-10 08/17/16 11:12 • (MS) R3157358-6 08/17/16 11:20 • (MSD) R3157358-7 08/17/16 11:22

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	107	4.64	102	105	91	93	1	75-125			2	20
Barium	107	74.1	166	180	85	98	1	75-125			8	20
Cadmium	107	ND	102	105	94	97	1	75-125			3	20
Chromium	107	12.5	120	121	100	101	1	75-125			1	20
Lead	107	3.35	119	122	107	110	1	75-125			3	20
Selenium	107	ND	99.2	103	92	95	1	75-125			3	20
Silver	107	ND	103	105	96	98	1	75-125			2	20



Method Blank (MB)

(MB) R3158555-3 08/17/16 13:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHG C6 - C12	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)				62.0-128

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3158555-4 08/17/16 13:56 • (LCSD) R3158555-5 08/17/16 14:18

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5500	5120	4720	93.1	85.8	66.0-123			8.11	20
(S) a,a,a-Trifluorotoluene(FID)				101	102	62.0-128				

5 Sr

6 Qc

L853715-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853715-01 08/17/16 16:42 • (MS) R3158555-8 08/17/16 19:39 • (MSD) R3158555-9 08/17/16 20:01

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5500	ND	6050	6220	110	113	1	47.5-136			2.80	20
(S) a,a,a-Trifluorotoluene(FID)					102	102		62.0-128				

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3157761-3 08/17/16 23:02

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 tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
2-Chloroethyl vinyl ether	U		3.01	50.0
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) R3157761-3 08/17/16 23:02

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	0.241	J	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	104			90.0-115
(S) Dibromofluoromethane	98.5			79.0-121
(S) 4-Bromofluorobenzene	98.3			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) R3157761-1 08/17/16 22:01 • (LCSD) R3157761-2 08/17/16 22:21

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	105	118	83.9	94.5	28.7-175			11.9	20.9
Acrolein	125	100	117	80.1	93.7	40.4-172			15.7	20
Acrylonitrile	125	112	138	89.4	110	58.2-145		J3	20.9	20



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

(LCS) R3157761-1 08/17/16 22:01 • (LCSD) R3157761-2 08/17/16 22:21

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	21.1	23.8	84.3	95.2	73.0-122			12.1	20
Bromobenzene	25.0	21.3	25.2	85.1	101	81.5-115			16.8	20
Bromodichloromethane	25.0	21.9	25.1	87.5	100	75.5-121			13.8	20
Bromoform	25.0	20.6	25.4	82.2	101	71.5-131		J3	20.9	20
Bromomethane	25.0	29.0	32.0	116	128	22.4-187			9.90	20
n-Butylbenzene	25.0	23.2	26.3	92.6	105	75.9-134			12.9	20
sec-Butylbenzene	25.0	21.7	25.6	86.7	102	80.6-126			16.6	20
tert-Butylbenzene	25.0	20.6	25.2	82.6	101	79.3-127			20.0	20
Carbon tetrachloride	25.0	19.6	22.2	78.4	88.8	70.9-129			12.5	20
Chlorobenzene	25.0	21.6	25.5	86.6	102	79.7-122			16.2	20
Chlorodibromomethane	25.0	21.1	25.4	84.3	102	78.2-124			18.6	20
Chloroethane	25.0	22.4	24.6	89.7	98.3	41.2-153			9.18	20
2-Chloroethyl vinyl ether	125	121	133	96.8	106	23.4-162			9.45	23.5
Chloroform	25.0	21.4	24.8	85.7	99.0	73.2-125			14.5	20
Chloromethane	25.0	17.3	19.9	69.0	79.8	55.8-134			14.4	20
2-Chlorotoluene	25.0	21.3	25.7	85.2	103	76.4-125			18.8	20
4-Chlorotoluene	25.0	21.7	26.2	86.9	105	81.5-121			18.7	20
1,2-Dibromo-3-Chloropropane	25.0	22.2	26.4	88.8	106	64.8-131			17.3	20
1,2-Dibromoethane	25.0	20.9	24.9	83.7	99.8	79.8-122			17.5	20
Dibromomethane	25.0	21.5	25.1	86.1	100	78.8-119			15.3	20
1,2-Dichlorobenzene	25.0	21.6	24.9	86.4	99.6	84.7-118			14.2	20
1,3-Dichlorobenzene	25.0	20.3	24.1	81.4	96.5	77.6-127			17.0	20
1,4-Dichlorobenzene	25.0	20.0	23.0	80.0	92.0	82.2-114	J4		13.9	20
Dichlorodifluoromethane	25.0	19.7	22.7	78.6	90.9	56.0-134			14.5	20
1,1-Dichloroethane	25.0	21.4	24.4	85.6	97.5	71.7-127			13.0	20
1,2-Dichloroethane	25.0	20.7	24.3	83.0	97.0	79.8-122			15.7	20
1,1-Dichloroethene	25.0	20.2	23.1	80.9	92.2	59.9-137			13.1	20
cis-1,2-Dichloroethene	25.0	21.1	24.1	84.5	96.3	77.3-122			13.0	20
trans-1,2-Dichloroethene	25.0	20.7	23.8	82.8	95.3	72.6-125			14.1	20
1,2-Dichloropropane	25.0	21.8	25.5	87.2	102	77.4-125			15.6	20
1,1-Dichloropropene	25.0	21.1	24.8	84.2	99.1	72.5-127			16.3	20
1,3-Dichloropropane	25.0	21.4	26.2	85.5	105	80.6-115		J3	20.4	20
cis-1,3-Dichloropropene	25.0	23.2	26.6	92.8	107	77.7-124			13.9	20
trans-1,3-Dichloropropene	25.0	22.9	26.3	91.6	105	73.5-127			13.9	20
2,2-Dichloropropane	25.0	21.7	24.9	86.9	99.4	61.3-134			13.5	20
Di-isopropyl ether	25.0	19.4	22.4	77.5	89.5	65.1-135			14.3	20
Ethylbenzene	25.0	20.1	24.6	80.5	98.2	80.9-121	J4		19.8	20
Hexachloro-1,3-butadiene	25.0	23.6	25.7	94.3	103	73.7-133			8.60	20
Isopropylbenzene	25.0	21.2	25.5	84.8	102	81.6-124			18.4	20
p-Isopropyltoluene	25.0	21.6	26.0	86.3	104	77.6-129			18.6	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) R3157761-1 08/17/16 22:01 • (LCSD) R3157761-2 08/17/16 22:21

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	109	123	86.9	98.5	46.4-155			12.5	20
Methylene Chloride	25.0	20.7	23.6	82.9	94.6	69.5-120			13.2	20
4-Methyl-2-pentanone (MIBK)	125	109	127	87.2	102	63.3-138			15.6	20
Methyl tert-butyl ether	25.0	20.5	23.9	82.0	95.5	70.1-125			15.2	20
Naphthalene	25.0	22.1	26.1	88.4	105	69.7-134			16.8	20
n-Propylbenzene	25.0	21.8	26.1	87.1	104	81.9-122			18.0	20
Styrene	25.0	22.0	26.9	88.2	108	79.9-124			19.8	20
1,1,1,2-Tetrachloroethane	25.0	20.8	25.6	83.3	103	78.5-125		J3	20.6	20
1,1,2,2-Tetrachloroethane	25.0	20.5	25.0	82.1	100	79.3-123			19.6	20
Tetrachloroethene	25.0	19.9	24.2	79.7	97.0	73.5-130			19.5	20
Toluene	25.0	21.4	24.7	85.8	98.6	77.9-116			13.9	20
1,1,2-Trichlorotrifluoroethane	25.0	19.2	21.4	76.8	85.6	62.0-141			10.8	20
1,2,3-Trichlorobenzene	25.0	20.9	24.5	83.7	98.1	75.7-134			15.9	20
1,2,4-Trichlorobenzene	25.0	21.3	24.4	85.0	97.8	76.1-136			14.0	20
1,1,1-Trichloroethane	25.0	21.1	24.4	84.2	97.7	71.1-129			14.8	20
1,1,2-Trichloroethane	25.0	21.0	25.5	83.9	102	81.6-120			19.3	20
Trichloroethene	25.0	22.0	25.0	88.1	99.9	79.5-121			12.6	20
Trichlorofluoromethane	25.0	19.7	22.0	78.7	87.8	49.1-157			10.9	20
1,2,3-Trichloropropane	25.0	21.5	25.7	86.0	103	74.9-124			17.8	20
1,2,3-Trimethylbenzene	25.0	21.6	25.0	86.4	100	79.9-118			14.7	20
1,2,4-Trimethylbenzene	25.0	21.3	25.5	85.1	102	79.0-122			18.1	20
1,3,5-Trimethylbenzene	25.0	20.2	24.7	80.9	98.7	81.0-123		J4	19.8	20
Vinyl chloride	25.0	21.5	23.9	86.0	95.5	61.5-134			10.5	20
Xylenes, Total	75.0	61.9	74.3	82.5	99.0	79.2-122			18.1	20
(S) Toluene-d8				103	102	90.0-115				
(S) Dibromofluoromethane				96.0	94.6	79.0-121				
(S) 4-Bromofluorobenzene				97.8	102	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) R3158200-3 08/20/16 18:03

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 tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
2-Chloroethyl vinyl ether	U		3.01	50.0
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) R3158200-3 08/20/16 18:03

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	102			90.0-115
(S) Dibromofluoromethane	104			79.0-121
(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) R3158200-1 08/20/16 16:10 • (LCSD) R3158200-2 08/20/16 16:32

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	98.9	87.1	79.1	69.7	28.7-175			12.7	20.9
Acrolein	125	117	104	93.2	83.1	40.4-172			11.5	20
Acrylonitrile	125	140	125	112	99.7	58.2-145			11.7	20



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

(LCS) R3158200-1 08/20/16 16:10 • (LCSD) R3158200-2 08/20/16 16:32

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	26.5	25.2	106	101	73.0-122			5.16	20
Bromobenzene	25.0	24.8	24.8	99.2	99.3	81.5-115			0.120	20
Bromodichloromethane	25.0	28.8	27.1	115	108	75.5-121			6.14	20
Bromoform	25.0	26.2	25.5	105	102	71.5-131			2.92	20
Bromomethane	25.0	31.7	26.7	127	107	22.4-187			17.3	20
n-Butylbenzene	25.0	26.4	25.6	106	102	75.9-134			3.11	20
sec-Butylbenzene	25.0	27.7	26.6	111	106	80.6-126			4.21	20
tert-Butylbenzene	25.0	28.3	27.9	113	112	79.3-127			1.52	20
Carbon tetrachloride	25.0	31.5	28.2	126	113	70.9-129			10.9	20
Chlorobenzene	25.0	26.8	27.0	107	108	79.7-122			0.720	20
Chlorodibromomethane	25.0	28.4	26.8	114	107	78.2-124			5.57	20
Chloroethane	25.0	30.6	26.2	122	105	41.2-153			15.6	20
2-Chloroethyl vinyl ether	125	105	111	84.2	88.7	23.4-162			5.14	23.5
Chloroform	25.0	28.6	26.5	114	106	73.2-125			7.49	20
Chloromethane	25.0	28.4	24.4	113	97.5	55.8-134			15.1	20
2-Chlorotoluene	25.0	27.9	26.9	112	108	76.4-125			3.69	20
4-Chlorotoluene	25.0	26.8	26.4	107	106	81.5-121			1.22	20
1,2-Dibromo-3-Chloropropane	25.0	26.0	25.0	104	100	64.8-131			3.61	20
1,2-Dibromoethane	25.0	25.9	25.8	103	103	79.8-122			0.220	20
Dibromomethane	25.0	27.4	25.0	110	99.8	78.8-119			9.47	20
1,2-Dichlorobenzene	25.0	26.6	25.6	106	102	84.7-118			3.68	20
1,3-Dichlorobenzene	25.0	27.8	26.9	111	108	77.6-127			3.50	20
1,4-Dichlorobenzene	25.0	23.8	23.4	95.3	93.7	82.2-114			1.70	20
Dichlorodifluoromethane	25.0	35.3	29.5	141	118	56.0-134	J4		18.1	20
1,1-Dichloroethane	25.0	27.9	25.6	112	102	71.7-127			8.83	20
1,2-Dichloroethane	25.0	25.3	25.0	101	99.9	79.8-122			1.39	20
1,1-Dichloroethene	25.0	30.2	26.5	121	106	59.9-137			13.1	20
cis-1,2-Dichloroethene	25.0	29.1	26.9	117	108	77.3-122			7.88	20
trans-1,2-Dichloroethene	25.0	31.3	27.6	125	110	72.6-125			12.7	20
1,2-Dichloropropane	25.0	26.6	24.5	106	97.9	77.4-125			8.24	20
1,1-Dichloropropene	25.0	27.6	27.3	110	109	72.5-127			1.25	20
1,3-Dichloropropane	25.0	24.0	24.9	95.9	99.5	80.6-115			3.72	20
cis-1,3-Dichloropropene	25.0	27.9	27.0	112	108	77.7-124			3.52	20
trans-1,3-Dichloropropene	25.0	26.9	26.6	108	106	73.5-127			1.22	20
2,2-Dichloropropane	25.0	31.7	26.4	127	106	61.3-134			18.1	20
Di-isopropyl ether	25.0	25.0	22.8	100	91.1	65.1-135			9.38	20
Ethylbenzene	25.0	26.5	26.0	106	104	80.9-121			2.19	20
Hexachloro-1,3-butadiene	25.0	27.8	27.1	111	108	73.7-133			2.57	20
Isopropylbenzene	25.0	27.7	26.2	111	105	81.6-124			5.68	20
p-Isopropyltoluene	25.0	29.4	28.1	118	112	77.6-129			4.73	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) R3158200-1 08/20/16 16:10 • (LCSD) R3158200-2 08/20/16 16:32

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	97.9	97.5	78.3	78.0	46.4-155			0.440	20
Methylene Chloride	25.0	27.9	24.3	112	97.1	69.5-120			14.0	20
4-Methyl-2-pentanone (MIBK)	125	133	120	106	95.8	63.3-138			10.2	20
Methyl tert-butyl ether	25.0	27.6	23.9	111	95.5	70.1-125			14.7	20
Naphthalene	25.0	26.5	23.8	106	95.4	69.7-134			10.7	20
n-Propylbenzene	25.0	27.5	26.5	110	106	81.9-122			3.55	20
Styrene	25.0	27.9	27.9	112	112	79.9-124			0.0200	20
1,1,1,2-Tetrachloroethane	25.0	29.5	28.7	118	115	78.5-125			2.94	20
1,1,2,2-Tetrachloroethane	25.0	26.2	24.2	105	96.7	79.3-123			8.23	20
Tetrachloroethene	25.0	26.9	27.0	108	108	73.5-130			0.450	20
Toluene	25.0	27.2	25.2	109	101	77.9-116			7.75	20
1,1,2-Trichlorotrifluoroethane	25.0	32.5	27.3	130	109	62.0-141			17.5	20
1,2,3-Trichlorobenzene	25.0	28.4	24.5	114	97.9	75.7-134			15.0	20
1,2,4-Trichlorobenzene	25.0	27.8	25.5	111	102	76.1-136			8.44	20
1,1,1-Trichloroethane	25.0	30.7	27.6	123	110	71.1-129			10.6	20
1,1,2-Trichloroethane	25.0	24.6	24.8	98.3	99.2	81.6-120			0.930	20
Trichloroethene	25.0	28.4	27.3	114	109	79.5-121			4.09	20
Trichlorofluoromethane	25.0	32.3	27.5	129	110	49.1-157			16.0	20
1,2,3-Trichloropropane	25.0	26.6	24.7	107	98.9	74.9-124			7.42	20
1,2,3-Trimethylbenzene	25.0	25.5	24.3	102	97.3	79.9-118			4.81	20
1,2,4-Trimethylbenzene	25.0	28.2	26.8	113	107	79.0-122			5.15	20
1,3,5-Trimethylbenzene	25.0	28.2	26.9	113	108	81.0-123			4.55	20
Vinyl chloride	25.0	31.6	26.1	126	104	61.5-134			19.1	20
Xylenes, Total	75.0	82.2	79.6	110	106	79.2-122			3.26	20
(S) Toluene-d8				107	102	90.0-115				
(S) Dibromofluoromethane				109	102	79.0-121				
(S) 4-Bromofluorobenzene				102	102	80.1-120				

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

L853829-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853829-06 08/20/16 18:48 • (MS) R3158200-4 08/20/16 19:11 • (MSD) R3158200-5 08/20/16 19:33

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	ND	73.5	80.9	50.2	56.1	1	25.0-156			9.55	21.5
Acrolein	125	ND	122	133	97.2	106	1	34.0-194			8.86	21.5
Acrylonitrile	125	ND	142	147	113	118	1	55.9-161			3.91	20
Benzene	25.0	ND	24.3	27.4	93.9	107	1	58.6-133			12.3	20
Bromobenzene	25.0	ND	24.1	26.3	96.3	105	1	70.6-125			8.63	20
Bromodichloromethane	25.0	ND	26.9	30.6	108	122	1	69.2-127			13.0	20



L853829-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853829-06 08/20/16 18:48 • (MS) R3158200-4 08/20/16 19:11 • (MSD) R3158200-5 08/20/16 19:33

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	25.8	26.9	103	107	1	66.3-140			3.96	20
Bromomethane	25.0	ND	27.1	32.3	108	129	1	16.6-183			17.7	20.5
n-Butylbenzene	25.0	ND	24.4	30.3	97.5	121	1	64.8-145		J3	21.6	20
sec-Butylbenzene	25.0	ND	25.9	29.4	103	118	1	66.8-139			12.9	20
tert-Butylbenzene	25.0	ND	26.3	28.7	105	115	1	67.1-138			8.76	20
Carbon tetrachloride	25.0	ND	27.7	33.2	111	133	1	60.6-139			18.1	20
Chlorobenzene	25.0	ND	26.0	28.2	104	113	1	70.1-130			8.12	20
Chlorodibromomethane	25.0	ND	26.4	29.0	106	116	1	71.6-132			9.25	20
Chloroethane	25.0	ND	26.5	30.5	106	122	1	33.3-155			13.9	20
2-Chloroethyl vinyl ether	125	ND	ND	ND	0.000	0.000	1	5.00-149	J6	J6	0.000	40
Chloroform	25.0	ND	25.8	29.9	103	120	1	66.1-133			14.6	20
Chloromethane	25.0	ND	24.0	28.8	96.1	115	1	40.7-139			18.1	20
2-Chlorotoluene	25.0	ND	27.0	30.9	106	122	1	66.9-134			13.5	20
4-Chlorotoluene	25.0	ND	25.3	28.2	101	113	1	66.8-134			10.9	20
1,2-Dibromo-3-Chloropropane	25.0	ND	26.8	32.3	107	129	1	63.9-142			18.5	20.2
1,2-Dibromoethane	25.0	ND	25.8	25.6	103	102	1	73.8-131			0.700	20
Dibromomethane	25.0	ND	26.1	27.9	104	112	1	72.8-127			6.97	20
1,2-Dichlorobenzene	25.0	ND	24.5	30.6	98.0	123	1	77.4-127		J3	22.2	20
1,3-Dichlorobenzene	25.0	ND	26.5	29.0	106	116	1	67.9-136			8.85	20
1,4-Dichlorobenzene	25.0	ND	22.7	27.3	89.4	108	1	74.4-123			18.5	20
Dichlorodifluoromethane	25.0	ND	31.3	37.4	113	137	1	42.2-146			17.7	20
1,1-Dichloroethane	25.0	ND	25.4	29.4	101	117	1	64.0-134			14.7	20
1,2-Dichloroethane	25.0	ND	23.9	26.5	93.6	104	1	60.7-132			10.2	20
1,1-Dichloroethene	25.0	ND	26.8	31.7	105	124	1	48.8-144			16.6	20
cis-1,2-Dichloroethene	25.0	ND	26.4	30.7	106	123	1	60.6-136			14.9	20
trans-1,2-Dichloroethene	25.0	ND	27.5	31.9	110	128	1	61.0-132			14.6	20
1,2-Dichloropropane	25.0	ND	25.1	29.0	101	116	1	69.7-130			14.4	20
1,1-Dichloropropene	25.0	ND	25.2	28.4	101	114	1	61.5-136			12.2	20
1,3-Dichloropropane	25.0	ND	24.2	24.8	97.0	99.4	1	74.3-123			2.40	20
cis-1,3-Dichloropropene	25.0	ND	25.9	26.7	103	107	1	71.1-129			3.20	20
trans-1,3-Dichloropropene	25.0	ND	26.6	28.1	107	113	1	66.3-136			5.49	20
2,2-Dichloropropane	25.0	ND	27.7	34.8	111	139	1	54.9-142		J3	22.7	20
Di-isopropyl ether	25.0	ND	22.9	26.3	91.4	105	1	59.9-140			14.1	20
Ethylbenzene	25.0	11.3	34.8	39.4	94.2	113	1	62.7-136			12.3	20
Hexachloro-1,3-butadiene	25.0	ND	25.9	31.2	104	125	1	61.1-144			18.5	20.1
Isopropylbenzene	25.0	ND	26.4	30.6	103	120	1	67.4-136			14.7	20
p-Isopropyltoluene	25.0	ND	28.0	31.8	112	127	1	62.8-143			12.5	20
2-Butanone (MEK)	125	ND	91.1	89.3	72.9	71.4	1	45.0-156			2.08	20.8
Methylene Chloride	25.0	ND	24.4	28.6	97.5	114	1	61.5-125			15.9	20
4-Methyl-2-pentanone (MIBK)	125	ND	140	143	112	115	1	60.7-150			2.72	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L853829-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853829-06 08/20/16 18:48 • (MS) R3158200-4 08/20/16 19:11 • (MSD) R3158200-5 08/20/16 19:33

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	24.4	28.9	97.6	116	1	61.4-136			16.9	20
Naphthalene	25.0	ND	31.7	39.4	109	140	1	61.8-143		J3	21.4	20
n-Propylbenzene	25.0	ND	26.6	30.5	103	119	1	63.2-139			13.8	20
Styrene	25.0	ND	27.6	31.0	107	121	1	68.2-133			11.6	20
1,1,1,2-Tetrachloroethane	25.0	ND	28.0	32.0	112	128	1	70.5-132			13.3	20
1,1,2,2-Tetrachloroethane	25.0	ND	26.2	27.3	105	109	1	64.9-145			4.06	20
Tetrachloroethene	25.0	ND	25.6	27.9	102	112	1	57.4-141			8.81	20
Toluene	25.0	ND	26.8	30.8	97.1	113	1	67.8-124			14.2	20
1,1,2-Trichlorotrifluoroethane	25.0	ND	27.3	32.4	109	130	1	53.7-150			17.3	20
1,2,3-Trichlorobenzene	25.0	ND	26.8	34.6	107	138	1	65.7-143		J3	25.5	20
1,2,4-Trichlorobenzene	25.0	ND	27.0	34.1	108	136	1	67.0-146		J3	23.1	20
1,1,1-Trichloroethane	25.0	ND	27.0	32.1	108	128	1	62.8-138			17.4	20
1,1,2-Trichloroethane	25.0	ND	24.4	26.0	97.7	104	1	74.1-130			6.20	20
Trichloroethene	25.0	ND	25.7	29.8	103	119	1	48.9-148			14.9	20
Trichlorofluoromethane	25.0	ND	27.7	33.4	111	134	1	39.9-165			18.7	20
1,2,3-Trichloropropane	25.0	ND	27.5	27.4	110	110	1	71.5-134			0.280	20
1,2,3-Trimethylbenzene	25.0	6.37	28.7	36.8	89.5	122	1	62.7-133		J3	24.5	20
1,2,4-Trimethylbenzene	25.0	11.6	36.0	42.0	97.8	122	1	60.5-137			15.3	20
1,3,5-Trimethylbenzene	25.0	4.62	30.4	34.9	103	121	1	67.9-134			13.9	20
Vinyl chloride	25.0	ND	26.4	31.0	105	124	1	44.3-143			16.1	20
Xylenes, Total	75.0	ND	120	140	160	186	1	65.6-133	J5	J5	15.4	20
(S) Toluene-d8					104	105		90.0-115				
(S) Dibromofluoromethane					104	106		79.0-121				
(S) 4-Bromofluorobenzene					102	95.1		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) R3158349-3 08/20/16 17:49

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 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
Hexachloro-1,3-butadiene	U		0.000342	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3158349-3 08/20/16 17:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	0.000459	J	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	105			88.7-115
(S) Dibromofluoromethane	102			76.3-123
(S) 4-Bromofluorobenzene	95.6			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) R3158349-1 08/20/16 16:27 • (LCSD) R3158349-2 08/20/16 16:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.0769	0.0843	61.5	67.4	25.3-178			9.21	22.9
Acrylonitrile	0.125	0.117	0.128	93.3	103	57.8-143			9.37	20
Benzene	0.0250	0.0230	0.0240	92.0	96.2	72.6-120			4.49	20
Bromobenzene	0.0250	0.0232	0.0249	92.7	99.6	80.3-115			7.25	20



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

(LCS) R3158349-1 08/20/16 16:27 • (LCSD) R3158349-2 08/20/16 16:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	0.0250	0.0236	0.0248	94.4	99.3	75.3-119			5.05	20
Bromoform	0.0250	0.0273	0.0293	109	117	69.1-135			6.87	20
Bromomethane	0.0250	0.0303	0.0321	121	128	23.0-191			5.68	20
n-Butylbenzene	0.0250	0.0222	0.0232	88.6	92.8	74.2-134			4.65	20
sec-Butylbenzene	0.0250	0.0228	0.0242	91.0	96.7	77.8-129			6.05	20
tert-Butylbenzene	0.0250	0.0231	0.0245	92.4	97.9	77.2-129			5.78	20
Carbon tetrachloride	0.0250	0.0223	0.0234	89.3	93.5	69.4-129			4.62	20
Chlorobenzene	0.0250	0.0248	0.0265	99.4	106	78.9-122			6.38	20
Chlorodibromomethane	0.0250	0.0267	0.0288	107	115	76.4-126			7.60	20
Chloroethane	0.0250	0.0290	0.0309	116	124	47.2-147			6.38	20
2-Chloroethyl vinyl ether	0.125	0.143	0.155	115	124	16.7-162			7.67	23.7
Chloroform	0.0250	0.0229	0.0241	91.7	96.3	73.3-122			4.88	20
Chloromethane	0.0250	0.0252	0.0258	101	103	53.1-135			2.29	20
2-Chlorotoluene	0.0250	0.0232	0.0248	93.0	99.3	74.6-127			6.55	20
4-Chlorotoluene	0.0250	0.0230	0.0246	91.9	98.3	79.5-123			6.73	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0237	0.0259	94.9	103	64.9-131			8.65	20
1,2-Dibromoethane	0.0250	0.0253	0.0264	101	106	67.2-121			4.42	20
Dibromomethane	0.0250	0.0251	0.0267	100	107	78.5-117			6.22	20
1,2-Dichlorobenzene	0.0250	0.0240	0.0249	95.9	99.8	83.6-119			4.00	20
1,3-Dichlorobenzene	0.0250	0.0234	0.0247	93.8	98.7	75.9-129			5.14	20
1,4-Dichlorobenzene	0.0250	0.0236	0.0250	94.5	100	81.0-115			5.76	20
Dichlorodifluoromethane	0.0250	0.0277	0.0283	111	113	50.9-139			2.39	20
1,1-Dichloroethane	0.0250	0.0235	0.0251	94.0	100	71.7-125			6.72	20
1,2-Dichloroethane	0.0250	0.0249	0.0269	99.6	108	67.2-121			7.70	20
1,1-Dichloroethene	0.0250	0.0266	0.0287	107	115	60.6-133			7.62	20
cis-1,2-Dichloroethene	0.0250	0.0234	0.0246	93.6	98.3	76.1-121			4.91	20
trans-1,2-Dichloroethene	0.0250	0.0225	0.0242	89.8	96.8	70.7-124			7.47	20
1,2-Dichloropropane	0.0250	0.0244	0.0262	97.6	105	76.9-123			7.32	20
1,1-Dichloropropene	0.0250	0.0246	0.0257	98.3	103	71.2-126			4.51	20
1,3-Dichloropropane	0.0250	0.0258	0.0275	103	110	80.3-114			6.54	20
cis-1,3-Dichloropropene	0.0250	0.0253	0.0265	101	106	77.3-123			4.58	20
trans-1,3-Dichloropropene	0.0250	0.0256	0.0273	103	109	73.0-127			6.22	20
2,2-Dichloropropane	0.0250	0.0235	0.0227	93.9	90.9	61.9-132			3.31	20
Di-isopropyl ether	0.0250	0.0225	0.0247	89.9	98.8	67.2-131			9.43	20
Ethylbenzene	0.0250	0.0236	0.0251	94.6	100	78.6-124			5.98	20
Hexachloro-1,3-butadiene	0.0250	0.0232	0.0245	92.7	98.2	69.2-136			5.75	20
Isopropylbenzene	0.0250	0.0228	0.0247	91.4	98.8	79.4-126			7.78	20
p-Isopropyltoluene	0.0250	0.0233	0.0251	93.1	100	75.4-132			7.44	20
2-Butanone (MEK)	0.125	0.102	0.109	81.3	87.0	44.5-154			6.87	21.3
Methylene Chloride	0.0250	0.0211	0.0228	84.4	91.1	68.2-119			7.61	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) R3158349-1 08/20/16 16:27 • (LCSD) R3158349-2 08/20/16 16:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	0.125	0.126	0.142	101	113	61.1-138			11.8	20
Methyl tert-butyl ether	0.0250	0.0218	0.0249	87.3	99.5	70.2-122			13.1	20
Naphthalene	0.0250	0.0206	0.0225	82.3	89.9	69.9-132			8.75	20
n-Propylbenzene	0.0250	0.0239	0.0253	95.7	101	80.2-124			5.49	20
Styrene	0.0250	0.0252	0.0264	101	106	79.4-124			4.62	20
1,1,1,2-Tetrachloroethane	0.0250	0.0251	0.0266	100	106	76.7-127			5.66	20
1,1,2,2-Tetrachloroethane	0.0250	0.0228	0.0247	91.2	98.9	78.8-124			8.14	20
Tetrachloroethene	0.0250	0.0253	0.0265	101	106	71.1-133			4.66	20
Toluene	0.0250	0.0234	0.0244	93.6	97.6	76.7-116			4.17	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0269	0.0293	108	117	62.6-138			8.45	20
1,2,3-Trichlorobenzene	0.0250	0.0224	0.0235	89.4	93.8	72.5-137			4.78	20
1,2,4-Trichlorobenzene	0.0250	0.0224	0.0234	89.6	93.5	74.0-137			4.28	20
1,1,1-Trichloroethane	0.0250	0.0229	0.0238	91.7	95.4	69.9-127			3.94	20
1,1,2-Trichloroethane	0.0250	0.0240	0.0257	96.1	103	81.9-119			6.59	20
Trichloroethene	0.0250	0.0251	0.0270	101	108	77.2-122			6.93	20
Trichlorofluoromethane	0.0250	0.0267	0.0287	107	115	51.5-151			7.04	20
1,2,3-Trichloropropane	0.0250	0.0248	0.0267	99.2	107	74.0-124			7.44	20
1,2,3-Trimethylbenzene	0.0250	0.0221	0.0232	88.3	92.8	79.4-118			4.99	20
1,2,4-Trimethylbenzene	0.0250	0.0222	0.0240	88.8	95.8	77.1-124			7.59	20
1,3,5-Trimethylbenzene	0.0250	0.0224	0.0243	89.7	97.2	79.0-125			8.01	20
Vinyl chloride	0.0250	0.0263	0.0271	105	108	58.4-134			2.94	20
Xylenes, Total	0.0750	0.0713	0.0757	95.1	101	78.1-123			5.92	20
<i>(S) Toluene-d8</i>				104	104	88.7-115				
<i>(S) Dibromofluoromethane</i>				101	100	76.3-123				
<i>(S) 4-Bromofluorobenzene</i>				92.2	93.4	69.7-129				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L853455-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853455-04 08/20/16 19:31 • (MS) R3158349-4 08/20/16 18:30 • (MSD) R3158349-5 08/20/16 18:51

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	0.128	ND	0.0669	0.0715	39.1	42.8	1	5.00-182			6.68	31.5
Acrylonitrile	0.128	ND	0.142	0.155	114	124	1	39.3-152			8.78	27.2
Benzene	0.0256	ND	0.0216	0.0207	86.3	82.9	1	47.8-131			4.00	22.8
Bromobenzene	0.0256	ND	0.0208	0.0196	83.2	78.6	1	40.0-130			5.72	27.4
Bromodichloromethane	0.0256	ND	0.0217	0.0211	86.7	84.3	1	50.6-128			2.76	22.8
Bromoform	0.0256	ND	0.0264	0.0282	105	113	1	43.3-139			6.60	25.9
Bromomethane	0.0256	ND	0.0290	0.0274	116	110	1	5.00-189			5.74	26.7
n-Butylbenzene	0.0256	ND	0.0202	0.0172	81.0	68.7	1	23.6-146			16.4	39.2



L853455-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853455-04 08/20/16 19:31 • (MS) R3158349-4 08/20/16 18:30 • (MSD) R3158349-5 08/20/16 18:51

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 %
sec-Butylbenzene	0.0256	ND	0.0208	0.0191	83.2	76.2	1	31.0-142			8.76	34.7
tert-Butylbenzene	0.0256	ND	0.0208	0.0199	83.4	79.8	1	36.9-142			4.37	31.7
Carbon tetrachloride	0.0256	ND	0.0220	0.0206	87.9	82.2	1	46.0-140			6.74	27.2
Chlorobenzene	0.0256	ND	0.0219	0.0213	87.6	85.1	1	44.1-134			2.81	25.7
Chlorodibromomethane	0.0256	ND	0.0232	0.0240	93.0	96.0	1	49.7-134			3.21	24
Chloroethane	0.0256	ND	0.0285	0.0266	114	106	1	5.00-164			6.96	28.4
2-Chloroethyl vinyl ether	0.128		ND	ND	0.000	0.000	1	5.00-159	J6	J6	0.000	40
Chloroform	0.0256	ND	0.0216	0.0209	86.4	83.8	1	51.2-133			3.08	22.8
Chloromethane	0.0256	ND	0.0229	0.0211	91.5	84.3	1	31.4-141			8.17	24.6
2-Chlorotoluene	0.0256	ND	0.0210	0.0198	84.0	79.0	1	36.1-137			6.06	28.9
4-Chlorotoluene	0.0256	ND	0.0205	0.0196	81.8	78.3	1	35.4-137			4.44	29.8
1,2-Dibromo-3-Chloropropane	0.0256	ND	0.0281	0.0321	113	128	1	40.4-138			13.1	30.8
1,2-Dibromoethane	0.0256	ND	0.0240	0.0248	96.0	99.4	1	50.2-133			3.49	23.6
Dibromomethane	0.0256	ND	0.0240	0.0240	95.9	96.1	1	52.4-128			0.150	23
1,2-Dichlorobenzene	0.0256	ND	0.0203	0.0193	81.2	77.1	1	34.6-139			5.15	29.9
1,3-Dichlorobenzene	0.0256	ND	0.0206	0.0197	82.3	78.6	1	28.4-142			4.60	31.2
1,4-Dichlorobenzene	0.0256	ND	0.0201	0.0192	80.2	76.7	1	35.0-133			4.49	31.1
Dichlorodifluoromethane	0.0256	ND	0.0257	0.0235	103	94.0	1	31.2-144			9.01	30.2
1,1-Dichloroethane	0.0256	ND	0.0230	0.0218	92.0	87.3	1	49.1-136			5.19	22.9
1,2-Dichloroethane	0.0256	ND	0.0243	0.0243	97.2	97.1	1	47.1-129			0.180	22.7
1,1-Dichloroethene	0.0256	ND	0.0265	0.0241	106	96.4	1	36.1-142			9.55	25.6
cis-1,2-Dichloroethene	0.0256	ND	0.0220	0.0211	88.1	84.2	1	50.6-133			4.55	23
trans-1,2-Dichloroethene	0.0256	ND	0.0223	0.0205	89.1	81.8	1	43.8-135			8.56	24.8
1,2-Dichloropropane	0.0256	ND	0.0229	0.0219	91.5	87.8	1	50.3-134			4.12	22.7
1,1-Dichloropropene	0.0256	ND	0.0238	0.0221	95.3	88.3	1	43.0-137			7.61	26.4
1,3-Dichloropropane	0.0256	ND	0.0240	0.0244	96.1	97.6	1	51.4-127			1.56	23.1
cis-1,3-Dichloropropene	0.0256	ND	0.0229	0.0225	91.4	90.0	1	48.4-134			1.59	23.6
trans-1,3-Dichloropropene	0.0256	ND	0.0237	0.0244	94.8	97.5	1	46.6-135			2.81	25.3
2,2-Dichloropropane	0.0256	ND	0.0223	0.0221	89.2	88.2	1	45.2-141			1.13	26.8
Di-isopropyl ether	0.0256	ND	0.0222	0.0214	88.6	85.6	1	46.7-140			3.48	23.5
Ethylbenzene	0.0256	ND	0.0217	0.0206	86.8	82.3	1	44.8-135			5.29	26.9
Hexachloro-1,3-butadiene	0.0256	ND	0.0200	0.0165	80.1	65.9	1	10.0-149			19.4	40
Isopropylbenzene	0.0256	ND	0.0212	0.0196	85.0	78.6	1	41.9-139			7.82	29.3
p-Isopropyltoluene	0.0256	ND	0.0215	0.0197	85.8	78.7	1	27.3-146			8.63	35.1
2-Butanone (MEK)	0.128	ND	0.116	0.129	92.9	103	1	23.9-170			10.6	28.3
Methylene Chloride	0.0256	ND	0.0199	0.0190	79.8	76.0	1	46.7-125			4.80	22.2
4-Methyl-2-pentanone (MIBK)	0.128	ND	0.167	0.184	133	148	1	42.4-146		J5	10.1	26.7
Methyl tert-butyl ether	0.0256	ND	0.0234	0.0232	93.5	92.8	1	50.4-131			0.710	24.8
Naphthalene	0.0256	ND	0.0204	0.0219	81.7	87.5	1	18.4-145			6.85	34
n-Propylbenzene	0.0256	ND	0.0219	0.0202	87.8	81.0	1	35.2-139			8.04	31.9

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L853455-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853455-04 08/20/16 19:31 • (MS) R3158349-4 08/20/16 18:30 • (MSD) R3158349-5 08/20/16 18:51

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 %
Styrene	0.0256	ND	0.0174	0.0161	69.7	64.6	1	39.7-137			7.72	28.2
1,1,1,2-Tetrachloroethane	0.0256	ND	0.0219	0.0216	87.7	86.5	1	48.8-136			1.39	25.5
1,1,2,2-Tetrachloroethane	0.0256	ND	0.0252	0.0269	101	108	1	45.7-140			6.63	26.4
Tetrachloroethene	0.0256	ND	0.0228	0.0218	87.7	83.7	1	37.7-140			4.50	29.2
Toluene	0.0256	ND	0.0217	0.0205	83.1	78.3	1	47.8-127			5.63	24.3
1,1,2-Trichlorotrifluoroethane	0.0256	ND	0.0275	0.0263	110	105	1	35.7-146			4.30	28.8
1,2,3-Trichlorobenzene	0.0256	ND	0.0182	0.0182	72.9	72.8	1	10.0-150			0.0600	38.5
1,2,4-Trichlorobenzene	0.0256	ND	0.0181	0.0174	72.3	69.4	1	10.0-153			4.07	39.3
1,1,1-Trichloroethane	0.0256	ND	0.0221	0.0213	88.4	85.1	1	49.0-138			3.83	25.3
1,1,2-Trichloroethane	0.0256	ND	0.0226	0.0229	90.5	91.7	1	52.3-132			1.36	23.4
Trichloroethene	0.0256	ND	0.0237	0.0221	94.7	88.2	1	48.0-132			7.03	24.8
Trichlorofluoromethane	0.0256	ND	0.0261	0.0244	105	97.4	1	12.8-169			7.10	29.7
1,2,3-Trichloropropane	0.0256	ND	0.0272	0.0292	109	117	1	44.4-138			7.10	26.3
1,2,3-Trimethylbenzene	0.0256	ND	0.0193	0.0182	77.1	72.7	1	41.0-133			5.88	27.6
1,2,4-Trimethylbenzene	0.0256	ND	0.0205	0.0193	80.6	75.8	1	32.9-139			6.04	30.6
1,3,5-Trimethylbenzene	0.0256	ND	0.0208	0.0192	83.3	76.8	1	37.1-138			8.07	30.6
Vinyl chloride	0.0256	ND	0.0250	0.0234	99.8	93.7	1	32.0-146			6.40	26.3
Xylenes, Total	0.0769	ND	0.0643	0.0604	84.6	79.3	1	42.7-135			6.32	26.6
(S) Toluene-d8					103	105		88.7-115				
(S) Dibromofluoromethane					106	106		76.3-123				
(S) 4-Bromofluorobenzene					91.7	92.1		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) R3157318-1 08/16/16 15:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	92.2			50.0-150

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

(LCS) R3157318-2 08/16/16 16:19 • (LCSD) R3157318-3 08/16/16 18:42

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	952	961	127	128	50.0-150			0.980	20
Residual Range Organics (RRO)	750	763	697	102	92.9	50.0-150			9.04	20
<i>(S) o-Terphenyl</i>				97.6	94.2	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) R3156984-1 08/15/16 17:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	75.8			50.0-150

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

(LCS) R3156984-2 08/15/16 18:02 • (LCSD) R3156984-3 08/15/16 18:16

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)	30.0	22.7	19.0	75.7	63.3	50.0-150			17.9	20
Residual Range Organics (RRO)	30.0	21.8	17.4	72.8	57.9	50.0-150		J3	22.7	20
<i>(S) o-Terphenyl</i>				78.2	63.2	50.0-150				

L853248-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853248-03 08/16/16 01:12 • (MS) R3156984-4 08/16/16 01:26 • (MSD) R3156984-5 08/16/16 01:41

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	%	%		%			%	%
Diesel Range Organics (DRO)	3.57	U	40.9	37.4	78.4	68.7	10	50.0-150			8.84	20
Residual Range Organics (RRO)	3.57	197	283	220	240	64.5	10	50.0-150	V	J3	24.8	20
<i>(S) o-Terphenyl</i>					73.1	70.0		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) R3157083-1 08/16/16 10:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
PCB 1016	U		0.00350	0.0170
PCB 1221	U		0.00537	0.0170
PCB 1232	U		0.00417	0.0170
PCB 1242	U		0.00318	0.0170
PCB 1248	U		0.00315	0.0170
PCB 1254	U		0.00472	0.0170
PCB 1260	U		0.00494	0.0170
(S) Decachlorobiphenyl	76.2			10.0-143
(S) Tetrachloro-m-xylene	79.3			29.2-144

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3157083-2 08/16/16 10:50 • (LCSD) R3157083-3 08/16/16 11:03

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	%	%	%			%	%
PCB 1260	0.167	0.130	0.118	77.9	71.0	46.5-120			9.20	27
PCB 1016	0.167	0.134	0.122	80.1	73.5	46.3-117			8.67	27.5
(S) Decachlorobiphenyl				81.0	78.7	10.0-143				
(S) Tetrachloro-m-xylene				82.6	82.2	29.2-144				

7 Gl

8 Al

9 Sc

L853144-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L853144-02 08/16/16 14:21 • (MS) R3157083-4 08/16/16 14:34 • (MSD) R3157083-5 08/16/16 14:46

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	%	%		%			%	%
PCB 1260	0.196	ND	0.0736	0.0886	37.6	45.3	1	24.6-127			18.5	20
PCB 1016	0.196	ND	0.110	0.127	56.0	64.8	1	23.9-147			14.5	25.8
(S) Decachlorobiphenyl					36.1	42.1		10.0-143				
(S) Tetrachloro-m-xylene					56.1	61.0		29.2-144				



Method Blank (MB)

(MB) R3157096-3 08/16/16 04:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	0.00717	U	0.00212	0.0500
Benzo(g,h,i)perylene	0.00653	U	0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	0.00592	U	0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	U		0.0198	0.250
Phenanthrene	0.0101	U	0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	0.00940	U	0.00821	0.250
2-Methylnaphthalene	0.0101	U	0.00902	0.250
(S) Nitrobenzene-d5	69.7			33.8-179
(S) 2-Fluorobiphenyl	108			55.5-150
(S) p-Terphenyl-d14	101			46.2-163

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) R3157096-1 08/16/16 03:39 • (LCSD) R3157096-2 08/16/16 04:01

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	%	%	%			%	%
Anthracene	2.00	2.11	2.05	106	102	68.9-153			3.24	20
Acenaphthene	2.00	1.96	1.87	98.0	93.7	67.7-153			4.51	20
Acenaphthylene	2.00	1.95	1.89	97.3	94.6	66.9-141			2.78	20
Benzo(a)anthracene	2.00	1.87	1.80	93.7	90.2	63.1-147			3.76	20
Benzo(a)pyrene	2.00	2.05	1.97	103	98.3	62.2-150			4.35	20
Benzo(b)fluoranthene	2.00	1.85	1.74	92.3	86.8	58.4-148			6.11	20
Benzo(g,h,i)perylene	2.00	1.72	1.63	85.8	81.7	57.4-152			4.88	20
Benzo(k)fluoranthene	2.00	1.85	1.83	92.7	91.5	60.5-154			1.34	20
Chrysene	2.00	1.86	1.81	92.8	90.7	64.8-155			2.29	20
Dibenz(a,h)anthracene	2.00	1.74	1.71	87.2	85.3	53.5-153			2.23	20
Fluoranthene	2.00	2.18	2.03	109	102	68.6-153			7.18	20
Fluorene	2.00	1.88	1.83	94.2	91.6	67.3-141			2.78	20



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

(LCS) R3157096-1 08/16/16 03:39 • (LCSD) R3157096-2 08/16/16 04:01

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Indeno(1,2,3-cd)pyrene	2.00	1.75	1.68	87.6	83.8	57.0-155			4.44	20
Naphthalene	2.00	1.88	1.80	94.0	89.9	66.7-135			4.42	20
Phenanthrene	2.00	1.92	1.84	96.2	91.8	64.3-143			4.76	20
Pyrene	2.00	2.07	2.06	104	103	60.2-154			0.480	20
1-Methylnaphthalene	2.00	1.95	1.95	97.4	97.6	68.3-144			0.180	20
2-Methylnaphthalene	2.00	1.98	1.91	98.9	95.6	67.6-143			3.41	20
(S) Nitrobenzene-d5				72.1	59.9	33.8-179				
(S) 2-Fluorobiphenyl				95.8	96.8	55.5-150				
(S) p-Terphenyl-d14				87.3	84.3	46.2-163				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3157989-3 08/19/16 03:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.000600	0.00600
Acenaphthene	U		0.000600	0.00600
Acenaphthylene	U		0.000600	0.00600
Benzo(a)anthracene	U		0.000600	0.00600
Benzo(a)pyrene	U		0.000600	0.00600
Benzo(b)fluoranthene	U		0.000600	0.00600
Benzo(g,h,i)perylene	U		0.000600	0.00600
Benzo(k)fluoranthene	U		0.000600	0.00600
Chrysene	U		0.000600	0.00600
Dibenz(a,h)anthracene	U		0.000600	0.00600
Fluoranthene	U		0.000600	0.00600
Fluorene	U		0.000600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.000600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.000600	0.00600
Pyrene	U		0.000600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
(S) p-Terphenyl-d14	83.9			32.2-131
(S) Nitrobenzene-d5	63.9			22.1-146
(S) 2-Fluorobiphenyl	84.3			40.6-122

- 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) R3157989-1 08/19/16 03:08 • (LCSD) R3157989-2 08/19/16 03:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0688	0.0624	85.9	77.9	50.3-130			9.77	20
Acenaphthene	0.0800	0.0634	0.0577	79.2	72.1	52.4-120			9.42	20
Acenaphthylene	0.0800	0.0639	0.0586	79.8	73.3	49.6-120			8.61	20
Benzo(a)anthracene	0.0800	0.0687	0.0630	85.9	78.7	46.7-125			8.77	20
Benzo(a)pyrene	0.0800	0.0727	0.0656	90.9	82.0	42.3-119			10.3	20
Benzo(b)fluoranthene	0.0800	0.0644	0.0587	80.5	73.4	43.6-124			9.27	20
Benzo(g,h,i)perylene	0.0800	0.0692	0.0619	86.5	77.3	45.1-132			11.2	20
Benzo(k)fluoranthene	0.0800	0.0679	0.0615	84.9	76.8	46.1-131			9.95	20
Chrysene	0.0800	0.0679	0.0628	84.8	78.5	49.5-131			7.80	20
Dibenz(a,h)anthracene	0.0800	0.0690	0.0611	86.2	76.3	44.8-133			12.1	20
Fluoranthene	0.0800	0.0738	0.0670	92.3	83.8	49.3-128			9.70	20
Fluorene	0.0800	0.0660	0.0600	82.5	75.0	50.6-121			9.51	20



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

(LCS) R3157989-1 08/19/16 03:08 • (LCSD) R3157989-2 08/19/16 03:29

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 %
Indeno(1,2,3-cd)pyrene	0.0800	0.0699	0.0626	87.4	78.3	46.1-135			11.0	20
Naphthalene	0.0800	0.0625	0.0570	78.2	71.2	49.6-115			9.26	20
Phenanthrene	0.0800	0.0665	0.0605	83.1	75.6	48.8-121			9.42	20
Pyrene	0.0800	0.0758	0.0713	94.8	89.1	44.7-130			6.19	20
1-Methylnaphthalene	0.0800	0.0706	0.0635	88.2	79.3	50.6-122			10.6	20
2-Methylnaphthalene	0.0800	0.0687	0.0619	85.8	77.4	50.4-120			10.3	20
(S) p-Terphenyl-d14				68.9	75.7	32.2-131				
(S) Nitrobenzene-d5				52.3	60.4	22.1-146				
(S) 2-Fluorobiphenyl				75.5	81.5	40.6-122				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0 - Analyte exceeds %D or %Rec for Continuing Calibration per 8260C or 8270D method specific criteria. 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.
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		

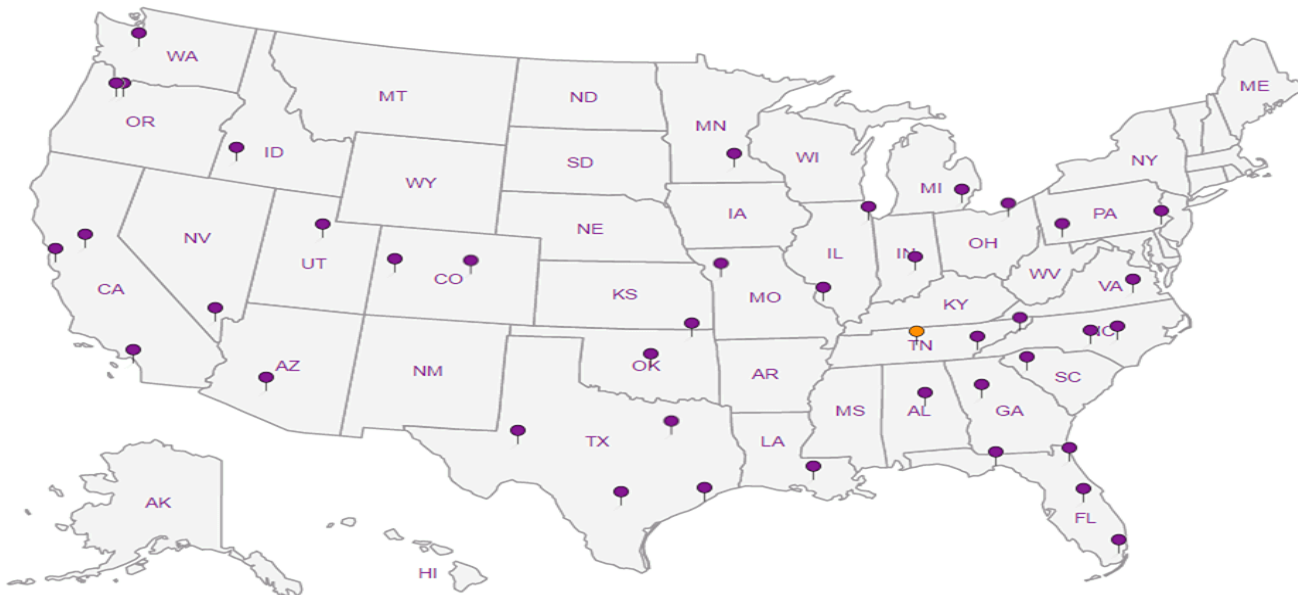
Third Party & Federal Accreditations

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.**



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Avenue
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project
Description: **BNSF - Wishram Railyard, WA**

City/State
Collected: **Wishram, WA**

Phone: **253-835-6400**
Fax:

Client Project #

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joe Sawdey

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed

Email? No Yes

FAX? No Yes

No. of
Cntrs

Immediately
Packed on Ice N X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX, TS 4ozClr-NoPres	SV8270 4ozClr-NoPres	SV8270PAHSIM 4ozClr-NoPres	Metal - PCFA B	VOLs	PCBs	Other	Other	Other	Other	Other	Other	
B-16-24-29		SS	29	8/10	1645	67	X	X	X	X									01
B-11-24-18			18	8/10	1620	67	X	X	X	X									02
B-12-09-15			15	8/9	1405	67	X	X	X	X									03
B-16-12-10			10	8/9	1520	67	X	X	X	X									04
B-16-05-04			4	8/11	1020	1						X							05
B-16-05-10			10	8/11	1030	1						X							06
B-16-12-10			10	8/11	1230	67	X	X	X	X									07
B-16-04-04			4	8/11	1050	1						X							08
B-16-04-10			10	8/11	1055	1						X							09
DUP-0811				8/11		67	X	X	X	X									10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

GD 8-13-16

pH _____ Temp _____

Flow _____ Other _____

Hold #

Relinquished by: (Signature) <i>[Signature]</i>	Date: 8/12	Time: 1400	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) a JW
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.9 °C Bottles Received: 95	COC Seal Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 8-13-16 Time: 900	pH Checked: C2 NCF:

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# 853405
C237

Acctnum: BNSF1KEN

Template: T114341

Prelogin: P562191

TSR: 134 - Mark W. Beasley

PB:

Shipped Via:

Rem./Contaminant Sample # (lab only)

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Avenue
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
Joseph.Sawdey@kennedyjenks.com,

Project
Description: BNSF - Wishram Rail yard, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1696120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joe Sawdey

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed

Email? No Yes
 FAX? No Yes

Immediately Packed on Ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative							
							8082 100ml Amb-NoPres	MRCRAB 250mlHDPE-HNO3 (Total) CC	NWTPHDXLVI 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVI 40mlAmb-NoPres-WT	V8260 40mlAmb-HCl	V8260BTEX 40mlAmb-HCl	MRCRAB 250ml (Dissolved) CC
B-16-18(10.0)(20160811)		GW	10	8/11	1315	10	X	X	X	X	X	X		
B-16-24(25.0)(20160810)		GW	25	8/10	1715	10	X	X	X	X	X	X		
B-16-24(10.0)(20160811)		GW	10	8/11	0745	10	X	X	X	X	X	X		
B-16-09-15		GW	15	8/9	1420	9		X	X	X	X			
B-16-12(10.0)(20160809)		GW	10.0	8/9	1515	9		X	X	X	X			
Trip blank -01		GW				1								
		GW												
		GW												
		GW												

Chain of Custody Page ___ of ___



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# 855409

Table #

Acctnum: BNSF1KEN

Template: T114447

Prelogin: P562552

TSR: 134 - Mark W. Beasley

PB:

Shipped Via:

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Hold # _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: 8/12	Time: 1400	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) a 5w7
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.9 °C Bottles Received: 95	COC Seal Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) Dy Dean	Date: 8-13-16 Time: 90	pH Checked: <input checked="" type="checkbox"/> NCF:



L · A · B S · C · I · E · N · C · E · S

YOUR LAB OF CHOICE

Cooler Receipt Checklist

Client: BNSFIKEN SDG# 853401

Cooler Received/Opened On: 8-13-16 By Greg Deam

Temperature Upon Receipt: 2.9 °C
Greg Deam (Signature)

Cooler Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?	/		
Were custody papers properly filled out (ink, signed, etc.)?	/		
Did all bottles arrive in good condition?	/		
Were correct bottles used for the analyses requested?	/		
Was sufficient amount of sample sent in each bottle?	/		
Were correct preservatives used?	/		
Were all applicable sample containers checked for preservation? (Any samples not in accepted pH range noted on COC.)	/		
If applicable, was an observable VOA headspace present?		/	
Non Conformance Generated? (If yes see attached NCF)		/	



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O · N · E L · A · B



N · A · T · I · O · N · W · I · D · E

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L853761
Samples Received: 08/16/2016
Project Number: 1696120
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Jason Romer
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.



¹ Cp: Cover Page	1	
² Tc: Table of Contents	2	
³ Ss: Sample Summary	3	
⁴ Cn: Case Narrative	4	
⁵ Sr: Sample Results	5	
B-16-17 (10.0) (20160812) L853761-10	5	
RIVER NODULE L853761-16	6	
TB-01 (20160815) L853761-17	7	
⁶ Qc: Quality Control Summary	9	
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Volatile Organic Compounds (GC/MS) by Method 8260B	11	
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	17	
⁷ Gl: Glossary of Terms	18	
⁸ Al: Accreditations & Locations	19	
⁹ Sc: Chain of Custody	20	

SAMPLE SUMMARY



B-16-17 (10.0) (20160812) L853761-10 GW

Collected by
Joe Sawdey Collected date/time
08/12/16 09:15 Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/19/16 12:11	JDG
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 14:13	LTB

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

RIVER NODULE L853761-16 Solid

Collected by
Joe Sawdey Collected date/time
08/12/16 13:00 Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG900183	2500	08/19/16 23:48	08/20/16 18:00	JM

TB-01 (20160815) L853761-17 GW

Collected by
Joe Sawdey Collected date/time
08/12/16 13:00 Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG900473	1	08/19/16 20:27	08/19/16 20:27	DWR



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.

Jason Romer
Technical Service Representative

Sample Handling and Receiving

The analysis for 2-Chloroethyl Vinyl Ether was conducted from a chemically preserved container.

<u>ESC Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L853761-17	TB-01 (20160815)	8260B

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



Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Lead	19.9		5.00	1	08/19/2016 12:11	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 14:13	WG899547

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	RDL mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	80000		10000	2500	08/20/2016 18:00	WG900183
Residual Range Organics (RRO)	223000		25000	2500	08/20/2016 18:00	WG900183
(S) o-Terphenyl	824	<u>J7</u>	50.0-150		08/20/2016 18:00	WG900183

Sample Narrative:

NWTPHDX L853761-16 WG900183: NWTPHDX - SGT was performed

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



Collected date/time: 08/12/16 13:00

L853761

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/19/2016 20:27	WG900473
Acrolein	ND		50.0	1	08/19/2016 20:27	WG900473
Acrylonitrile	ND		10.0	1	08/19/2016 20:27	WG900473
Benzene	ND		1.00	1	08/19/2016 20:27	WG900473
Bromobenzene	ND		1.00	1	08/19/2016 20:27	WG900473
Bromodichloromethane	ND		1.00	1	08/19/2016 20:27	WG900473
Bromoform	ND		1.00	1	08/19/2016 20:27	WG900473
Bromomethane	ND		5.00	1	08/19/2016 20:27	WG900473
n-Butylbenzene	ND		1.00	1	08/19/2016 20:27	WG900473
sec-Butylbenzene	ND		1.00	1	08/19/2016 20:27	WG900473
tert-Butylbenzene	ND		1.00	1	08/19/2016 20:27	WG900473
Carbon tetrachloride	ND		1.00	1	08/19/2016 20:27	WG900473
Chlorobenzene	ND		1.00	1	08/19/2016 20:27	WG900473
Chlorodibromomethane	ND		1.00	1	08/19/2016 20:27	WG900473
Chloroethane	ND		5.00	1	08/19/2016 20:27	WG900473
2-Chloroethyl vinyl ether	ND	J3 J4	50.0	1	08/19/2016 20:27	WG900473
Chloroform	ND		5.00	1	08/19/2016 20:27	WG900473
Chloromethane	ND		2.50	1	08/19/2016 20:27	WG900473
2-Chlorotoluene	ND		1.00	1	08/19/2016 20:27	WG900473
4-Chlorotoluene	ND		1.00	1	08/19/2016 20:27	WG900473
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/19/2016 20:27	WG900473
1,2-Dibromoethane	ND		1.00	1	08/19/2016 20:27	WG900473
Dibromomethane	ND		1.00	1	08/19/2016 20:27	WG900473
1,2-Dichlorobenzene	ND		1.00	1	08/19/2016 20:27	WG900473
1,3-Dichlorobenzene	ND		1.00	1	08/19/2016 20:27	WG900473
1,4-Dichlorobenzene	ND		1.00	1	08/19/2016 20:27	WG900473
Dichlorodifluoromethane	ND		5.00	1	08/19/2016 20:27	WG900473
1,1-Dichloroethane	ND		1.00	1	08/19/2016 20:27	WG900473
1,2-Dichloroethane	ND		1.00	1	08/19/2016 20:27	WG900473
1,1-Dichloroethene	ND		1.00	1	08/19/2016 20:27	WG900473
cis-1,2-Dichloroethene	ND		1.00	1	08/19/2016 20:27	WG900473
trans-1,2-Dichloroethene	ND		1.00	1	08/19/2016 20:27	WG900473
1,2-Dichloropropane	ND		1.00	1	08/19/2016 20:27	WG900473
1,1-Dichloropropene	ND		1.00	1	08/19/2016 20:27	WG900473
1,3-Dichloropropane	ND		1.00	1	08/19/2016 20:27	WG900473
cis-1,3-Dichloropropene	ND		1.00	1	08/19/2016 20:27	WG900473
trans-1,3-Dichloropropene	ND		1.00	1	08/19/2016 20:27	WG900473
2,2-Dichloropropane	ND		1.00	1	08/19/2016 20:27	WG900473
Di-isopropyl ether	ND		1.00	1	08/19/2016 20:27	WG900473
Ethylbenzene	ND		1.00	1	08/19/2016 20:27	WG900473
Hexachloro-1,3-butadiene	ND		1.00	1	08/19/2016 20:27	WG900473
Isopropylbenzene	ND		1.00	1	08/19/2016 20:27	WG900473
p-Isopropyltoluene	ND		1.00	1	08/19/2016 20:27	WG900473
2-Butanone (MEK)	ND		10.0	1	08/19/2016 20:27	WG900473
Methylene Chloride	ND		5.00	1	08/19/2016 20:27	WG900473
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/19/2016 20:27	WG900473
Methyl tert-butyl ether	ND		1.00	1	08/19/2016 20:27	WG900473
Naphthalene	ND		5.00	1	08/19/2016 20:27	WG900473
n-Propylbenzene	ND		1.00	1	08/19/2016 20:27	WG900473
Styrene	ND		1.00	1	08/19/2016 20:27	WG900473
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/19/2016 20:27	WG900473
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/19/2016 20:27	WG900473
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/19/2016 20:27	WG900473
Tetrachloroethene	ND		1.00	1	08/19/2016 20:27	WG900473
Toluene	ND		5.00	1	08/19/2016 20:27	WG900473
1,2,3-Trichlorobenzene	ND		1.00	1	08/19/2016 20:27	WG900473

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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		1.00	1	08/19/2016 20:27	WG900473
1,1,1-Trichloroethane	ND		1.00	1	08/19/2016 20:27	WG900473
1,1,2-Trichloroethane	ND		1.00	1	08/19/2016 20:27	WG900473
Trichloroethene	ND		1.00	1	08/19/2016 20:27	WG900473
Trichlorofluoromethane	ND		5.00	1	08/19/2016 20:27	WG900473
1,2,3-Trichloropropane	ND		2.50	1	08/19/2016 20:27	WG900473
1,2,4-Trimethylbenzene	ND		1.00	1	08/19/2016 20:27	WG900473
1,2,3-Trimethylbenzene	ND		1.00	1	08/19/2016 20:27	WG900473
1,3,5-Trimethylbenzene	ND		1.00	1	08/19/2016 20:27	WG900473
Vinyl chloride	ND		1.00	1	08/19/2016 20:27	WG900473
Xylenes, Total	ND		3.00	1	08/19/2016 20:27	WG900473
(S) Toluene-d8	104		90.0-115		08/19/2016 20:27	WG900473
(S) Dibromofluoromethane	100		79.0-121		08/19/2016 20:27	WG900473
(S) 4-Bromofluorobenzene	92.2		80.1-120		08/19/2016 20:27	WG900473

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



Method Blank (MB)

(MB) R3157967-1 08/18/16 16:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Lead	U		1.90	5.00

¹ Cp

² Tc

³ Ss

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

(LCS) R3157967-2 08/18/16 17:02 • (LCSD) R3157967-3 08/18/16 17:04

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Lead	1000	1030	1040	103	104	80-120			1	20

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3157724-1 08/18/16 13:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Lead,Dissolved	U		1.90	5.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3157724-2 08/18/16 13:30 • (LCSD) R3157724-3 08/18/16 13:32

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Lead,Dissolved	1000	1030	1020	103	102	80-120			1	20



Method Blank (MB)

(MB) R3158361-3 08/19/16 15:20

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 tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
2-Chloroethyl vinyl ether	U		3.01	50.0
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) R3158361-3 08/19/16 15:20

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
1,1,2,2-Tetrachloroethane	U		0.130	1.00
n-Propylbenzene	U		0.349	1.00
Tetrachloroethene	U		0.372	1.00
Styrene	U		0.307	1.00
1,1,1,2-Tetrachloroethane	U		0.385	1.00
Toluene	U		0.780	5.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
Trichloroethene	U		0.398	1.00
1,2,4-Trichlorobenzene	U		0.355	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
Vinyl chloride	U		0.259	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	105			90.0-115
(S) Dibromofluoromethane	96.2			79.0-121
(S) 4-Bromofluorobenzene	89.6			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) R3158361-1 08/19/16 13:32 • (LCSD) R3158361-2 08/19/16 13:54

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	85.0	90.2	68.0	72.2	28.7-175			5.97	20.9
Acrolein	125	114	122	91.0	98.0	40.4-172			7.35	20
Acrylonitrile	125	111	112	88.9	89.3	58.2-145			0.450	20



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

(LCS) R3158361-1 08/19/16 13:32 • (LCSD) R3158361-2 08/19/16 13:54

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	24.4	24.3	97.7	97.4	73.0-122			0.280	20
Bromobenzene	25.0	25.0	24.4	100	97.8	81.5-115			2.21	20
Bromodichloromethane	25.0	23.9	23.6	95.4	94.5	75.5-121			0.960	20
Bromoform	25.0	26.2	25.3	105	101	71.5-131			3.63	20
Bromomethane	25.0	40.8	42.2	163	169	22.4-187			3.29	20
n-Butylbenzene	25.0	22.8	22.4	91.1	89.5	75.9-134			1.83	20
sec-Butylbenzene	25.0	24.1	24.0	96.5	96.0	80.6-126			0.460	20
tert-Butylbenzene	25.0	24.6	24.2	98.5	96.9	79.3-127			1.61	20
Carbon tetrachloride	25.0	22.3	22.2	89.2	88.8	70.9-129			0.400	20
Chlorobenzene	25.0	26.0	26.2	104	105	79.7-122			0.770	20
Chlorodibromomethane	25.0	25.6	25.0	103	100	78.2-124			2.59	20
Chloroethane	25.0	24.1	24.2	96.3	96.9	41.2-153			0.640	20
2-Chloroethyl vinyl ether	125	136	28.9	109	23.1	23.4-162		J3 J4	130	23.5
Chloroform	25.0	24.0	23.9	95.8	95.6	73.2-125			0.200	20
Chloromethane	25.0	23.4	23.4	93.5	93.7	55.8-134			0.240	20
2-Chlorotoluene	25.0	25.1	24.7	100	98.6	76.4-125			1.67	20
4-Chlorotoluene	25.0	24.6	23.8	98.3	95.3	81.5-121			3.06	20
1,2-Dibromo-3-Chloropropane	25.0	22.3	21.9	89.4	87.5	64.8-131			2.07	20
1,2-Dibromoethane	25.0	25.2	24.1	101	96.3	79.8-122			4.51	20
1,2-Dichlorobenzene	25.0	24.3	24.4	97.3	97.7	84.7-118			0.470	20
Dibromomethane	25.0	25.0	23.9	100	95.8	79.5-118			4.33	20
1,3-Dichlorobenzene	25.0	25.1	24.7	100	98.7	77.6-127			1.75	20
1,4-Dichlorobenzene	25.0	24.0	23.9	95.9	95.8	82.2-114			0.140	20
Dichlorodifluoromethane	25.0	24.6	23.9	98.5	95.6	56.0-134			2.96	20
1,1-Dichloroethane	25.0	24.3	24.4	97.0	97.4	71.7-127			0.440	20
1,2-Dichloroethane	25.0	22.1	22.2	88.5	89.0	65.3-126			0.580	20
1,1-Dichloroethene	25.0	24.7	24.7	98.6	98.6	59.9-137			0.0200	20
cis-1,2-Dichloroethene	25.0	24.5	24.2	98.0	96.9	77.3-122			1.12	20
trans-1,2-Dichloroethene	25.0	23.1	22.5	92.2	89.8	72.6-125			2.64	20
1,2-Dichloropropane	25.0	26.2	25.0	105	100	77.4-125			4.61	20
1,1-Dichloropropene	25.0	24.5	24.7	98.0	98.8	72.5-127			0.770	20
1,3-Dichloropropane	25.0	25.5	25.4	102	102	80.6-115			0.240	20
cis-1,3-Dichloropropene	25.0	25.8	25.4	103	102	77.7-124			1.51	20
trans-1,3-Dichloropropene	25.0	24.6	24.1	98.4	96.5	73.5-127			2.02	20
2,2-Dichloropropane	25.0	21.1	20.7	84.4	82.8	61.3-134			1.82	20
Di-isopropyl ether	25.0	22.6	22.7	90.4	90.8	65.1-135			0.450	20
Ethylbenzene	25.0	24.7	24.9	99.0	99.8	80.9-121			0.800	20
Hexachloro-1,3-butadiene	25.0	25.4	24.9	102	99.7	73.7-133			1.96	20
Isopropylbenzene	25.0	23.7	23.5	94.7	94.0	81.6-124			0.790	20
p-Isopropyltoluene	25.0	24.9	24.5	99.4	97.9	77.6-129			1.52	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) R3158361-1 08/19/16 13:32 • (LCSD) R3158361-2 08/19/16 13:54

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	93.1	99.3	74.5	79.5	46.4-155			6.51	20
Methylene Chloride	25.0	24.4	24.6	97.6	98.3	69.5-120			0.810	20
4-Methyl-2-pentanone (MIBK)	125	109	107	87.4	85.5	63.3-138			2.20	20
Methyl tert-butyl ether	25.0	20.7	20.9	82.8	83.6	70.1-125			1.00	20
Naphthalene	25.0	21.2	21.6	84.9	86.6	69.7-134			1.96	20
n-Propylbenzene	25.0	24.5	24.1	97.9	96.3	81.9-122			1.66	20
Styrene	25.0	26.9	25.6	108	102	79.9-124			5.07	20
1,1,1,2-Tetrachloroethane	25.0	25.6	25.2	102	101	78.5-125			1.22	20
1,1,2,2-Tetrachloroethane	25.0	22.7	22.4	90.7	89.7	79.3-123			1.10	20
Tetrachloroethene	25.0	26.0	24.5	104	98.0	73.5-130			5.92	20
Toluene	25.0	23.9	23.9	95.6	95.4	77.9-116			0.190	20
1,1,2-Trichlorotrifluoroethane	25.0	24.8	24.4	99.3	97.6	62.0-141			1.75	20
1,2,3-Trichlorobenzene	25.0	24.6	24.3	98.2	97.0	75.7-134			1.23	20
1,1,1-Trichloroethane	25.0	22.1	22.4	88.3	89.4	71.1-129			1.31	20
1,2,4-Trichlorobenzene	25.0	24.5	24.2	98.1	96.7	76.1-136			1.47	20
1,1,2-Trichloroethane	25.0	23.4	23.3	93.4	93.1	81.6-120			0.310	20
Trichloroethene	25.0	24.7	24.7	98.7	98.7	79.5-121			0.0300	20
Trichlorofluoromethane	25.0	22.8	22.5	91.2	89.8	49.1-157			1.55	20
1,2,3-Trichloropropane	25.0	22.8	23.8	91.4	95.0	74.9-124			3.89	20
1,2,3-Trimethylbenzene	25.0	23.3	23.3	93.1	93.1	79.9-118			0.0100	20
1,2,4-Trimethylbenzene	25.0	24.2	23.5	96.9	94.0	79.0-122			3.01	20
1,3,5-Trimethylbenzene	25.0	23.9	23.6	95.4	94.5	81.0-123			0.980	20
Vinyl chloride	25.0	24.3	24.0	97.0	96.1	61.5-134			0.890	20
Xylenes, Total	75.0	73.5	72.6	98.0	96.8	79.2-122			1.21	20
(S) Toluene-d8				104	103	90.0-115				
(S) Dibromofluoromethane				97.1	98.6	79.0-121				
(S) 4-Bromofluorobenzene				92.9	92.4	80.1-120				

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

L854168-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L854168-01 08/19/16 18:19 • (MS) R3158361-4 08/19/16 18:40 • (MSD) R3158361-5 08/19/16 19:01

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	U	45.5	49.3	36.4	39.4	1	25.0-156			8.04	21.5
Acrolein	125	U	96.8	108	77.4	86.5	1	34.0-194			11.1	21.5
Acrylonitrile	125	U	113	132	90.2	106	1	55.9-161			15.8	20
Benzene	25.0	U	23.1	23.5	92.5	94.1	1	58.6-133			1.71	20
Bromobenzene	25.0	U	23.2	23.4	92.9	93.8	1	70.6-125			0.910	20
Bromodichloromethane	25.0	U	23.2	22.9	92.9	91.5	1	69.2-127			1.45	20



L854168-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L854168-01 08/19/16 18:19 • (MS) R3158361-4 08/19/16 18:40 • (MSD) R3158361-5 08/19/16 19:01

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	U	24.5	25.8	98.1	103	1	66.3-140			5.00	20
Bromomethane	25.0	U	39.0	40.1	156	160	1	16.6-183			2.67	20.5
n-Butylbenzene	25.0	U	21.9	22.4	87.6	89.5	1	64.8-145			2.12	20
sec-Butylbenzene	25.0	U	22.8	23.0	91.1	92.1	1	66.8-139			1.10	20
tert-Butylbenzene	25.0	U	22.9	23.3	91.5	93.0	1	67.1-138			1.67	20
Carbon tetrachloride	25.0	U	20.8	21.9	83.3	87.6	1	60.6-139			5.10	20
Chlorobenzene	25.0	U	24.2	24.5	96.9	98.1	1	70.1-130			1.14	20
Chlorodibromomethane	25.0	U	24.0	25.2	96.0	101	1	71.6-132			4.97	20
Chloroethane	25.0	U	23.1	23.3	92.3	93.3	1	33.3-155			1.10	20
2-Chloroethyl vinyl ether	125	U	ND	ND	0.000	0.000	1	5.00-149	J6	J6	0.000	40
Chloroform	25.0	U	22.6	22.9	90.4	91.8	1	66.1-133			1.52	20
Chloromethane	25.0	U	21.6	21.9	86.5	87.6	1	40.7-139			1.29	20
2-Chlorotoluene	25.0	U	22.9	23.2	91.5	92.7	1	66.9-134			1.32	20
4-Chlorotoluene	25.0	U	22.3	23.1	89.1	92.4	1	66.8-134			3.65	20
1,2-Dibromo-3-Chloropropane	25.0	U	23.6	25.2	94.3	101	1	63.9-142			6.73	20.2
1,2-Dibromoethane	25.0	U	23.8	24.8	95.4	99.3	1	73.8-131			4.03	20
1,2-Dichlorobenzene	25.0	U	23.5	24.3	94.1	97.1	1	77.4-127			3.09	20
Dibromomethane	25.0	U	23.2	25.2	92.7	101	1	72.8-127			8.37	20
1,3-Dichlorobenzene	25.0	U	23.1	23.8	92.3	95.0	1	67.9-136			2.93	20
1,4-Dichlorobenzene	25.0	U	22.8	23.5	91.1	94.2	1	74.4-123			3.32	20
Dichlorodifluoromethane	25.0	U	22.9	22.9	91.6	91.7	1	42.2-146			0.180	20
1,1-Dichloroethane	25.0	U	23.2	23.8	92.8	95.0	1	64.0-134			2.43	20
1,2-Dichloroethane	25.0	U	22.1	22.9	88.4	91.7	1	60.7-132			3.70	20
1,1-Dichloroethene	25.0	U	23.2	24.1	92.9	96.4	1	48.8-144			3.72	20
cis-1,2-Dichloroethene	25.0	U	22.8	23.7	91.1	94.8	1	60.6-136			4.05	20
trans-1,2-Dichloroethene	25.0	U	21.5	21.6	85.9	86.6	1	61.0-132			0.800	20
1,2-Dichloropropane	25.0	U	25.1	25.4	100	102	1	69.7-130			1.37	20
1,1-Dichloropropene	25.0	U	23.2	23.9	92.7	95.8	1	61.5-136			3.26	20
1,3-Dichloropropane	25.0	U	24.5	25.1	97.9	100	1	74.3-123			2.45	20
cis-1,3-Dichloropropene	25.0	U	23.9	24.2	95.4	96.7	1	71.1-129			1.29	20
trans-1,3-Dichloropropene	25.0	U	24.2	24.1	97.0	96.6	1	66.3-136			0.410	20
2,2-Dichloropropane	25.0	U	19.8	20.9	79.1	83.7	1	54.9-142			5.67	20
Di-isopropyl ether	25.0	U	22.2	22.5	88.7	89.9	1	59.9-140			1.43	20
Ethylbenzene	25.0	U	22.8	23.5	91.2	94.1	1	62.7-136			3.14	20
Hexachloro-1,3-butadiene	25.0	U	23.9	24.8	95.7	99.3	1	61.1-144			3.71	20.1
Isopropylbenzene	25.0	U	21.7	22.3	86.6	89.2	1	67.4-136			2.90	20
p-Isopropyltoluene	25.0	U	22.6	23.2	90.5	92.6	1	62.8-143			2.27	20
2-Butanone (MEK)	125	U	76.7	88.7	61.4	70.9	1	45.0-156			14.4	20.8
Methylene Chloride	25.0	U	22.9	23.3	91.7	93.2	1	61.5-125			1.68	20
4-Methyl-2-pentanone (MIBK)	125	U	112	123	89.2	98.3	1	60.7-150			9.69	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L854168-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L854168-01 08/19/16 18:19 • (MS) R3158361-4 08/19/16 18:40 • (MSD) R3158361-5 08/19/16 19:01

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	U	20.3	21.7	81.3	86.8	1	61.4-136			6.49	20
Naphthalene	25.0	U	21.8	24.2	87.2	96.8	1	61.8-143			10.4	20
n-Propylbenzene	25.0	U	22.8	23.1	91.1	92.3	1	63.2-139			1.30	20
Styrene	25.0	U	23.9	25.0	95.7	100	1	68.2-133			4.43	20
1,1,1,2-Tetrachloroethane	25.0	U	23.8	24.2	95.0	96.6	1	70.5-132			1.65	20
1,1,2,2-Tetrachloroethane	25.0	U	22.3	23.8	89.3	95.3	1	64.9-145			6.56	20
Tetrachloroethene	25.0	U	23.5	23.1	93.8	92.4	1	57.4-141			1.49	20
Toluene	25.0	U	22.6	22.7	90.4	90.9	1	67.8-124			0.580	20
1,1,2-Trichlorotrifluoroethane	25.0	U	23.8	25.0	95.4	100	1	53.7-150			4.94	20
1,2,3-Trichlorobenzene	25.0	U	23.4	25.3	93.5	101	1	65.7-143			7.90	20
1,1,1-Trichloroethane	25.0	U	21.2	21.7	85.0	86.9	1	58.7-134			2.24	20
1,2,4-Trichlorobenzene	25.0	U	23.5	25.4	93.9	102	1	67.0-146			8.02	20
1,1,2-Trichloroethane	25.0	U	21.8	22.5	87.2	90.0	1	74.1-130			3.19	20
Trichloroethene	25.0	U	23.0	23.3	92.0	93.3	1	48.9-148			1.37	20
Trichlorofluoromethane	25.0	U	21.6	22.2	86.3	88.8	1	39.9-165			2.77	20
1,2,3-Trichloropropane	25.0	U	23.7	26.2	94.6	105	1	71.5-134			10.2	20
1,2,3-Trimethylbenzene	25.0	U	22.4	22.4	89.7	89.4	1	62.7-133			0.330	20
1,2,4-Trimethylbenzene	25.0	U	22.2	22.6	88.8	90.6	1	60.5-137			1.99	20
1,3,5-Trimethylbenzene	25.0	U	22.2	22.3	89.0	89.1	1	67.9-134			0.0600	20
Vinyl chloride	25.0	U	22.9	23.2	91.5	92.7	1	44.3-143			1.26	20
Xylenes, Total	75.0	U	68.1	68.9	90.8	91.9	1	65.6-133			1.14	20
(S) Toluene-d8					104	102		90.0-115				
(S) Dibromofluoromethane					98.5	98.3		79.0-121				
(S) 4-Bromofluorobenzene					91.5	91.9		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) R3158218-1 08/20/16 12:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	98.6			50.0-150

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

(LCS) R3158218-2 08/20/16 12:44 • (LCSD) R3158218-3 08/20/16 12:56

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)	30.0	28.3	29.4	94.2	98.1	50.0-150			4.09	20
Residual Range Organics (RRO)	30.0	24.7	24.5	82.3	81.6	50.0-150			0.840	20
<i>(S) o-Terphenyl</i>				89.2	87.7	50.0-150				

L854354-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L854354-19 08/20/16 15:58 • (MS) R3158218-4 08/20/16 16:10 • (MSD) R3158218-5 08/20/16 16:23

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	%	%		%			%	%
Diesel Range Organics (DRO)	32.3	6.38	38.7	35.0	99.9	88.5	1	50.0-150			10.1	20
Residual Range Organics (RRO)	32.3	12.1	40.5	38.7	88.1	82.4	1	50.0-150			4.64	20
<i>(S) o-Terphenyl</i>					79.4	82.0		50.0-150				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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
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.
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.

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		

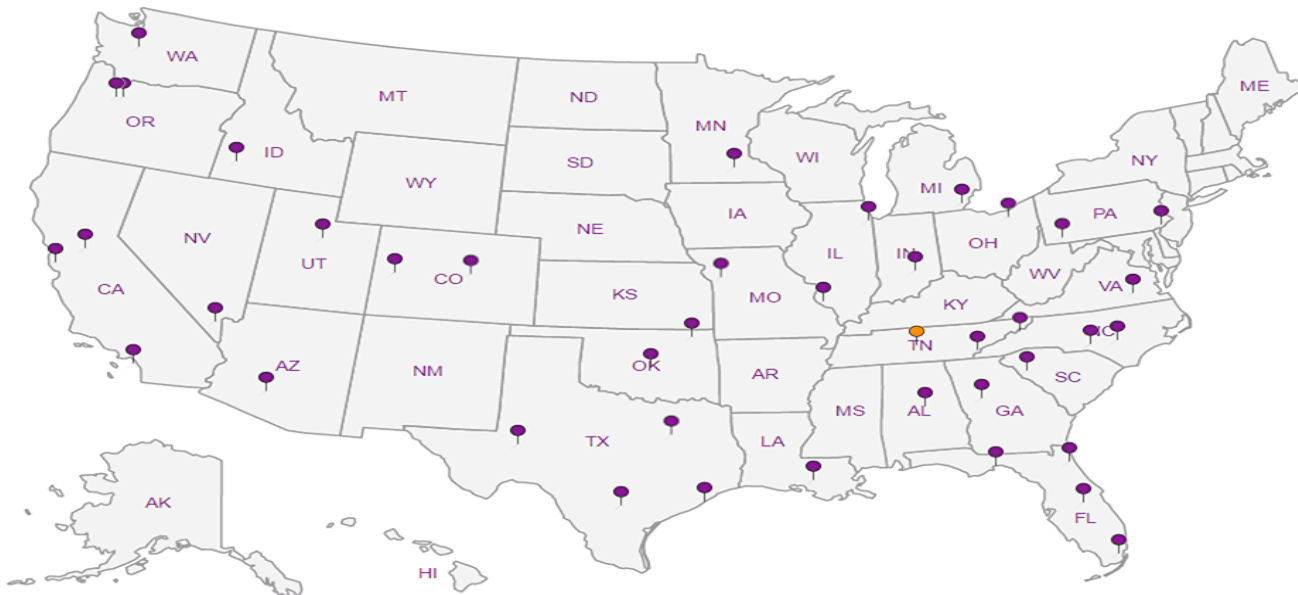
Third Party & Federal Accreditations

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.**



Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Avenue
 Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@kennedyjenks.com

Project
 Description: **BNSF - Wishram Railyard, WA**

City/State
 Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Client Project #
167120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
See Sunday

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]
 Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed
 Email? No Yes
 FAX? No Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
* B-16-16(10.0)(20160812)		GW	10	8/12	0950	2
B-16-11(10.0)(20160811)		GW	10	8/11	0910	2
B-16-10(10.0)(20160811)		GW	10	8/11	0925	
B-16-09(10.0)(20160812)		GW	10	8/12	0850	
B-16-20(10.0)(20160812)		GW	10	8/12	0720	
B-16-21(10.0)(20160812)		GW	10	8/12	0815	
B-16-23(10.0)(20160812)		GW	10	8/11	0940	
B-16-15(10.0)(20160812)		GW	10	8/12	1010	
B-16-13(10.0)(20160811)		GW	10	8/11	0825	
B-16-17(10.0)(20160812)		GW	10	8/12	0915	

Analysis / Container / Preservative									
Dissolved 250mlHDPE-HNO3					Total 250mlHDPE-HNO3				

Chain of Custody Page of



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **L853761**
G222

Acctnum: **BNSF1KEN**
 Template: **T114808**
 Prelogin: **P564376**
 TSR: **134 - Mark W. Beasley**
 PB:

Shipped Via:

Rem./Contaminant	Sample # (lab only)
	-01
	02
	03
	04
	05
	06
	07
	08
	09
	10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: *M&M's collected from B-16-11(10.0)(20160812) B-16-17(10.0)(20160812) for total/diss lead (Pb) only*

pH _____ Temp _____
 Flow _____ Other _____

Hold # _____

Relinquished by: (Signature) *[Signature]* Date: **8/15** Time: **1400**

Received by: (Signature) _____

Samples returned via: UPS FedEx Courier _____

Condition: (lab use only) **JW7**

Temp: **2.9** °C Bottles Received: **34**

Relinquished by: (Signature) _____ Date: _____ Time: _____

Received by: (Signature) _____

COC Seal Intact: Y N NA

Relinquished by: (Signature) _____ Date: _____ Time: _____

Received for lab by: (Signature) *[Signature]*

Date: **8/16/16** Time: **0900**

pH Checked: **12** NCF:

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Avenue
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project Description: BNSF - Wishram Railyard, WA

City/State Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Date Results Needed


Same Day200%
Next Day100%
Two Day50%
Three Day25%

Email? No Yes

FAX? No Yes

Immediately
Packed on Ice N Y

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative	Chain of Custody	Page	of	
B-16-19(10.0)(20160811)		GW	10	8/11	0845	2	Dissolved 250mlHDPE-HNO3	 YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 L# <u>L853761</u> Table # Acctnum: BNSF1KEN Template: T114808 Prelogin: P564376 TSR: 134 - Mark W. Beasley PB: Shipped Via: Rem./Contaminant Sample # (lab only)			
B-16-19(10.0)(20160812)			10	8/12	0735	X	Total 250mlHDPE-HNO3				11
B-16-12A(10.0)(20160812)			10	8/12	0750		NWTPH-Dx				12
B-16-22(10.0)(20160812)			10	8/12	0825		EPH (WA Methods)				13
DUP-01(10.0)(20160812)			10	8/12	---		PAHs				14
			10	8/12	---		VOCS				15
River-Nodule		Soil	0	8/12	1300	1				16	
TR-01(20160815)						1				17	

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: Analyze River-Nodule in following order of priority:
NWTPH-Dx, EPH (WA), PAHs, VOCS

pH _____ Temp _____

Flow _____ Other _____

Hold #

Relinquished by: (Signature) <i>[Signature]</i>	Date: 8/15	Time: 1400	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) JW7
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.9 °C Bottles Received: 34	COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 8/16/16 Time: 0900	pH Checked: 12 NCF: <input checked="" type="checkbox"/>



L·A·B S·C·I·E·N·C·E·S

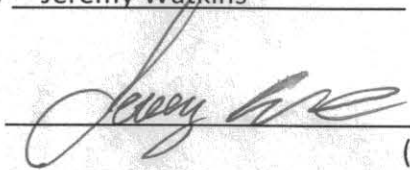
YOUR LAB OF CHOICE

Cooler Receipt Checklist

Client: BNSFIKEN SDG# L 853761

Cooler Received/Opened On: 8-16-16 By Jeremy Watkins

Temperature Upon Receipt: 2.9 °C


(Signature)

Cooler Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?			✓
Were custody papers properly filled out (ink, signed, etc.)?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were correct preservatives used?	✓		
Were all applicable sample containers checked for preservation? (Any samples not in accepted pH range noted on COC.)	✓		
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated? (If yes see attached NCF)	✓		



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ONE LAB



NATION-WIDE

ESC Lab Sciences
Non-Conformance Form

Login #: L853761	Client: BNSF1KEN	Date: 8/16/16	Evaluated by: Jeremy
------------------	------------------	---------------	----------------------

Non-Conformance (check applicable items)

Sample Integrity		Chain of Custody Clarification	
Parameter(s) past holding time	x	Login Clarification Needed	If Broken Container:
Improper temperature		Chain of custody is incomplete	Insufficient packing material around container
Improper container type		Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation		Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courie
Insufficient sample volume.		Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.		Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.		Trip Blank not received.	If no Chain of Custody:
Broken container		Client did not "X" analysis.	Received by:
Broken container:		Chain of Custody is missing	Date/Time:
Sufficient sample remains			Temp./Cont. Rec./pH:
			Carrier:
			Tracking#

Login Comments:

- Limited sample volume for River-Nodule. About ten little pellets in the container
- Client has comment "Tot. and Diss. Lead only" for B-16-17. Does client need more metals for all other samples. Perlog is for PBICP/PBDICP anyways.
- No analysis marked for Trip Blank

Client informed by:	Call	Email	Voice Mail	Date: 8/16/16	Time: 1510
TSR Initials: MB	Client Contact:				

Login Instructions:

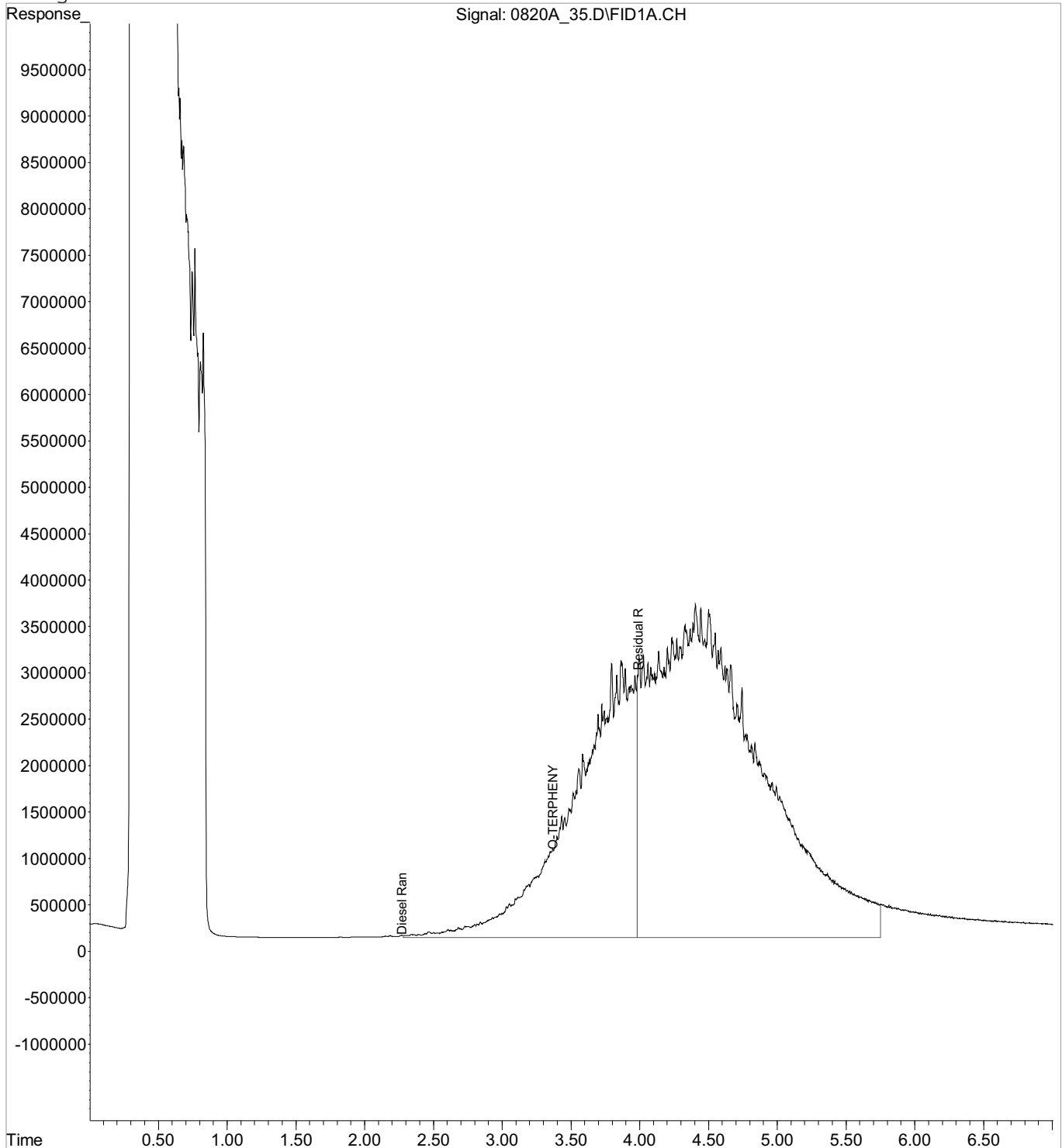
- Log River-Nodule for NWTPHDX only
- Total and Dissolved lead only
- V8260

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

Data File : C:\MSDCHEM\1\DATA\082016A\0820A 35.D Vial: 28
Acq On : 20 Aug 2016 6:00 pm Operator: 614
Sample : L853761-16 2500x WG900183 1-5 Inst : SVGC13
Misc : soil Multiplr: 100.00
IntFile : events.e
Quant Time: Aug 22 9:55 2016 Quant Results File: EP13H16P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H16P.M (Chemstation Integrator)
Title :
Last Update : Tue Aug 16 12:03:45 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

Volume Inj. :
Signal Phase :
Signal Info :



Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L855238
Samples Received: 08/16/2016
Project Number: 1696120
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001










Entire Report Reviewed By:



Mark W. Beasley
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



B-16-16 (10.0) (20160812) L855238-01 GW

Collected by
Joe Sawdey
Collected date/time
08/12/16 09:50
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:02	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:18	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 17:07	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 13:35	LTB

1
Cp

2
Tc

3
Ss

4
Cn

B-16-11 (10.0) (20160811) L855238-02 GW

Collected by
Joe Sawdey
Collected date/time
08/11/16 09:10
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:05	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:20	TRB
Metals (ICP) by Method 6010C	WG899489	5	08/18/16 10:22	08/18/16 17:36	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 13:45	LTB

5
Sr

6
Qc

7
Gl

8
Al

B-16-10 (10.0) (20160811) L855238-03 GW

Collected by
Joe Sawdey
Collected date/time
08/11/16 09:25
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:08	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:23	TRB
Metals (ICP) by Method 6010C	WG899489	5	08/18/16 10:22	08/18/16 17:38	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 13:48	LTB

9
Sc

B-16-09 (10.0) (20160812) L855238-04 GW

Collected by
Joe Sawdey
Collected date/time
08/12/16 08:50
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:17	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:26	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 17:41	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 13:51	LTB

B-16-20 (10.0) (20160812) L855238-05 GW

Collected by
Joe Sawdey
Collected date/time
08/12/16 07:20
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:19	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:29	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 17:44	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 13:59	LTB

B-16-21 (10.0) (20160812) L855238-06 GW

Collected by
Joe Sawdey
Collected date/time
08/12/16 08:15
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:22	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 11:57	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 17:46	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 14:02	LTB

SAMPLE SUMMARY



B-16-23 (10.0) (20160811) L855238-07 GW

Collected by
Joe Sawdey
Collected date/time
08/11/16 09:40
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:25	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:32	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 17:49	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 14:04	LTB

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

B-16-15 (10.0) (20160812) L855238-08 GW

Collected by
Joe Sawdey
Collected date/time
08/12/16 10:10
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:28	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:35	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 17:52	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 14:07	LTB

B-16-13 (10.0) (20160811) L855238-09 GW

Collected by
Joe Sawdey
Collected date/time
08/11/16 08:25
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:31	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:38	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 17:54	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 14:10	LTB

B-16-14 (10.0) (20160811) L855238-10 GW

Collected by
Joe Sawdey
Collected date/time
08/11/16 08:45
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:34	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:41	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 22:31	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 14:15	LTB

B-16-19 (10.0) (20160812) L855238-11 GW

Collected by
Joe Sawdey
Collected date/time
08/12/16 07:35
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:37	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:44	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 22:33	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 14:18	LTB

B-16-12A (10.0) (20160812) L855238-12 GW

Collected by
Joe Sawdey
Collected date/time
08/12/16 07:50
Received date/time
08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:40	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:53	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 22:36	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 14:21	LTB

SAMPLE SUMMARY



B-16-22 (10.0) (20160812) L855238-13 GW

Collected by: Joe Sawdey
 Collected date/time: 08/12/16 08:25
 Received date/time: 08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 13:50	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 12:56	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 22:39	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 14:24	LTB

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

DUP-01 (10.0) (20160812) L855238-14 GW

Collected by: Joe Sawdey
 Collected date/time: 08/12/16 00:00
 Received date/time: 08/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG901536	1	08/23/16 17:26	08/24/16 14:43	TRB
Mercury by Method 7470A	WG901537	1	08/23/16 17:27	08/24/16 13:29	TRB
Metals (ICP) by Method 6010C	WG899489	1	08/18/16 10:22	08/18/16 22:41	LTB
Metals (ICP) by Method 6010C	WG899547	1	08/17/16 16:15	08/18/16 14:32	LTB



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Mark W. Beasley
Technical Service Representative

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



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/24/2016 12:18	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:02	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	11.5		10.0	1	08/18/2016 17:07	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 13:35	WG899547
Barium	327		5.00	1	08/18/2016 17:07	WG899489
Barium,Dissolved	68.3		5.00	1	08/18/2016 13:35	WG899547
Cadmium	ND		2.00	1	08/18/2016 17:07	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 13:35	WG899547
Chromium	25.9		10.0	1	08/18/2016 17:07	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 13:35	WG899547
Lead	115		5.00	1	08/18/2016 17:07	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 13:35	WG899547
Selenium	ND		10.0	1	08/18/2016 17:07	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 13:35	WG899547
Silver	ND		5.00	1	08/18/2016 17:07	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 13:35	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	0.519		0.200	1	08/24/2016 12:20	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:05	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	107		50.0	5	08/18/2016 17:36	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 13:45	WG899547
Barium	6150		25.0	5	08/18/2016 17:36	WG899489
Barium,Dissolved	70.6		5.00	1	08/18/2016 13:45	WG899547
Cadmium	14.1		10.0	5	08/18/2016 17:36	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 13:45	WG899547
Chromium	647		50.0	5	08/18/2016 17:36	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 13:45	WG899547
Lead	445		25.0	5	08/18/2016 17:36	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 13:45	WG899547
Selenium	ND		50.0	5	08/18/2016 17:36	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 13:45	WG899547
Silver	ND		25.0	5	08/18/2016 17:36	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 13:45	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	0.506		0.200	1	08/24/2016 12:23	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:08	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	151		50.0	5	08/18/2016 17:38	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 13:48	WG899547
Barium	8620		25.0	5	08/18/2016 17:38	WG899489
Barium,Dissolved	63.4		5.00	1	08/18/2016 13:48	WG899547
Cadmium	19.3		10.0	5	08/18/2016 17:38	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 13:48	WG899547
Chromium	854		50.0	5	08/18/2016 17:38	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 13:48	WG899547
Lead	1860		25.0	5	08/18/2016 17:38	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 13:48	WG899547
Selenium	ND		50.0	5	08/18/2016 17:38	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 13:48	WG899547
Silver	ND		25.0	5	08/18/2016 17:38	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 13:48	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/24/2016 12:26	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:17	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	31.8		10.0	1	08/18/2016 17:41	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 13:51	WG899547
Barium	1020		5.00	1	08/18/2016 17:41	WG899489
Barium,Dissolved	44.0	<u>B</u>	5.00	1	08/18/2016 13:51	WG899547
Cadmium	3.92		2.00	1	08/18/2016 17:41	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 13:51	WG899547
Chromium	157		10.0	1	08/18/2016 17:41	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 13:51	WG899547
Lead	61.7		5.00	1	08/18/2016 17:41	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 13:51	WG899547
Selenium	ND		10.0	1	08/18/2016 17:41	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 13:51	WG899547
Silver	ND		5.00	1	08/18/2016 17:41	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 13:51	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/24/2016 12:29	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:19	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	15.7		10.0	1	08/18/2016 17:44	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 13:59	WG899547
Barium	167		5.00	1	08/18/2016 17:44	WG899489
Barium,Dissolved	28.8	<u>B</u>	5.00	1	08/18/2016 13:59	WG899547
Cadmium	ND		2.00	1	08/18/2016 17:44	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 13:59	WG899547
Chromium	43.2		10.0	1	08/18/2016 17:44	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 13:59	WG899547
Lead	46.2		5.00	1	08/18/2016 17:44	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 13:59	WG899547
Selenium	ND		10.0	1	08/18/2016 17:44	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 13:59	WG899547
Silver	ND		5.00	1	08/18/2016 17:44	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 13:59	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND	J3	0.200	1	08/24/2016 11:57	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:22	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	ND		10.0	1	08/18/2016 17:46	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 14:02	WG899547
Barium	120		5.00	1	08/18/2016 17:46	WG899489
Barium,Dissolved	39.9	B	5.00	1	08/18/2016 14:02	WG899547
Cadmium	ND		2.00	1	08/18/2016 17:46	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 14:02	WG899547
Chromium	14.1		10.0	1	08/18/2016 17:46	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 14:02	WG899547
Lead	7.30		5.00	1	08/18/2016 17:46	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 14:02	WG899547
Selenium	ND		10.0	1	08/18/2016 17:46	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 14:02	WG899547
Silver	ND		5.00	1	08/18/2016 17:46	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 14:02	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	0.297		0.200	1	08/24/2016 12:32	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:25	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	26.4		10.0	1	08/18/2016 17:49	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 14:04	WG899547
Barium	1550		5.00	1	08/18/2016 17:49	WG899489
Barium,Dissolved	74.0		5.00	1	08/18/2016 14:04	WG899547
Cadmium	8.76		2.00	1	08/18/2016 17:49	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 14:04	WG899547
Chromium	198		10.0	1	08/18/2016 17:49	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 14:04	WG899547
Lead	4530		5.00	1	08/18/2016 17:49	WG899489
Lead,Dissolved	6.29		5.00	1	08/18/2016 14:04	WG899547
Selenium	ND		10.0	1	08/18/2016 17:49	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 14:04	WG899547
Silver	ND		5.00	1	08/18/2016 17:49	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 14:04	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	0.935		0.200	1	08/24/2016 12:35	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:28	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	28.1		10.0	1	08/18/2016 17:52	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 14:07	WG899547
Barium	494		5.00	1	08/18/2016 17:52	WG899489
Barium,Dissolved	143		5.00	1	08/18/2016 14:07	WG899547
Cadmium	4.68		2.00	1	08/18/2016 17:52	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 14:07	WG899547
Chromium	56.4		10.0	1	08/18/2016 17:52	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 14:07	WG899547
Lead	1420		5.00	1	08/18/2016 17:52	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 14:07	WG899547
Selenium	ND		10.0	1	08/18/2016 17:52	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 14:07	WG899547
Silver	ND		5.00	1	08/18/2016 17:52	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 14:07	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/24/2016 12:38	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:31	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		10.0	1	08/18/2016 17:54	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 14:10	WG899547
Barium	192		5.00	1	08/18/2016 17:54	WG899489
Barium,Dissolved	27.6	<u>B</u>	5.00	1	08/18/2016 14:10	WG899547
Cadmium	ND		2.00	1	08/18/2016 17:54	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 14:10	WG899547
Chromium	42.4		10.0	1	08/18/2016 17:54	WG899489
Chromium,Dissolved	18.1		10.0	1	08/18/2016 14:10	WG899547
Lead	59.5		5.00	1	08/18/2016 17:54	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 14:10	WG899547
Selenium	ND		10.0	1	08/18/2016 17:54	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 14:10	WG899547
Silver	ND		5.00	1	08/18/2016 17:54	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 14:10	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/24/2016 12:41	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:34	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		10.0	1	08/18/2016 22:31	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 14:15	WG899547
Barium	352		5.00	1	08/18/2016 22:31	WG899489
Barium,Dissolved	68.1		5.00	1	08/18/2016 14:15	WG899547
Cadmium	ND		2.00	1	08/18/2016 22:31	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 14:15	WG899547
Chromium	58.8		10.0	1	08/18/2016 22:31	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 14:15	WG899547
Lead	308		5.00	1	08/18/2016 22:31	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 14:15	WG899547
Selenium	ND		10.0	1	08/18/2016 22:31	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 14:15	WG899547
Silver	ND		5.00	1	08/18/2016 22:31	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 14:15	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/24/2016 12:44	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:37	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	15.2		10.0	1	08/18/2016 22:33	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 14:18	WG899547
Barium	367		5.00	1	08/18/2016 22:33	WG899489
Barium,Dissolved	63.3		5.00	1	08/18/2016 14:18	WG899547
Cadmium	ND		2.00	1	08/18/2016 22:33	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 14:18	WG899547
Chromium	36.4		10.0	1	08/18/2016 22:33	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 14:18	WG899547
Lead	7.52		5.00	1	08/18/2016 22:33	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 14:18	WG899547
Selenium	ND		10.0	1	08/18/2016 22:33	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 14:18	WG899547
Silver	ND		5.00	1	08/18/2016 22:33	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 14:18	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/24/2016 12:53	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:40	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		10.0	1	08/18/2016 22:36	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 14:21	WG899547
Barium	495		5.00	1	08/18/2016 22:36	WG899489
Barium,Dissolved	43.4	<u>B</u>	5.00	1	08/18/2016 14:21	WG899547
Cadmium	ND		2.00	1	08/18/2016 22:36	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 14:21	WG899547
Chromium	57.5		10.0	1	08/18/2016 22:36	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 14:21	WG899547
Lead	78.6		5.00	1	08/18/2016 22:36	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 14:21	WG899547
Selenium	ND		10.0	1	08/18/2016 22:36	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 14:21	WG899547
Silver	ND		5.00	1	08/18/2016 22:36	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 14:21	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/24/2016 12:56	WG901537
Mercury,Dissolved	ND	<u>J3</u>	0.200	1	08/24/2016 13:50	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		10.0	1	08/18/2016 22:39	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 14:24	WG899547
Barium	146		5.00	1	08/18/2016 22:39	WG899489
Barium,Dissolved	43.0	<u>B</u>	5.00	1	08/18/2016 14:24	WG899547
Cadmium	ND		2.00	1	08/18/2016 22:39	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 14:24	WG899547
Chromium	18.9		10.0	1	08/18/2016 22:39	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 14:24	WG899547
Lead	222		5.00	1	08/18/2016 22:39	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 14:24	WG899547
Selenium	ND		10.0	1	08/18/2016 22:39	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 14:24	WG899547
Silver	ND		5.00	1	08/18/2016 22:39	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 14:24	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	1.45		0.200	1	08/24/2016 13:29	WG901537
Mercury,Dissolved	ND		0.200	1	08/24/2016 14:43	WG901536

1 Cp

2 Tc

3 Ss

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	32.8		10.0	1	08/18/2016 22:41	WG899489
Arsenic,Dissolved	ND		10.0	1	08/18/2016 14:32	WG899547
Barium	482		5.00	1	08/18/2016 22:41	WG899489
Barium,Dissolved	142		5.00	1	08/18/2016 14:32	WG899547
Cadmium	4.07		2.00	1	08/18/2016 22:41	WG899489
Cadmium,Dissolved	ND		2.00	1	08/18/2016 14:32	WG899547
Chromium	60.2		10.0	1	08/18/2016 22:41	WG899489
Chromium,Dissolved	ND		10.0	1	08/18/2016 14:32	WG899547
Lead	1310		5.00	1	08/18/2016 22:41	WG899489
Lead,Dissolved	ND		5.00	1	08/18/2016 14:32	WG899547
Selenium	ND		10.0	1	08/18/2016 22:41	WG899489
Selenium,Dissolved	ND		10.0	1	08/18/2016 14:32	WG899547
Silver	ND		5.00	1	08/18/2016 22:41	WG899489
Silver,Dissolved	ND		5.00	1	08/18/2016 14:32	WG899547

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3158926-1 08/24/16 13:41

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

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

(LCS) R3158926-2 08/24/16 13:44 • (LCSD) R3158926-3 08/24/16 13:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury,Dissolved	3.00	3.09	3.05	103	102	80-120			1	20

L855238-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855238-13 08/24/16 13:50 • (MS) R3158926-4 08/24/16 13:53 • (MSD) R3158926-5 08/24/16 13:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury,Dissolved	3.00	ND	3.17	2.40	106	80	1	75-125		J3	28	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3158883-1 08/24/16 11:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

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

(LCS) R3158883-2 08/24/16 11:51 • (LCSD) R3158883-3 08/24/16 11:54

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	%	%	%			%	%
Mercury	3.00	3.10	3.20	103	107	80-120			3	20

L855238-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855238-06 08/24/16 11:57 • (MS) R3158883-4 08/24/16 12:00 • (MSD) R3158883-5 08/24/16 12:03

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	%	%		%			%	%
Mercury	3.00	ND	2.80	2.24	93	75	1	75-125		J3	22	20

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3157967-1 08/18/16 16:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		6.50	10.0
Barium	5.55		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) R3157967-2 08/18/16 17:02 • (LCSD) R3157967-3 08/18/16 17:04

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	1010	1010	101	101	80-120			0	20
Barium	1000	1030	1030	103	103	80-120			1	20
Cadmium	1000	1020	1030	102	103	80-120			0	20
Chromium	1000	971	972	97	97	80-120			0	20
Lead	1000	1030	1040	103	104	80-120			1	20
Selenium	1000	1050	1060	105	106	80-120			1	20
Silver	1000	970	970	97	97	80-120			0	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3157724-1 08/18/16 13:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		6.50	10.0
Barium,Dissolved	4.50	J	1.70	5.00
Cadmium,Dissolved	U		0.700	2.00
Chromium,Dissolved	U		1.40	10.0
Lead,Dissolved	U		1.90	5.00
Selenium,Dissolved	U		7.40	10.0
Silver,Dissolved	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) R3157724-2 08/18/16 13:30 • (LCSD) R3157724-3 08/18/16 13:32

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,Dissolved	1000	1010	1000	101	100	80-120			1	20
Barium,Dissolved	1000	1010	1000	101	100	80-120			0	20
Cadmium,Dissolved	1000	1010	1010	101	101	80-120			0	20
Chromium,Dissolved	1000	987	979	99	98	80-120			1	20
Lead,Dissolved	1000	1030	1020	103	102	80-120			1	20
Selenium,Dissolved	1000	1040	1040	104	104	80-120			0	20
Silver,Dissolved	1000	984	975	98	97	80-120			1	20

6 Qc

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.
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.
Rec.	Recovery.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.

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.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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		

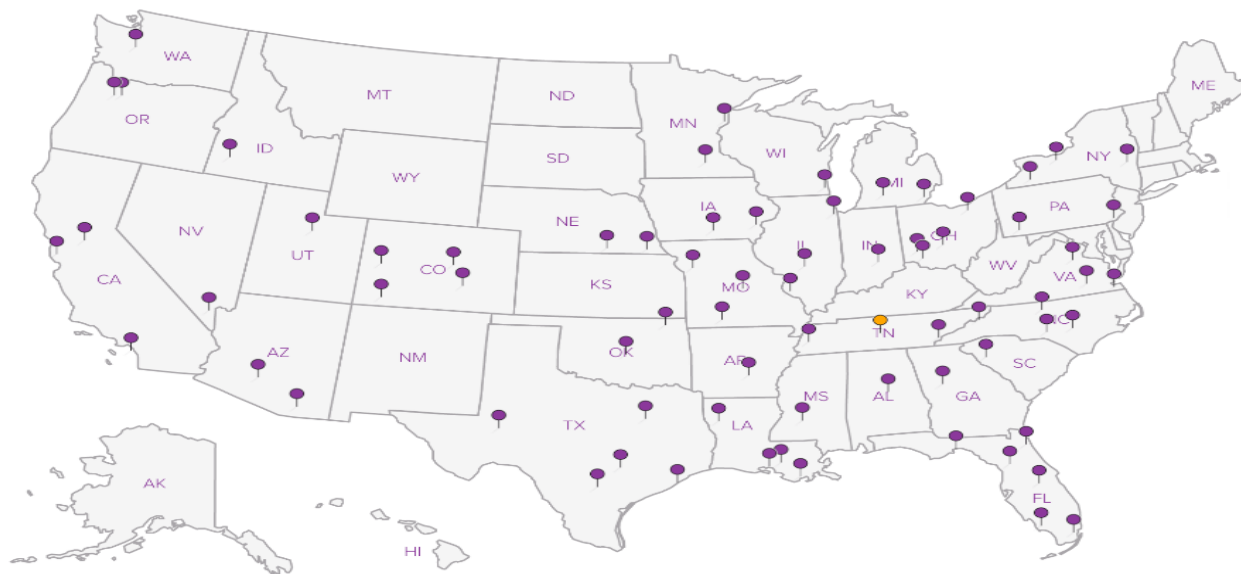
Third Party & Federal Accreditations

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.**



Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Avenue
 Tacoma, WA 98421

Analysis / Container / Preservative

Chain of Custody Page of



YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



Report to:
 Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
 JosephSawdey@kennedyjenks.com,

Project Description: BNSF - Wishram Rail yard, WA

City/State Collected: Wishram, WA

Phone: 253-835-6400
 Fax:

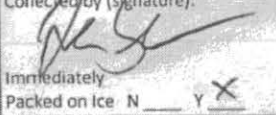
Client Project #
1676120

Lab Project #
 BNSF1KEN-WISHRAM

Collected by (print):
See Summary

Site/Facility ID #

P.O. #

Collected by (signature):


Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed
 Email? No Yes
 FAX? No Yes

Immediately Packed on Ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Disolved 250mlHDPE-HNO3	Total 250mlHDPE-HNO3
* B-16-16(10.0)(20160812)		GW	10	8/12	0950	2	X	X
B-16-11(10.0)(20160811)		GW	10	8/11	0910	2		
B-16-10(10.0)(20160811)		GW	10	8/11	0925			
B-16-09(10.0)(20160812)		GW	10	8/12	0850			
B-16-20(10.0)(20160812)		GW	10	8/12	0720			
B-16-21(10.0)(20160812)		GW	10	8/12	0815			
B-16-23(10.0)(20160812)		GW	10	8/11	0940			
B-16-15(10.0)(20160812)		GW	10	8/12	1010			
B-16-13(10.0)(20160811)		GW	10	8/11	0825			
B-16-17(10.0)(20160812)		GW	10	8/12	0915			

Disolved 250mlHDPE-HNO3

Total 250mlHDPE-HNO3

L# L853761
G222 L855238

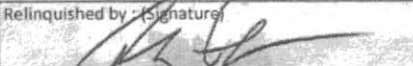
Acctnum: BNSF1KEN
 Template: T114808
 Prelogin: P564376
 TSR: 134 - Mark W. Beasley
 PB:
 Shipped Via:

Item/Contaminant	Sample # (lab only)
	-01 -01
	-02 02
	-03 03
	-04 04
	-05 05
	-06 06
	-07 07
	-08 08
	-09 09
	10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: MMSMS collected from B-16-16(10.0)(20160812) B-16-17(10.0)(20160812) for total/diss lead (Pb) only

pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature)


Date: 8/15 Time: 1400

Received by: (Signature)

Samples returned via: UPS
 FedEx Courier

Condition: (lab use only)
JW7
(OK)

Relinquished by: (Signature)

Date: _____ Time: _____

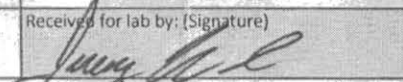
Received by: (Signature)

Temp: 2.9 °C Bottles Received: 34

COC Seal Intact: Y N NA

Relinquished by: (Signature)

Date: _____ Time: _____

Received for lab by: (Signature)


Date: 8/16/16 Time: 0900

pH Checked: 12 NCF: #

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Avenue
 Tacoma, WA 98421
 Email To: RyanHultgren@kennedyjenks.com,
 JosephSawdey@Kennedyjenks.com,

Report to:
 Ryan Hultgren

Project
 Description: **BNSF - Wishram Railway, WA**
 Phone: 253-835-6400
 Fax:

City/State
 Collected: **Wishram, WA**
 Lab Project #
BNSF1KEN-WISHRAM

Client Project #
 Site/Facility ID #
 P.O. #


Collected by (signature):
 Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%
 Immediately
 Packed on Ice: N ___ Y ___

Date Results Needed
 Email? ___ No Yes
 FAX? ___ No ___ Yes
 No. of
 Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
B-16-19(10.0)(20160811)		GW	10	8/11	0845	2
B-16-19(10.0)(20160812)			10	8/12	0735	1
B-16-12A(10.0)(20160812)			10	8/12	0750	1
B-16-22(10.0)(20160812)			10	8/12	0825	1
DUP-01(10.0)(20160812)			10	8/12	---	1
River-Nodule		Soil	0	8/12	1300	1
TB-01(20160815)						1

Analysis / Container / Preservative										
Dissolved 250mlHDPE-HNO3	2									
Total 250mlHDPE-HNO3	2									
NWTPH-Dx										
EPH (WA Methods)										
PAHS										
VOCS										


Chain of Custody Page ___ of ___



L.A.B. S.C.I.E.N.C.E.S.

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **L853761**
 Table # **L855238**
 Acctnum: **BNSF1KEN**
 Template: **T114808**
 Prelogin: **P564376**
 TSR: 134 - Mark W. Beasley
 PB:

Shipped Via:

Rem./Contaminant	Sample # (lab only)
	-10 -FF
	-11 12
	-12 13
	-13 14
	-14 15
	16 16 SW
	17

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: Analyze River-Nodule in following order of priority:
 NWTPH-Dx, EPH (WA), PAHS, VOCS

pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: 8/15	Time: 1400	Received by: (Signature) <i>[Signature]</i>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>

Samples returned via: UPS
 FedEx Courier _____
 Temp: **2.9** °C Bottles Received: **34**
 Date: **8/16/16** Time: **0900**

Hold #
 Condition: (lab use only)
 OK **JW1**
 COC Seal Intact: ___ Y ___ N ___ NA
 pH Checked: **12**
 NCF: **[Signature]**

Troy Dunlap

L855238

From: Mark Beasley
Sent: Tuesday, August 23, 2016 9:46 AM
To: Login; Sample Storage
Cc: John Davis
Subject: L853761 *BNSF1KEN* relog

Relog L853761-01 thru -15 (except do not relog -10) for MRCRA8 and MDRCRA8. Place total ICP metals into WG899489, place dissolved ICP metals into WG899547. Log as RX due 8/26.

Johnny – Pull old data where possible.

Thanks
Mark Beasley
ESC Lab Sciences
Direct: (615) 773-9672
Mobile: (615) 330-1602
Email: mbeasley@esclabsciences.com

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Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L866626
Samples Received: 10/18/2016
Project Number: 1696120
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:

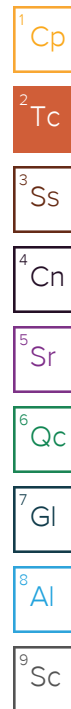


Jason Romer
Technical Service Representative

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



MW-13-12 L866626-01 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	1	10/19/16 23:07	10/20/16 11:47	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by
Joe Sawdey

Collected date/time
10/11/16 14:20

Received date/time
10/18/16 09:00

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

MW-17-18 L866626-02 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	10	10/19/16 23:07	10/21/16 02:08	DMG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	2	10/19/16 23:07	10/20/16 18:00	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by
Joe Sawdey

Collected date/time
10/12/16 17:35

Received date/time
10/18/16 09:00

MW-18-16 L866626-03 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	2	10/19/16 23:07	10/20/16 18:17	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by
Joe Sawdey

Collected date/time
10/11/16 17:10

Received date/time
10/18/16 09:00

MW-12-12 L866626-04 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	1	10/19/16 23:07	10/20/16 12:38	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by
Joe Sawdey

Collected date/time
10/11/16 10:15

Received date/time
10/18/16 09:00

DUP-01 L866626-05 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	1	10/19/16 23:07	10/20/16 12:55	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by
Joe Sawdey

Collected date/time
10/12/16 00:00

Received date/time
10/18/16 09:00

RMD-4-60R L866626-06 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	1	10/19/16 23:07	10/20/16 13:13	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by
Joe Sawdey

Collected date/time
10/12/16 14:15

Received date/time
10/18/16 09:00

RMD-4-65 L866626-07 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	1	10/19/16 23:07	10/20/16 13:29	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by
Joe Sawdey

Collected date/time
10/12/16 14:50

Received date/time
10/18/16 09:00

SAMPLE SUMMARY



B-16-03-22 L866626-08 Solid

			Collected by	Collected date/time	Received date/time
			Joe Sawdey	10/13/16 14:45	10/18/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG918777	1	10/20/16 00:57	10/20/16 13:15	KMP
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG918777	20	10/20/16 00:57	10/21/16 21:24	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	1	10/19/16 23:07	10/20/16 17:01	DMG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	20	10/19/16 23:07	10/21/16 01:51	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

1
Cp

2
Tc

3
Ss

4
Cn

B-16-02-19 L866626-09 Solid

			Collected by	Collected date/time	Received date/time
			Joe Sawdey	10/13/16 11:15	10/18/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG918777	1	10/20/16 00:57	10/20/16 13:39	KMP
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG918777	20	10/20/16 00:57	10/21/16 21:46	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918796	2	10/19/16 23:07	10/20/16 17:44	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

5
Sr

6
Qc

7
Gl

8
Al

RIVER NAPL 03 L866626-10 GW

			Collected by	Collected date/time	Received date/time
			Joe Sawdey	10/13/16 11:00	10/18/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919300	222	10/20/16 22:13	10/24/16 14:09	TRF

9
Sc

RIVER NAPL 04 L866626-11 GW

			Collected by	Collected date/time	Received date/time
			Joe Sawdey	10/14/16 10:35	10/18/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919300	154	10/20/16 22:13	10/24/16 14:26	TRF

MW-13-12 L866626-13 Solid

			Collected by	Collected date/time	Received date/time
			Joe Sawdey	10/11/16 14:20	10/18/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919849	1	10/24/16 06:57	10/24/16 16:09	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

MW-17-18 L866626-14 Solid

			Collected by	Collected date/time	Received date/time
			Joe Sawdey	10/12/16 17:35	10/18/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919849	1	10/24/16 06:57	10/24/16 17:39	DMG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919849	5	10/24/16 06:57	10/25/16 00:07	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

MW-18-16 L866626-15 Solid

			Collected by	Collected date/time	Received date/time
			Joe Sawdey	10/11/16 17:10	10/18/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919849	1	10/24/16 06:57	10/24/16 18:32	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

SAMPLE SUMMARY



MW-12-12 L866626-16 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919849	1	10/24/16 06:57	10/24/16 16:26	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by Joe Sawdey
 Collected date/time 10/11/16 10:15
 Received date/time 10/18/16 09:00

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

DUP-01 L866626-17 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919849	1	10/24/16 06:57	10/24/16 16:46	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by Joe Sawdey
 Collected date/time 10/12/16 00:00
 Received date/time 10/18/16 09:00

RMD-4-60R L866626-18 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919849	1	10/24/16 06:57	10/24/16 17:03	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by Joe Sawdey
 Collected date/time 10/12/16 14:15
 Received date/time 10/18/16 09:00

B-16-03-22 L866626-19 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919849	1	10/24/16 06:57	10/24/16 17:22	DMG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919849	10	10/24/16 06:57	10/24/16 23:50	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by Joe Sawdey
 Collected date/time 10/13/16 11:15
 Received date/time 10/18/16 09:00

B-16-02-19 L866626-20 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG919849	1	10/24/16 06:57	10/24/16 17:56	DMG
Total Solids by Method 2540 G-2011	WG918578	1	10/19/16 10:47	10/19/16 10:55	KDW

Collected by Joe Sawdey
 Collected date/time 10/03/16 09:00
 Received date/time 10/18/16 09:00



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jason Romer
Technical Service Representative

Project Narrative

L866626-01 thru -11: NWTPH-Dx did not contain Silica Gel Treatment (SGT).

L866626-13 thru -20: NWTPH-Dx included Silica Gel Treatment (SGT).

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.4		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.91	1	10/20/2016 11:47	WG918796
Residual Range Organics (RRO)	ND		12.3	1	10/20/2016 11:47	WG918796
(S) o-Terphenyl	122		50.0-150		10/20/2016 11:47	WG918796

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-01 WG918796: Dx - No SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.9		1	10/19/2016 10:55	WG918578

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	744		43.5	10	10/21/2016 02:08	WG918796
Residual Range Organics (RRO)	108		21.8	2	10/20/2016 18:00	WG918796
<i>(S) o-Terphenyl</i>	148		50.0-150		10/21/2016 02:08	WG918796
<i>(S) o-Terphenyl</i>	84.5		50.0-150		10/20/2016 18:00	WG918796

Sample Narrative:

NWTPHDX L866626-02 WG918796: Dx - No SGT



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.3		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	24.3		8.86	2	10/20/2016 18:17	WG918796
Residual Range Organics (RRO)	90.0		22.2	2	10/20/2016 18:17	WG918796
(S) o-Terphenyl	105		50.0-150		10/20/2016 18:17	WG918796

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-03 WG918796: Dx - No SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.3		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.98	1	10/20/2016 12:38	WG918796
Residual Range Organics (RRO)	ND		12.4	1	10/20/2016 12:38	WG918796
(S) o-Terphenyl	117		50.0-150		10/20/2016 12:38	WG918796

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-04 WG918796: Dx - No SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	75.2		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.32	1	10/20/2016 12:55	WG918796
Residual Range Organics (RRO)	ND		13.3	1	10/20/2016 12:55	WG918796
(S) o-Terphenyl	107		50.0-150		10/20/2016 12:55	WG918796

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-05 WG918796: Dx - No SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.6		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.15	1	10/20/2016 13:13	WG918796
Residual Range Organics (RRO)	ND		12.9	1	10/20/2016 13:13	WG918796
(S) o-Terphenyl	105		50.0-150		10/20/2016 13:13	WG918796

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-06 WG918796: Dx - No SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	75.5		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.30	1	10/20/2016 13:29	WG918796
Residual Range Organics (RRO)	ND		13.2	1	10/20/2016 13:29	WG918796
(S) o-Terphenyl	118		50.0-150		10/20/2016 13:29	WG918796

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-07 WG918796: Dx - No SGT

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	80.4		1	10/19/2016 10:55	WG918578

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Diesel Range Organics (DRO)	1480		99.5	20	10/21/2016 01:51	WG918796
Residual Range Organics (RRO)	136		12.4	1	10/20/2016 17:01	WG918796
(S) o-Terphenyl	131	J7	50.0-150		10/21/2016 01:51	WG918796
(S) o-Terphenyl	112		50.0-150		10/20/2016 17:01	WG918796

Sample Narrative:

NWTPHDX L866626-08 WG918796: Dx - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	0.250		0.149	20	10/21/2016 21:24	WG918777
Acenaphthene	ND		0.149	20	10/21/2016 21:24	WG918777
Acenaphthylene	ND		0.149	20	10/21/2016 21:24	WG918777
Benzo(a)anthracene	0.0136		0.00747	1	10/20/2016 13:15	WG918777
Benzo(a)pyrene	ND		0.00747	1	10/20/2016 13:15	WG918777
Benzo(b)fluoranthene	ND		0.00747	1	10/20/2016 13:15	WG918777
Benzo(g,h,i)perylene	ND		0.00747	1	10/20/2016 13:15	WG918777
Benzo(k)fluoranthene	ND		0.00747	1	10/20/2016 13:15	WG918777
Chrysene	0.0155		0.00747	1	10/20/2016 13:15	WG918777
Dibenz(a,h)anthracene	ND		0.00747	1	10/20/2016 13:15	WG918777
Fluoranthene	ND		0.149	20	10/21/2016 21:24	WG918777
Fluorene	ND		0.149	20	10/21/2016 21:24	WG918777
Indeno(1,2,3-cd)pyrene	ND		0.00747	1	10/20/2016 13:15	WG918777
Naphthalene	ND		0.498	20	10/21/2016 21:24	WG918777
Phenanthrene	ND		0.149	20	10/21/2016 21:24	WG918777
Pyrene	0.143		0.00747	1	10/20/2016 13:15	WG918777
1-Methylnaphthalene	ND		0.498	20	10/21/2016 21:24	WG918777
2-Methylnaphthalene	ND		0.498	20	10/21/2016 21:24	WG918777
(S) Nitrobenzene-d5	54.9		22.1-146		10/20/2016 13:15	WG918777
(S) Nitrobenzene-d5	101	J7	22.1-146		10/21/2016 21:24	WG918777
(S) 2-Fluorobiphenyl	79.1		40.6-122		10/20/2016 13:15	WG918777
(S) 2-Fluorobiphenyl	86.6	J7	40.6-122		10/21/2016 21:24	WG918777
(S) p-Terphenyl-d14	93.3	J7	32.2-131		10/21/2016 21:24	WG918777
(S) p-Terphenyl-d14	102		32.2-131		10/20/2016 13:15	WG918777

Sample Narrative:

8270C-SIM L866626-08 WG918777: Dilution due to matrix

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.1		1	10/19/2016 10:55	WG918578

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	441		10.5	2	10/20/2016 17:44	WG918796
Residual Range Organics (RRO)	233		26.3	2	10/20/2016 17:44	WG918796
(S) o-Terphenyl	92.1		50.0-150		10/20/2016 17:44	WG918796

Sample Narrative:

NWTPHDX L866626-09 WG918796: Dx - No SGT

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0294		0.00789	1	10/20/2016 13:39	WG918777
Acenaphthene	0.0560		0.00789	1	10/20/2016 13:39	WG918777
Acenaphthylene	ND		0.00789	1	10/20/2016 13:39	WG918777
Benzo(a)anthracene	ND		0.00789	1	10/20/2016 13:39	WG918777
Benzo(a)pyrene	ND		0.00789	1	10/20/2016 13:39	WG918777
Benzo(b)fluoranthene	ND		0.00789	1	10/20/2016 13:39	WG918777
Benzo(g,h,i)perylene	ND		0.00789	1	10/20/2016 13:39	WG918777
Benzo(k)fluoranthene	ND		0.00789	1	10/20/2016 13:39	WG918777
Chrysene	ND		0.00789	1	10/20/2016 13:39	WG918777
Dibenz(a,h)anthracene	ND		0.00789	1	10/20/2016 13:39	WG918777
Fluoranthene	0.00991		0.00789	1	10/20/2016 13:39	WG918777
Fluorene	0.0325		0.00789	1	10/20/2016 13:39	WG918777
Indeno(1,2,3-cd)pyrene	ND		0.00789	1	10/20/2016 13:39	WG918777
Naphthalene	ND		0.526	20	10/21/2016 21:46	WG918777
Phenanthrene	0.116		0.00789	1	10/20/2016 13:39	WG918777
Pyrene	0.0183		0.00789	1	10/20/2016 13:39	WG918777
1-Methylnaphthalene	ND		0.526	20	10/21/2016 21:46	WG918777
2-Methylnaphthalene	ND		0.526	20	10/21/2016 21:46	WG918777
(S) Nitrobenzene-d5	96.1		22.1-146		10/20/2016 13:39	WG918777
(S) Nitrobenzene-d5	87.8	<u>J7</u>	22.1-146		10/21/2016 21:46	WG918777
(S) 2-Fluorobiphenyl	88.1		40.6-122		10/20/2016 13:39	WG918777
(S) 2-Fluorobiphenyl	76.4	<u>J7</u>	40.6-122		10/21/2016 21:46	WG918777
(S) p-Terphenyl-d14	73.3		32.2-131		10/20/2016 13:39	WG918777
(S) p-Terphenyl-d14	77.2	<u>J7</u>	32.2-131		10/21/2016 21:46	WG918777

Sample Narrative:

8270C-SIM L866626-09 WG918777: Dilution due to matrix

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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	61000		22200	222	10/24/2016 14:09	WG919300
Residual Range Organics (RRO)	88700		55500	222	10/24/2016 14:09	WG919300
(S) o-Terphenyl	0.000	<u>J7</u>	50.0-150		10/24/2016 14:09	WG919300

Sample Narrative:

NWTPHDX L866626-10 WG919300: Dx - No SGT

- 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	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	60900		15400	154	10/24/2016 14:26	WG919300
Residual Range Organics (RRO)	84700		38500	154	10/24/2016 14:26	WG919300
(S) o-Terphenyl	0.000	<u>J7</u>	50.0-150		10/24/2016 14:26	WG919300

Sample Narrative:

NWTPHDX L866626-11 WG919300: Dx - No SGT

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.4		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.91	1	10/24/2016 16:09	WG919849
Residual Range Organics (RRO)	ND		12.3	1	10/24/2016 16:09	WG919849
(S) o-Terphenyl	94.9		50.0-150		10/24/2016 16:09	WG919849

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-13 WG919849: Dx includes SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.9		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	216		21.8	5	10/25/2016 00:07	WG919849
Residual Range Organics (RRO)	38.2		10.9	1	10/24/2016 17:39	WG919849
<i>(S) o-Terphenyl</i>	87.1		50.0-150		10/24/2016 17:39	WG919849
<i>(S) o-Terphenyl</i>	95.3		50.0-150		10/25/2016 00:07	WG919849

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-14 WG919849: Dx includes SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.2		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	18.4		4.43	1	10/24/2016 18:32	WG919849
Residual Range Organics (RRO)	64.9		11.1	1	10/24/2016 18:32	WG919849
(S) o-Terphenyl	60.0		50.0-150		10/24/2016 18:32	WG919849

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-15 WG919849: Dx includes SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.3		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.98	1	10/24/2016 16:26	WG919849
Residual Range Organics (RRO)	ND		12.5	1	10/24/2016 16:26	WG919849
(S) o-Terphenyl	100		50.0-150		10/24/2016 16:26	WG919849

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-16 WG919849: Dx includes SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	75.2		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.32	1	10/24/2016 16:46	WG919849
Residual Range Organics (RRO)	ND		13.3	1	10/24/2016 16:46	WG919849
(S) o-Terphenyl	98.0		50.0-150		10/24/2016 16:46	WG919849

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-17 WG919849: Dx includes SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.6		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.15	1	10/24/2016 17:03	WG919849
Residual Range Organics (RRO)	ND		12.9	1	10/24/2016 17:03	WG919849
(S) o-Terphenyl	102		50.0-150		10/24/2016 17:03	WG919849

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-18 WG919849: Dx includes SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.4		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1210		49.8	10	10/24/2016 23:50	WG919849
Residual Range Organics (RRO)	121		12.4	1	10/24/2016 17:22	WG919849
(S) o-Terphenyl	92.0		50.0-150		10/24/2016 23:50	WG919849
(S) o-Terphenyl	99.7		50.0-150		10/24/2016 17:22	WG919849

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-19 WG919849: Dx includes SGT

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.1		1	10/19/2016 10:55	WG918578

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	183		5.26	1	10/24/2016 17:56	WG919849
Residual Range Organics (RRO)	103		13.1	1	10/24/2016 17:56	WG919849
(S) o-Terphenyl	63.9		50.0-150		10/24/2016 17:56	WG919849

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L866626-20 WG919849: Dx includes SGT

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3171875-1 10/19/16 10:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000700			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

L866626-01 Original Sample (OS) • Duplicate (DUP)

(OS) L866626-01 10/19/16 10:55 • (DUP) R3171875-3 10/19/16 10:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	81.4	81.5	1	0.123		5

⁶ Qc

Laboratory Control Sample (LCS)

(LCS) R3171875-2 10/19/16 10:55

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

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3172128-1 10/20/16 09:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	111			50.0-150

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

(LCS) R3172128-2 10/20/16 10:02 • (LCSD) R3172128-3 10/20/16 10:19

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)	30.0	26.5	27.5	88.3	91.6	50.0-150			3.57	20
Residual Range Organics (RRO)	30.0	22.4	23.8	74.5	79.2	50.0-150			6.13	20
<i>(S) o-Terphenyl</i>				89.6	90.5	50.0-150				

L866626-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866626-01 10/20/16 11:47 • (MS) R3172128-4 10/20/16 12:04 • (MSD) R3172128-5 10/20/16 12:20

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	%	%		%			%	%
Diesel Range Organics (DRO)	36.8	ND	33.6	34.3	90.5	92.6	1	50.0-150			2.18	20
Residual Range Organics (RRO)	36.8	ND	27.4	29.1	74.4	78.9	1	50.0-150			5.93	20
<i>(S) o-Terphenyl</i>					77.8	82.6		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) R3172872-1 10/24/16 11:43

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	103			50.0-150

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

(LCS) R3172872-2 10/24/16 12:01 • (LCSD) R3172872-3 10/24/16 12:19

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)	30.0	25.5	26.0	85.0	86.8	50.0-150			2.13	20
Residual Range Organics (RRO)	30.0	25.1	25.2	83.6	83.9	50.0-150			0.360	20
<i>(S) o-Terphenyl</i>				89.1	88.1	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) R3172584-1 10/21/16 22:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	109			50.0-150

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

(LCS) R3172584-2 10/21/16 22:28 • (LCSD) R3172584-3 10/21/16 22:45

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	855	880	114	117	50.0-150			2.86	20
Residual Range Organics (RRO)	750	707	712	94.2	95.0	50.0-150			0.790	20
<i>(S) o-Terphenyl</i>				107	108	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) R3172348-3 10/20/16 12:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.000600	0.00600
Acenaphthene	U		0.000600	0.00600
Acenaphthylene	U		0.000600	0.00600
Benzo(a)anthracene	U		0.000600	0.00600
Benzo(a)pyrene	U		0.000600	0.00600
Benzo(b)fluoranthene	U		0.000600	0.00600
Benzo(g,h,i)perylene	U		0.000600	0.00600
Benzo(k)fluoranthene	U		0.000600	0.00600
Chrysene	U		0.000600	0.00600
Dibenz(a,h)anthracene	U		0.000600	0.00600
Fluoranthene	U		0.000600	0.00600
Fluorene	U		0.000600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.000600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.000600	0.00600
Pyrene	U		0.000600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
(S) p-Terphenyl-d14	80.8			32.2-131
(S) Nitrobenzene-d5	96.7			22.1-146
(S) 2-Fluorobiphenyl	94.0			40.6-122

- 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) R3172348-1 10/20/16 12:01 • (LCSD) R3172348-2 10/20/16 12:26

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 %
Anthracene	0.0800	0.0785	0.0815	98.1	102	50.3-130			3.78	20
Acenaphthene	0.0800	0.0846	0.0863	106	108	52.4-120			2.04	20
Acenaphthylene	0.0800	0.0788	0.0808	98.5	101	49.6-120			2.53	20
Benzo(a)anthracene	0.0800	0.0818	0.0832	102	104	46.7-125			1.67	20
Benzo(a)pyrene	0.0800	0.0727	0.0780	90.8	97.5	42.3-119			7.03	20
Benzo(b)fluoranthene	0.0800	0.0796	0.0884	99.5	111	43.6-124			10.5	20
Benzo(g,h,i)perylene	0.0800	0.0847	0.0877	106	110	45.1-132			3.41	20
Benzo(k)fluoranthene	0.0800	0.0801	0.0772	100	96.5	46.1-131			3.68	20
Chrysene	0.0800	0.0837	0.0863	105	108	49.5-131			3.07	20
Dibenz(a,h)anthracene	0.0800	0.0804	0.0838	101	105	44.8-133			4.06	20
Fluoranthene	0.0800	0.0833	0.0862	104	108	49.3-128			3.37	20
Fluorene	0.0800	0.0804	0.0821	101	103	50.6-121			2.12	20



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

(LCS) R3172348-1 10/20/16 12:01 • (LCSD) R3172348-2 10/20/16 12:26

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 %
Indeno(1,2,3-cd)pyrene	0.0800	0.0820	0.0860	102	107	46.1-135			4.76	20
Naphthalene	0.0800	0.0762	0.0794	95.2	99.3	49.6-115			4.21	20
Phenanthrene	0.0800	0.0816	0.0835	102	104	48.8-121			2.30	20
Pyrene	0.0800	0.0909	0.0933	114	117	44.7-130			2.60	20
1-Methylnaphthalene	0.0800	0.0805	0.0831	101	104	50.6-122			3.09	20
2-Methylnaphthalene	0.0800	0.0798	0.0825	99.7	103	50.4-120			3.39	20
(S) p-Terphenyl-d14				88.1	87.3	32.2-131				
(S) Nitrobenzene-d5				100	104	22.1-146				
(S) 2-Fluorobiphenyl				101	103	40.6-122				

L866645-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866645-05 10/20/16 19:23 • (MS) R3172348-4 10/20/16 19:48 • (MSD) R3172348-5 10/20/16 20:12

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 %
Anthracene	0.0202	0.0533	0.237	0.171	182	116	5	26.5-141	J5	J3	32.7	21.2
Acenaphthene	0.0202	0.00801	0.0936	0.0991	84.9	90.3	5	31.9-130			5.67	20
Acenaphthylene	0.0202	0.00555	0.0828	0.0764	76.6	70.2	5	33.7-129			8.05	20
Benzo(a)anthracene	0.0202	0.0726	0.176	0.160	102	87.1	5	18.3-136			9.23	24.6
Benzo(a)pyrene	0.0202	0.0945	0.255	0.192	159	96.5	5	16.9-135	J5	J3	28.1	25.2
Benzo(b)fluoranthene	0.0202	0.108	0.240	0.207	131	98.3	5	10.0-134			14.9	30.9
Benzo(g,h,i)perylene	0.0202	0.112	0.369	0.211	255	98.2	5	14.1-140	J5	J3	54.4	25.5
Benzo(k)fluoranthene	0.0202	0.0321	0.131	0.111	97.8	78.1	5	18.2-138			16.4	25.6
Chrysene	0.0202	0.0972	0.215	0.198	116	100	5	17.1-145			7.97	24.2
Dibenz(a,h)anthracene	0.0202	0.0299	0.105	0.0849	74.1	54.5	5	18.5-138			20.9	24.3
Fluoranthene	0.0202	0.113	0.234	0.268	119	153	5	15.4-144		J5	13.6	27.1
Fluorene	0.0202	0.0215	0.135	0.109	112	86.9	5	23.5-136		J3	21.0	20
Indeno(1,2,3-cd)pyrene	0.0202	0.0656	0.196	0.147	130	80.5	5	14.5-142		J3	28.9	25.8
Naphthalene	0.0202	0.0567	0.273	0.205	214	147	5	29.2-128	J5	J3 J5	28.4	20
Phenanthrene	0.0202	0.0524	0.174	0.214	121	160	5	20.1-134		J5	20.5	23.6
Pyrene	0.0202	0.126	0.285	0.267	158	140	5	11.0-148	J5		6.63	26.1
1-Methylnaphthalene	0.0202	0.0166	0.114	0.110	97.0	92.6	5	28.4-137			3.95	20
2-Methylnaphthalene	0.0202	0.0405	0.183	0.149	141	108	5	26.6-137	J5	J3	20.4	20
(S) p-Terphenyl-d14					51.0	45.6		32.2-131				
(S) Nitrobenzene-d5					84.5	83.0		22.1-146				
(S) 2-Fluorobiphenyl					72.6	68.5		40.6-122				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 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
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

- 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		

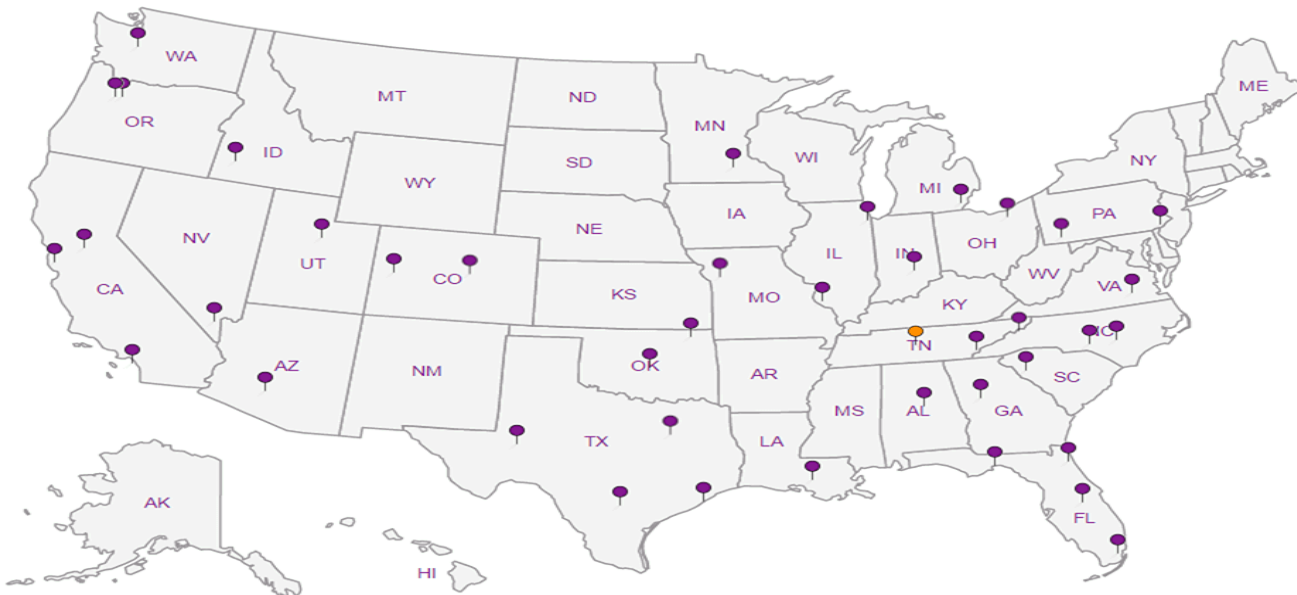
Third Party & Federal Accreditations

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.**



Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Avenue
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@Kennedyjenks.com,

Project Description: BNSF - Wishram Railyard, WA

City/State Collected:

Phone: 253-835-6400
Fax:

Client Project #
1696120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joe Sunday

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day 200%
 Next Day 100%
 Two Day 50%
 Three Day 25%

Date Results Needed

Email? No Yes
 FAX? No Yes

No. of
Cntrs
To

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs To												
MW-13-12	G	SS	12	10/11	1420	1	X											
MW-17-18	G	SS	18	10/12	1735	1	X											
MW-18-16		SS	16	10/11	1710	1	X											
MW-12-12		SS	12	10/11	1015	1	X											
DUP-01		SS	-	10/12	-	1	X											
RMD-4-60R		SS	60	10/12	1415	1	X											
RMD-4-65		SS	65	10/12	1450	1	X											
B-16-03-22		SS	22	10/13	1445	1	X		X									
B-16-02-19		SS	19	10/13	1115	1	X		X									
River Sheen 01		SS	-	10/13	0900	1	X											Hold

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: 68224068124

pH _____ Temp _____

Flow _____ Other _____

Hold # **10-053**

Relinquished by: (Signature)
[Signature]

Date: 10/17
Time: 0900

Received by: (Signature)
[Signature]

Samples returned via: UPS
 FedEx Courier _____

Condition: (lab use only)

Relinquished by: (Signature)

Date:

Received by: (Signature)

Temp: 3.1 °C Bottles Received: 16

COC Seal Intact: Y N NA

Relinquished by: (Signature)

Date:

Received for lab by: (Signature)
[Signature]

Date: 10-14-16 Time: 9:00

pH Checked: NCF

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# 1866626
E204

Acctnum: BNSF1KEN
Template: T114341
Pregoin: P562191
TSR: 134 - Mark W. Beasley
PB:

Shipped Via:

Rem./Contaminant	Sample # (lab only)
	-01
	-02
	-03
	-04
	-05
	-06
	-07
	-08
	-09
	-10

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Avenue
 Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project
 Description: **BNSF - Wishram Railyard, WA**

City/State
 Collected:

Phone: **253-835-6400**
 Fax:

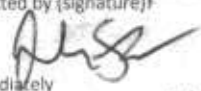
Client Project #
1696120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joe Sawdey

Site/Facility ID #

P.O. #

Collected by (signature):

 Immediately
 Packed on Ice N Y X

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
 Email? ___ No X Yes
 FAX? ___ No ___ Yes
 No. of
 Cntrs.
 TO

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs. TO
B-16-02-24.5	C	SS	24.5	10/13	1205	1 X
River Sheen 02	-	SS	-	10/13	0905	1 X
River NAPL 03	-	SS	-	10/13	1100	1 X
River NAPL 04	-	SS	-	10/14	1035	1 X
		SS				
		SS				
		SS				
		SS				
		SS				
		SS				

Analysis / Container / Preservative									
NWTPHDX, TS 4ozCir-NoPres	SV8270 4ozCir-NoPres	SV8270PAHSIM 4ozCir-NoPres	WA EPH	VOLs					

Chain of Custody Page of



12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **1866626**

Table #

Acctnum: **BNSF1KEN**
 Template: **T114341**
 Prelogin: **P562191**
 TSR: **134 - Mark W. Beasley**
 PB:

Shipped Via:

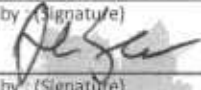
Rem./Contaminant Sample # (lab only)

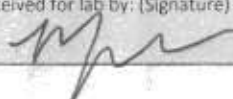
Hold	
Hold	
	-10
	-11

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: **A Run samples River NAPL 03 and River NAPL 04 in following order of priorities: NWTPH-Dx, WA EPH, PAHS, VOLs**

6827 1106 8124
 pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature)

 Date: **10/17**
 Time: **0900**

Received by: (Signature)

 Date: _____
 Time: _____

Samples returned via: UPS
 FedEx Courier _____
 Temp: **3.1** °C Bottles Received: **16**
 Date: **10-15-16** Time: **9:00**

Condition: (lab use only)
OK JW7

COC Seal Intact: ___ Y ___ N NA

pH Checked: _____ NCF: _____



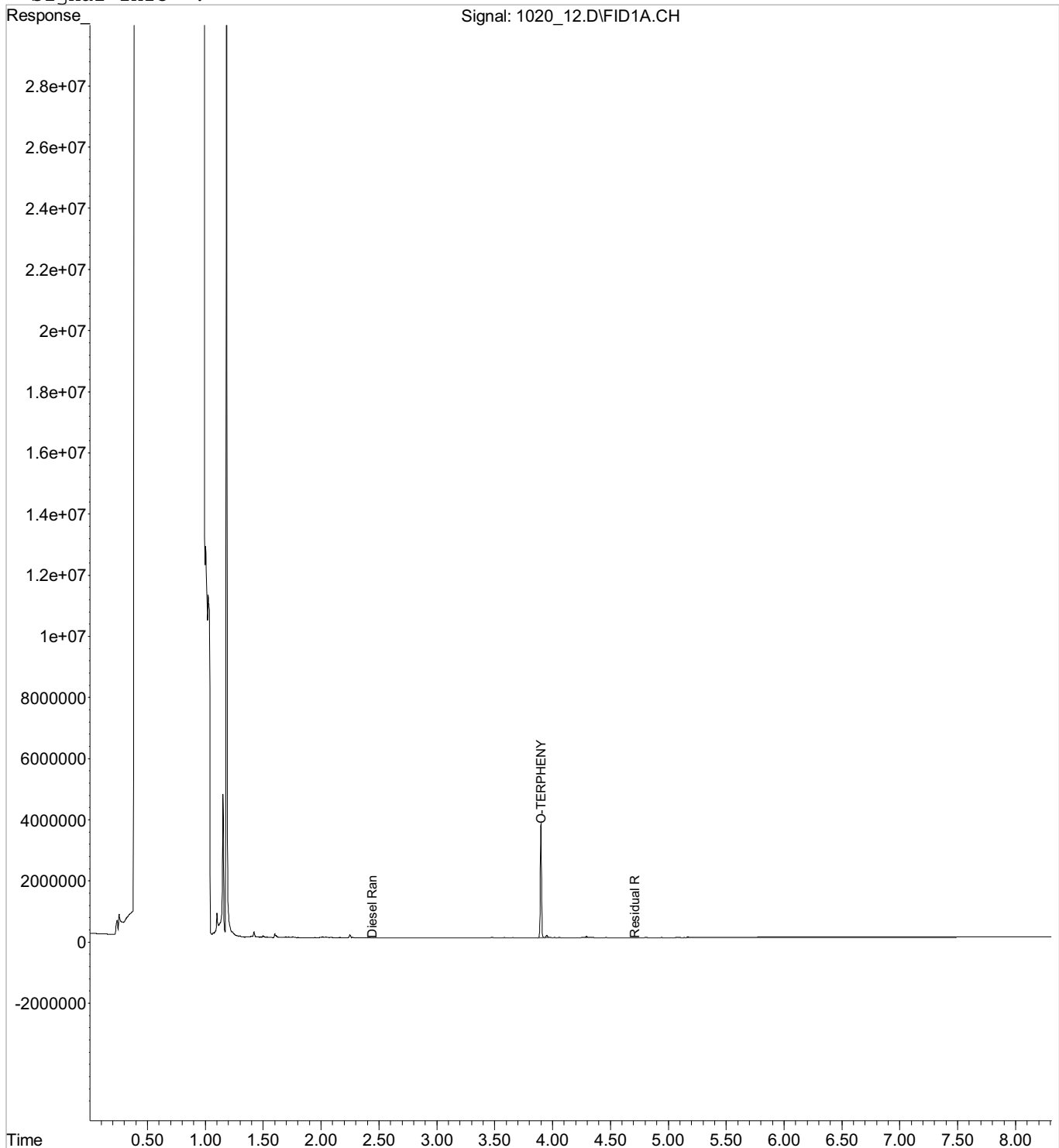
YOUR LAB OF CHOICE

Cooler Receipt Form					
Client:	BNSFIKEN	SDG#	686626		
Cooler Received/Opened On:	10-18-16	Temperature Upon Receipt:	3.1 °c		
Received By:	Mesta Freeman				
Signature:	<i>[Handwritten Signature]</i>				
Receipt Check List			Yes	No	N/A
Were custody seals on outside of cooler and intact?					/
Were custody papers properly filled out?			/		
Did all bottles arrive in good condition?			/		
Were correct bottles used for the analyses requested?			/		
Was sufficient amount of sample sent in each bottle?			/		
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?					/
Non Conformance Generated. (If yes see attached NCF)					

Data File : C:\MSDCHEM\1\DATA\102016\1020 12.D Vial: 11
Acq On : 20 Oct 2016 11:47 am Operator: 614
Sample : L866626-01 1x WG918796 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.04
IntFile : EVENTS.E
Quant Time: Oct 20 14:35 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

Volume Inj. :
Signal Phase :
Signal Info :



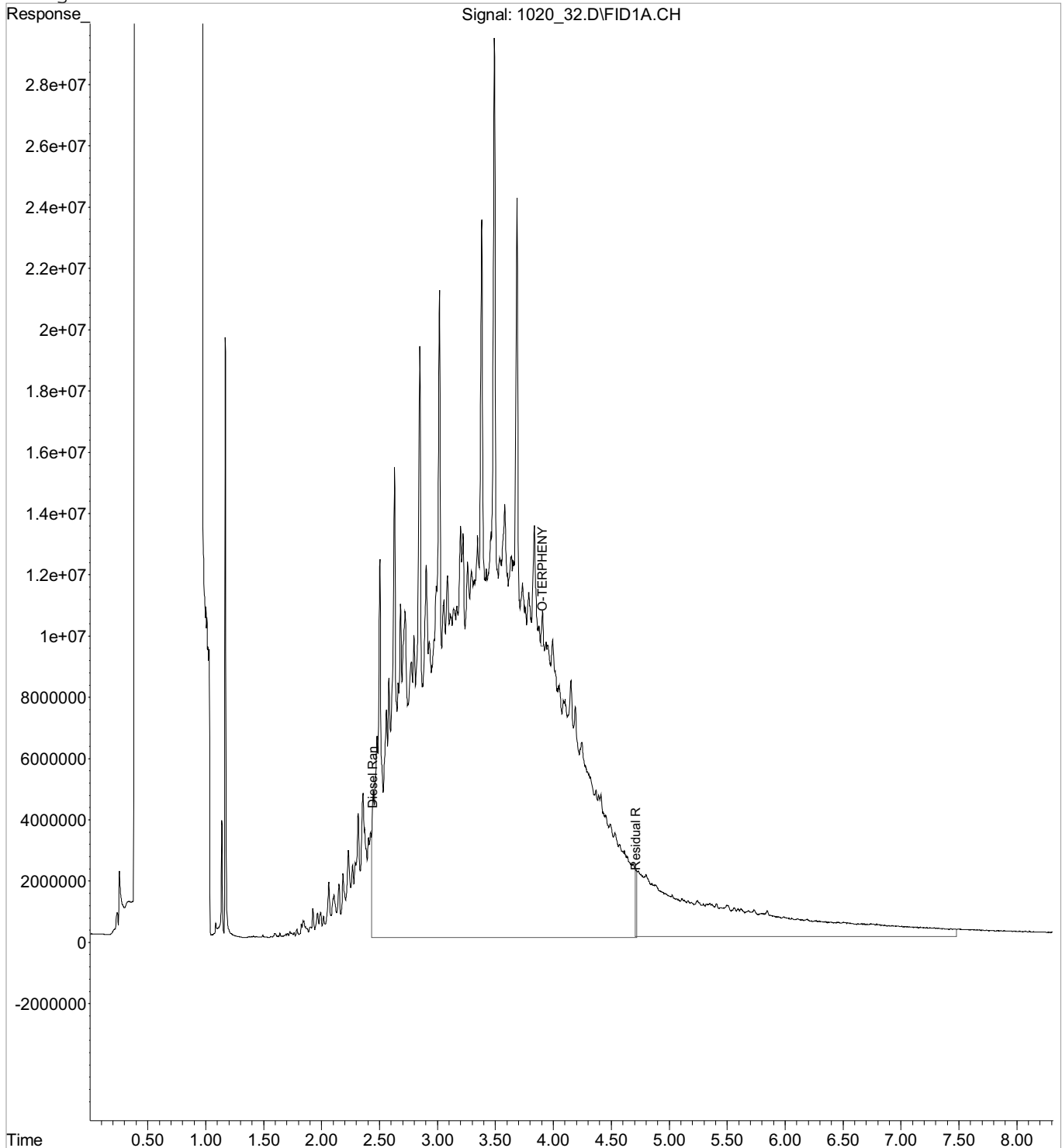
Data File : C:\MSDCHEM\1\DATA\102016\1020 32.D
Acq On : 20 Oct 2016 6:00 pm
Sample : L866626-02 2x WG918796 12.5-1
Misc : soil
IntFile : EVENTS.E
Quant Time: Oct 20 18:57 2016

Vial: 20
Operator: 614
Inst : SVGC2
Multiplr: 0.08

Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

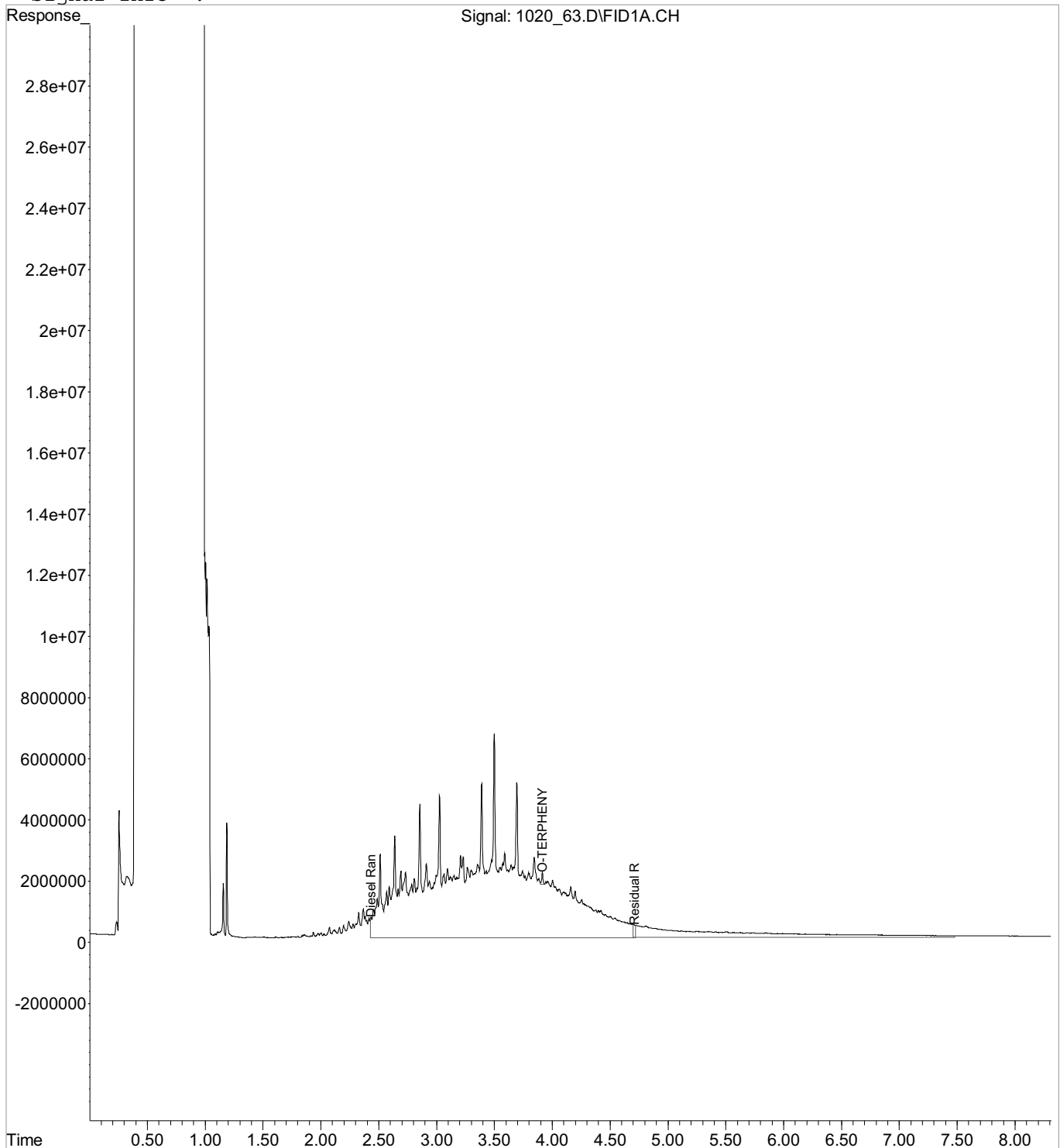
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102016\1020 63.D Vial: 20
Acq On : 21 Oct 2016 2:08 am Operator: 614
Sample : L866626-02 10x WG918796 12.5-1 Inst : SVGC2
Misc : soil Multiplr: 0.40
IntFile : EVENTS.E
Quant Time: Oct 21 9:25 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

Volume Inj. :
Signal Phase :
Signal Info :

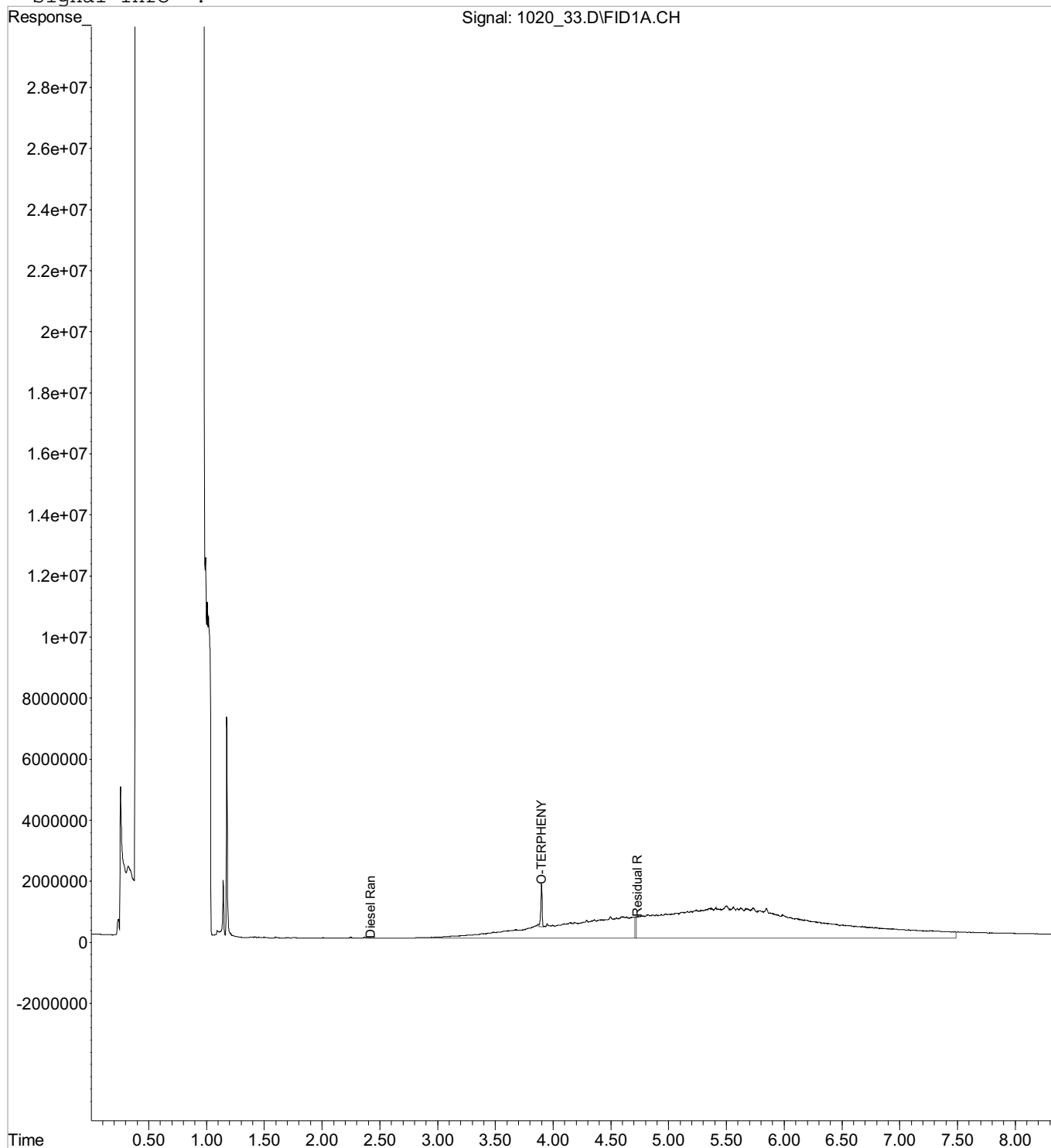


Data File : C:\MSDCHEM\1\DATA\102016\1020 33.D
Acq On : 20 Oct 2016 6:17 pm
Sample : L866626-03 2x WG918796 12.5-1
Misc : soil
IntFile : EVENTS.E
Quant Time: Oct 20 18:58 2016

Vial: 21
Operator: 614
Inst : SVGC2
Multiplr: 0.08

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

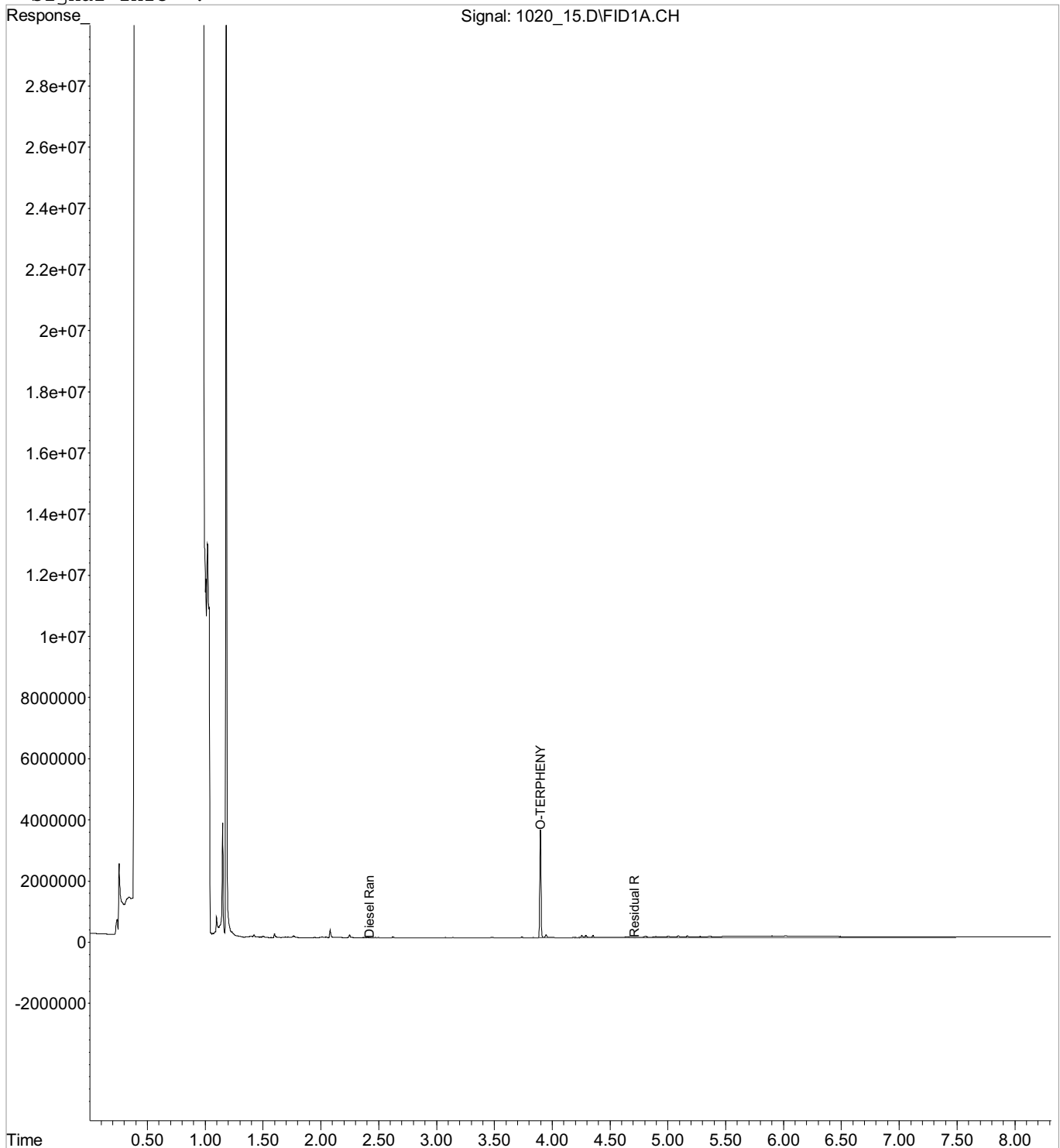
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102016\1020 15.D Vial: 14
Acq On : 20 Oct 2016 12:38 pm Operator: 614
Sample : L866626-04 1x WG918796 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.04
IntFile : EVENTS.E
Quant Time: Oct 20 14:36 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

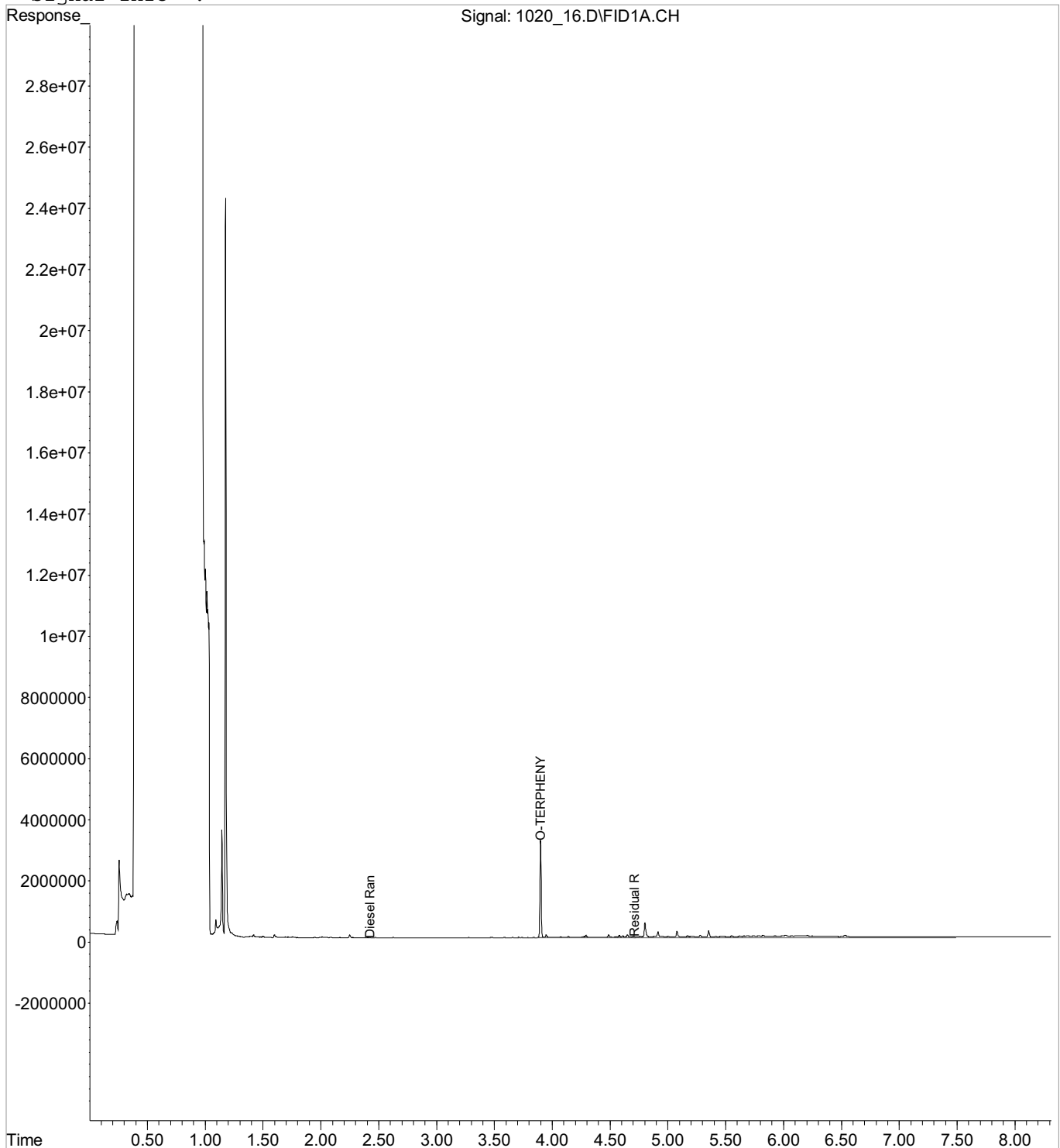
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102016\1020 16.D Vial: 15
Acq On : 20 Oct 2016 12:55 pm Operator: 614
Sample : L866626-05 1x WG918796 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.04
IntFile : EVENTS.E
Quant Time: Oct 20 14:36 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

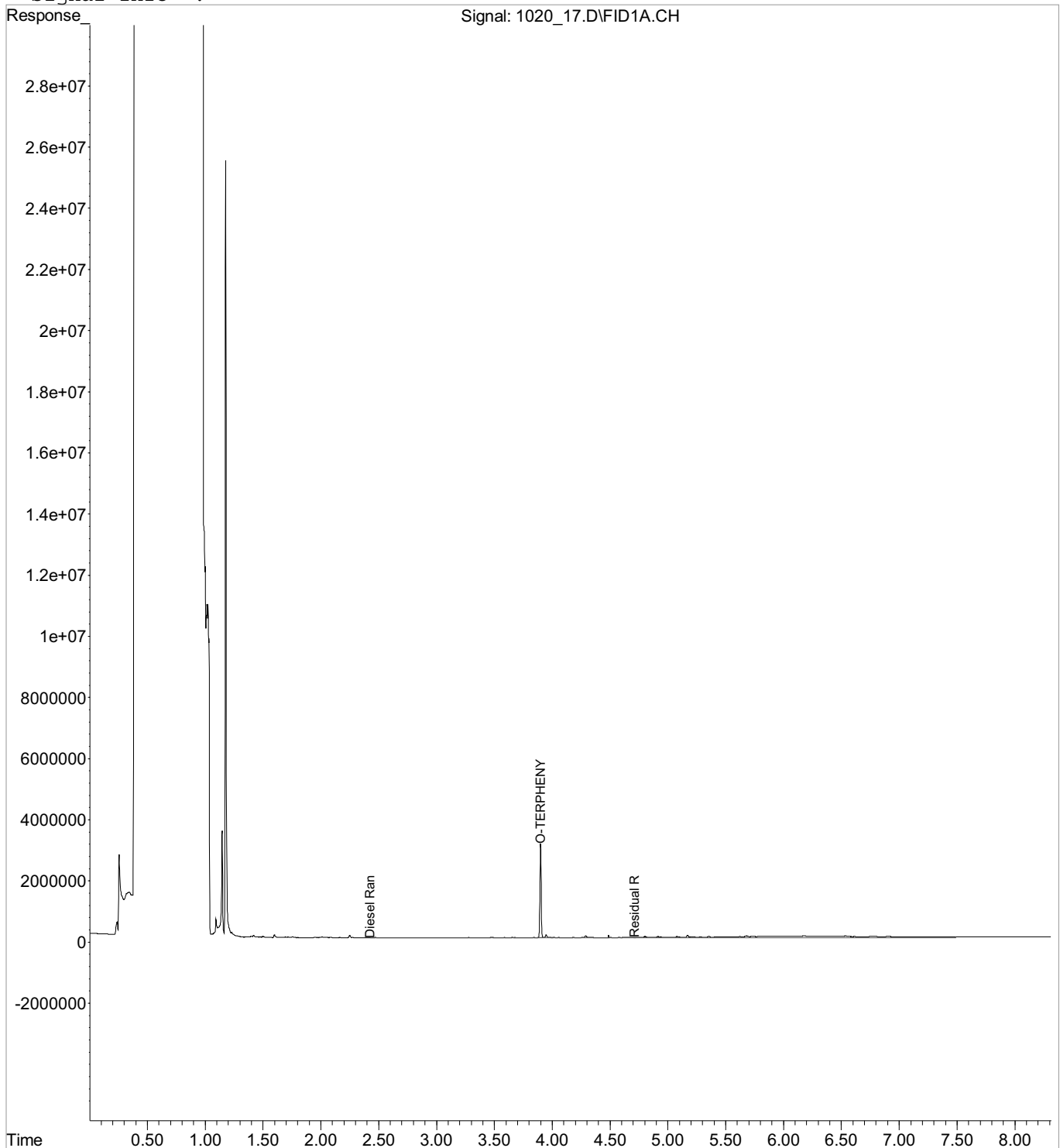
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102016\1020 17.D Vial: 16
Acq On : 20 Oct 2016 1:13 pm Operator: 614
Sample : L866626-06 1x WG918796 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.04
IntFile : EVENTS.E
Quant Time: Oct 20 14:37 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

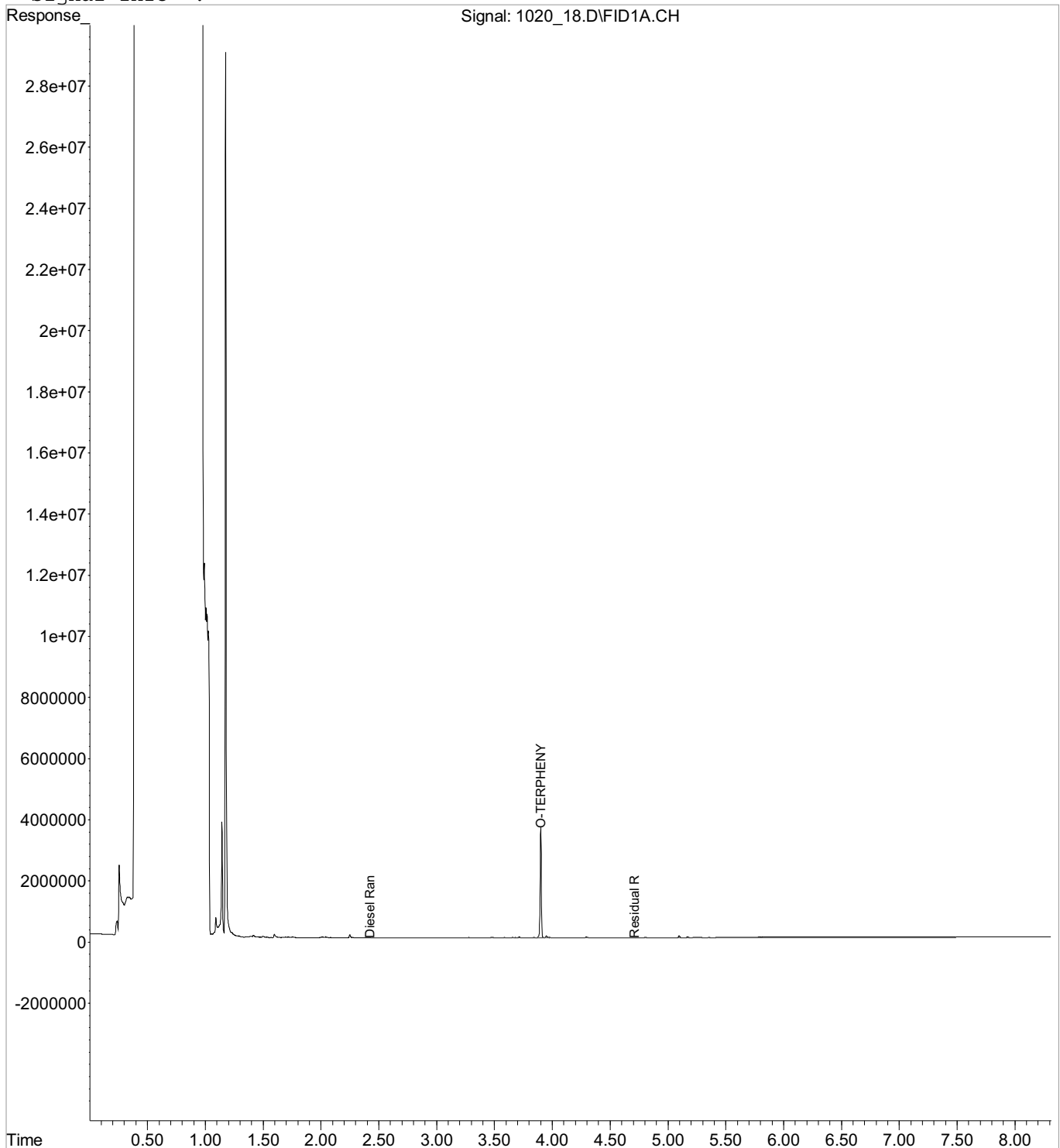
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102016\1020 18.D Vial: 17
Acq On : 20 Oct 2016 1:29 pm Operator: 614
Sample : L866626-07 1x WG918796 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.04
IntFile : EVENTS.E
Quant Time: Oct 20 14:37 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

Volume Inj. :
Signal Phase :
Signal Info :



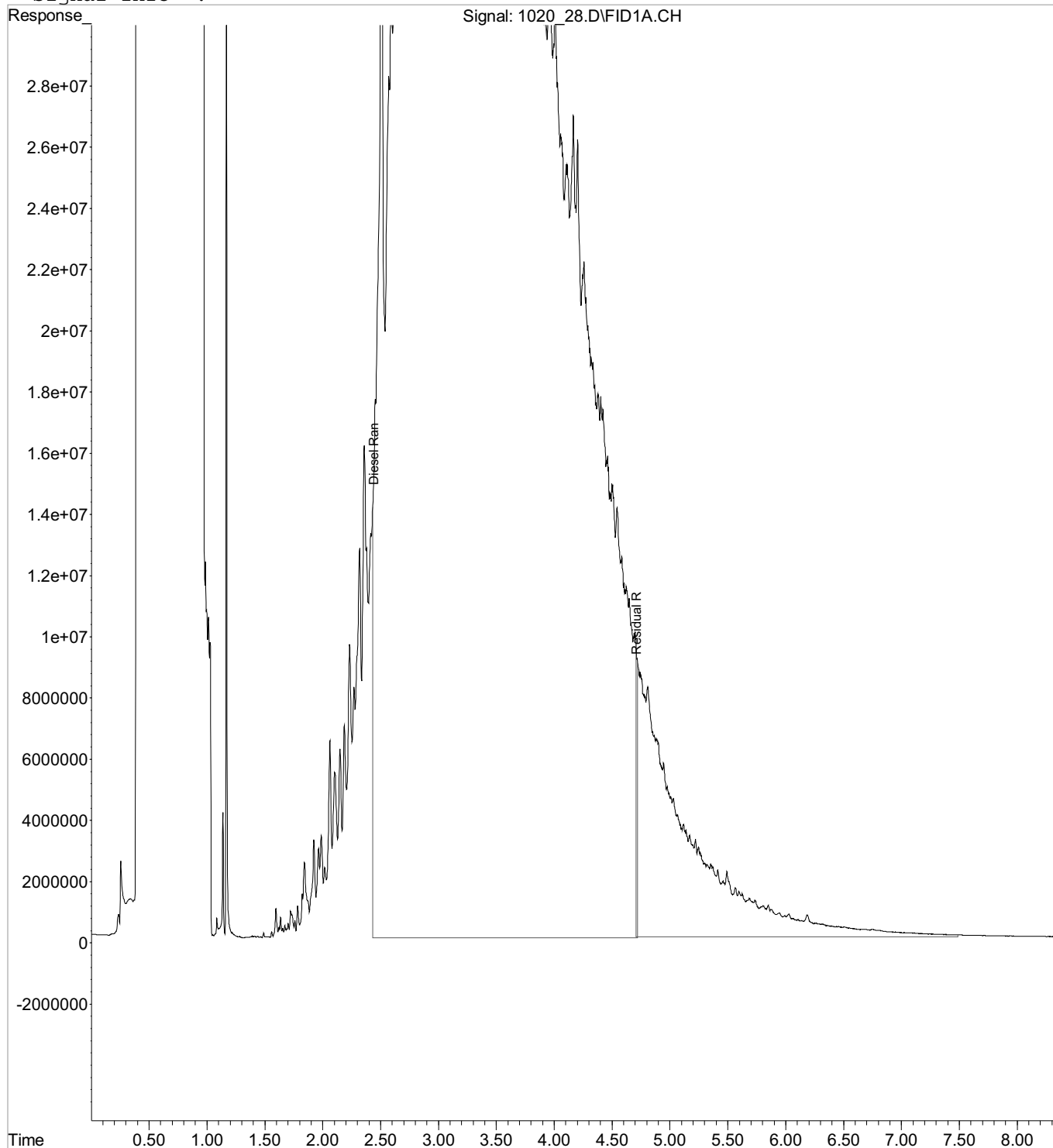
Data File : C:\MSDCHEM\1\DATA\102016\1020 28.D
Acq On : 20 Oct 2016 5:01 pm
Sample : L866626-08 1x WG918796 12.5-0.5
Misc : soil
IntFile : EVENTS.E
Quant Time: Oct 20 17:15 2016

Vial: 18
Operator: 614
Inst : SVGC2
Multiplr: 0.04

Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

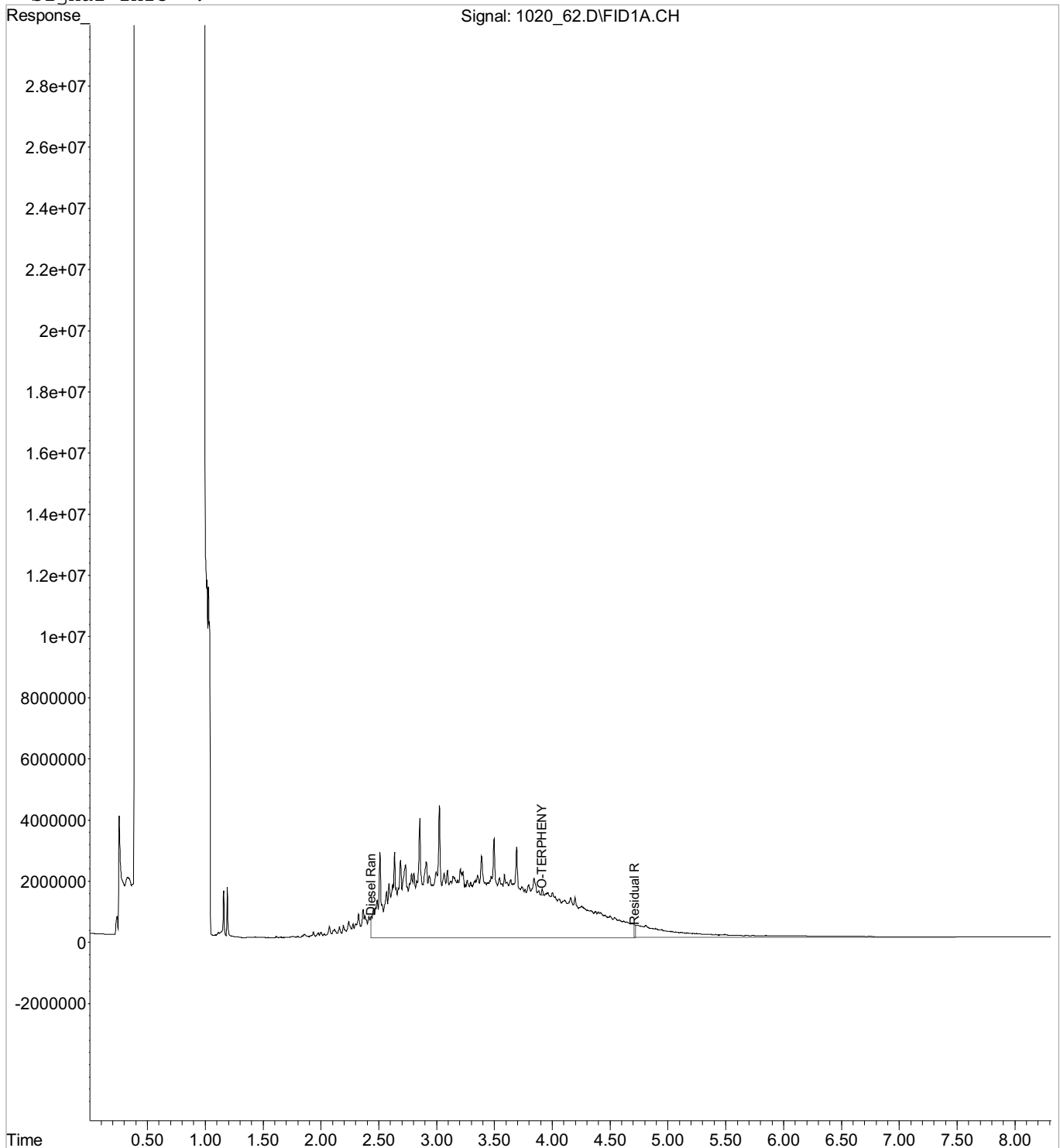
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102016\1020 62.D Vial: 18
Acq On : 21 Oct 2016 1:51 am Operator: 614
Sample : L866626-08 20x WG918796 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.80
IntFile : EVENTS.E
Quant Time: Oct 21 9:25 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

Volume Inj. :
Signal Phase :
Signal Info :



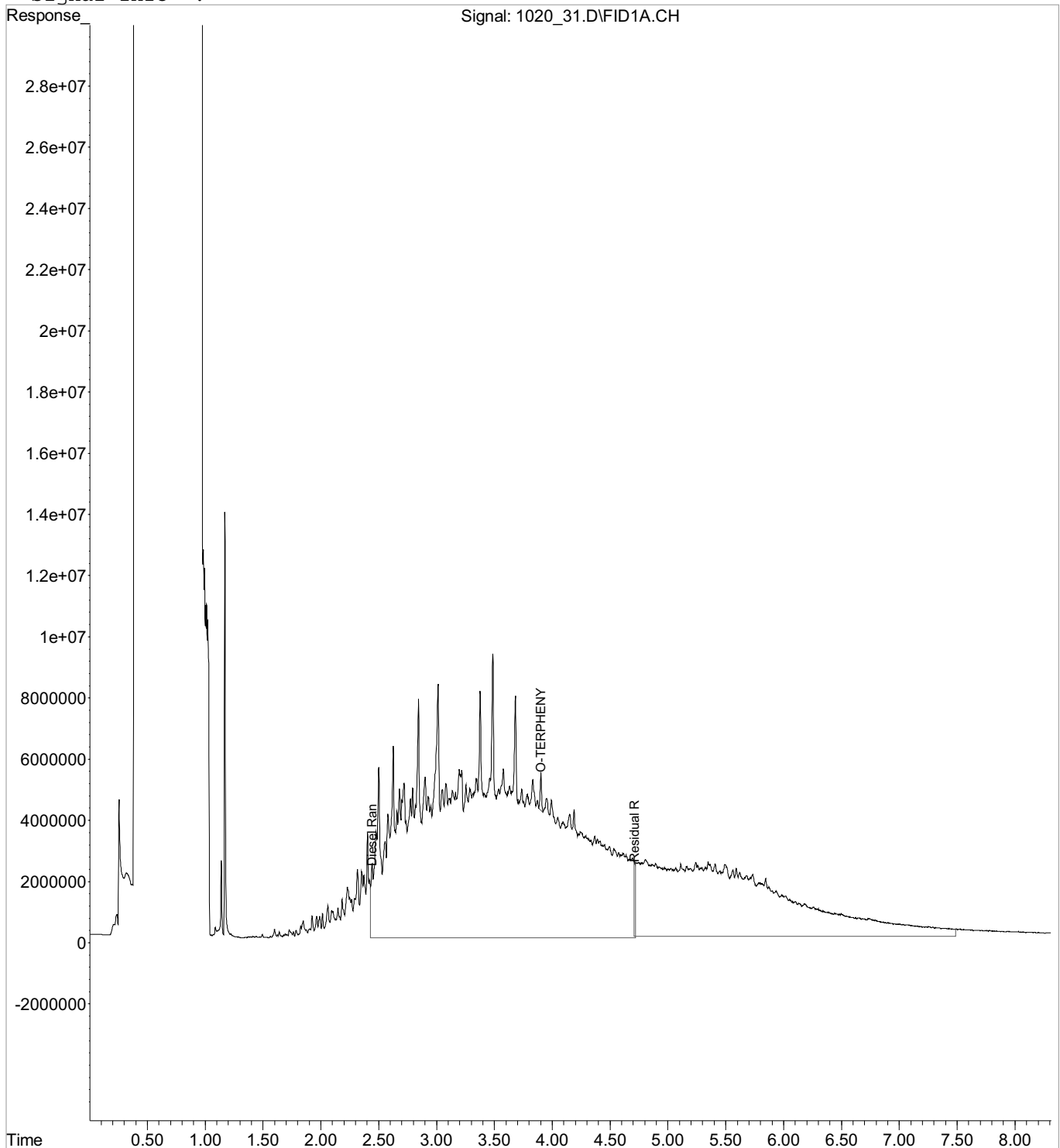
Data File : C:\MSDCHEM\1\DATA\102016\1020 31.D
Acq On : 20 Oct 2016 5:44 pm
Sample : L866626-09 2x WG918796 12.5-1
Misc : soil
IntFile : EVENTS.E
Quant Time: Oct 20 17:53 2016

Vial: 19
Operator: 614
Inst : SVGC2
Multiplr: 0.08

Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

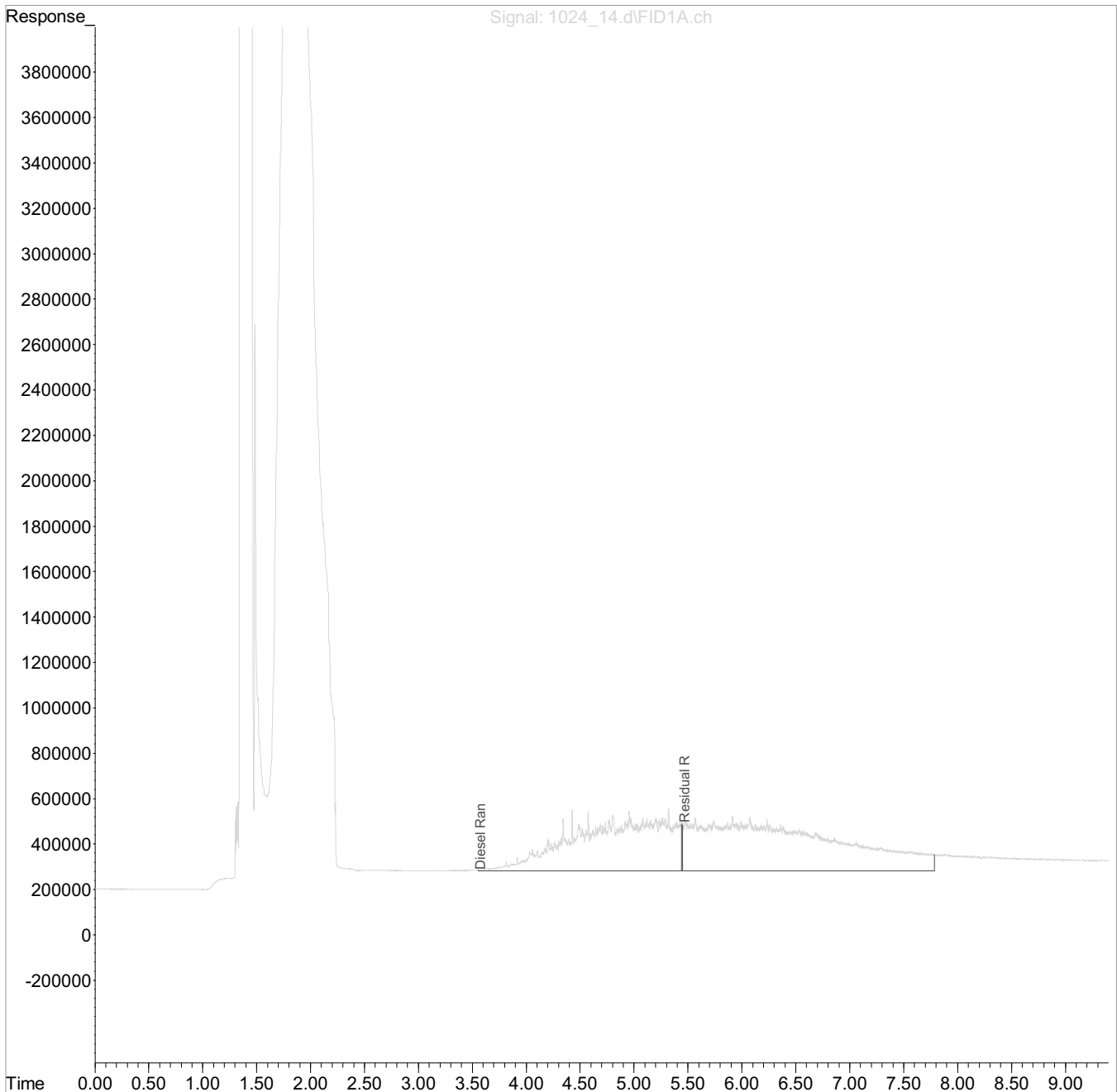
Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\102416\
 Data File : 1024_14.d
 Signal(s) : FID1A.ch
 Acq On : 24 Oct 2016 2:09 pm
 Operator : 765
 Sample : L866626-10 222x WG919300 45-5
 Misc : water
 ALS Vial : 12 Sample Multiplier: 11.1
 InstName : SVGC31

Integration File: events.e
 Quant Time: Oct 24 14:59:11 2016
 Quant Method : C:\msdchem\1\methods\EP31I19BPA.M
 Quant Title :
 QLast Update : Thu Oct 20 15:48:08 2016
 Response via : Initial Calibration
 Integrator: ChemStation

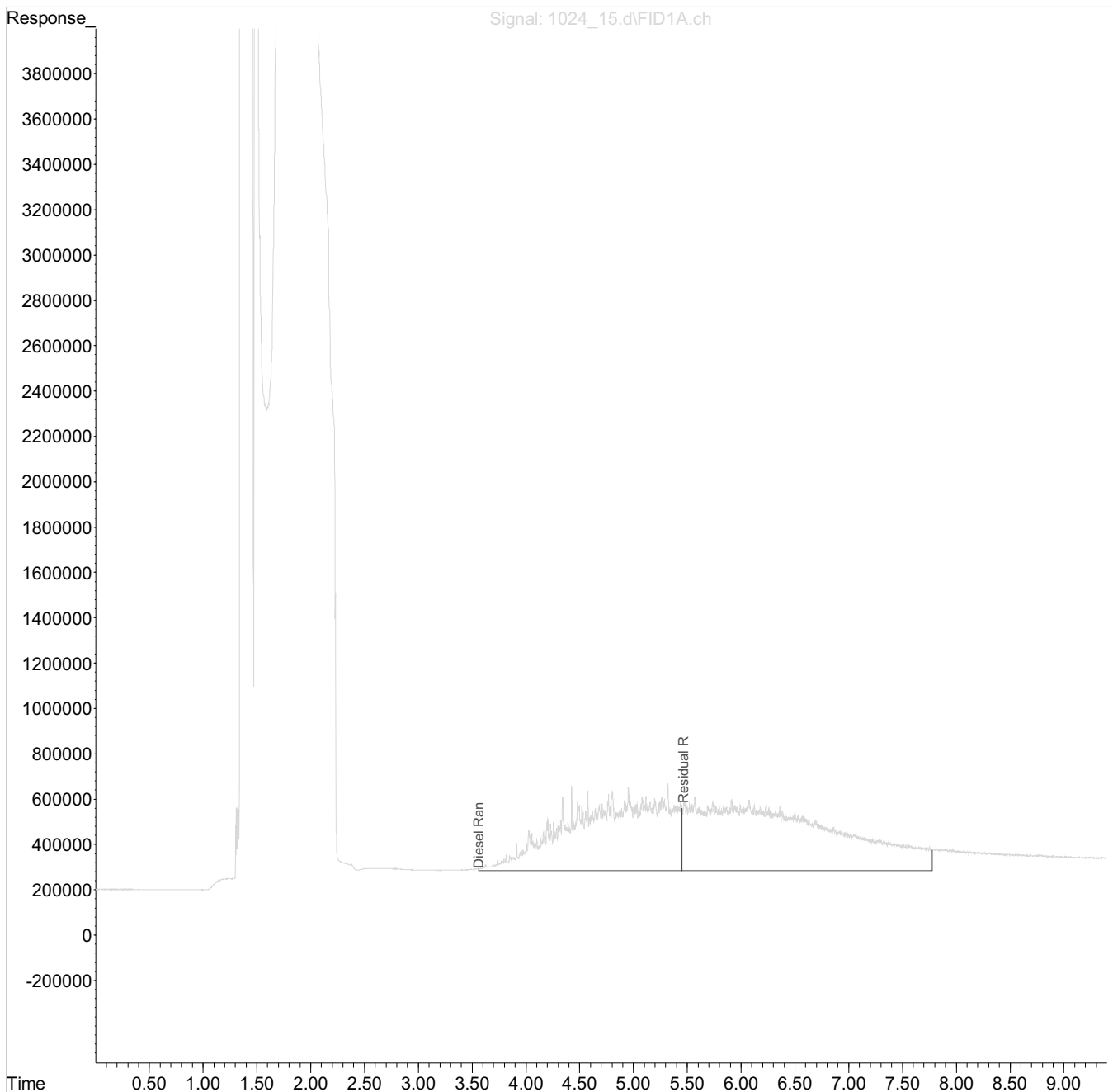
Volume Inj. :
 Signal Phase :
 Signal Info :



Data Path : C:\msdchem\1\data\102416\
 Data File : 1024 15.d
 Signal(s) : FID1A.ch
 Acq On : 24 Oct 2016 2:26 pm
 Operator : 765
 Sample : L866626-11 154x WG919300 65-5
 Misc : water
 ALS Vial : 13 Sample Multiplier: 7.69
 InstName : SVGC31

Integration File: events.e
 Quant Time: Oct 24 15:00:15 2016
 Quant Method : C:\msdchem\1\methods\EP31I19BPA.M
 Quant Title :
 QLast Update : Thu Oct 20 15:48:08 2016
 Response via : Initial Calibration
 Integrator: ChemStation

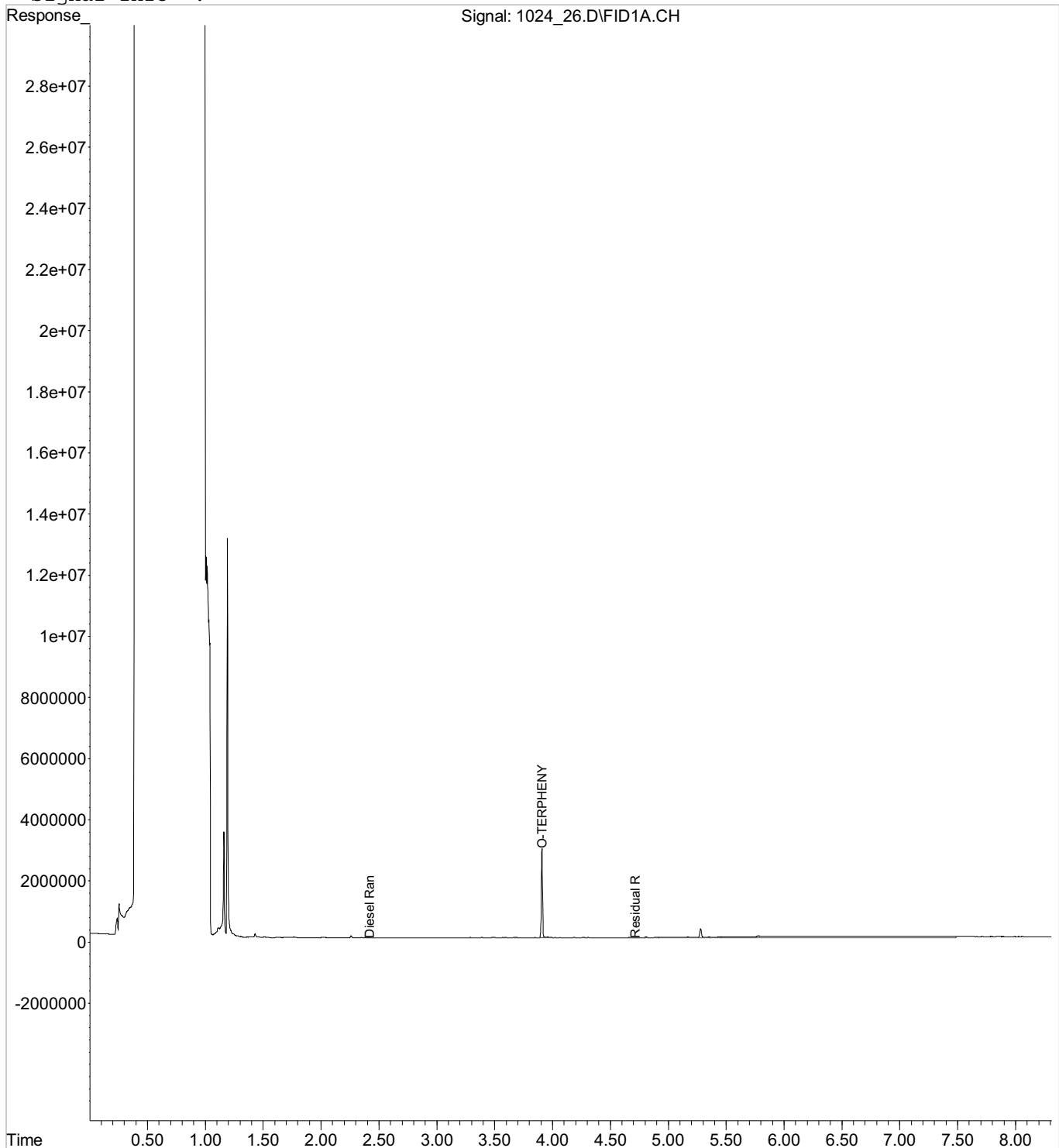
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\102416\1024 26.D Vial: 32
Acq On : 24 Oct 2016 4:09 pm Operator: 720
Sample : L866626-13 1x WG919849 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.04
IntFile : EVENTS.E
Quant Time: Oct 24 16:35 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

Volume Inj. :
Signal Phase :
Signal Info :

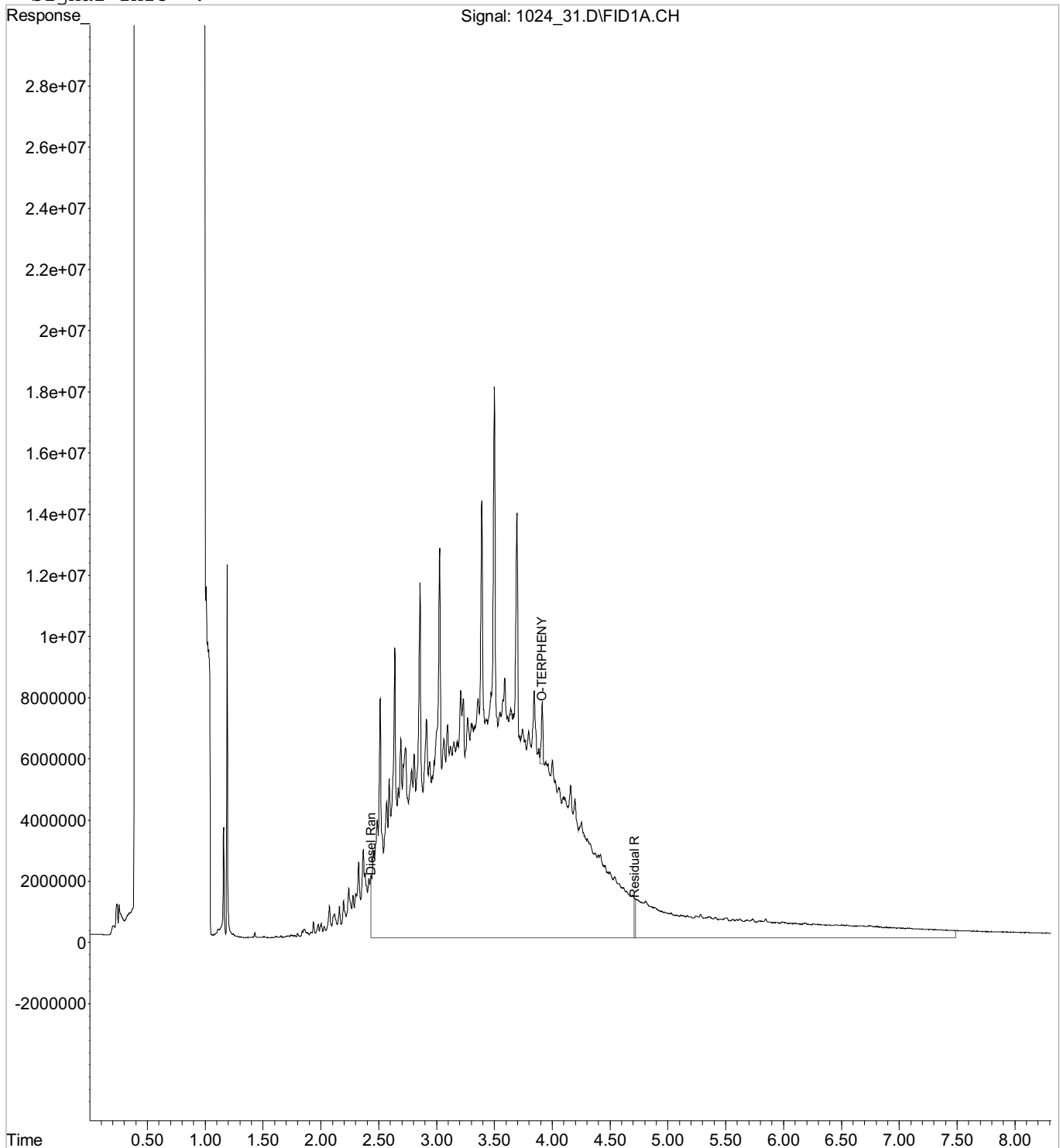


Data File : C:\MSDCHEM\1\DATA\102416\1024 31.D
Acq On : 24 Oct 2016 5:39 pm
Sample : L866626-14 1x WG919849 12.5-0.5
Misc : soil
IntFile : EVENTS.E
Quant Time: Oct 24 20:05 2016

Vial: 37
Operator: 720
Inst : SVGC2
Multiplr: 0.04

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

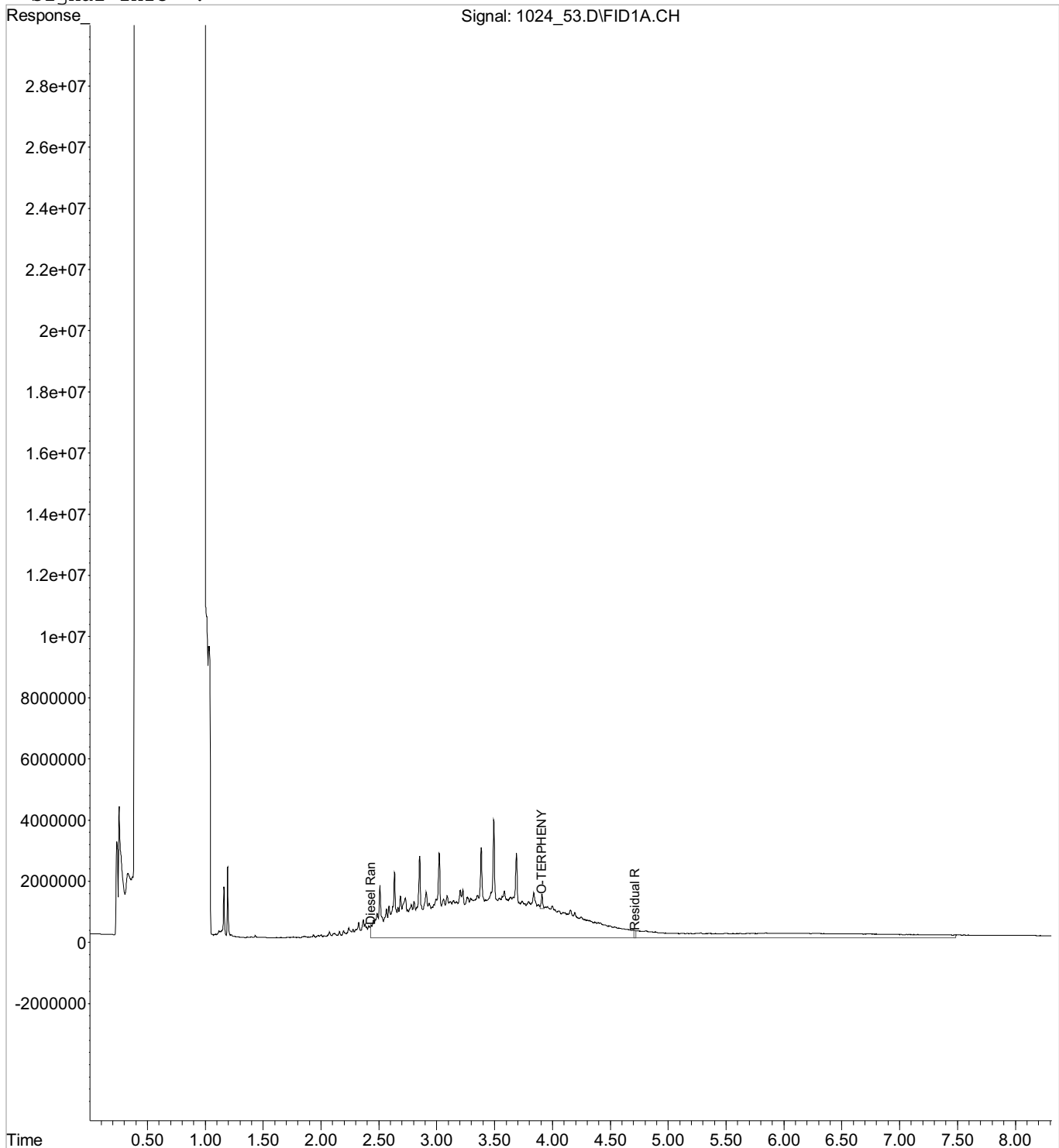
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102416\1024 53.D Vial: 37
Acq On : 25 Oct 2016 12:07 am Operator: 720
Sample : L866626-14 5x WG919849 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.20
IntFile : EVENTS.E
Quant Time: Oct 25 8:59 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

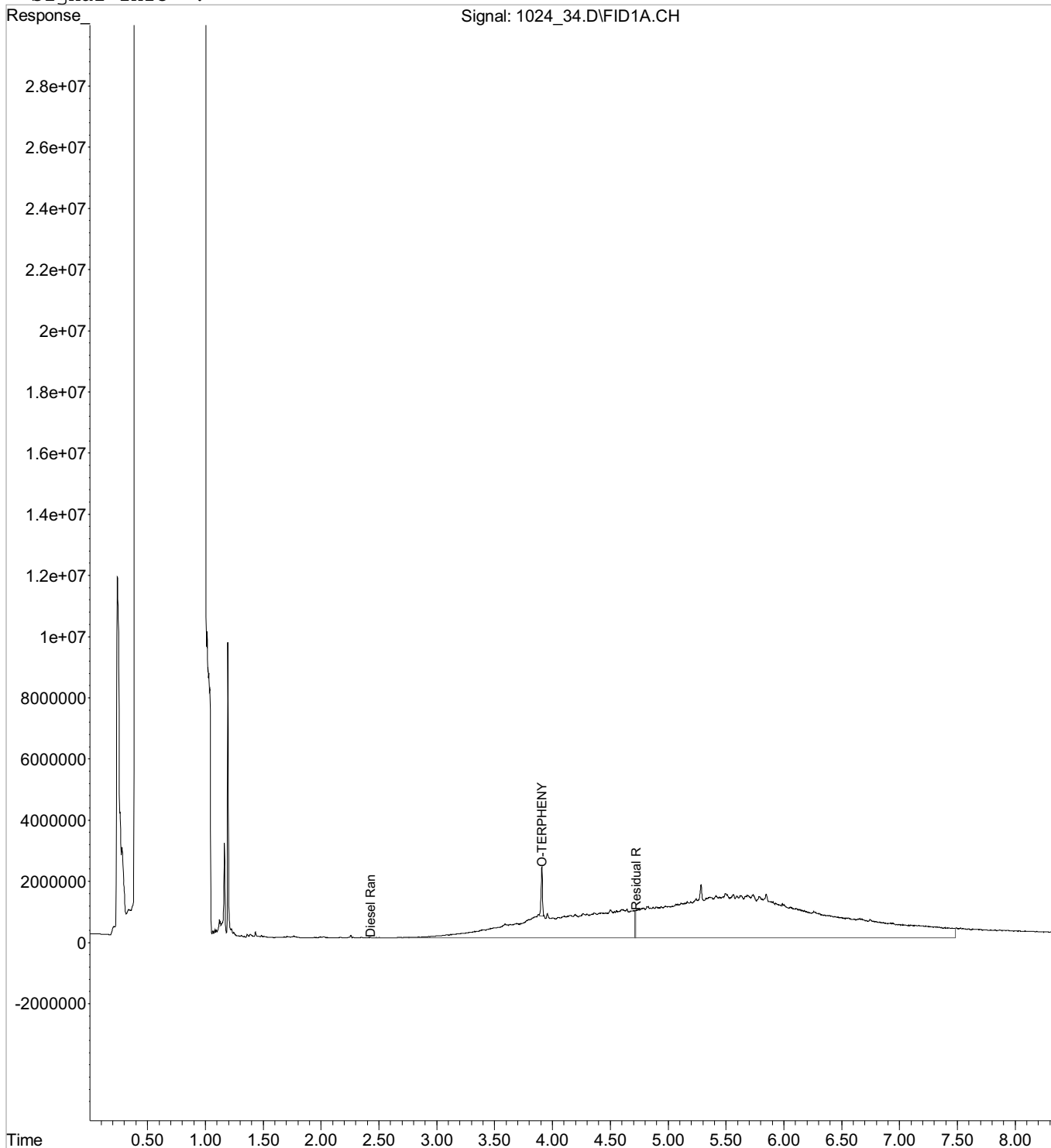
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102416\1024 34.D Vial: 40
Acq On : 24 Oct 2016 6:32 pm Operator: 720
Sample : L866626-15 1x WG919849 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.04
IntFile : EVENTS.E
Quant Time: Oct 24 20:12 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

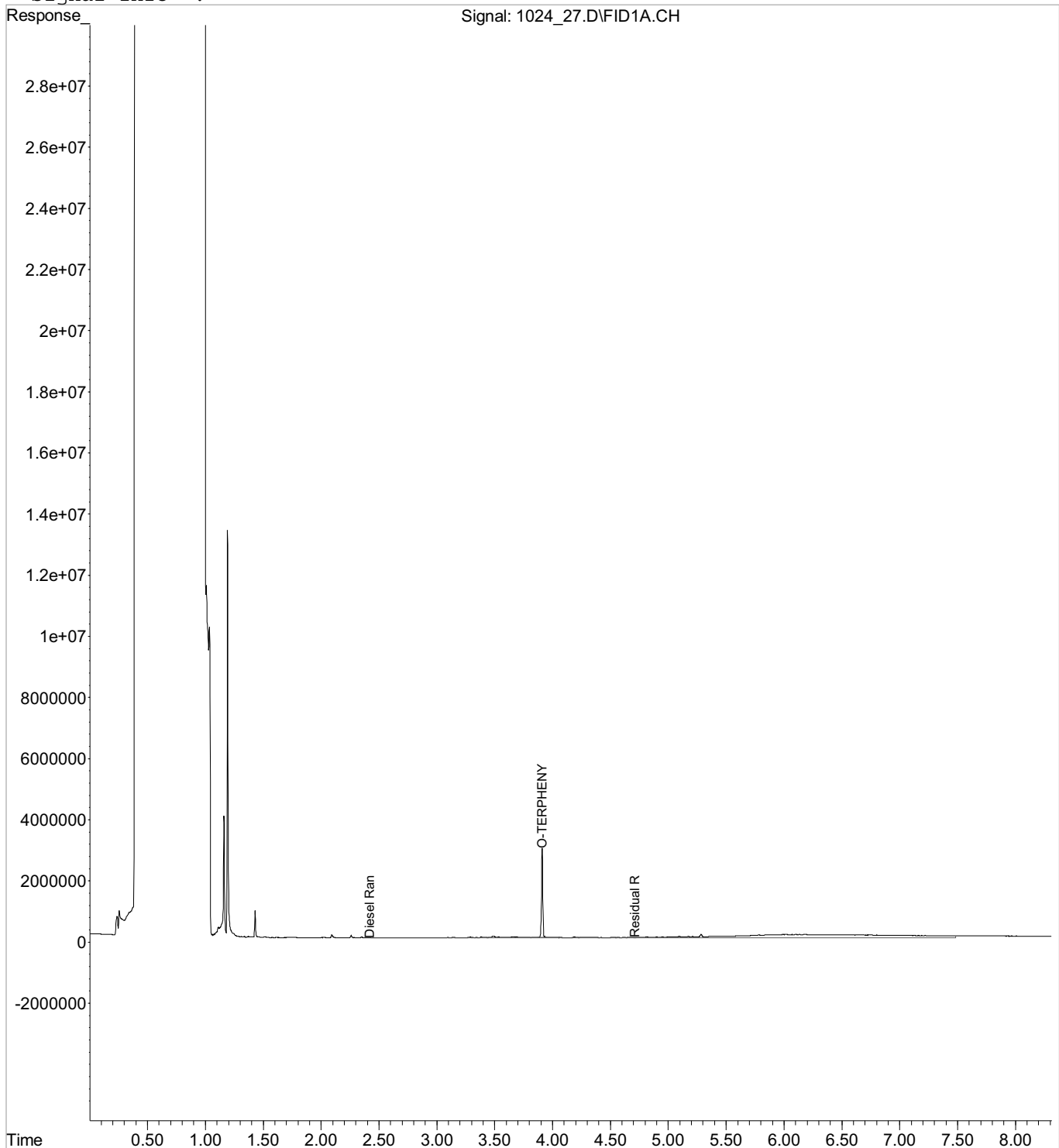
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102416\1024 27.D Vial: 33
Acq On : 24 Oct 2016 4:26 pm Operator: 720
Sample : L866626-16 1x WG919849 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.04
IntFile : EVENTS.E
Quant Time: Oct 24 16:36 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

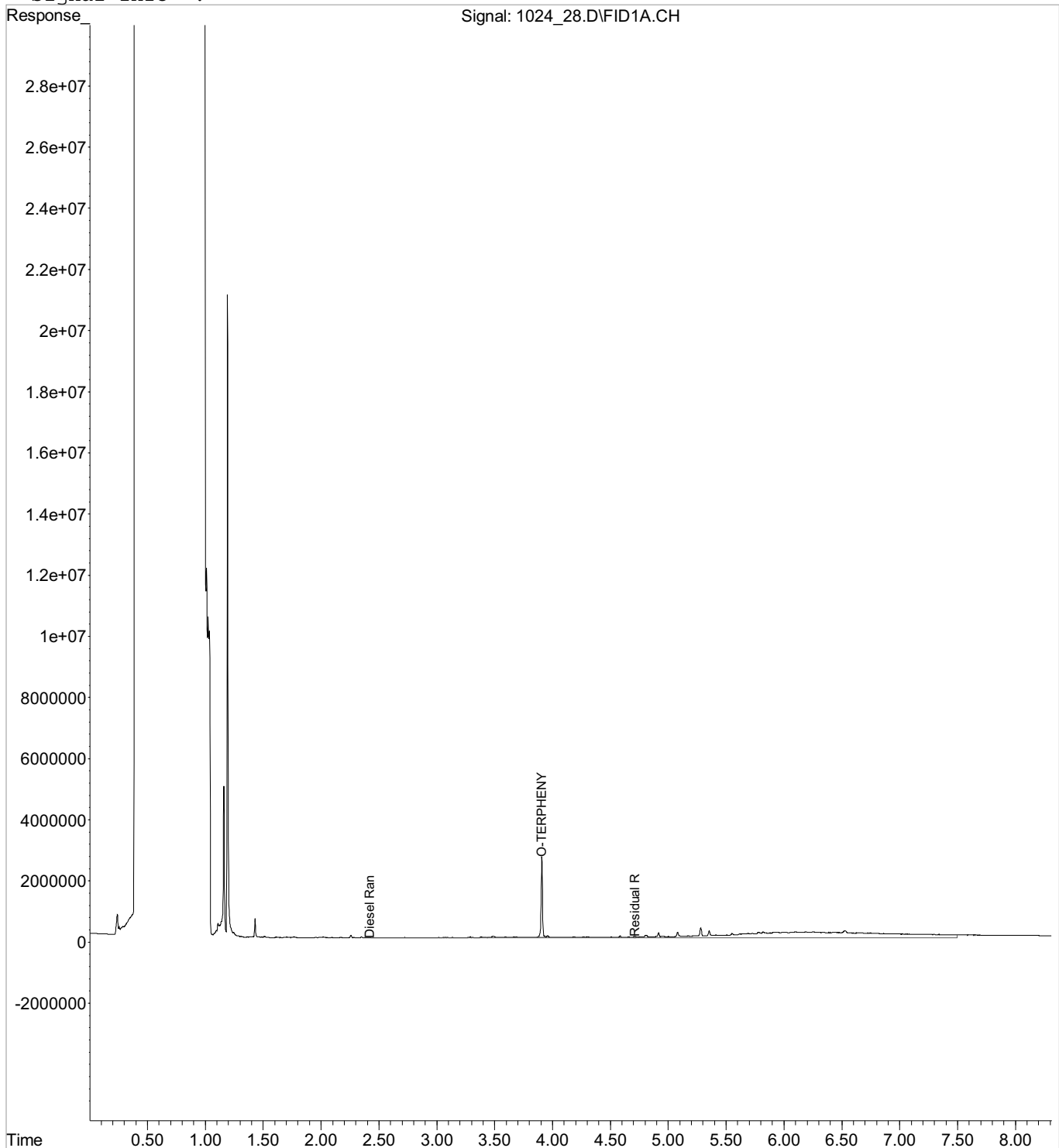
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102416\1024 28.D Vial: 34
Acq On : 24 Oct 2016 4:46 pm Operator: 720
Sample : L866626-17 1x WG919849 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.04
IntFile : EVENTS.E
Quant Time: Oct 24 17:13 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

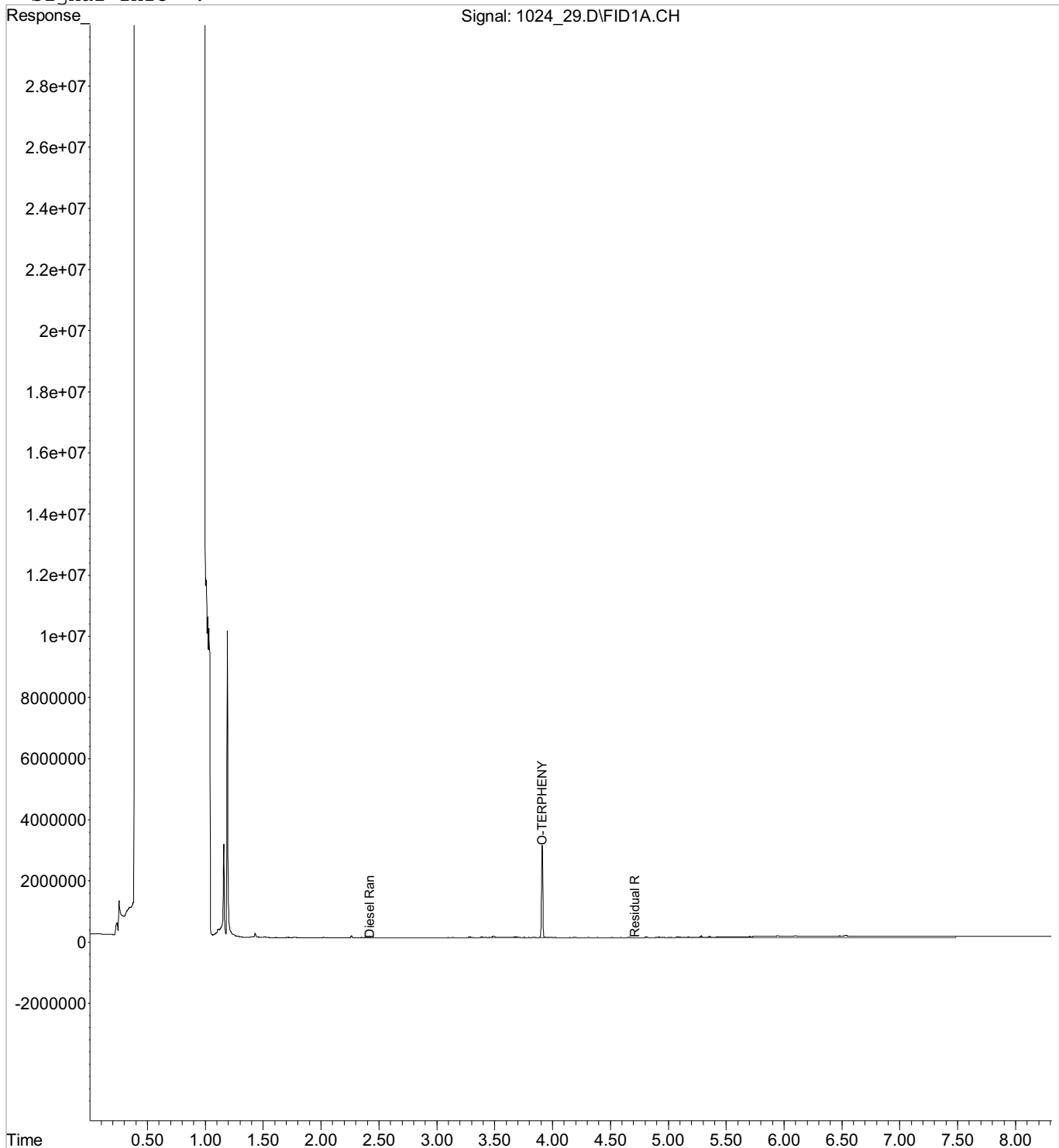
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102416\1024 29.D Vial: 35
Acq On : 24 Oct 2016 5:03 pm Operator: 720
Sample : L866626-18 1x WG919849 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.04
IntFile : EVENTS.E
Quant Time: Oct 24 17:14 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

Volume Inj. :
Signal Phase :
Signal Info :



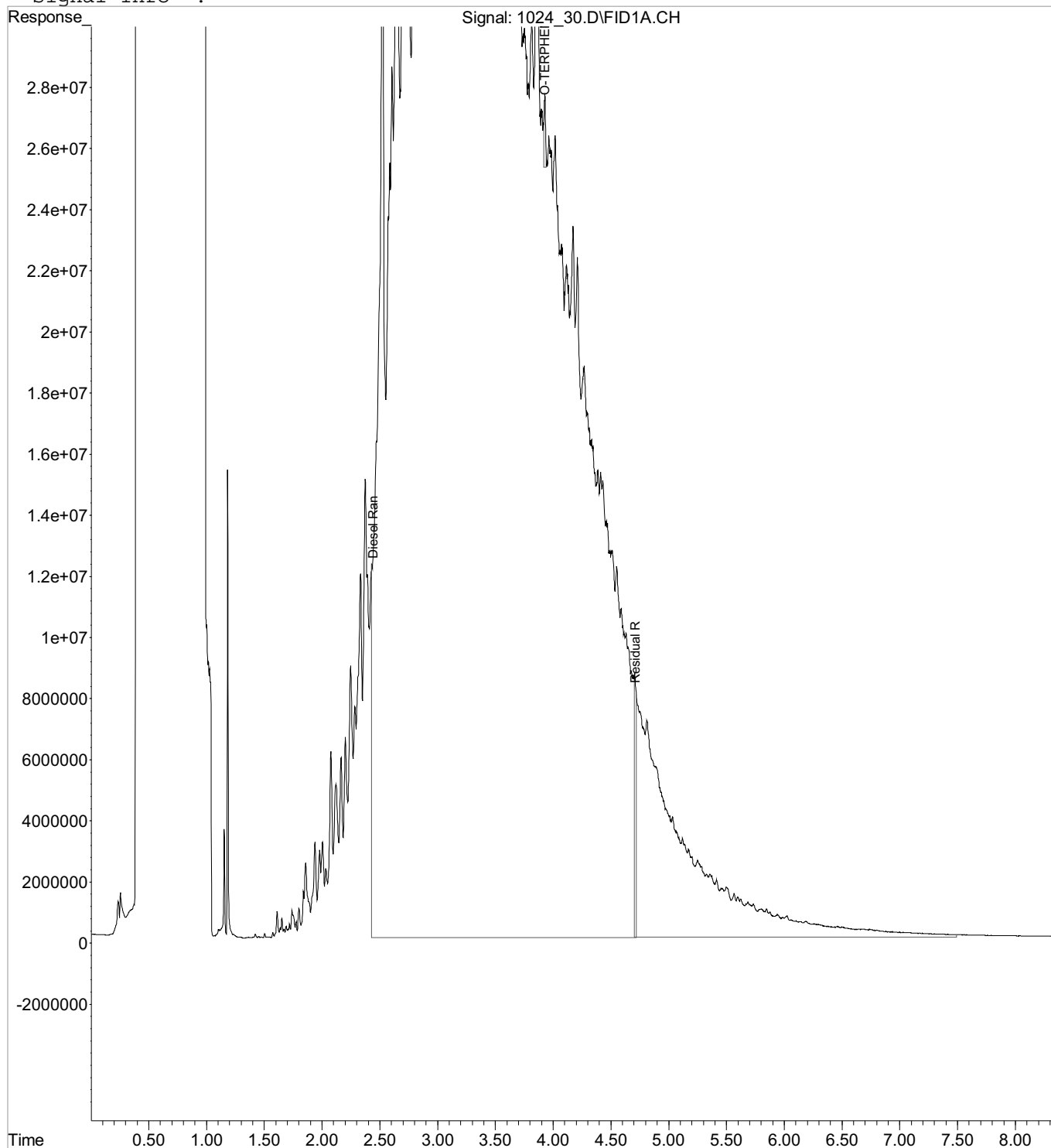
Data File : C:\MSDCHEM\1\DATA\102416\1024 30.D
Acq On : 24 Oct 2016 5:22 pm
Sample : L866626-19 1x WG919849 12.5-0.5
Misc : soil
IntFile : EVENTS.E
Quant Time: Oct 24 20:03 2016

Vial: 36
Operator: 720
Inst : SVGC2
Multiplr: 0.04

Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

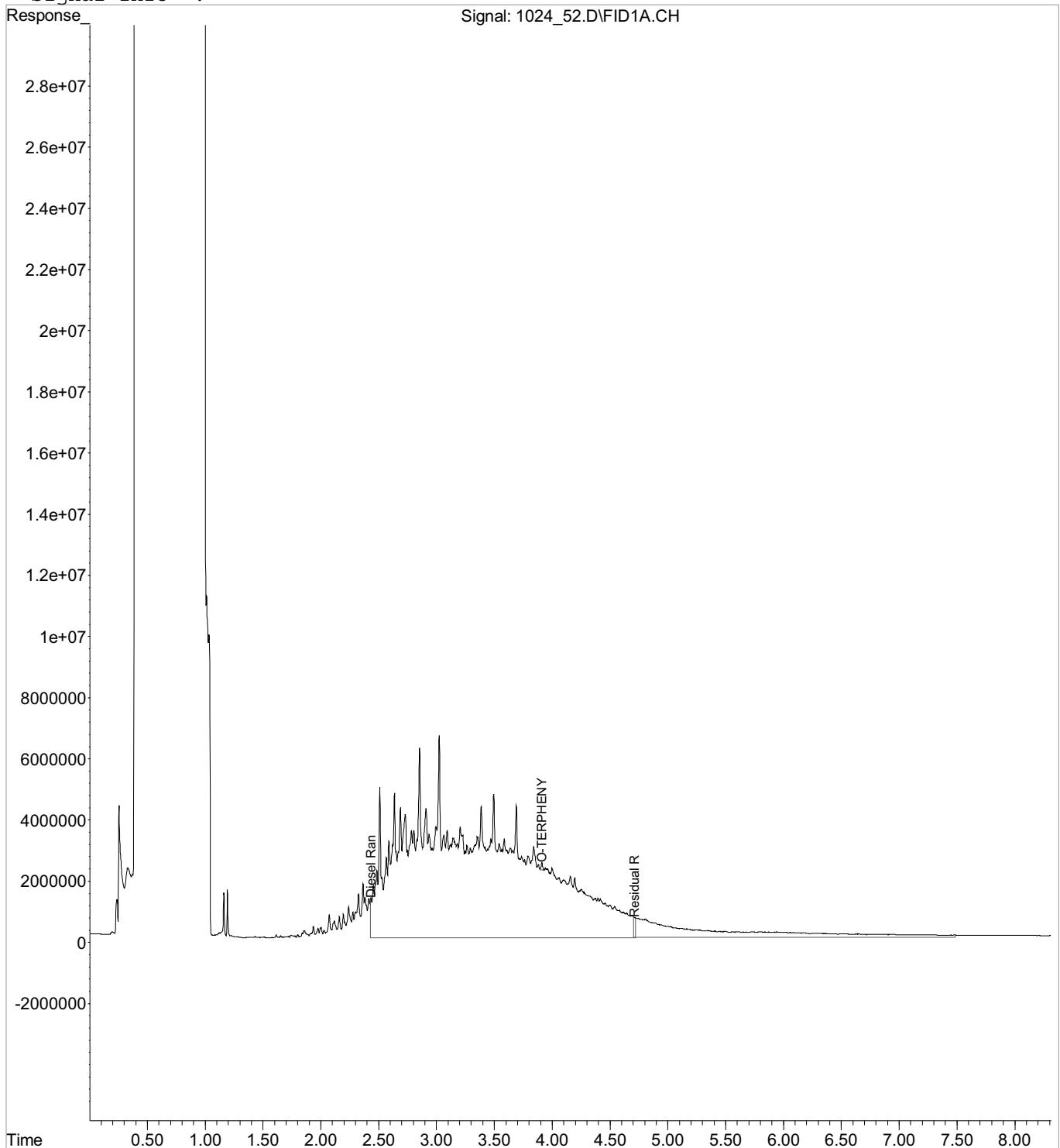
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\102416\1024 52.D Vial: 36
Acq On : 24 Oct 2016 11:50 pm Operator: 720
Sample : L866626-19 10x WG919849 12.5-0.5 Inst : SVGC2
Misc : soil Multiplr: 0.40
IntFile : EVENTS.E
Quant Time: Oct 25 8:59 2016 Quant Results File: EP02J05P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

Volume Inj. :
Signal Phase :
Signal Info :

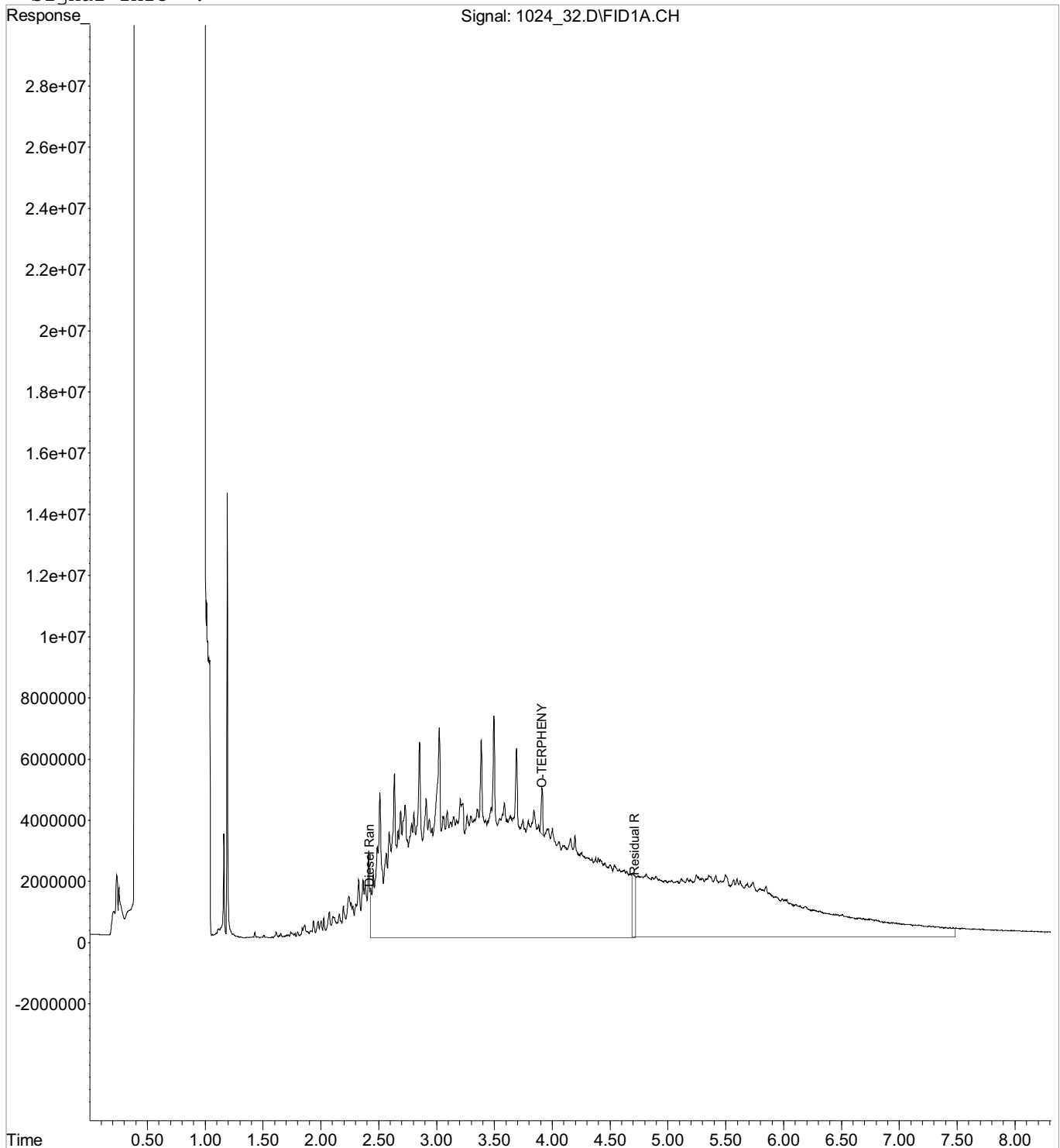


Data File : C:\MSDCHEM\1\DATA\102416\1024 32.D
Acq On : 24 Oct 2016 5:56 pm
Sample : L866626-20 1x WG919849 12.5-0.5
Misc : soil
IntFile : EVENTS.E
Quant Time: Oct 24 20:11 2016

Vial: 38
Operator: 720
Inst : SVGC2
Multiplr: 0.04

Quant Method : C:\MSDCHEM\1\METHODS\EP02J05P.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 05 15:43:18 2016
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

Volume Inj. :
Signal Phase :
Signal Info :



Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L868141
Samples Received: 10/25/2016
Project Number: 1696120
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Jason Romer
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



MW-17-20 L868141-01 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG921060	1	10/28/16 09:12	10/29/16 20:35	DMG
Total Solids by Method 2540 G-2011	WG920835	1	10/26/16 10:28	10/26/16 10:45	KDW

Collected by Joe S
 Collected date/time 10/17/16 12:40
 Received date/time 10/25/16 09:00

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

MW-14-20 L868141-02 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG921060	1	10/28/16 09:12	10/29/16 18:37	DMG
Total Solids by Method 2540 G-2011	WG920835	1	10/26/16 10:28	10/26/16 10:45	KDW

Collected by Joe S
 Collected date/time 10/18/16 14:23
 Received date/time 10/25/16 09:00

MW-15-20 L868141-03 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG921060	1	10/28/16 09:12	10/29/16 18:51	DMG
Total Solids by Method 2540 G-2011	WG920835	1	10/26/16 10:28	10/26/16 10:45	KDW

Collected by Joe S
 Collected date/time 10/18/16 10:15
 Received date/time 10/25/16 09:00

OHM-3-34 L868141-04 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG921060	50	10/28/16 09:12	10/29/16 21:01	DMG
Total Solids by Method 2540 G-2011	WG920835	1	10/26/16 10:28	10/26/16 10:45	KDW

Collected by Joe S
 Collected date/time 10/20/16 14:45
 Received date/time 10/25/16 09:00

OHM-4-25 L868141-05 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG921060	1	10/28/16 09:12	10/29/16 20:48	DMG
Total Solids by Method 2540 G-2011	WG920835	1	10/26/16 10:28	10/26/16 10:45	KDW

Collected by Joe S
 Collected date/time 10/20/16 09:50
 Received date/time 10/25/16 09:00

OHM-3-26 L868141-06 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG921060	50	10/28/16 09:12	10/29/16 21:13	DMG
Total Solids by Method 2540 G-2011	WG920835	1	10/26/16 10:28	10/26/16 10:45	KDW

Collected by Joe S
 Collected date/time 10/20/16 13:10
 Received date/time 10/25/16 09:00

B-16-01-07 L868141-07 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG921039	1000	10/28/16 01:53	10/28/16 20:22	CMJ
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG921060	800	10/28/16 09:12	10/31/16 17:02	ACM
Total Solids by Method 2540 G-2011	WG920835	1	10/26/16 10:28	10/26/16 10:45	KDW
Volatile Organic Compounds (GC/MS) by Method 8260C	WG921381	1.09	10/31/16 09:00	10/31/16 21:06	JHH

Collected by Joe S
 Collected date/time 10/18/16 15:55
 Received date/time 10/25/16 09:00



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jason Romer
Technical Service Representative

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.2		1	10/26/2016 10:45	WG920835

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	105		5.25	1	10/29/2016 20:35	WG921060
Residual Range Organics (RRO)	57.1		13.1	1	10/29/2016 20:35	WG921060
(S) o-Terphenyl	17.2	J2	50.0-150		10/29/2016 20:35	WG921060

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L868141-01 WG921060: NWTPHDX - SGT was performed

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	78.4		1	10/26/2016 10:45	WG920835

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.10	1	10/29/2016 18:37	WG921060
Residual Range Organics (RRO)	ND		12.8	1	10/29/2016 18:37	WG921060
(S) o-Terphenyl	60.8		50.0-150		10/29/2016 18:37	WG921060

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L868141-02 WG921060: NWTPHDX - SGT was performed

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.5		1	10/26/2016 10:45	WG920835

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.73	1	10/29/2016 18:51	WG921060
Residual Range Organics (RRO)	ND		11.8	1	10/29/2016 18:51	WG921060
(S) o-Terphenyl	112		50.0-150		10/29/2016 18:51	WG921060

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L868141-03 WG921060: NWTPHDX - SGT was performed

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.8		1	10/26/2016 10:45	WG920835

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	9010		257	50	10/29/2016 21:01	WG921060
Residual Range Organics (RRO)	9670		642	50	10/29/2016 21:01	WG921060
(S) o-Terphenyl	1150	<u>J7</u>	50.0-150		10/29/2016 21:01	WG921060

Sample Narrative:

NWTPHDX L868141-04 WG921060: NWTPHDX - SGT was performed



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.5		1	10/26/2016 10:45	WG920835

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	104		4.97	1	10/29/2016 20:48	WG921060
Residual Range Organics (RRO)	113		12.4	1	10/29/2016 20:48	WG921060
(S) o-Terphenyl	14.5	J2	50.0-150		10/29/2016 20:48	WG921060

Sample Narrative:

NWTPHDX L868141-05 WG921060: NWTPHDX - SGT was performed



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	75.6		1	10/26/2016 10:45	WG920835

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6940		264	50	10/29/2016 21:13	WG921060
Residual Range Organics (RRO)	6910		661	50	10/29/2016 21:13	WG921060
(S) o-Terphenyl	530	J7	50.0-150		10/29/2016 21:13	WG921060

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L868141-06 WG921060: NWTPHDX - SGT was performed

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	93.4		1	10/26/2016 10:45	WG920835

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0583	1.09	10/31/2016 21:06	WG921381
Acrylonitrile	ND		0.0117	1.09	10/31/2016 21:06	WG921381
Benzene	0.00181		0.00117	1.09	10/31/2016 21:06	WG921381
Bromobenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Bromodichloromethane	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Bromoform	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Bromomethane	ND		0.00583	1.09	10/31/2016 21:06	WG921381
n-Butylbenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
sec-Butylbenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
tert-Butylbenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Carbon tetrachloride	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Chlorobenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Chlorodibromomethane	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Chloroethane	ND		0.00583	1.09	10/31/2016 21:06	WG921381
2-Chloroethyl vinyl ether	ND		0.0583	1.09	10/31/2016 21:06	WG921381
Chloroform	ND		0.00583	1.09	10/31/2016 21:06	WG921381
Chloromethane	ND		0.00292	1.09	10/31/2016 21:06	WG921381
2-Chlorotoluene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
4-Chlorotoluene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
1,2-Dibromo-3-Chloropropane	ND		0.00583	1.09	10/31/2016 21:06	WG921381
1,2-Dibromoethane	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Dibromomethane	ND		0.00117	1.09	10/31/2016 21:06	WG921381
1,2-Dichlorobenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
1,3-Dichlorobenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
1,4-Dichlorobenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Dichlorodifluoromethane	ND		0.00583	1.09	10/31/2016 21:06	WG921381
1,1-Dichloroethane	ND		0.00117	1.09	10/31/2016 21:06	WG921381
1,2-Dichloroethane	ND		0.00117	1.09	10/31/2016 21:06	WG921381
1,1-Dichloroethene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
cis-1,2-Dichloroethene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
trans-1,2-Dichloroethene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
1,2-Dichloropropane	ND		0.00117	1.09	10/31/2016 21:06	WG921381
1,1-Dichloropropene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
1,3-Dichloropropane	ND		0.00117	1.09	10/31/2016 21:06	WG921381
cis-1,3-Dichloropropene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
trans-1,3-Dichloropropene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
2,2-Dichloropropane	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Di-isopropyl ether	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Ethylbenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Hexachloro-1,3-butadiene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Isopropylbenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
p-Isopropyltoluene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
2-Butanone (MEK)	0.0185	<u>JO</u>	0.0117	1.09	10/31/2016 21:06	WG921381
Methylene Chloride	ND		0.00583	1.09	10/31/2016 21:06	WG921381
4-Methyl-2-pentanone (MIBK)	ND		0.0117	1.09	10/31/2016 21:06	WG921381
Methyl tert-butyl ether	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Naphthalene	ND	<u>V3</u>	0.00583	1.09	10/31/2016 21:06	WG921381
n-Propylbenzene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
Styrene	ND		0.00117	1.09	10/31/2016 21:06	WG921381
1,1,1,2-Tetrachloroethane	ND		0.00117	1.09	10/31/2016 21:06	WG921381

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	ND		0.0017	1.09	10/31/2016 21:06	WG921381
1,1,2-Trichlorotrifluoroethane	ND		0.0017	1.09	10/31/2016 21:06	WG921381
Tetrachloroethene	ND		0.0017	1.09	10/31/2016 21:06	WG921381
Toluene	ND		0.00583	1.09	10/31/2016 21:06	WG921381
1,2,3-Trichlorobenzene	ND		0.0017	1.09	10/31/2016 21:06	WG921381
1,2,4-Trichlorobenzene	ND		0.0017	1.09	10/31/2016 21:06	WG921381
1,1,1-Trichloroethane	ND		0.0017	1.09	10/31/2016 21:06	WG921381
1,1,2-Trichloroethane	ND		0.0017	1.09	10/31/2016 21:06	WG921381
Trichloroethene	ND		0.0017	1.09	10/31/2016 21:06	WG921381
Trichlorofluoromethane	ND		0.00583	1.09	10/31/2016 21:06	WG921381
1,2,3-Trichloropropane	ND		0.00292	1.09	10/31/2016 21:06	WG921381
1,2,4-Trimethylbenzene	ND		0.0017	1.09	10/31/2016 21:06	WG921381
1,2,3-Trimethylbenzene	0.00430	V3	0.0017	1.09	10/31/2016 21:06	WG921381
Vinyl chloride	ND		0.0017	1.09	10/31/2016 21:06	WG921381
1,3,5-Trimethylbenzene	ND		0.0017	1.09	10/31/2016 21:06	WG921381
Xylenes, Total	ND		0.00350	1.09	10/31/2016 21:06	WG921381
(S) Toluene-d8	106		88.7-115		10/31/2016 21:06	WG921381
(S) Dibromofluoromethane	131	J1	76.3-123		10/31/2016 21:06	WG921381
(S) 4-Bromofluorobenzene	68.3	J2	69.7-129		10/31/2016 21:06	WG921381

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4610		3430	800	10/31/2016 17:02	WG921060
Residual Range Organics (RRO)	12600		8560	800	10/31/2016 17:02	WG921060
(S) o-Terphenyl	0.000	J2	50.0-150		10/31/2016 17:02	WG921060

Sample Narrative:

NWTPHDX L868141-07 WG921060: NWTPHDX - SGT was performed

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		35.3	1000	10/28/2016 20:22	WG921039
Acenaphthylene	ND		35.3	1000	10/28/2016 20:22	WG921039
Anthracene	ND		35.3	1000	10/28/2016 20:22	WG921039
Benzidine	ND		356	1000	10/28/2016 20:22	WG921039
Benzo(a)anthracene	ND		35.3	1000	10/28/2016 20:22	WG921039
Benzo(b)fluoranthene	ND		35.3	1000	10/28/2016 20:22	WG921039
Benzo(k)fluoranthene	ND		35.3	1000	10/28/2016 20:22	WG921039
Benzo(g,h,i)perylene	ND		35.3	1000	10/28/2016 20:22	WG921039
Benzo(a)pyrene	ND		35.3	1000	10/28/2016 20:22	WG921039
Bis(2-chlorethoxy)methane	ND		356	1000	10/28/2016 20:22	WG921039
Bis(2-chloroethyl)ether	ND		356	1000	10/28/2016 20:22	WG921039
Bis(2-chloroisopropyl)ether	ND		356	1000	10/28/2016 20:22	WG921039
4-Bromophenyl-phenylether	ND		356	1000	10/28/2016 20:22	WG921039
2-Chloronaphthalene	ND		35.3	1000	10/28/2016 20:22	WG921039
4-Chlorophenyl-phenylether	ND		356	1000	10/28/2016 20:22	WG921039
Chrysene	ND		35.3	1000	10/28/2016 20:22	WG921039
Dibenz(a,h)anthracene	ND		35.3	1000	10/28/2016 20:22	WG921039
3,3-Dichlorobenzidine	ND		356	1000	10/28/2016 20:22	WG921039
2,4-Dinitrotoluene	ND		356	1000	10/28/2016 20:22	WG921039
2,6-Dinitrotoluene	ND		356	1000	10/28/2016 20:22	WG921039
Fluoranthene	ND		35.3	1000	10/28/2016 20:22	WG921039
Fluorene	ND		35.3	1000	10/28/2016 20:22	WG921039



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Hexachlorobenzene	ND		356	1000	10/28/2016 20:22	WG921039
Hexachloro-1,3-butadiene	ND		356	1000	10/28/2016 20:22	WG921039
Hexachlorocyclopentadiene	ND		356	1000	10/28/2016 20:22	WG921039
Hexachloroethane	ND		356	1000	10/28/2016 20:22	WG921039
Indeno(1,2,3-cd)pyrene	ND		35.3	1000	10/28/2016 20:22	WG921039
Isophorone	ND		356	1000	10/28/2016 20:22	WG921039
Naphthalene	ND		35.3	1000	10/28/2016 20:22	WG921039
Nitrobenzene	ND		356	1000	10/28/2016 20:22	WG921039
n-Nitrosodimethylamine	ND		356	1000	10/28/2016 20:22	WG921039
n-Nitrosodiphenylamine	ND		356	1000	10/28/2016 20:22	WG921039
n-Nitrosodi-n-propylamine	ND		356	1000	10/28/2016 20:22	WG921039
Phenanthrene	ND		35.3	1000	10/28/2016 20:22	WG921039
Benzylbutyl phthalate	ND		356	1000	10/28/2016 20:22	WG921039
Bis(2-ethylhexyl)phthalate	ND		356	1000	10/28/2016 20:22	WG921039
Di-n-butyl phthalate	ND		356	1000	10/28/2016 20:22	WG921039
Diethyl phthalate	ND		356	1000	10/28/2016 20:22	WG921039
Dimethyl phthalate	ND		356	1000	10/28/2016 20:22	WG921039
Di-n-octyl phthalate	ND		356	1000	10/28/2016 20:22	WG921039
Pyrene	ND		35.3	1000	10/28/2016 20:22	WG921039
1,2,4-Trichlorobenzene	ND		356	1000	10/28/2016 20:22	WG921039
4-Chloro-3-methylphenol	ND		356	1000	10/28/2016 20:22	WG921039
2-Chlorophenol	ND		356	1000	10/28/2016 20:22	WG921039
2,4-Dichlorophenol	ND		356	1000	10/28/2016 20:22	WG921039
2,4-Dimethylphenol	ND		356	1000	10/28/2016 20:22	WG921039
4,6-Dinitro-2-methylphenol	ND		356	1000	10/28/2016 20:22	WG921039
2,4-Dinitrophenol	ND		356	1000	10/28/2016 20:22	WG921039
2-Methylphenol	ND		356	1000	10/28/2016 20:22	WG921039
3&4-Methyl Phenol	ND		356	1000	10/28/2016 20:22	WG921039
2-Nitrophenol	ND		356	1000	10/28/2016 20:22	WG921039
4-Nitrophenol	ND		356	1000	10/28/2016 20:22	WG921039
Pentachlorophenol	ND		356	1000	10/28/2016 20:22	WG921039
Phenol	ND		356	1000	10/28/2016 20:22	WG921039
2,4,6-Trichlorophenol	ND		356	1000	10/28/2016 20:22	WG921039
(S) 2-Fluorophenol	0.000	J7	21.1-116		10/28/2016 20:22	WG921039
(S) Phenol-d5	21.6	J7	26.3-121		10/28/2016 20:22	WG921039
(S) Nitrobenzene-d5	68.6	J7	21.9-129		10/28/2016 20:22	WG921039
(S) 2-Fluorobiphenyl	45.1	J7	34.9-129		10/28/2016 20:22	WG921039
(S) 2,4,6-Tribromophenol	0.000	J7	21.6-142		10/28/2016 20:22	WG921039
(S) p-Terphenyl-d14	93.8	J7	21.5-128		10/28/2016 20:22	WG921039

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

8270D L868141-07 WG921039: Dilution due to extract matrix



Method Blank (MB)

(MB) R3173647-1 10/26/16 10:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L868141-07 Original Sample (OS) • Duplicate (DUP)

(OS) L868141-07 10/26/16 10:45 • (DUP) R3173647-3 10/26/16 10:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	93.4	95.5	1	2.21		5

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3173647-2 10/26/16 10:45

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



Method Blank (MB)

(MB) R3174755-3 10/31/16 11:41

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 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
Hexachloro-1,3-butadiene	U		0.000342	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3174755-3 10/31/16 11:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	99.9			88.7-115
(S) Dibromofluoromethane	110			76.3-123
(S) 4-Bromofluorobenzene	91.0			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) R3174755-1 10/31/16 10:21 • (LCSD) R3174755-2 10/31/16 10:40

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	0.0945	0.0961	75.6	76.9	25.3-178			1.68	22.9
Acrylonitrile	0.125	0.157	0.159	126	127	57.8-143			1.35	20
Benzene	0.0250	0.0246	0.0253	98.5	101	72.6-120			2.67	20
Bromobenzene	0.0250	0.0220	0.0234	88.0	93.7	80.3-115			6.25	20



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

(LCS) R3174755-1 10/31/16 10:21 • (LCSD) R3174755-2 10/31/16 10:40

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 %
Bromodichloromethane	0.0250	0.0256	0.0262	102	105	75.3-119			2.27	20
Bromoform	0.0250	0.0231	0.0244	92.4	97.8	69.1-135			5.69	20
Bromomethane	0.0250	0.0260	0.0256	104	102	23.0-191			1.64	20
n-Butylbenzene	0.0250	0.0256	0.0265	102	106	74.2-134			3.34	20
sec-Butylbenzene	0.0250	0.0211	0.0225	84.2	90.0	77.8-129			6.70	20
tert-Butylbenzene	0.0250	0.0201	0.0213	80.4	85.3	77.2-129			5.93	20
Carbon tetrachloride	0.0250	0.0215	0.0226	86.1	90.6	69.4-129			5.10	20
Chlorobenzene	0.0250	0.0198	0.0204	79.3	81.5	78.9-122			2.73	20
Chlorodibromomethane	0.0250	0.0217	0.0218	86.7	87.2	76.4-126			0.590	20
Chloroethane	0.0250	0.0247	0.0245	98.9	98.1	47.2-147			0.760	20
2-Chloroethyl vinyl ether	0.125	0.178	0.168	143	135	16.7-162			5.88	23.7
Chloroform	0.0250	0.0252	0.0268	101	107	73.3-122			5.89	20
Chloromethane	0.0250	0.0214	0.0239	85.5	95.6	53.1-135			11.2	20
2-Chlorotoluene	0.0250	0.0215	0.0230	86.1	92.1	74.6-127			6.64	20
4-Chlorotoluene	0.0250	0.0211	0.0225	84.3	90.1	79.5-123			6.70	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0256	0.0259	102	104	64.9-131			1.26	20
1,2-Dibromoethane	0.0250	0.0220	0.0219	87.8	87.5	67.2-121			0.360	20
Dibromomethane	0.0250	0.0266	0.0272	106	109	78.5-117			2.33	20
1,2-Dichlorobenzene	0.0250	0.0228	0.0236	91.4	94.5	83.6-119			3.36	20
1,3-Dichlorobenzene	0.0250	0.0191	0.0208	76.5	83.2	75.9-129			8.43	20
1,4-Dichlorobenzene	0.0250	0.0224	0.0234	89.8	93.6	81.0-115			4.15	20
Dichlorodifluoromethane	0.0250	0.0218	0.0239	87.1	95.4	50.9-139			9.09	20
1,1-Dichloroethane	0.0250	0.0258	0.0280	103	112	71.7-125			8.09	20
1,2-Dichloroethane	0.0250	0.0296	0.0303	118	121	67.2-121			2.51	20
1,1-Dichloroethene	0.0250	0.0244	0.0236	97.7	94.5	60.6-133			3.34	20
cis-1,2-Dichloroethene	0.0250	0.0243	0.0266	97.0	106	76.1-121			9.21	20
trans-1,2-Dichloroethene	0.0250	0.0220	0.0246	87.9	98.3	70.7-124			11.1	20
1,2-Dichloropropane	0.0250	0.0257	0.0263	103	105	76.9-123			2.34	20
1,1-Dichloropropene	0.0250	0.0277	0.0284	111	114	71.2-126			2.48	20
1,3-Dichloropropane	0.0250	0.0238	0.0233	95.0	93.2	80.3-114			1.98	20
cis-1,3-Dichloropropene	0.0250	0.0268	0.0270	107	108	77.3-123			0.610	20
trans-1,3-Dichloropropene	0.0250	0.0265	0.0261	106	104	73.0-127			1.56	20
2,2-Dichloropropane	0.0250	0.0261	0.0289	104	116	61.9-132			10.4	20
Di-isopropyl ether	0.0250	0.0255	0.0282	102	113	67.2-131			9.87	20
Ethylbenzene	0.0250	0.0203	0.0210	81.2	84.0	78.6-124			3.30	20
Hexachloro-1,3-butadiene	0.0250	0.0240	0.0254	96.0	102	69.2-136			5.77	20
Isopropylbenzene	0.0250	0.0203	0.0214	81.4	85.8	79.4-126			5.27	20
p-Isopropyltoluene	0.0250	0.0209	0.0221	83.6	88.4	75.4-132			5.49	20
2-Butanone (MEK)	0.125	0.160	0.152	128	121	44.5-154			5.11	21.3
Methylene Chloride	0.0250	0.0210	0.0234	84.0	93.7	68.2-119			10.9	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) R3174755-1 10/31/16 10:21 • (LCSD) R3174755-2 10/31/16 10:40

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 %
4-Methyl-2-pentanone (MIBK)	0.125	0.156	0.152	125	121	61.1-138			2.96	20
Methyl tert-butyl ether	0.0250	0.0248	0.0269	99.2	107	70.2-122			7.93	20
Naphthalene	0.0250	0.0241	0.0243	96.3	97.4	69.9-132			1.10	20
n-Propylbenzene	0.0250	0.0216	0.0229	86.3	91.7	80.2-124			6.02	20
Styrene	0.0250	0.0212	0.0223	84.7	89.0	79.4-124			4.99	20
1,1,1,2-Tetrachloroethane	0.0250	0.0201	0.0212	80.4	84.7	76.7-127			5.20	20
1,1,2,2-Tetrachloroethane	0.0250	0.0247	0.0252	98.9	101	78.8-124			2.01	20
Tetrachloroethene	0.0250	0.0195	0.0201	77.9	80.5	71.1-133			3.25	20
Toluene	0.0250	0.0231	0.0236	92.3	94.5	76.7-116			2.36	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0245	0.0239	98.0	95.5	62.6-138			2.53	20
1,2,3-Trichlorobenzene	0.0250	0.0242	0.0245	96.8	98.1	72.5-137			1.32	20
1,2,4-Trichlorobenzene	0.0250	0.0236	0.0246	94.3	98.3	74.0-137			4.13	20
1,1,1-Trichloroethane	0.0250	0.0247	0.0262	98.7	105	69.9-127			6.14	20
1,1,2-Trichloroethane	0.0250	0.0227	0.0219	90.8	87.5	81.9-119			3.72	20
Trichloroethene	0.0250	0.0221	0.0236	88.6	94.3	77.2-122			6.29	20
Trichlorofluoromethane	0.0250	0.0256	0.0253	103	101	51.5-151			1.51	20
1,2,3-Trichloropropane	0.0250	0.0240	0.0251	95.8	100	74.0-124			4.70	20
1,2,3-Trimethylbenzene	0.0250	0.0236	0.0243	94.5	97.0	79.4-118			2.67	20
1,2,4-Trimethylbenzene	0.0250	0.0207	0.0221	82.8	88.5	77.1-124			6.69	20
1,3,5-Trimethylbenzene	0.0250	0.0208	0.0223	83.4	89.1	79.0-125			6.64	20
Vinyl chloride	0.0250	0.0259	0.0269	104	108	58.4-134			3.62	20
Xylenes, Total	0.0750	0.0611	0.0636	81.4	84.8	78.1-123			4.03	20
<i>(S) Toluene-d8</i>				102	101	88.7-115				
<i>(S) Dibromofluoromethane</i>				108	110	76.3-123				
<i>(S) 4-Bromofluorobenzene</i>				90.8	92.0	69.7-129				

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

L868104-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L868104-04 10/31/16 19:05 • (MS) R3174755-4 10/31/16 19:25 • (MSD) R3174755-5 10/31/16 19:46

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	1.23	1.78	39.4	57.1	25	5.00-182		J3	36.7	31.5
Acrylonitrile	0.125	ND	3.04	3.56	97.4	114	25	39.3-152			15.6	27.2
Benzene	0.0250	0.0308	0.614	0.613	93.3	93.1	25	47.8-131			0.140	22.8
Bromobenzene	0.0250	ND	0.523	0.513	83.6	82.1	25	40.0-130			1.82	27.4
Bromodichloromethane	0.0250	ND	0.570	0.573	91.1	91.7	25	50.6-128			0.590	22.8
Bromoform	0.0250	ND	0.482	0.481	77.0	77.0	25	43.3-139			0.110	25.9
Bromomethane	0.0250	ND	0.543	0.529	86.9	84.7	25	5.00-189			2.55	26.7
n-Butylbenzene	0.0250	ND	0.551	0.574	88.1	91.8	25	23.6-146			4.05	39.2



L868104-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L868104-04 10/31/16 19:05 • (MS) R3174755-4 10/31/16 19:25 • (MSD) R3174755-5 10/31/16 19:46

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 %
sec-Butylbenzene	0.0250	ND	0.457	0.446	73.2	71.3	25	31.0-142			2.61	34.7
tert-Butylbenzene	0.0250	ND	0.445	0.433	71.2	69.3	25	36.9-142			2.80	31.7
Carbon tetrachloride	0.0250	ND	0.418	0.475	66.9	75.9	25	46.0-140			12.6	27.2
Chlorobenzene	0.0250	ND	0.474	0.472	75.9	75.5	25	44.1-134			0.520	25.7
Chlorodibromomethane	0.0250	ND	0.488	0.491	78.1	78.5	25	49.7-134			0.560	24
Chloroethane	0.0250	ND	0.453	0.477	72.5	76.2	25	5.00-164			5.03	28.4
2-Chloroethyl vinyl ether	0.125	ND	4.01	4.28	128	137	25	5.00-159			6.31	40
Chloroform	0.0250	ND	0.529	0.595	84.7	95.2	25	51.2-133			11.7	22.8
Chloromethane	0.0250	ND	0.423	0.491	67.7	78.6	25	31.4-141			15.0	24.6
2-Chlorotoluene	0.0250	ND	0.499	0.487	79.8	77.9	25	36.1-137			2.41	28.9
4-Chlorotoluene	0.0250	ND	0.490	0.472	78.4	75.6	25	35.4-137			3.73	29.8
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.480	0.500	76.8	80.0	25	40.4-138			4.16	30.8
1,2-Dibromoethane	0.0250	ND	0.510	0.520	81.6	83.1	25	50.2-133			1.87	23.6
Dibromomethane	0.0250	ND	0.586	0.592	93.8	94.7	25	52.4-128			0.960	23
1,2-Dichlorobenzene	0.0250	ND	0.522	0.540	83.5	86.4	25	34.6-139			3.36	29.9
1,3-Dichlorobenzene	0.0250	ND	0.426	0.409	68.2	65.4	25	28.4-142			4.19	31.2
1,4-Dichlorobenzene	0.0250	ND	0.524	0.527	83.8	84.2	25	35.0-133			0.510	31.1
Dichlorodifluoromethane	0.0250	ND	0.416	0.442	66.5	70.7	25	31.2-144			6.16	30.2
1,1-Dichloroethane	0.0250	ND	0.554	0.635	88.6	102	25	49.1-136			13.6	22.9
1,2-Dichloroethane	0.0250	ND	0.703	0.701	113	112	25	47.1-129			0.360	22.7
1,1-Dichloroethene	0.0250	ND	0.600	0.579	96.0	92.6	25	36.1-142			3.59	25.6
cis-1,2-Dichloroethene	0.0250	ND	0.501	0.584	80.1	93.4	25	50.6-133			15.3	23
trans-1,2-Dichloroethene	0.0250	ND	0.458	0.534	73.3	85.5	25	43.8-135			15.4	24.8
1,2-Dichloropropane	0.0250	ND	0.604	0.619	96.6	99.0	25	50.3-134			2.38	22.7
1,1-Dichloropropene	0.0250	ND	0.559	0.634	89.4	101	25	43.0-137			12.6	26.4
1,3-Dichloropropane	0.0250	ND	0.559	0.577	89.5	92.3	25	51.4-127			3.11	23.1
cis-1,3-Dichloropropene	0.0250	ND	0.617	0.619	98.7	99.1	25	48.4-134			0.420	23.6
trans-1,3-Dichloropropene	0.0250	ND	0.586	0.611	93.8	97.7	25	46.6-135			4.12	25.3
2,2-Dichloropropane	0.0250	ND	0.486	0.546	77.7	87.4	25	45.2-141			11.7	26.8
Di-isopropyl ether	0.0250	ND	0.569	0.650	91.0	104	25	46.7-140			13.4	23.5
Ethylbenzene	0.0250	ND	0.485	0.487	77.7	78.0	25	44.8-135			0.370	26.9
Hexachloro-1,3-butadiene	0.0250	ND	0.493	0.516	78.8	82.5	25	10.0-149			4.54	40
Isopropylbenzene	0.0250	ND	0.466	0.465	74.6	74.4	25	41.9-139			0.320	29.3
p-Isopropyltoluene	0.0250	ND	0.444	0.430	71.1	68.9	25	27.3-146			3.17	35.1
2-Butanone (MEK)	0.125	ND	2.92	3.45	93.6	110	25	23.9-170			16.5	28.3
Methylene Chloride	0.0250	ND	0.449	0.511	71.8	81.8	25	46.7-125			13.1	22.2
4-Methyl-2-pentanone (MIBK)	0.125	ND	3.19	3.27	102	105	25	42.4-146			2.47	26.7
Methyl tert-butyl ether	0.0250	ND	0.519	0.576	83.0	92.1	25	50.4-131			10.4	24.8
Naphthalene	0.0250	ND	0.474	0.476	75.9	76.1	25	18.4-145			0.330	34
n-Propylbenzene	0.0250	ND	0.484	0.480	77.4	76.8	25	35.2-139			0.790	31.9

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L868104-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L868104-04 10/31/16 19:05 • (MS) R3174755-4 10/31/16 19:25 • (MSD) R3174755-5 10/31/16 19:46

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 %
Styrene	0.0250	ND	0.500	0.498	79.9	79.7	25	39.7-137			0.220	28.2
1,1,1,2-Tetrachloroethane	0.0250	ND	0.472	0.466	75.6	74.6	25	48.8-136			1.33	25.5
1,1,2,2-Tetrachloroethane	0.0250	ND	0.513	0.509	82.1	81.4	25	45.7-140			0.800	26.4
Tetrachloroethene	0.0250	ND	0.444	0.442	71.1	70.8	25	37.7-140			0.490	29.2
Toluene	0.0250	ND	0.587	0.595	83.9	85.3	25	47.8-127			1.41	24.3
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.584	0.571	93.5	91.3	25	35.7-146			2.30	28.8
1,2,3-Trichlorobenzene	0.0250	ND	0.495	0.486	79.2	77.8	25	10.0-150			1.81	38.5
1,2,4-Trichlorobenzene	0.0250	ND	0.477	0.482	76.3	77.1	25	10.0-153			1.02	39.3
1,1,1-Trichloroethane	0.0250	ND	0.494	0.544	79.0	87.1	25	49.0-138			9.71	25.3
1,1,2-Trichloroethane	0.0250	ND	0.517	0.522	82.7	83.6	25	52.3-132			1.10	23.4
Trichloroethene	0.0250	ND	0.507	0.509	81.2	81.4	25	48.0-132			0.320	24.8
Trichlorofluoromethane	0.0250	ND	0.703	0.696	113	111	25	12.8-169			1.09	29.7
1,2,3-Trichloropropane	0.0250	ND	0.539	0.512	86.2	81.9	25	44.4-138			5.22	26.3
1,2,3-Trimethylbenzene	0.0250	ND	0.551	0.565	88.2	90.4	25	41.0-133			2.46	27.6
1,2,4-Trimethylbenzene	0.0250	ND	0.460	0.445	73.7	71.2	25	32.9-139			3.44	30.6
1,3,5-Trimethylbenzene	0.0250	ND	0.470	0.453	75.2	72.5	25	37.1-138			3.71	30.6
Vinyl chloride	0.0250	ND	0.489	0.562	78.2	89.9	25	32.0-146			13.9	26.3
Xylenes, Total	0.0750	ND	1.45	1.45	76.0	76.1	25	42.7-135			0.230	26.6
(S) Toluene-d8					101	101		88.7-115				
(S) Dibromofluoromethane					94.1	104		76.3-123				
(S) 4-Bromofluorobenzene					90.9	89.4		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) R3174376-1 10/29/16 13:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	102			50.0-150

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

(LCS) R3174376-2 10/29/16 13:34 • (LCSD) R3174376-3 10/29/16 13:47

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)	30.0	30.2	25.2	101	83.9	50.0-150			18.0	20
Residual Range Organics (RRO)	30.0	29.5	25.4	98.2	84.6	50.0-150			14.9	20
<i>(S) o-Terphenyl</i>				126	115	50.0-150				

L867928-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L867928-13 10/29/16 16:54 • (MS) R3174376-4 10/29/16 17:07 • (MSD) R3174376-5 10/29/16 17:20

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	%	%		%			%	%
Diesel Range Organics (DRO)	38.3	ND	25.4	21.6	65.7	55.9	1	50.0-150			16.0	20
Residual Range Organics (RRO)	38.3	ND	23.1	19.3	60.3	50.6	1	50.0-150			17.5	20
<i>(S) o-Terphenyl</i>					109	103		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) R3174443-3 10/28/16 12:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0330
Acenaphthylene	U		0.00671	0.0330
Anthracene	U		0.00632	0.0330
Benzidine	U		0.0637	0.333
Benzo(a)anthracene	U		0.00428	0.0330
Benzo(b)fluoranthene	U		0.00695	0.0330
Benzo(k)fluoranthene	U		0.00582	0.0330
Benzo(g,h,i)perylene	U		0.00721	0.0330
Benzo(a)pyrene	U		0.00548	0.0330
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
2-Chloronaphthalene	U		0.00639	0.0330
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0330
Dibenz(a,h)anthracene	U		0.00821	0.0330
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0330
Fluorene	U		0.00682	0.0330
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0330
Isophorone	U		0.00522	0.333
Naphthalene	U		0.00889	0.0330
Nitrobenzene	U		0.00695	0.333
n-Nitrosodimethylamine	U		0.0647	0.333
n-Nitrosodiphenylamine	U		0.00594	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0330
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3174443-3 10/28/16 12:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyrene	U		0.0123	0.0330
1,2,4-Trichlorobenzene	U		0.00876	0.333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2-Methylphenol	U		0.00986	0.333
3&4-Methyl Phenol	U		0.00783	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	65.1			21.9-129
(S) 2-Fluorobiphenyl	74.3			34.9-129
(S) p-Terphenyl-d14	85.2			21.5-128
(S) Phenol-d5	65.1			26.3-121
(S) 2-Fluorophenol	61.8			21.1-116
(S) 2,4,6-Tribromophenol	83.0			21.6-142

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) R3174443-1 10/28/16 11:23 • (LCSD) R3174443-2 10/28/16 11:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.667	0.493	0.518	73.9	77.6	48.9-107			4.89	20
Acenaphthylene	0.667	0.503	0.533	75.3	79.9	49.2-111			5.92	20
Anthracene	0.667	0.490	0.520	73.5	77.9	52.0-112			5.79	20
Benzidine	0.667	ND	ND	0.000	0.000	0.000-48.0			0.000	40
Benzo(a)anthracene	0.667	0.485	0.516	72.6	77.4	52.3-106			6.35	20
Benzo(b)fluoranthene	0.667	0.461	0.517	69.2	77.5	51.3-106			11.4	20
Benzo(k)fluoranthene	0.667	0.477	0.483	71.4	72.4	52.9-107			1.37	20
Benzo(g,h,i)perylene	0.667	0.568	0.587	85.1	88.0	45.8-108			3.32	20
Benzo(a)pyrene	0.667	0.488	0.516	73.2	77.3	51.9-106			5.47	20
Bis(2-chlorethoxy)methane	0.667	0.438	0.460	65.7	68.9	44.9-108			4.77	20
Bis(2-chloroethyl)ether	0.667	0.349	0.372	52.2	55.7	32.5-112			6.44	26
Bis(2-chloroisopropyl)ether	0.667	0.391	0.428	58.6	64.2	40.4-99.0			9.15	20.7



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

(LCS) R3174443-1 10/28/16 11:23 • (LCSD) R3174443-2 10/28/16 11:47

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 %
4-Bromophenyl-phenylether	0.667	0.486	0.510	72.9	76.4	51.4-110			4.71	20
2-Chloronaphthalene	0.667	0.459	0.482	68.8	72.3	47.1-105			4.96	20
4-Chlorophenyl-phenylether	0.667	0.481	0.506	72.1	75.9	48.1-108			5.13	20
Chrysene	0.667	0.513	0.539	76.9	80.8	54.4-110			4.92	20
Dibenz(a,h)anthracene	0.667	0.560	0.584	84.0	87.5	45.7-111			4.09	20
3,3-Dichlorobenzidine	0.667	0.410	0.446	61.4	66.8	21.0-101			8.37	22
2,4-Dinitrotoluene	0.667	0.522	0.564	78.2	84.5	53.0-112			7.75	20
2,6-Dinitrotoluene	0.667	0.508	0.543	76.1	81.4	51.6-110			6.74	20
Fluoranthene	0.667	0.481	0.520	72.2	77.9	53.7-110			7.60	20
Fluorene	0.667	0.487	0.512	73.0	76.7	51.1-109			5.04	20
Hexachlorobenzene	0.667	0.487	0.505	73.1	75.8	43.2-104			3.60	20.1
Hexachloro-1,3-butadiene	0.667	0.408	0.434	61.2	65.0	41.5-112			6.14	20
Hexachlorocyclopentadiene	0.667	0.543	0.571	81.4	85.6	13.5-123			5.10	20.7
Hexachloroethane	0.667	0.331	0.349	49.7	52.3	36.2-103			5.14	22.7
Indeno(1,2,3-cd)pyrene	0.667	0.561	0.584	84.1	87.5	47.5-109			3.98	20
Isophorone	0.667	0.477	0.498	71.5	74.7	28.8-104			4.44	20
Naphthalene	0.667	0.417	0.433	62.5	65.0	43.4-103			3.82	20
Nitrobenzene	0.667	0.415	0.431	62.2	64.5	40.7-109			3.76	21
n-Nitrosodimethylamine	0.667	0.338	0.320	50.6	48.0	18.1-122			5.39	23.5
n-Nitrosodiphenylamine	0.667	0.473	0.500	71.0	74.9	48.8-107			5.39	20
n-Nitrosodi-n-propylamine	0.667	0.421	0.464	63.1	69.6	43.3-109			9.83	20
Phenanthrene	0.667	0.487	0.509	73.0	76.3	51.6-107			4.35	20
Benzylbutyl phthalate	0.667	0.516	0.533	77.3	79.9	47.5-115			3.34	20
Bis(2-ethylhexyl)phthalate	0.667	0.523	0.544	78.4	81.6	48.1-116			3.97	20.5
Di-n-butyl phthalate	0.667	0.503	0.531	75.5	79.7	49.7-113			5.45	20
Diethyl phthalate	0.667	0.494	0.537	74.1	80.5	52.0-112			8.27	20
Dimethyl phthalate	0.667	0.492	0.531	73.8	79.6	51.4-108			7.50	20
Di-n-octyl phthalate	0.667	0.536	0.561	80.3	84.1	49.6-112			4.60	22
Pyrene	0.667	0.490	0.511	73.5	76.7	47.1-108			4.19	20
1,2,4-Trichlorobenzene	0.667	0.411	0.429	61.6	64.2	39.8-100			4.20	20
4-Chloro-3-methylphenol	0.667	0.491	0.518	73.7	77.7	51.1-113			5.33	20
2-Chlorophenol	0.667	0.374	0.406	56.1	60.8	40.8-103			8.10	20
2-Methylphenol	0.667	0.400	0.448	60.0	67.2	42.4-100			11.4	20
3&4-Methyl Phenol	0.667	0.463	0.521	69.3	78.2	50.5-115			11.9	20
2,4-Dichlorophenol	0.667	0.472	0.504	70.8	75.6	46.2-109			6.52	20
2,4-Dimethylphenol	0.667	0.431	0.450	64.6	67.4	42.2-110			4.32	20
4,6-Dinitro-2-methylphenol	0.667	0.486	0.527	72.8	79.0	23.1-119			8.23	23.7
2,4-Dinitrophenol	0.667	0.361	0.419	54.1	62.9	10.0-105			15.0	36.5
2-Nitrophenol	0.667	0.466	0.498	69.8	74.6	44.2-113			6.67	20.9
4-Nitrophenol	0.667	0.488	0.539	73.2	80.9	34.8-109			9.89	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) R3174443-1 10/28/16 11:23 • (LCSD) R3174443-2 10/28/16 11:47

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 %
Pentachlorophenol	0.667	0.470	0.516	70.5	77.4	16.2-102			9.29	22.9
Phenol	0.667	0.393	0.433	58.9	64.9	41.5-106			9.71	20
2,4,6-Trichlorophenol	0.667	0.510	0.551	76.5	82.6	44.4-108			7.62	20
(S) Nitrobenzene-d5				61.9	64.4	21.9-129				
(S) 2-Fluorobiphenyl				70.2	73.6	34.9-129				
(S) p-Terphenyl-d14				74.3	77.8	21.5-128				
(S) Phenol-d5				60.5	66.0	26.3-121				
(S) 2-Fluorophenol				55.3	59.4	21.1-116				
(S) 2,4,6-Tribromophenol				77.7	82.3	21.6-142				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L867884-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L867884-01 10/28/16 16:28 • (MS) R3174443-4 10/28/16 16:52 • (MSD) R3174443-5 10/28/16 17:15

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 %
Acenaphthene	0.747	U	0.621	0.593	83.2	79.4	1	32.2-134			4.69	27.3
Acenaphthylene	0.747	U	0.650	0.611	87.0	81.8	1	38.7-129			6.19	25.9
Anthracene	0.747	U	0.622	0.581	83.2	77.7	1	32.3-137			6.84	28.4
Benzidine	0.747	U	0.383	0.321	51.3	43.0	1	0.000-49.9	J5		17.6	40
Benzo(a)anthracene	0.747	U	0.618	0.569	82.7	76.2	1	33.3-124			8.27	29
Benzo(b)fluoranthene	0.747	U	0.633	0.591	84.7	79.2	1	23.3-133			6.79	30.3
Benzo(k)fluoranthene	0.747	U	0.652	0.585	87.2	78.3	1	31.0-129			10.8	26.7
Benzo(g,h,i)perylene	0.747	U	0.526	0.518	70.4	69.3	1	10.0-127			1.68	31.9
Benzo(a)pyrene	0.747	U	0.621	0.568	83.2	76.0	1	28.2-128			8.98	28.4
Bis(2-chlorethoxy)methane	0.747	U	0.572	0.524	76.6	70.1	1	35.0-132			8.91	26.1
Bis(2-chloroethyl)ether	0.747	U	0.478	0.429	64.0	57.4	1	28.8-128			10.8	33.6
Bis(2-chloroisopropyl)ether	0.747	U	0.568	0.512	76.0	68.6	1	31.8-118			10.3	31.7
4-Bromophenyl-phenylether	0.747	U	0.623	0.577	83.4	77.2	1	39.0-130			7.66	26
2-Chloronaphthalene	0.747	U	0.600	0.567	80.3	75.9	1	37.5-123			5.63	26.5
4-Chlorophenyl-phenylether	0.747	U	0.631	0.594	84.5	79.5	1	37.9-123			6.08	25.9
Chrysene	0.747	U	0.642	0.599	86.0	80.2	1	36.3-129			6.99	28
Dibenz(a,h)anthracene	0.747	U	0.512	0.479	68.5	64.1	1	10.5-128			6.64	29.5
3,3-Dichlorobenzidine	0.747	U	0.605	0.543	80.9	72.7	1	10.0-129			10.7	40
2,4-Dinitrotoluene	0.747	U	0.698	0.655	93.4	87.6	1	27.8-147			6.39	29.7
2,6-Dinitrotoluene	0.747	U	0.656	0.617	87.8	82.7	1	36.5-137			6.02	29.7
Fluoranthene	0.747	U	0.619	0.579	82.9	77.5	1	27.9-138			6.64	26.9
Fluorene	0.747	U	0.625	0.592	83.6	79.2	1	34.0-133			5.40	27.1
Hexachlorobenzene	0.747	U	0.619	0.573	82.9	76.7	1	34.4-116			7.78	25.4
Hexachloro-1,3-butadiene	0.747	U	0.595	0.515	79.7	69.0	1	36.5-125			14.4	29.7



L867884-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L867884-01 10/28/16 16:28 • (MS) R3174443-4 10/28/16 16:52 • (MSD) R3174443-5 10/28/16 17:15

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 %
Hexachlorocyclopentadiene	0.747	U	0.718	0.653	96.1	87.4	1	10.0-124			9.50	37.5
Hexachloroethane	0.747	U	0.475	0.411	63.6	55.1	1	11.3-143			14.5	31.9
Indeno(1,2,3-cd)pyrene	0.747	U	0.536	0.512	71.8	68.5	1	10.0-128			4.62	31.5
Isophorone	0.747	U	0.613	0.561	82.0	75.1	1	25.7-116			8.77	27.7
Naphthalene	0.747	U	0.562	0.506	75.2	67.8	1	36.4-121			10.5	27.2
Nitrobenzene	0.747	U	0.549	0.494	73.5	66.2	1	30.9-134			10.5	27.8
n-Nitrosodimethylamine	0.747	U	0.432	0.371	57.8	49.7	1	19.2-127			15.1	32
n-Nitrosodiphenylamine	0.747	U	0.604	0.565	80.8	75.6	1	26.8-133			6.62	25.9
n-Nitrosodi-n-propylamine	0.747	U	0.570	0.531	76.4	71.0	1	33.0-134			7.20	28.2
Phenanthrene	0.747	U	0.606	0.574	81.1	76.9	1	30.8-137			5.40	26.5
Benzylbutyl phthalate	0.747	U	0.640	0.590	85.7	79.0	1	33.4-128			8.13	28.5
Bis(2-ethylhexyl)phthalate	0.747	U	0.655	0.609	87.6	81.5	1	21.8-141			7.28	35.2
Di-n-butyl phthalate	0.747	U	0.621	0.577	83.1	77.3	1	32.2-133			7.21	25.9
Diethyl phthalate	0.747	U	0.659	0.611	88.2	81.8	1	39.4-136			7.53	25.5
Dimethyl phthalate	0.747	U	0.650	0.607	87.0	81.3	1	35.8-137			6.79	25.4
Di-n-octyl phthalate	0.747	U	0.660	0.615	88.4	82.3	1	28.5-128			7.14	32.5
Pyrene	0.747	U	0.624	0.578	83.6	77.3	1	24.1-130			7.76	29.9
1,2,4-Trichlorobenzene	0.747	U	0.562	0.509	75.2	68.1	1	36.5-114			9.93	28.4
4-Chloro-3-methylphenol	0.747	U	0.665	0.606	89.0	81.1	1	27.0-154			9.34	26.6
2-Chlorophenol	0.747	U	0.525	0.474	70.2	63.4	1	33.2-121			10.2	29.3
2-Methylphenol	0.747	U	0.560	0.522	75.0	69.9	1	30.3-118			7.12	25.1
3&4-Methyl Phenol	0.747	U	0.643	0.602	86.1	80.7	1	33.3-141			6.54	25.7
2,4-Dichlorophenol	0.747	U	0.649	0.593	86.9	79.4	1	34.8-134			8.99	27.3
2,4-Dimethylphenol	0.747	U	0.601	0.551	80.5	73.7	1	12.3-149			8.81	32.3
4,6-Dinitro-2-methylphenol	0.747	U	0.690	0.613	92.3	82.1	1	10.0-144			11.8	32.7
2,4-Dinitrophenol	0.747	U	0.648	0.599	86.7	80.2	1	10.0-121			7.79	39.4
2-Nitrophenol	0.747	U	0.658	0.591	88.1	79.1	1	29.5-144			10.7	29.9
4-Nitrophenol	0.747	U	0.688	0.646	92.0	86.5	1	20.0-133			6.26	30.2
Pentachlorophenol	0.747	U	0.716	0.660	95.8	88.3	1	10.0-139			8.16	28.3
Phenol	0.747	U	0.532	0.488	71.2	65.3	1	25.1-130			8.62	29.6
2,4,6-Trichlorophenol	0.747	U	0.700	0.661	93.7	88.4	1	33.8-133			5.77	28.1
(S) Nitrobenzene-d5					75.6	68.3		21.9-129				
(S) 2-Fluorobiphenyl					83.1	80.4		34.9-129				
(S) p-Terphenyl-d14					88.3	83.5		21.5-128				
(S) Phenol-d5					74.3	69.0		26.3-121				
(S) 2-Fluorophenol					70.8	63.0		21.1-116				
(S) 2,4,6-Tribromophenol					94.3	88.6		21.6-142				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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
J0	J0 - Analyte exceeds %D or %Rec for Continuing Calibration per 8260C or 8270D method specific criteria. The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
V3	The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. BDL results will be unaffected.

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		

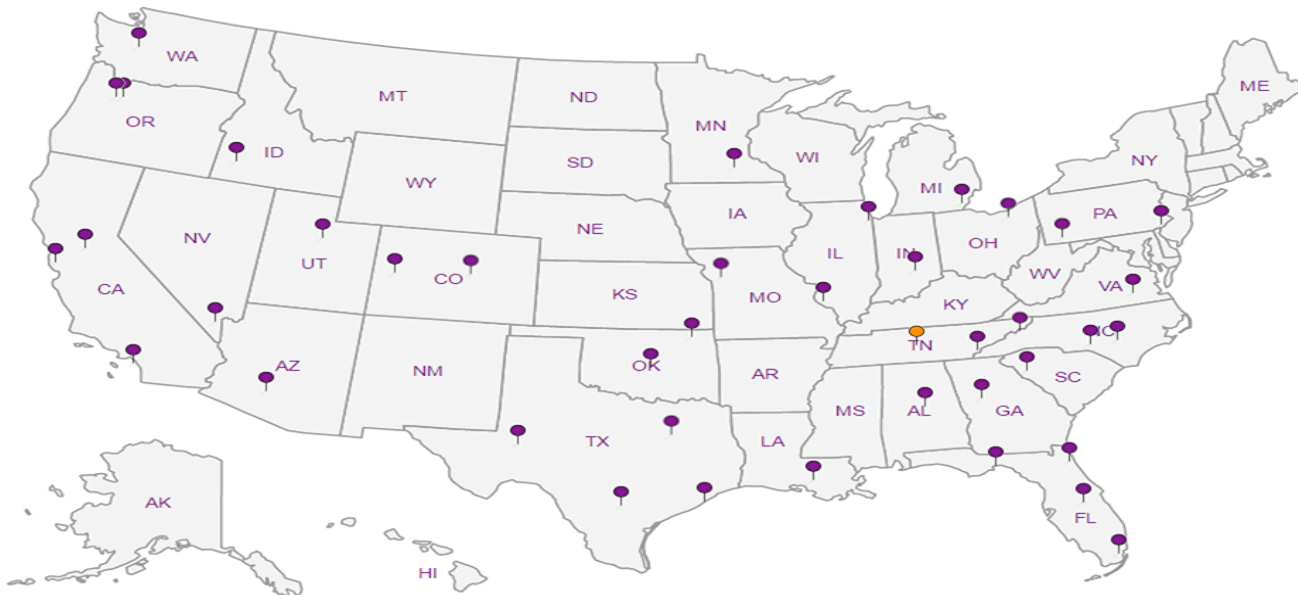
Third Party & Federal Accreditations

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.**



Kennedy/Jenks Consultants

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Project Description: **Acme WA BNSF Wishram**

City/State Collected: **Wishram, WA**

Phone: **253-835-6400**
Fax:

Client Project #

1696020

Lab Project #
KENJENWMT-ACME

Collected by (print):
Joe Sawdey

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Date Results Needed

Immediately Packed on Ice **N** **Y** **X**

Same Day 200%
Next Day 100%
Two Day 50%
Three Day 25%

Email? No Yes
FAX? No Yes

No. of
Entrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Entrs	ES&OC	SW&OC	NW&TPH	DX	SVOLs	VOLs
MW-17-20		SS	20	10/17	1240	1	X	X	X			
MW-14-20		SS	20	10/18	1423	5	X	X	X			
MW-15-20		SS	20	10/18	1015	5	X	X	X			
OHM-3-34		SS	34	10/20	1445	5	X	X	X			
OHM-4-25		SS	25	10/20	0950	5	X	X	X			
OHM-3-26			26	10/20	1310	1			X			
B-16-01-07			07	10/18	1555	6			X	X	X	



YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# **L868141**
A157

Acctnum: **KENJENWMT**
Template: **T116339**
Prelogin: **P570194**
TSR: **134 - Mark W. Beasley**
PB:

Shipped Via:
Rem./Contaminant Sample # (lab only)

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: pH _____ Temp _____
Flow _____ Other _____ Hold # _____

Relinquished by: (Signature) [Signature]	Date: 10/24	Time: 1200	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.1 °C Bottles Received: 12ATB	COC Seal Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) [Signature]	Date: 10/25/16 Time: 9w	pH Checked: NCF:



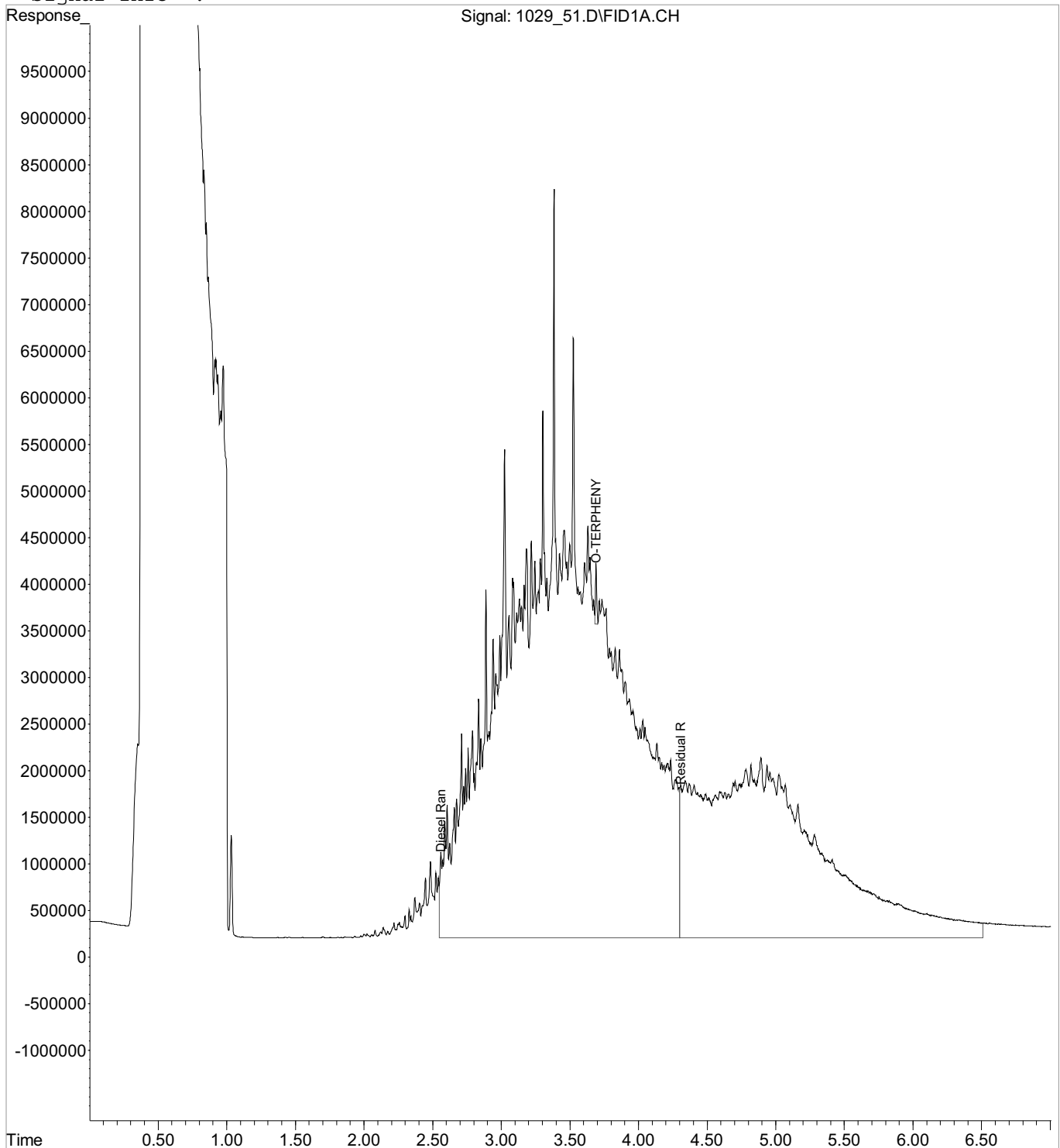
Cooler Receipt Form					
Client:	BNSFIKEN	SDG#	2868141		
Cooler Received/Opened On:	10/26 /16	Temperature Upon Receipt:	3.1 °c		
Received By: Rickey Mosley					
Signature: <i>Rickey Mosley</i>					
Receipt Check List			Yes	No	N/A
Were custody seals on outside of cooler and intact?					✓
Were custody papers properly filled out?			✓		
Did all bottles arrive in good condition?			✓		
Were correct bottles used for the analyses requested?			✓		
Was sufficient amount of sample sent in each bottle?			✓		
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?					✓
Non Conformance Generated. (If yes see attached NCF)					

Data File : C:\MSDCHEM\1\DATA\102916\1029 51.D
Acq On : 29 Oct 2016 8:35 pm
Sample : L868141-01 1x WG921060 12.5-0.5
Misc : soil
IntFile : events.e
Quant Time: Oct 30 12:22 2016

Vial: 57
Operator: 614
Inst : SVG13
Multiplr: 0.04

Quant Method : C:\MSDCHEM\1\METHODS\EP13J29P.M (Chemstation Integrator)
Title :
Last Update : Sat Oct 29 11:32:22 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

Volume Inj. :
Signal Phase :
Signal Info :

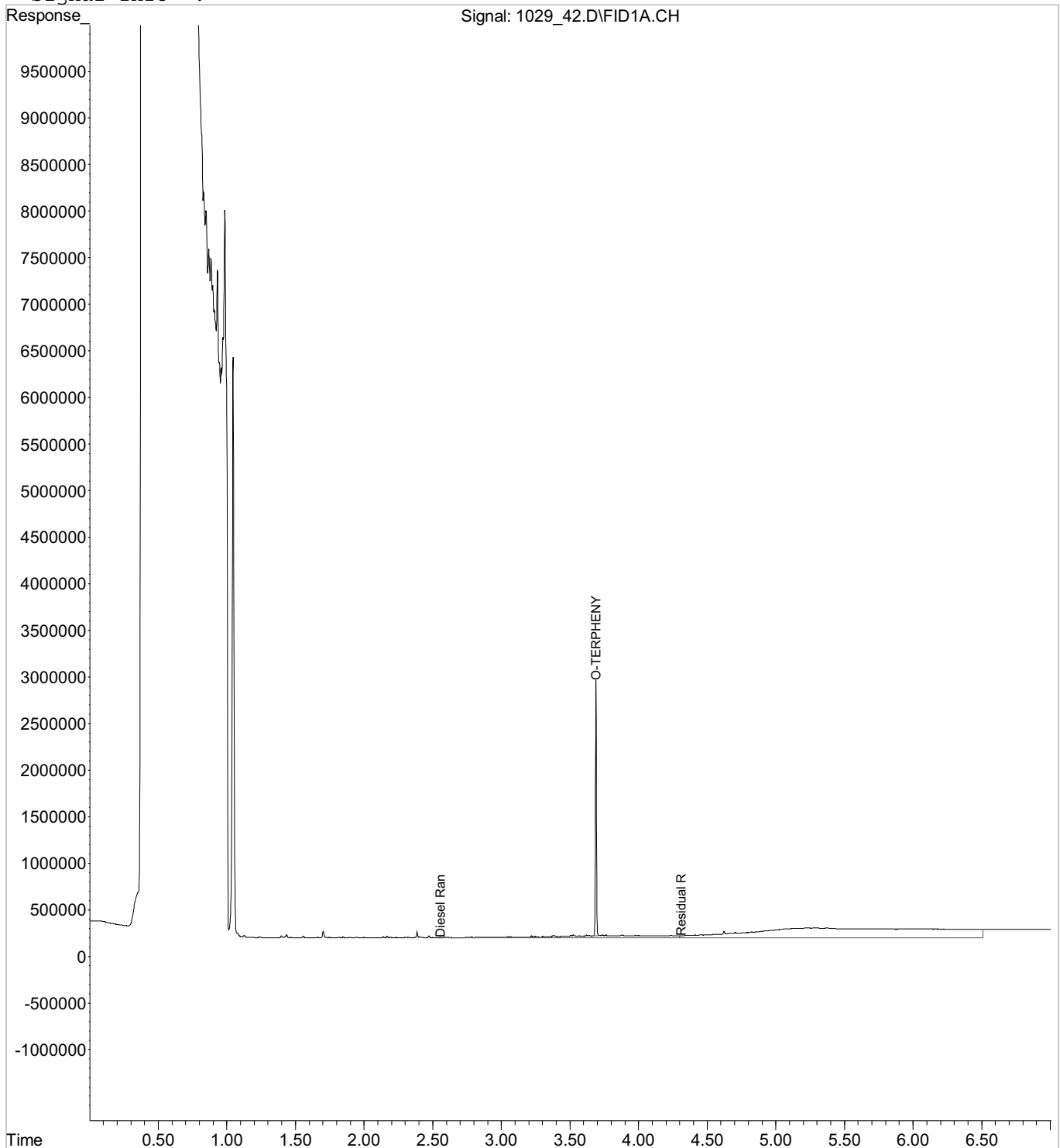


Data File : C:\MSDCHEM\1\DATA\102916\1029 42.D
Acq On : 29 Oct 2016 6:37 pm
Sample : L868141-02 1x WG921060 12.5-0.5
Misc : soil
IntFile : events.e
Quant Time: Oct 30 12:19 2016

Vial: 48
Operator: 614
Inst : SVGC13
Multiplr: 0.04

Quant Method : C:\MSDCHEM\1\METHODS\EP13J29P.M (Chemstation Integrator)
Title :
Last Update : Sat Oct 29 11:32:22 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

Volume Inj. :
Signal Phase :
Signal Info :

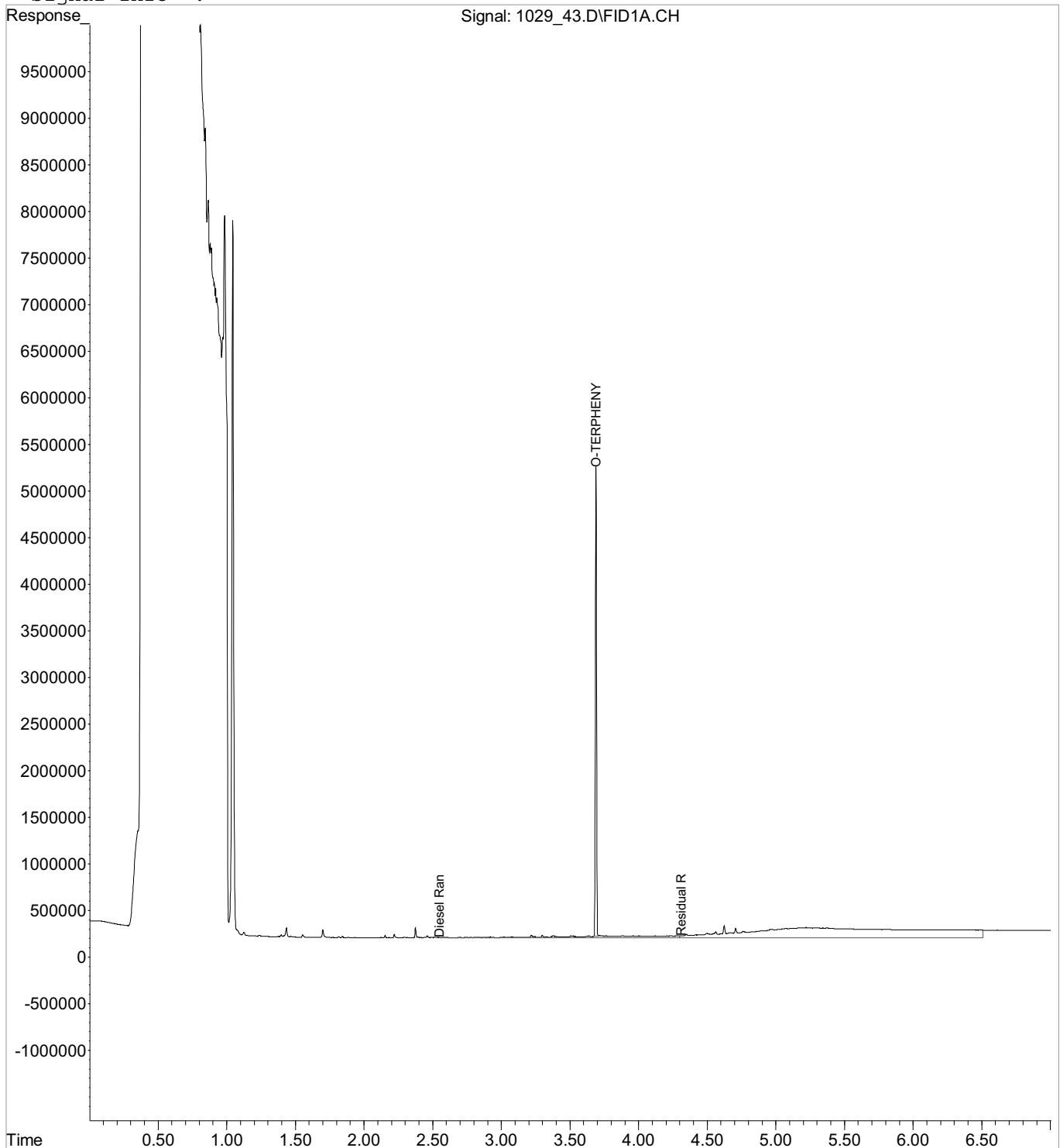


Data File : C:\MSDCHEM\1\DATA\102916\1029 43.D
Acq On : 29 Oct 2016 6:51 pm
Sample : L868141-03 1x WG921060 12.5-0.5
Misc : soil
IntFile : events.e
Quant Time: Oct 30 12:19 2016

Vial: 49
Operator: 614
Inst : SVG13
Multiplr: 0.04

Quant Method : C:\MSDCHEM\1\METHODS\EP13J29P.M (Chemstation Integrator)
Title :
Last Update : Sat Oct 29 11:32:22 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

Volume Inj. :
Signal Phase :
Signal Info :



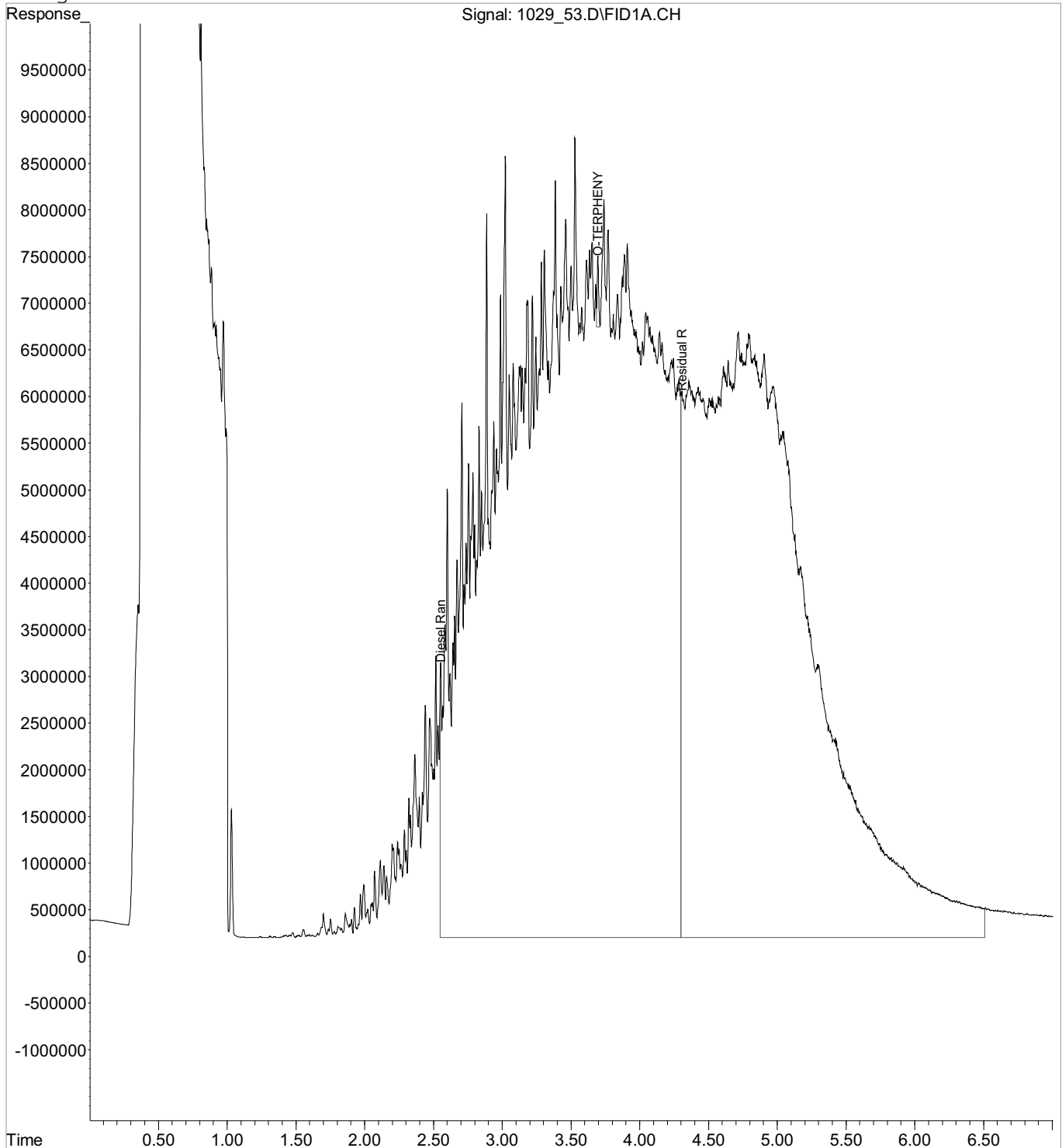
Data File : C:\MSDCHEM\1\DATA\102916\1029 53.D
Acq On : 29 Oct 2016 9:01 pm
Sample : L868141-04 50x WG921060 12.5-5
Misc : soil
IntFile : events.e
Quant Time: Oct 30 12:22 2016

Vial: 59
Operator: 614
Inst : SVG13
Multiplr: 2.00

Quant Results File: EP13J29P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13J29P.M (Chemstation Integrator)
Title :
Last Update : Sat Oct 29 11:32:22 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

Volume Inj. :
Signal Phase :
Signal Info :



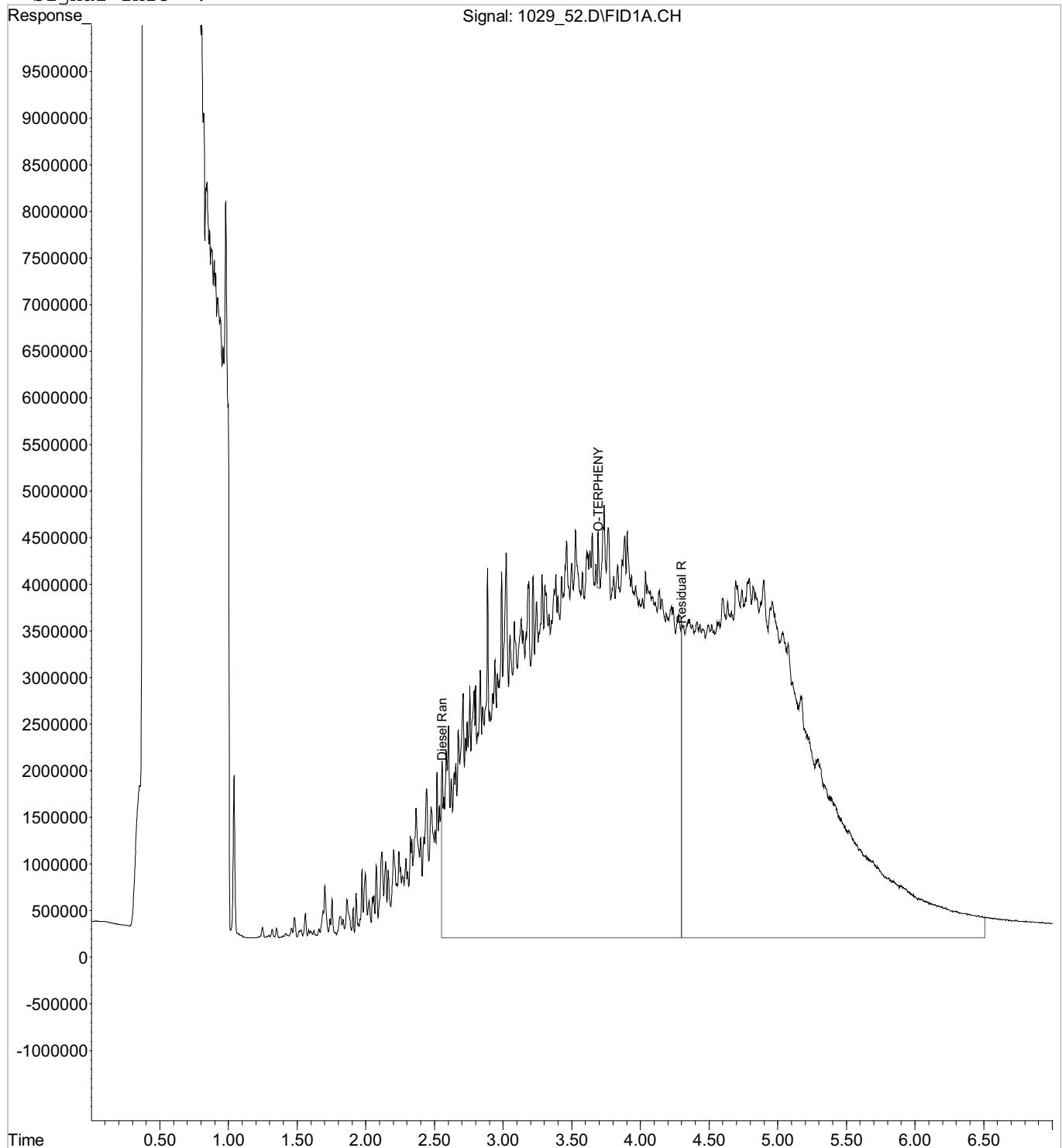
Data File : C:\MSDCHEM\1\DATA\102916\1029 52.D
Acq On : 29 Oct 2016 8:48 pm
Sample : L868141-05 1x WG921060 12.5-0.5
Misc : soil
IntFile : events.e
Quant Time: Oct 30 12:22 2016

Vial: 58
Operator: 614
Inst : SVGC13
Multiplr: 0.04

Quant Results File: EP13J29P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13J29P.M (Chemstation Integrator)
Title :
Last Update : Sat Oct 29 11:32:22 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

Volume Inj. :
Signal Phase :
Signal Info :



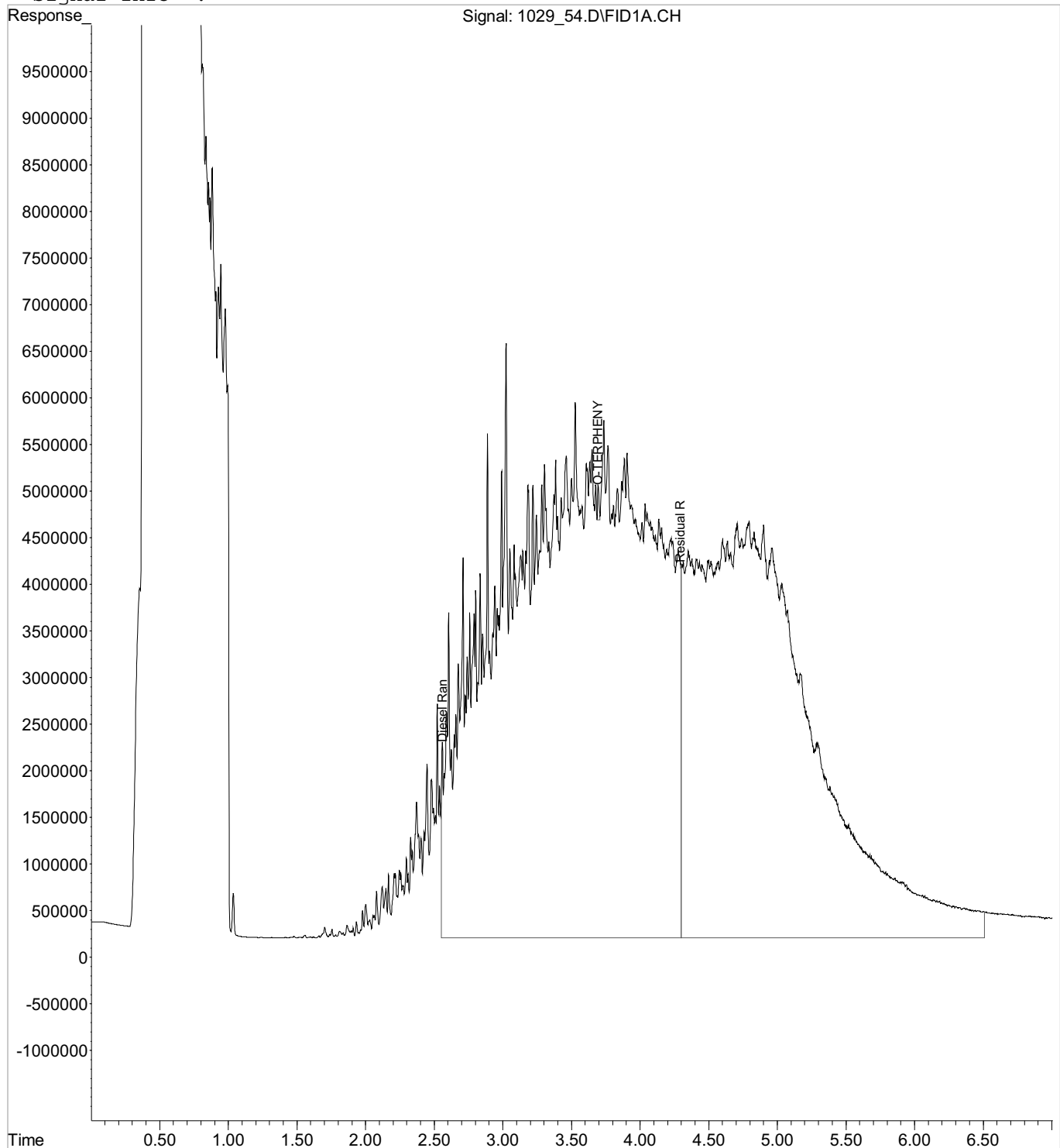
Data File : C:\MSDCHEM\1\DATA\102916\1029 54.D
Acq On : 29 Oct 2016 9:13 pm
Sample : L868141-06 50x WG921060 12.5-5
Misc : soil
IntFile : events.e
Quant Time: Oct 30 12:23 2016

Vial: 60
Operator: 614
Inst : SVGC13
Multiplr: 2.00

Quant Results File: EP13J29P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13J29P.M (Chemstation Integrator)
Title :
Last Update : Sat Oct 29 11:32:22 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

Volume Inj. :
Signal Phase :
Signal Info :



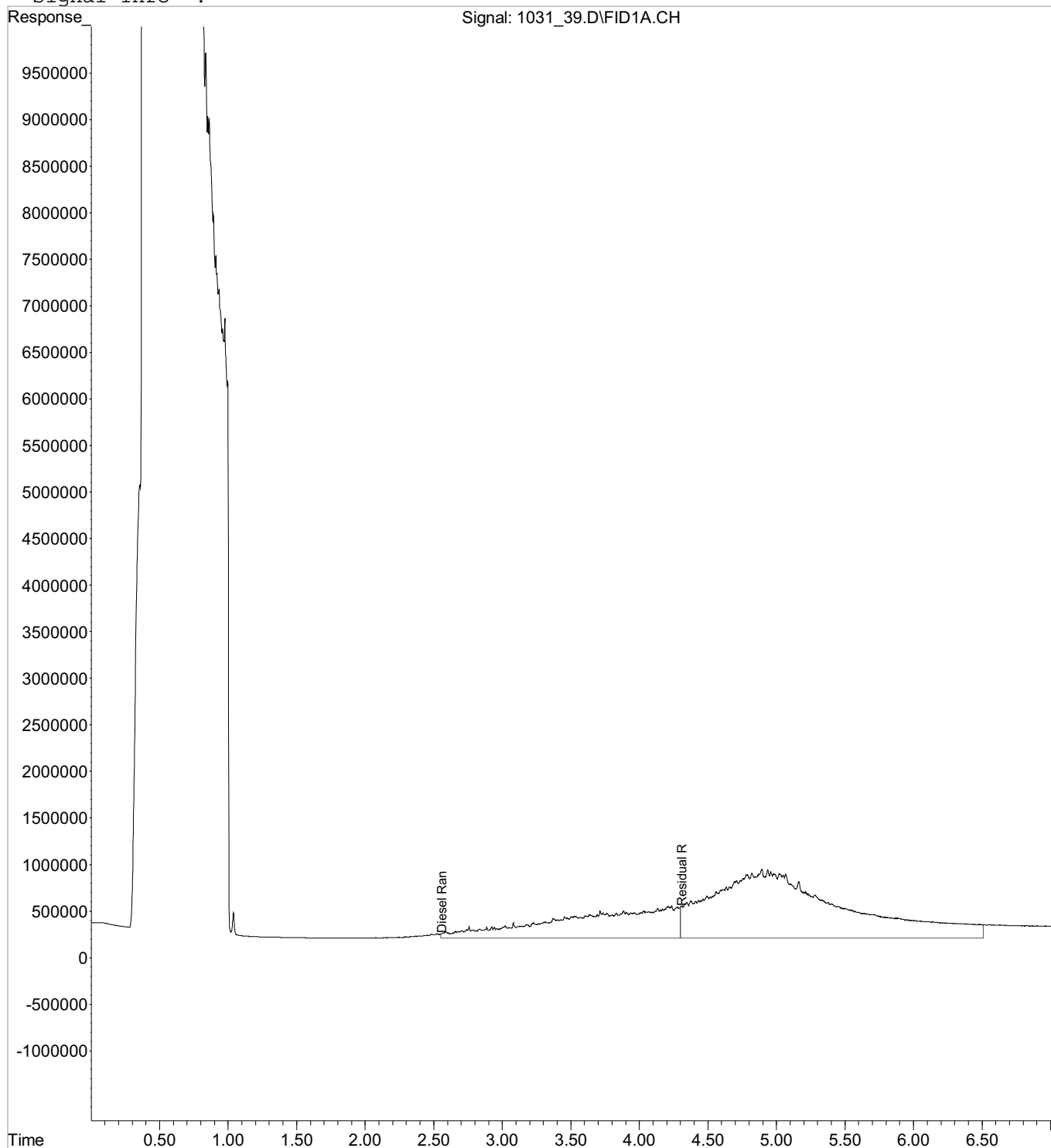
Data File : C:\MSDCHEM\1\DATA\103116\1031 39.D
Acq On : 31 Oct 2016 5:02 pm
Sample : L868141-07 800x WG921060 12.5-10
Misc : soil
IntFile : events.e
Quant Time: Oct 31 17:55 2016

Vial: 28
Operator: 720
Inst : SVGC13
Multiplr: 32.00

Quant Results File: EP13J29P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13J29P.M (Chemstation Integrator)
Title :
Last Update : Sat Oct 29 11:32:22 2016
Response via : Single Level Calibration
DataAcq Meth : OA10.M

Volume Inj. :
Signal Phase :
Signal Info :



Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L870190
Samples Received: 11/03/2016
Project Number:
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Jason Romer
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



OHM-2-38 L870190-01 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG924167	200	11/07/16 22:50	11/09/16 01:24	DMG
Total Solids by Method 2540 G-2011	WG923772	1	11/04/16 17:19	11/04/16 17:26	MEL

Collected by Joe Sawdey
 Collected date/time 10/25/16 16:05
 Received date/time 11/03/16 09:00

1 Cp

2 Tc

3 Ss

OHM-2-20 L870190-02 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG924167	50	11/07/16 22:50	11/08/16 23:30	DMG
Total Solids by Method 2540 G-2011	WG923772	1	11/04/16 17:19	11/04/16 17:26	MEL

Collected by Joe Sawdey
 Collected date/time 10/25/16 16:05
 Received date/time 11/03/16 09:00

4 Cn

5 Sr

6 Qc

OHM-1-51 L870190-03 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG924167	20	11/07/16 22:50	11/08/16 22:53	DMG
Total Solids by Method 2540 G-2011	WG923772	1	11/04/16 17:19	11/04/16 17:26	MEL

Collected by Joe Sawdey
 Collected date/time 11/01/16 12:00
 Received date/time 11/03/16 09:00

7 Gl

8 Al

9 Sc

OHM-1-20 L870190-04 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG924167	20	11/07/16 22:50	11/08/16 22:40	DMG
Total Solids by Method 2540 G-2011	WG923772	1	11/04/16 17:19	11/04/16 17:26	MEL

Collected by Joe Sawdey
 Collected date/time 11/01/16 10:00
 Received date/time 11/03/16 09:00



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jason Romer
Technical Service Representative

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.6		1	11/04/2016 17:26	WG923772

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	15900		981	200	11/09/2016 01:24	WG924167
Residual Range Organics (RRO)	16100		2450	200	11/09/2016 01:24	WG924167
(S) o-Terphenyl	455	J7	50.0-150		11/09/2016 01:24	WG924167

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L870190-01 WG924167: NWTPHDX - SGT was performed

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.6		1	11/04/2016 17:26	WG923772

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2090		248	50	11/08/2016 23:30	WG924167
Residual Range Organics (RRO)	1720		620	50	11/08/2016 23:30	WG924167
(S) o-Terphenyl	110	J7	50.0-150		11/08/2016 23:30	WG924167

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L870190-02 WG924167: NWTPHDX - SGT was performed

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	72.0		1	11/04/2016 17:26	WG923772

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2190		111	20	11/08/2016 22:53	WG924167
Residual Range Organics (RRO)	2000		278	20	11/08/2016 22:53	WG924167
(S) o-Terphenyl	120	J7	50.0-150		11/08/2016 22:53	WG924167

Sample Narrative:

NWTPHDX L870190-03 WG924167: NWTPHDX - SGT was performed



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	73.8		1	11/04/2016 17:26	WG923772

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1750		108	20	11/08/2016 22:40	WG924167
Residual Range Organics (RRO)	1560		271	20	11/08/2016 22:40	WG924167
(S) o-Terphenyl	98.5	J7	50.0-150		11/08/2016 22:40	WG924167

3 Ss

4 Cn

5 Sr

Sample Narrative:

NWTPHDX L870190-04 WG924167: NWTPHDX - SGT was performed

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3176074-1 11/04/16 17:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000700			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L870298-01 Original Sample (OS) • Duplicate (DUP)

(OS) L870298-01 11/04/16 17:26 • (DUP) R3176074-3 11/04/16 17:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	83.3	85.5	1	2.55		5

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3176074-2 11/04/16 17:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	99.9	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3176776-1 11/08/16 12:13

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	103			50.0-150

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

(LCS) R3176776-2 11/08/16 12:26 • (LCSD) R3176776-3 11/08/16 12:38

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)	30.0	27.9	32.0	93.1	107	50.0-150			13.5	20
Residual Range Organics (RRO)	30.0	28.7	31.9	95.6	106	50.0-150			10.8	20
<i>(S) o-Terphenyl</i>				98.4	108	50.0-150				

L869998-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L869998-03 11/08/16 13:17 • (MS) R3176776-4 11/08/16 13:30 • (MSD) R3176776-5 11/08/16 13:42

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	%	%		%			%	%
Diesel Range Organics (DRO)	32.6	U	28.9	28.9	87.7	87.6	1	50.0-150			0.150	20
Residual Range Organics (RRO)	32.6	8.38	41.0	35.7	100	84.0	1	50.0-150			13.8	20
<i>(S) o-Terphenyl</i>					74.0	79.5		50.0-150				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
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
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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		

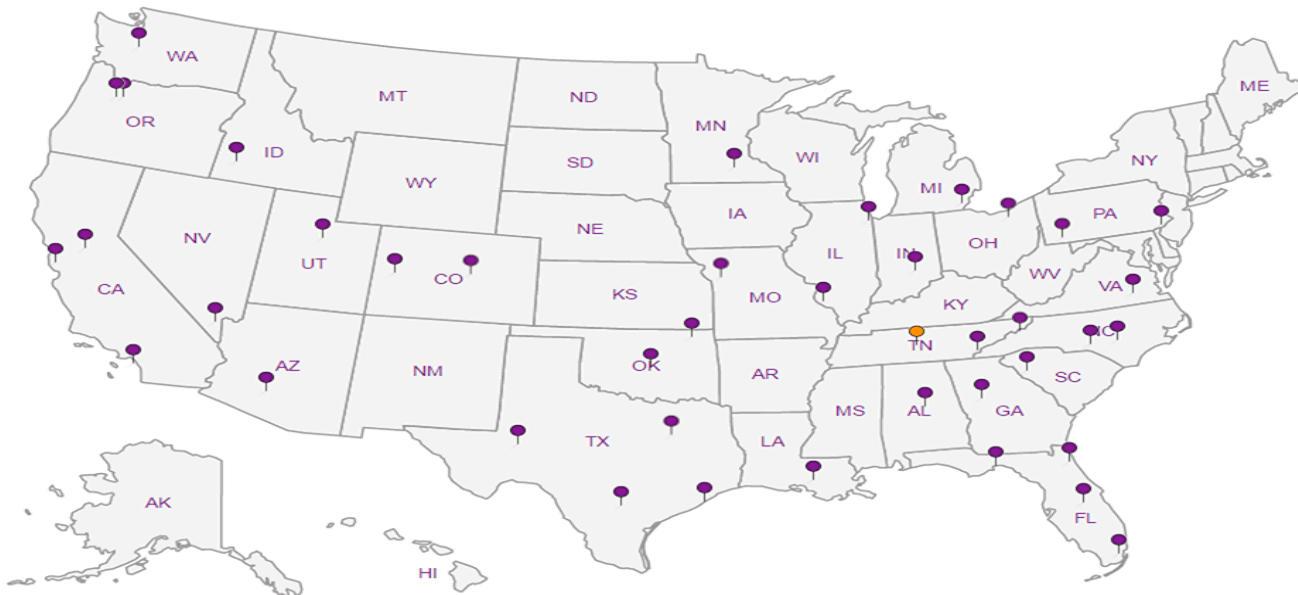
Third Party & Federal Accreditations

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.**



Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:

Shane DeGross
605 Puyallup Avenue
Tacoma, WA 98421

Analysis / Container / Preservative

Chain of Custody Page of



YOUR LAB OF CHOICE

12085 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com

Project
Description: **BNSF - Wishram Railyard, WA**

City/State
Collected: **Wishram, WA**

Phone: **253-835-6400**
Fax:

Client Project #
WAL120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joe Smolberg

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed

Email? No Yes

FAX? No Yes

No. of
Cntrs

Immunology
Packed on Ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative
OHM-2-38	GW	SS	38	10/25	1605	1	NWTPHDX, TS 4ozCir-NoPres
OHM-2-20	↓	SS	20	10/25	1240	1	SV8270 4ozCir-NoPres
OHM-1-51	↓	SS	51	11/1	1260	1	SV8270PAHSIM 4ozCir-NoPres
OHM-1-20	↓	SS	20	11/1	1000	1	
		SS					
		SS					
		SS					
		SS					
		SS					
		SS					
		SS					

L# **6870190**
A136
Acctnum: **BNSF1KEN**
Template: **T114341**
Prelogin: **PS62191**
TSR: **134 - Mark W. Beasley**
PB:

Item/Contaminant	Sample # (lab only)
	-01
	-02
	-03
	-04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

pH _____ Temp _____ **682711069039**

Flow _____ Other _____

Hold #

Relinquished by: (Signature) **[Signature]**

Date: **11/2**
Time: **0600**

Received by: (Signature)

Samples returned via: UPS
 FedEx Courier _____

Condition: (lab use only)
OK JW1

Relinquished by: (Signature)

Date: _____
Time: _____

Received by: (Signature)

Temp: **3.1** °C Bottles Received: **4-402**

COC Seal Intact: Y N NA

Relinquished by: (Signature)

Date: _____
Time: _____

Received for lab by: (Signature) **[Signature]**

Date: **11.3.10** Time: **0900**

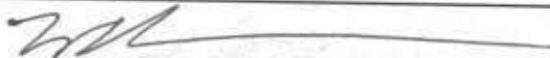
pH Checked: _____ NCF: _____



L · A · B S · C · I · E · N · C · E · S

YOUR LAB OF CHOICE

Cooler Receipt Form

Client: BNISFILLEN	SDG#	6870190
Cooler Received/Opened On: 11/3/16	Temperature Upon Receipt:	3.1 °c
Received By: Nikki Farmer		
Signature: 		

Receipt Check List			
	Yes	No	N/A
Were custody seals on outside of cooler and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were custody papers properly filled out?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did all bottles arrive in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were correct bottles used for the analyses requested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was sufficient amount of sample sent in each bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If applicable, was an observable VOA headspace present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Non Conformance Generated. (If yes see attached NCF)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

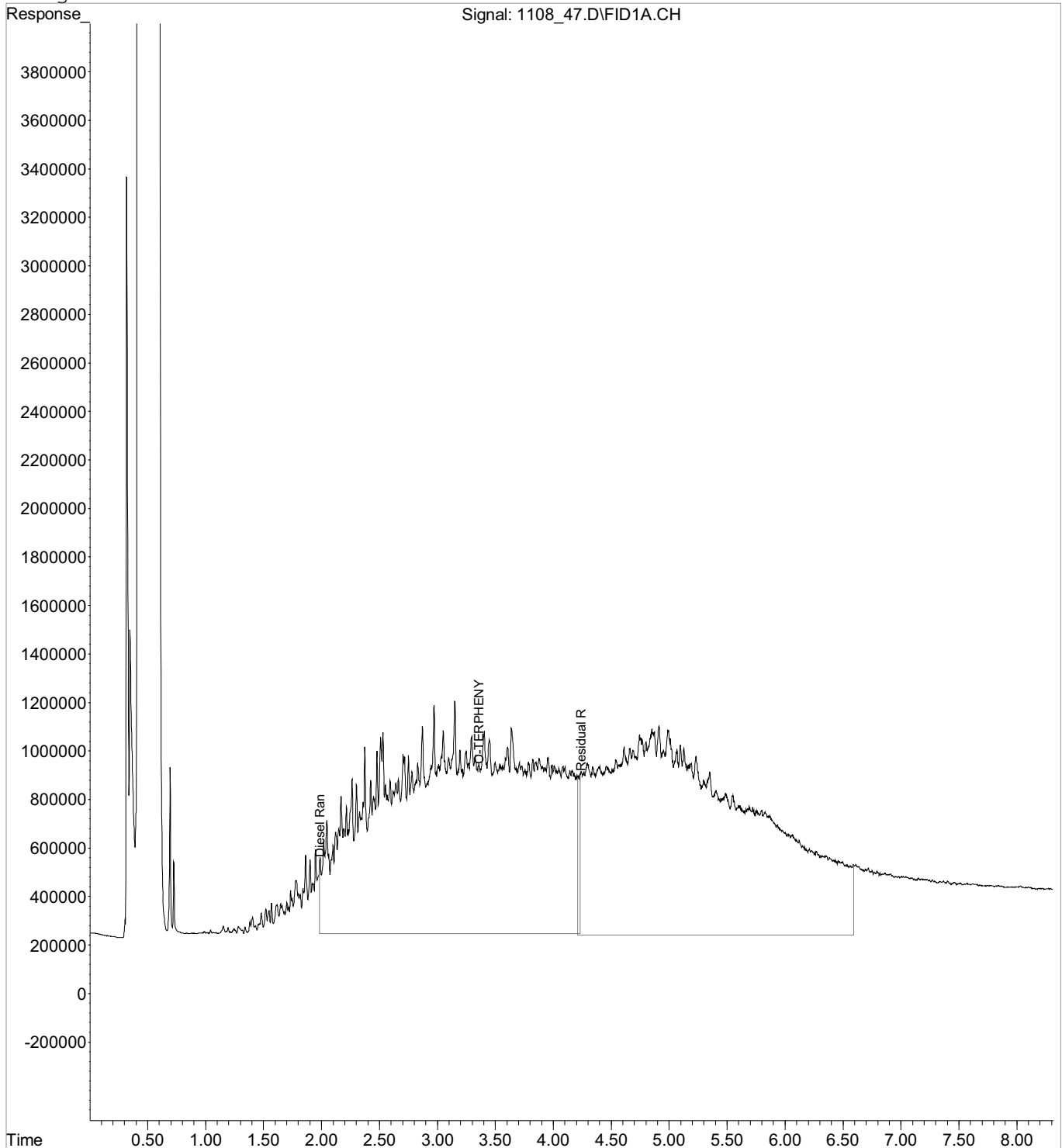
Data File : C:\MSDCHEM\1\DATA\110816\1108 47.D
Acq On : 11-9-2016 01:24:07 AM
Sample : L870190-01 200x WG924167 12.5-5
Misc : soil
IntFile : events.e
Quant Time: Nov 9 11:14 2016

Vial: 23
Operator: 720
Inst : SVGC16
Multiplr: 8.00

Quant Results File: EP16J21P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16J21P.M (Chemstation Integrator)
Title :
Last Update : Fri Oct 21 11:58:02 2016
Response via : Single Level Calibration
DataAcq Meth : OA12.M

Volume Inj. :
Signal Phase :
Signal Info :



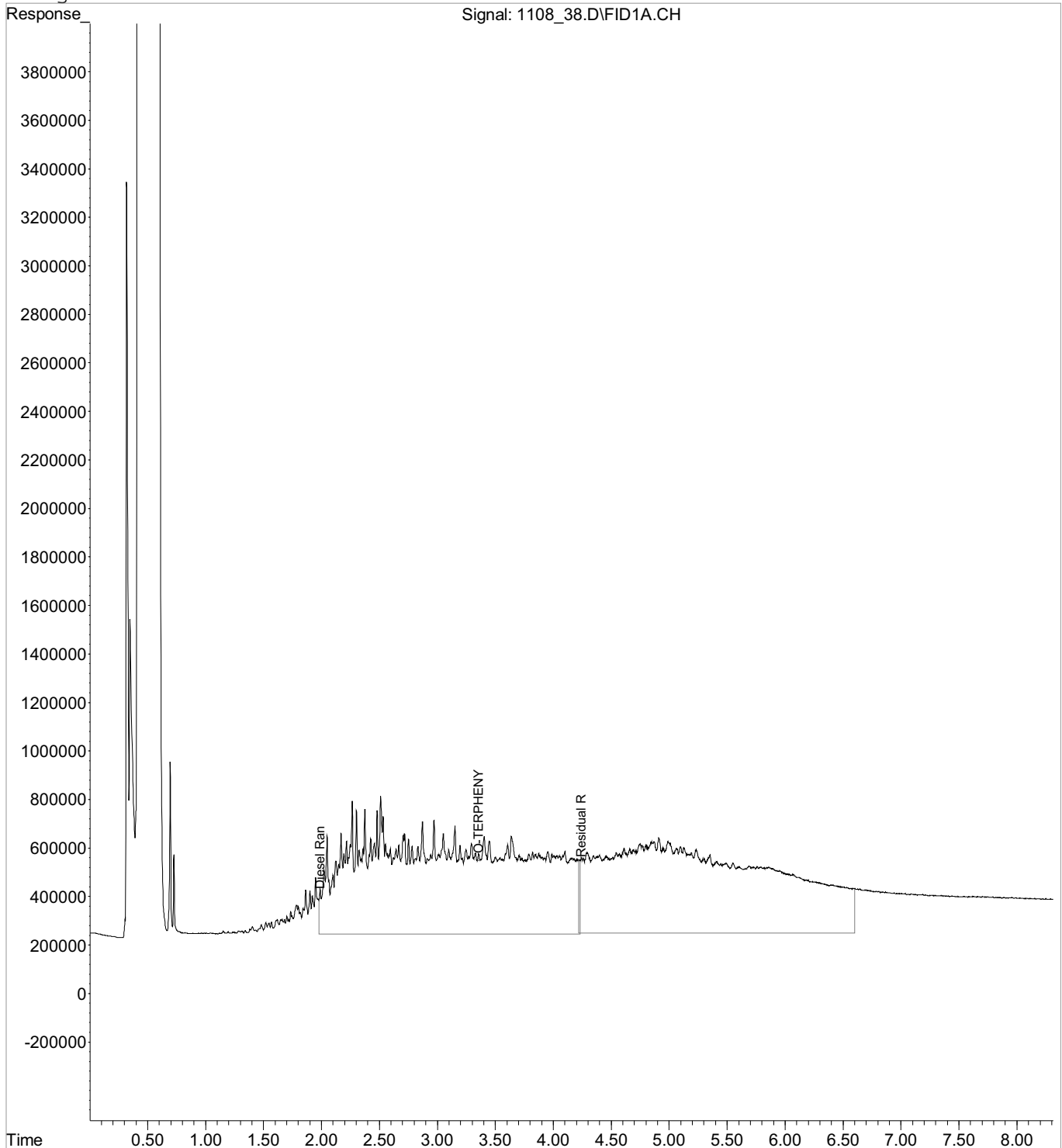
Data File : C:\MSDCHEM\1\DATA\110816\1108 38.D
Acq On : 08 Nov 2016 11:30 pm
Sample : L870190-02 50x WG924167 12.5-0.5
Misc : soil
IntFile : events.e
Quant Time: Nov 9 9:36 2016

Vial: 26
Operator: 720
Inst : SVGC16
Multiplr: 2.00

Quant Results File: EP16J21P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16J21P.M (Chemstation Integrator)
Title :
Last Update : Fri Oct 21 11:58:02 2016
Response via : Single Level Calibration
DataAcq Meth : OA12.M

Volume Inj. :
Signal Phase :
Signal Info :

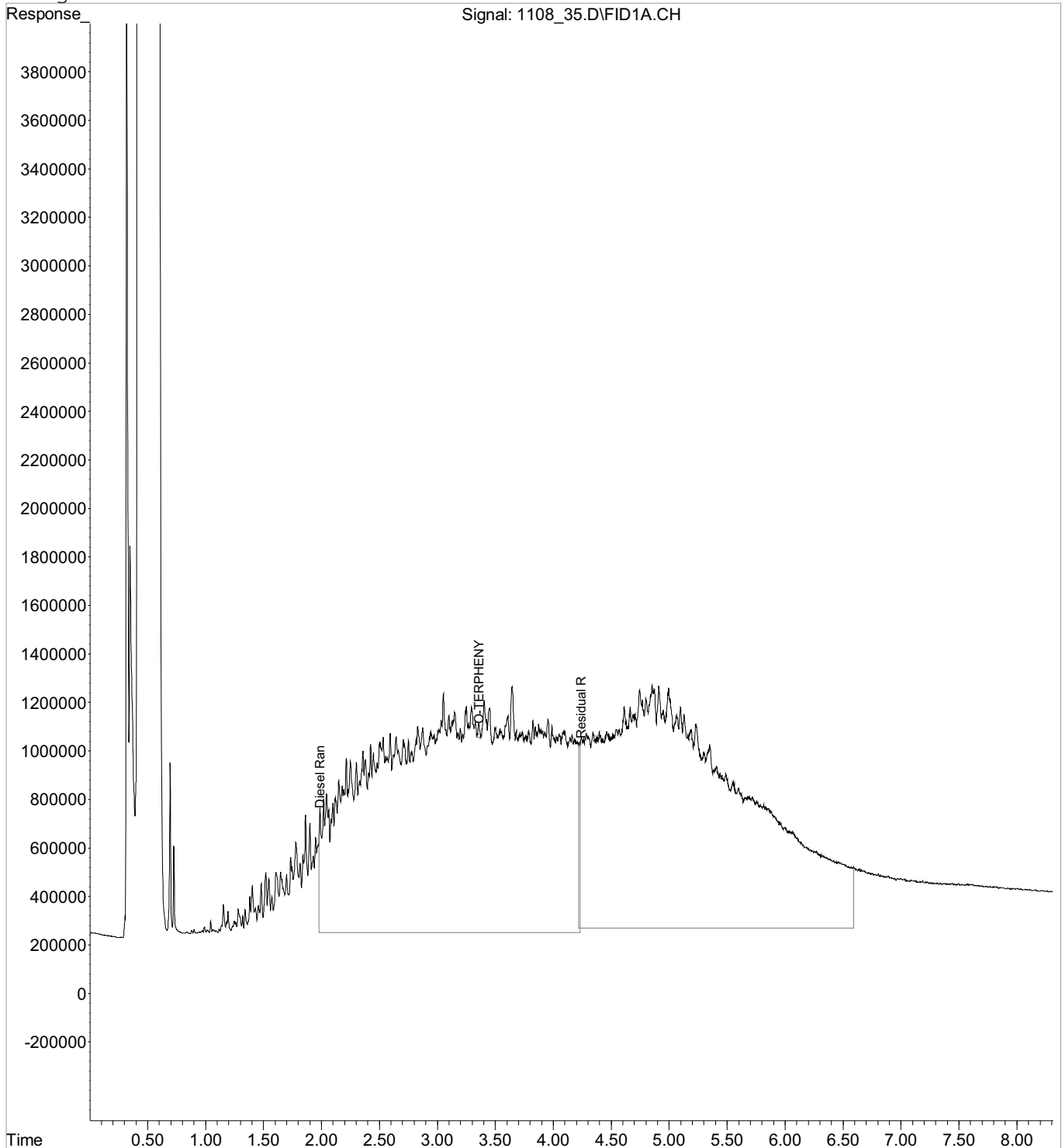


Data File : C:\MSDCHEM\1\DATA\110816\1108 35.D
Acq On : 08 Nov 2016 10:53 pm
Sample : L870190-03 20x WG924167 12.5-0.5
Misc : soil
IntFile : events.e
Quant Time: Nov 9 9:34 2016 Quant Results File: EP16J21P.RES

Vial: 19
Operator: 720
Inst : SVGC16
Multiplr: 0.80

Quant Method : C:\MSDCHEM\1\METHODS\EP16J21P.M (Chemstation Integrator)
Title :
Last Update : Fri Oct 21 11:58:02 2016
Response via : Single Level Calibration
DataAcq Meth : OA12.M

Volume Inj. :
Signal Phase :
Signal Info :



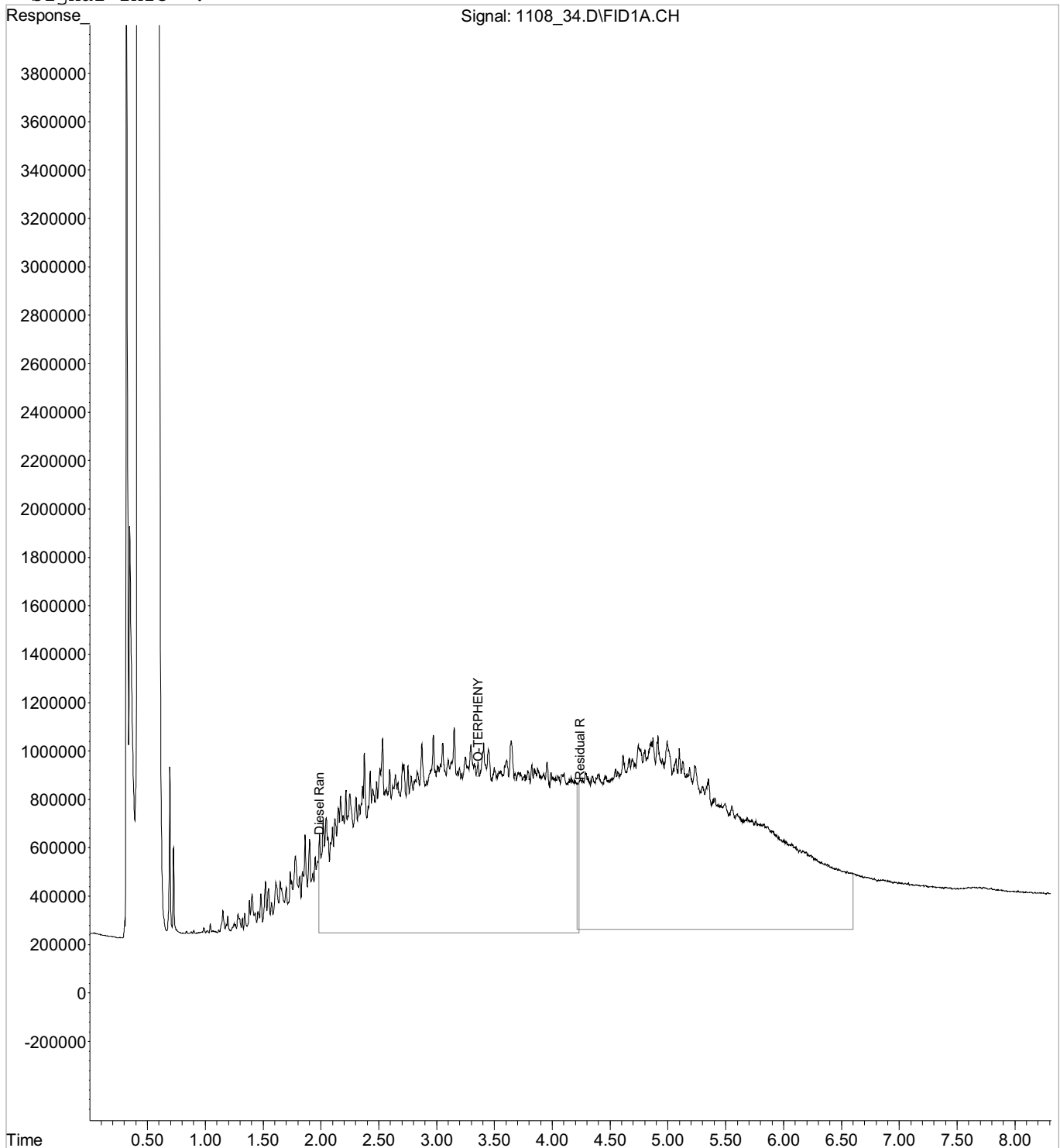
Data File : C:\MSDCHEM\1\DATA\110816\1108 34.D
Acq On : 08 Nov 2016 10:40 pm
Sample : L870190-04 20x WG924167 12.5-0.5
Misc : soil
IntFile : events.e
Quant Time: Nov 9 9:33 2016

Vial: 20
Operator: 720
Inst : SVGC16
Multiplr: 0.80

Quant Results File: EP16J21P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16J21P.M (Chemstation Integrator)
Title :
Last Update : Fri Oct 21 11:58:02 2016
Response via : Single Level Calibration
DataAcq Meth : OA12.M

Volume Inj. :
Signal Phase :
Signal Info :



September 07, 2017

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L928067
Samples Received: 08/05/2017
Project Number: 1796120.03
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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.



Cp: Cover Page	1	1 Cp
Tc: Table of Contents	2	2 Tc
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Cn: Case Narrative	4	4 Cn
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RIVER NAPL-080317 L928067-02	6	5 Sr
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Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	7	7 Gl
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Sc: Sample Chain of Custody	13	

SAMPLE SUMMARY



RIVER SHEEN-080217 L928067-01 GW

Collected by Alice Robinson	Collected date/time 08/02/17 12:45	Received date/time 08/05/17 08:45
--------------------------------	---------------------------------------	--------------------------------------

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1007876	1	08/09/17 18:54	08/11/17 01:10	TH

1
Cp

2
Tc

3
Ss

RIVER NAPL-080317 L928067-02 GW

Collected by Alice Robinson	Collected date/time 08/03/17 13:30	Received date/time 08/05/17 08:45
--------------------------------	---------------------------------------	--------------------------------------

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1010252	1	08/16/17 17:50	08/17/17 13:51	LM
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1010255	1	08/16/17 21:45	08/17/17 18:20	FMB

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

Mark W. Beasley
Technical Service Representative

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/11/2017 01:10	WG1007876
Residual Range Organics (RRO)	ND		250	1	08/11/2017 01:10	WG1007876
(S) o-Terphenyl	121		52.0-156		08/11/2017 01:10	WG1007876

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1190	T8	200	1	08/17/2017 13:51	WG1010252
Residual Range Organics (RRO)	441	T8	250	1	08/17/2017 13:51	WG1010252
(S) o-Terphenyl	120		52.0-156		08/17/2017 13:51	WG1010252

1 Cp

2 Tc

3 Ss

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.122	T8	0.0500	1	08/17/2017 18:20	WG1010255
Acenaphthene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Acenaphthylene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Benzo(a)anthracene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Benzo(a)pyrene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Benzo(b)fluoranthene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Benzo(g,h,i)perylene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Benzo(k)fluoranthene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Chrysene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Dibenz(a,h)anthracene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Fluoranthene	0.0666	T8	0.0500	1	08/17/2017 18:20	WG1010255
Fluorene	0.102	T8	0.0500	1	08/17/2017 18:20	WG1010255
Indeno(1,2,3-cd)pyrene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Naphthalene	0.353	T8	0.250	1	08/17/2017 18:20	WG1010255
Phenanthrene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Pyrene	0.527	T8	0.0500	1	08/17/2017 18:20	WG1010255
1-Methylnaphthalene	ND	T8	0.250	1	08/17/2017 18:20	WG1010255
2-Methylnaphthalene	ND	T8	0.250	1	08/17/2017 18:20	WG1010255
2-Chloronaphthalene	ND	T8	0.250	1	08/17/2017 18:20	WG1010255
(S) Nitrobenzene-d5	75.9		31.0-160		08/17/2017 18:20	WG1010255
(S) 2-Fluorobiphenyl	89.9		48.0-148		08/17/2017 18:20	WG1010255
(S) p-Terphenyl-d14	97.9		37.0-146		08/17/2017 18:20	WG1010255

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3240406-1 08/10/17 22:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	112			52.0-156

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

(LCS) R3240406-2 08/10/17 23:01 • (LCSD) R3240406-3 08/10/17 23:17

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	745	747	99.4	99.6	50.0-150			0.210	20
Residual Range Organics (RRO)	750	781	809	104	108	50.0-150			3.50	20
<i>(S) o-Terphenyl</i>				118	122	52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3242421-1 08/17/17 13:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	119			52.0-156

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

(LCS) R3242421-2 08/17/17 13:18 • (LCSD) R3242421-3 08/17/17 13:34

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	732	742	97.5	99.0	50.0-150			1.46	20
Residual Range Organics (RRO)	750	639	636	85.2	84.8	50.0-150			0.480	20
<i>(S) o-Terphenyl</i>				96.6	99.8	52.0-156				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3242361-3 08/17/17 17:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	U		0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	U		0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	75.3			31.0-160
(S) 2-Fluorobiphenyl	102			48.0-148
(S) p-Terphenyl-d14	95.2			37.0-146

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) R3242361-1 08/17/17 17:10 • (LCSD) R3242361-2 08/17/17 17:33

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 %
Anthracene	2.00	2.03	2.01	101	100	64.0-142			0.960	20
Acenaphthene	2.00	1.83	1.79	91.4	89.7	66.0-132			1.81	20
Acenaphthylene	2.00	1.92	1.89	95.8	94.3	65.0-132			1.56	20
Benzo(a)anthracene	2.00	1.93	1.87	96.3	93.5	59.0-134			2.90	20
Benzo(a)pyrene	2.00	1.96	1.92	98.2	95.8	61.0-145			2.43	20
Benzo(b)fluoranthene	2.00	1.96	1.79	98.1	89.4	57.0-136			9.21	20
Benzo(g,h,i)perylene	2.00	1.86	1.79	93.2	89.5	54.0-140			4.12	20
Benzo(k)fluoranthene	2.00	1.80	1.90	90.0	94.8	57.0-141			5.19	20
Chrysene	2.00	1.94	1.87	96.9	93.3	63.0-140			3.82	20
Dibenz(a,h)anthracene	2.00	1.79	1.74	89.3	86.9	49.0-141			2.74	20
Fluoranthene	2.00	2.13	2.12	107	106	65.0-143			0.840	20



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

(LCS) R3242361-1 08/17/17 17:10 • (LCSD) R3242361-2 08/17/17 17:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	1.82	1.78	91.2	89.2	64.0-129			2.17	20
Indeno(1,2,3-cd)pyrene	2.00	1.85	1.80	92.5	89.8	53.0-141			2.98	20
Naphthalene	2.00	1.92	1.89	95.8	94.5	68.0-129			1.40	20
Phenanthrene	2.00	1.73	1.72	86.7	86.2	62.0-132			0.540	20
Pyrene	2.00	1.84	1.77	91.8	88.6	58.0-156			3.59	20
1-Methylnaphthalene	2.00	2.06	2.03	103	102	68.0-137			1.20	20
2-Methylnaphthalene	2.00	1.92	1.90	96.2	95.2	68.0-134			1.01	20
2-Chloronaphthalene	2.00	1.91	1.89	95.4	94.4	65.0-129			1.00	20
<i>(S) Nitrobenzene-d5</i>				72.3	67.9	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				95.3	93.4	48.0-148				
<i>(S) p-Terphenyl-d14</i>				90.6	84.5	37.0-146				

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



Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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, 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.
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.

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

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration.



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		

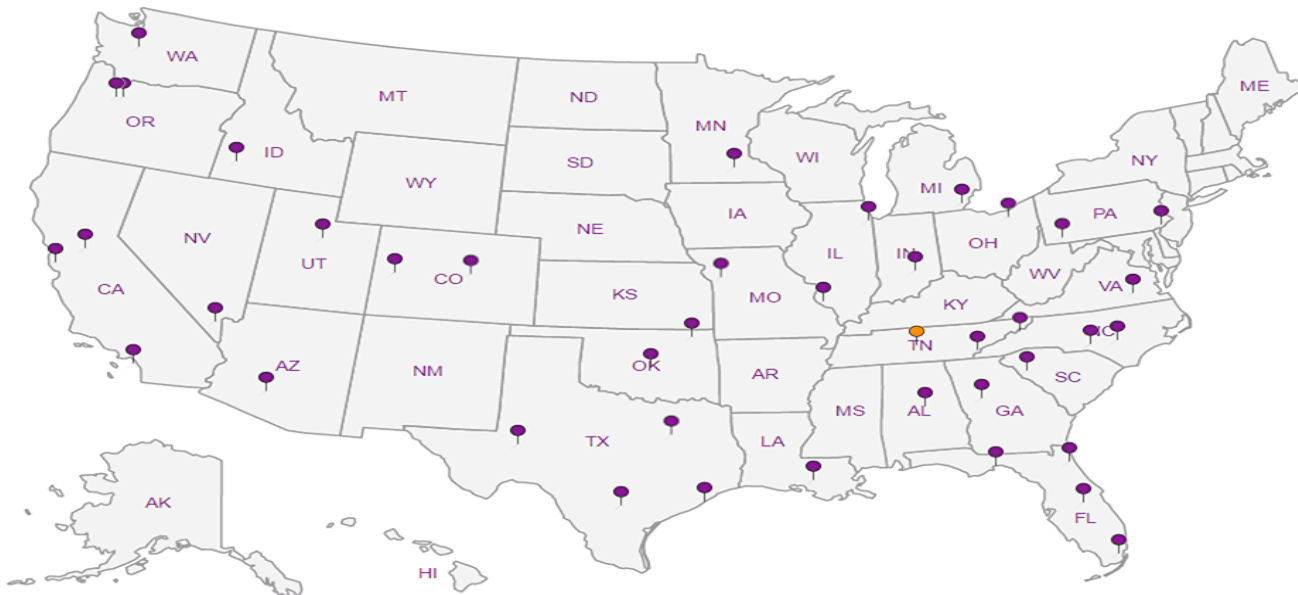
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	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.**



Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Ave S
 Tacoma, WA 98421

Report to:
 Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
 tyschreiner@kennedyjenks.com

Project
 Description: **BNSF - Wishram Railyard, WA**

City/State Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Client Project #
1796120.03

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson

Site/Facility ID #
TT9156-008

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
TT9156-008

Date Results Needed

Immediately Packed on Ice N Y

Chain of Custody Page of



L-A-B S-C-I-E-N-C-E-S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5855
 Phone: 800-767-5859
 Fax: 615-758-5859



Analysis / Container / Preservative

Sulfide: 125ml Amb-S-NaOH+ZnAc
 Total As, Pb 250ml HDPE-HNO3
 Total Pb 250ml HDPE-HNO3
 VR260BTEXC 40ml Amb-HCl
 NWRPH-Dx (no SGT)
 Extractable petroleum HCs by W4 EPH
 PAHs by 8270-SIM
 VOCs by 8260

L# **L928067**
 Tabl **A238**

Acctnum: **BNSF1KEN**
 Template: **T122578**
 Prelogin: **P596945**
 TSR: **134 - Mark W. Beasley**
 PB:

Shipped Via: **FedEX Saver**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Remarks	Sample # (lab only)
River sheen-080217	grab	GW	OT	8-2-17	12:45	1		-01
River NAPL 080217	grab	GW	OT	8-2-17	13:30	1		02
River NAPL 080317	grab	GW	OT	8-3-17	13:30	1		
		GW						
		GW						
		GW						
		GW						
		GW						
		GW						
		GW						

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other Surface water

Remarks: **TT9156-R01, PO# 4358 - Hold samples until further instruction from client for analysis to run**

Samples returned via:
 UPS FedEx Courier

Tracking #

Relinquished by: (Signature) **Alice Robinson** Date: **8-3-17** Time: **9:15**

Received by: (Signature) _____ Trip Blank Received: Yes/No HCL/MeOH TBR

Relinquished by: (Signature) _____ Date: _____ Time: _____

Received by: (Signature) _____ Temp: **1.7°C** Bottles Received: **7/60**

Relinquished by: (Signature) _____ Date: **8-5-17** Time: **8:45**

Received by: (Signature) _____ Date: _____ Time: _____

Condition: **8-032** NCF **10K**

Sample Receipt Checklist
 COC Seal Present/intact: 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 Headpace: Y N
 Preservation Correct/Checked: Y N

If preservation required by Login: Date/Time

Andy Vann

From: Mark Beasley
Sent: Tuesday, August 08, 2017 1:19 PM
To: Login
Subject: FW: BNSF1KEN Hold COC (8-032) - #1796120.03, BNSF - Wishram, WA rec'd 8/5/17
Attachments: Scanned document.pdf

Log the following samples previously on hold as R5 due 8/15:

River Sheen Pour up 2 – 40ml vials and log for NWTPHDXLVINOSGT
River NAPL-080317 Log as oil for SV8270PAHSIM & NWTPHDXNOSGT. Instruct the lab to analyze the black oil substance stuck to the side of the jar.

Thanks
Mark

From: Jeremy W. Watkins
Sent: Saturday, August 05, 2017 3:11 PM
To: Mark Beasley; Login
Subject: BNSF1KEN Hold COC (8-032) - #1796120.03, BNSF - Wishram, WA rec'd 8/5/17

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

October 16, 2017

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L938628
Samples Received: 09/22/2017
Project Number: 1796120*00
Description: BNSF - Wishram Railyard, WA
Site: BNSF WISHRAM
Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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.



Cp: Cover Page	1	¹Cp
Tc: Table of Contents	2	
Cn: Case Narrative	3	²Tc
Gl: Glossary of Terms	4	
Al: Accreditations & Locations	5	³Cn
Sc: Sample Chain of Custody	6	⁴Gl
		⁵Al
		⁶Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

- ¹ Cp
- ² Tc
- ³ Cn
- ⁴ Gl
- ⁵ Al
- ⁶ Sc

Mark W. Beasley
Technical Service Representative

Project Narrative

L938628 -01 contains subout data that is included after the chain of custody.



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

SDG	Sample Delivery Group.
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.

- ¹ Cp
- ² Tc
- ³ Cn
- ⁴ Gl
- ⁵ Al
- ⁶ Sc

Qualifier Description

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



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
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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		

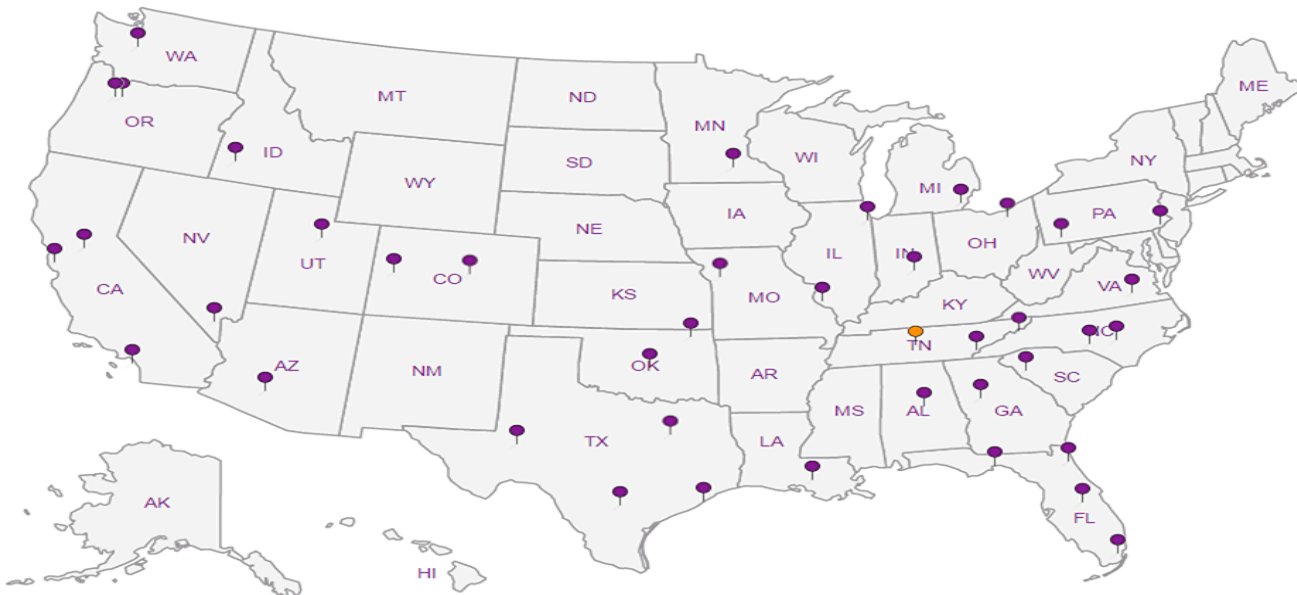
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	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

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Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:

Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Pres
Chk

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project
Description: BNSF - Wishram Railyard, WA

City/State
Collected: *Wishram, WA*

Phone: 253-835-6400
Fax:

Client Project #
1796120*00

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson

Site/Facility ID #
BNSF Wishram

P.O. #
4358

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Quote #

Date Results Needed

Immediately
Packed on Ice N Y

No.
of
Cnts

Sulfide 125mlAmb-S-NaOH-ZnAc
Total As, Ph 250mlHDPE-HNO3
Total Pb 250mlHDPE-HNO3
V8260BTEXC 40mlAmb-HCl
WA-EPH

Analysis / Container / Preservative

Chain of Custody Page of



L.A.B. S.C.I.E.N.C.E.S.
a subsidiary of *PerkinElmer*

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# *1938609 Td*

Table # *1938628*

Accctnum: BNSF1KEN

Template: T122528

Prelogin: P618204

TSR: 134, Mark W. Beasley

PB: *7-11-17*

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative	Remarks	Sample # (lab only)
<i>RIVER NAPL-2017</i>	<i>grab</i>	<i>GW</i>	<i>0</i>	<i>9-20-17</i>	<i>9:00</i>	<i>2</i>			<i>-01-20</i>
		<i>GW</i>							
		<i>GW</i>							
		<i>GW</i>							
		<i>GW</i>							
		<i>GW</i>							
		<i>GW</i>							
		<i>GW</i>							
		<i>GW</i>							
		<i>GW</i>							

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other *Surface water*

Remarks: TT9156-R04, PO# 4358

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
UPS FedEx Courier

Tracking # _____

Sample Receipt Checklist	
COC Seal Present/Intact: <input type="checkbox"/> NP <input checked="" type="checkbox"/> N	
COC Signed/Accurate: <input checked="" type="checkbox"/> N	
Bottles arrive intact: <input checked="" type="checkbox"/> N	
Correct bottles used: <input checked="" type="checkbox"/> N	
Sufficient volume sent: <input checked="" type="checkbox"/> N	
If Applicable	
VOA Zero Headspace: <input checked="" type="checkbox"/> N	
Preservation Correct/Checked: <input checked="" type="checkbox"/> N	

Relinquished by: (Signature) <i>Alice Robinson</i>	Date: <i>9-21-17</i>	Time: <i>11:30</i>	Received by: (Signature)	Trip Blank Received: <input checked="" type="checkbox"/> No <i>4xTB</i> HCl/MeOH TBR	Bottles Received: <i>340</i>	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <i>6.6</i> <i>55</i>		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Kelly M...</i>	Date: <i>9/21/17</i>	Time: <i>0845</i>	Hold: Condition: NCF / <i>60</i>



10 October 2017

Janice Cozby
ESC Lab Sciences
12065 Lebanon Road
Mt Juliet, TN 37122

RE: WG1024240

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)
1710377

Associated SDG ID(s)
N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclosed Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.


Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



17I0377

Sub-Contract Chain of Custody

 **Environmental Science Corp**
12065 Lebanon Road
Mt. Juliet, TN 37122
(615) 773-9756 (615) 758-5859 fax

Sub-Contract Lab : ARI-WA
City / State : Tukwila, WA
Results Needed by : 10/17/17
ESC Purchase Order # : S26438
Send Reports To : Benita Miller BHollins-Miller@esclabsciences.com

WORKGROUP **WG1024240**
Date Created : 2017/09/25 09:27:02

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L938628-01	GW	2017/09/20 09:00:0	Miscellaneous Analyses	MISC-SUB	<i>WA EPH</i>	

23744745
23744746

Relinquished by *Bm* Date: *9/25/17*
 Received by : *Beithing Hall* Date: *9/26/17 11:03*
 Relinquished by _____ Date: _____
 Received by : _____ Date: _____





Cooler Receipt Form

ARI Client: B.H.
Environ ESC
COC No(s): _____ NA
Assigned ARI Job No: 17I0377
Preliminary Examination Phase:

Project Name: _____
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
Tracking No: 7474 0934 3474 NA

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)
 Time: 11:03 3.1
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: D00522
 Cooler Accepted by: B.H. Date: 9/26/17 Time: 11:03

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI: NA
 Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____
 Samples Logged by: BF Date: 9/26/17 Time: 1458

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

<p>Small Air Bubbles ~2mm</p>	<p>Peabubbles 2-4 mm</p>	<p>LARGE Air Bubbles > 4 mm</p>	Small → "sm" (< 2 mm) Peabubbles → "pb" (2 to < 4 mm) Large → "lg" (4 to < 6 mm) Headspace → "hs" (> 6 mm)
-----------------------------------	------------------------------	--	---



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
L938628-01	1710377-01	Water	25-Sep-2017 00:00	26-Sep-2017 11:03



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

Case Narrative

Sample receipt

One sample as listed on the preceding page was received September 26, 2017 under ARI workorder 1710377. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Extractable Organic Hydrocarbons - WA-Ecology

The sample was extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

There were no target compounds detected in the method blank.

The LCS percent recoveries were within control limits.



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

L938628-01
17I0377-01 (Water)

Washington Department of Ecology Methods

Method: WA EPH
Instrument: FID8

Sampled: 09/25/2017 00:00
Analyzed: 04-Oct-2017 13:09

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BF10687 Sample Size: 500 mL
Prepared: 27-Sep-2017 Final Volume: 1 mL

Sample Cleanup: Cleanup Method: Silica Gel
Cleanup Batch: CFJ0020 Initial Volume: 1 mL
Cleaned: 03-Oct-2017 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics		1	40	ND	ug/L	U
C10-C12 Aliphatics		1	40	ND	ug/L	U
C12-C16 Aliphatics		1	40	ND	ug/L	U
C16-C21 Aliphatics		1	40	ND	ug/L	U
C21-C34 Aliphatics		1	40	ND	ug/L	U
<i>Surrogate: 1-Chloro-octadecane</i>			36-120 %	57.9	%	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics		1	40	ND	ug/L	U
C10-C12 Aromatics		1	40	ND	ug/L	U
C12-C16 Aromatics		1	40	ND	ug/L	U
C16-C21 Aromatics		1	40	ND	ug/L	U
C21-C34 Aromatics		1	40	ND	ug/L	U
<i>Surrogate: o-Terphenyl</i>			41-120 %	61.0	%	



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

Washington Department of Ecology Methods - Quality Control

Batch BFI0687 - EPA 3510C SepF

Instrument: FID8 Analyst: ML

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0687-BLK1)										
					Prepared: 27-Sep-2017 Analyzed: 04-Oct-2017 11:11					
C8-C10 Aliphatics	ND	40	ug/L							U
C10-C12 Aliphatics	ND	40	ug/L							U
C12-C16 Aliphatics	ND	40	ug/L							U
C16-C21 Aliphatics	ND	40	ug/L							U
C21-C34 Aliphatics	ND	40	ug/L							U
<i>Surrogate: 1-Chloro-octadecane</i>		211	ug/L	300		70.3	36-120			
Blank (BFI0687-BLK2)										
					Prepared: 27-Sep-2017 Analyzed: 04-Oct-2017 13:29					
C8-C10 Aromatics	ND	40	ug/L							U
C10-C12 Aromatics	ND	40	ug/L							U
C12-C16 Aromatics	ND	40	ug/L							U
C16-C21 Aromatics	ND	40	ug/L							U
C21-C34 Aromatics	ND	40	ug/L							U
<i>Surrogate: o-Terphenyl</i>		204	ug/L	300		68.0	41-120			
LCS (BFI0687-BS1)										
					Prepared: 27-Sep-2017 Analyzed: 04-Oct-2017 11:30					
C8-C10 Aliphatics	74.8	40	ug/L	150		49.9	12-120			
C10-C12 Aliphatics	95.2	40	ug/L	150		63.5	15-120			
C12-C16 Aliphatics	134	40	ug/L	150		89.6	39-120			
C16-C21 Aliphatics	119	40	ug/L	150		79.6	56-120			
C21-C34 Aliphatics	127	40	ug/L	150		84.4	10-120			
<i>Surrogate: 1-Chloro-octadecane</i>		217	ug/L	300		72.5	36-120			
LCS (BFI0687-BS2)										
					Prepared: 27-Sep-2017 Analyzed: 04-Oct-2017 13:49					
C10-C12 Aromatics	89.2	40	ug/L	150		59.5	29-120			
C12-C16 Aromatics	91.4	40	ug/L	150		60.9	39-120			
C16-C21 Aromatics	246	40	ug/L	300		81.9	54-120			
C21-C34 Aromatics	111	40	ug/L	150		74.3	29-120			
<i>Surrogate: o-Terphenyl</i>		206	ug/L	300		68.8	41-120			



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

Certified Analyses included in this Report

Analyte	Certifications
WA EPH in Water	
C8-C10 Aliphatics	DoD-ELAP,NELAP,WADOE
C10-C12 Aliphatics	DoD-ELAP,NELAP,WADOE
C12-C16 Aliphatics	DoD-ELAP,NELAP,WADOE
C16-C21 Aliphatics	DoD-ELAP,NELAP,WADOE
C21-C34 Aliphatics	DoD-ELAP,NELAP,WADOE
C8-C10 Aromatics	DoD-ELAP,NELAP,WADOE
C10-C12 Aromatics	DoD-ELAP,NELAP,WADOE
C12-C16 Aromatics	DoD-ELAP,NELAP,WADOE
C16-C21 Aromatics	DoD-ELAP,NELAP,WADOE
C21-C34 Aromatics	DoD-ELAP,NELAP,WADOE

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	UST-033	09/01/2017
CALAP	California Department of Public Health CAELAP	2748	02/28/2018
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/07/2019
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006	05/11/2018
WADOE	WA Dept of Ecology	C558	06/30/2018
WA-DW	Ecology - Drinking Water	C558	06/30/2018



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

Notes and Definitions

- U This analyte is not detected above the applicable reporting or detection limit.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- [2C] Indicates this result was quantified on the second column on a dual column analysis.

Soil, Reconnaissance, and LNAPL Analytical Reports for 2017

September 07, 2017

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L928067
Samples Received: 08/05/2017
Project Number: 1796120.03
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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.



Cp: Cover Page	1	1 Cp
Tc: Table of Contents	2	2 Tc
Ss: Sample Summary	3	3 Ss
Cn: Case Narrative	4	4 Cn
Sr: Sample Results	5	5 Sr
RIVER SHEEN-080217 L928067-01	5	4 Cn
RIVER NAPL-080317 L928067-02	6	5 Sr
Qc: Quality Control Summary	7	6 Qc
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	7	7 Gl
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	9	8 Al
Gl: Glossary of Terms	11	9 Sc
Al: Accreditations & Locations	12	
Sc: Sample Chain of Custody	13	

SAMPLE SUMMARY



RIVER SHEEN-080217 L928067-01 GW

Collected by Alice Robinson	Collected date/time 08/02/17 12:45	Received date/time 08/05/17 08:45
--------------------------------	---------------------------------------	--------------------------------------

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1007876	1	08/09/17 18:54	08/11/17 01:10	TH

1
Cp

2
Tc

3
Ss

RIVER NAPL-080317 L928067-02 GW

Collected by Alice Robinson	Collected date/time 08/03/17 13:30	Received date/time 08/05/17 08:45
--------------------------------	---------------------------------------	--------------------------------------

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1010252	1	08/16/17 17:50	08/17/17 13:51	LM
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1010255	1	08/16/17 21:45	08/17/17 18:20	FMB

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

Mark W. Beasley
Technical Service Representative

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/11/2017 01:10	WG1007876
Residual Range Organics (RRO)	ND		250	1	08/11/2017 01:10	WG1007876
(S) o-Terphenyl	121		52.0-156		08/11/2017 01:10	WG1007876

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1190	T8	200	1	08/17/2017 13:51	WG1010252
Residual Range Organics (RRO)	441	T8	250	1	08/17/2017 13:51	WG1010252
(S) o-Terphenyl	120		52.0-156		08/17/2017 13:51	WG1010252

1 Cp

2 Tc

3 Ss

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.122	T8	0.0500	1	08/17/2017 18:20	WG1010255
Acenaphthene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Acenaphthylene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Benzo(a)anthracene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Benzo(a)pyrene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Benzo(b)fluoranthene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Benzo(g,h,i)perylene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Benzo(k)fluoranthene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Chrysene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Dibenz(a,h)anthracene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Fluoranthene	0.0666	T8	0.0500	1	08/17/2017 18:20	WG1010255
Fluorene	0.102	T8	0.0500	1	08/17/2017 18:20	WG1010255
Indeno(1,2,3-cd)pyrene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Naphthalene	0.353	T8	0.250	1	08/17/2017 18:20	WG1010255
Phenanthrene	ND	T8	0.0500	1	08/17/2017 18:20	WG1010255
Pyrene	0.527	T8	0.0500	1	08/17/2017 18:20	WG1010255
1-Methylnaphthalene	ND	T8	0.250	1	08/17/2017 18:20	WG1010255
2-Methylnaphthalene	ND	T8	0.250	1	08/17/2017 18:20	WG1010255
2-Chloronaphthalene	ND	T8	0.250	1	08/17/2017 18:20	WG1010255
(S) Nitrobenzene-d5	75.9		31.0-160		08/17/2017 18:20	WG1010255
(S) 2-Fluorobiphenyl	89.9		48.0-148		08/17/2017 18:20	WG1010255
(S) p-Terphenyl-d14	97.9		37.0-146		08/17/2017 18:20	WG1010255

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3240406-1 08/10/17 22:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	112			52.0-156

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

(LCS) R3240406-2 08/10/17 23:01 • (LCSD) R3240406-3 08/10/17 23:17

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	745	747	99.4	99.6	50.0-150			0.210	20
Residual Range Organics (RRO)	750	781	809	104	108	50.0-150			3.50	20
<i>(S) o-Terphenyl</i>				118	122	52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3242421-1 08/17/17 13:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	119			52.0-156

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

(LCS) R3242421-2 08/17/17 13:18 • (LCSD) R3242421-3 08/17/17 13:34

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	732	742	97.5	99.0	50.0-150			1.46	20
Residual Range Organics (RRO)	750	639	636	85.2	84.8	50.0-150			0.480	20
<i>(S) o-Terphenyl</i>				96.6	99.8	52.0-156				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3242361-3 08/17/17 17:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	U		0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	U		0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	75.3			31.0-160
(S) 2-Fluorobiphenyl	102			48.0-148
(S) p-Terphenyl-d14	95.2			37.0-146

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) R3242361-1 08/17/17 17:10 • (LCSD) R3242361-2 08/17/17 17:33

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 %
Anthracene	2.00	2.03	2.01	101	100	64.0-142			0.960	20
Acenaphthene	2.00	1.83	1.79	91.4	89.7	66.0-132			1.81	20
Acenaphthylene	2.00	1.92	1.89	95.8	94.3	65.0-132			1.56	20
Benzo(a)anthracene	2.00	1.93	1.87	96.3	93.5	59.0-134			2.90	20
Benzo(a)pyrene	2.00	1.96	1.92	98.2	95.8	61.0-145			2.43	20
Benzo(b)fluoranthene	2.00	1.96	1.79	98.1	89.4	57.0-136			9.21	20
Benzo(g,h,i)perylene	2.00	1.86	1.79	93.2	89.5	54.0-140			4.12	20
Benzo(k)fluoranthene	2.00	1.80	1.90	90.0	94.8	57.0-141			5.19	20
Chrysene	2.00	1.94	1.87	96.9	93.3	63.0-140			3.82	20
Dibenz(a,h)anthracene	2.00	1.79	1.74	89.3	86.9	49.0-141			2.74	20
Fluoranthene	2.00	2.13	2.12	107	106	65.0-143			0.840	20



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

(LCS) R3242361-1 08/17/17 17:10 • (LCSD) R3242361-2 08/17/17 17:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	1.82	1.78	91.2	89.2	64.0-129			2.17	20
Indeno(1,2,3-cd)pyrene	2.00	1.85	1.80	92.5	89.8	53.0-141			2.98	20
Naphthalene	2.00	1.92	1.89	95.8	94.5	68.0-129			1.40	20
Phenanthrene	2.00	1.73	1.72	86.7	86.2	62.0-132			0.540	20
Pyrene	2.00	1.84	1.77	91.8	88.6	58.0-156			3.59	20
1-Methylnaphthalene	2.00	2.06	2.03	103	102	68.0-137			1.20	20
2-Methylnaphthalene	2.00	1.92	1.90	96.2	95.2	68.0-134			1.01	20
2-Chloronaphthalene	2.00	1.91	1.89	95.4	94.4	65.0-129			1.00	20
<i>(S) Nitrobenzene-d5</i>				72.3	67.9	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				95.3	93.4	48.0-148				
<i>(S) p-Terphenyl-d14</i>				90.6	84.5	37.0-146				

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



Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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, 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.
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.

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

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration.



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		

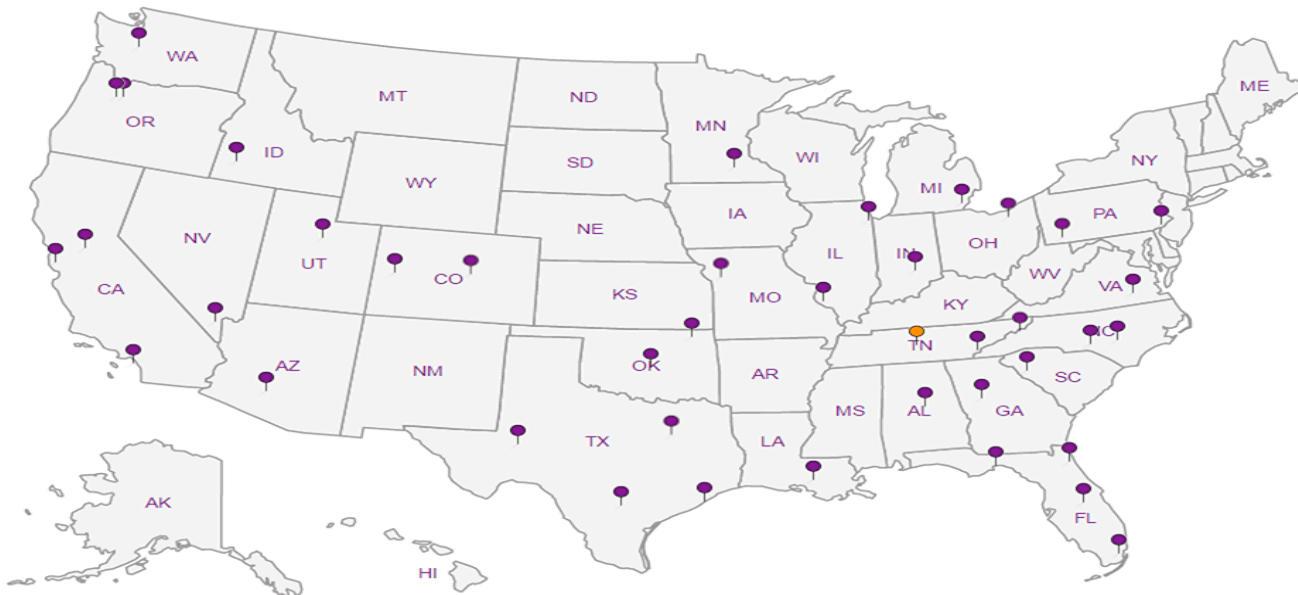
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	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.**



Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Ave S
 Tacoma, WA 98421

Report to:
 Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
 tyschreiner@kennedyjenks.com

Project Description: **BNSF - Wishram Railyard, WA**

City/State Collected: **Wishram, WA**

Phone: **253-835-6400**

Fax:

Client Project # **1796120.03**

Lab Project # **BNSF1KEN-WISHRAM**

Collected by (print): **Alice Robinson**

Collected by (signature): **Alice Robinson**

Site/Facility ID #

P.O. # **TT9156-008**

Quote #

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Date Results Needed

Immediately Packed on Ice N Y

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page of

ESC
 L-A-B S-C-I-E-N-C-E-S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5855
 Phone: 800-767-5859
 Fax: 615-758-5859

QR Code



L# **L928067**

Tabl **A238**

Acctnum: **BNSF1KEN**

Template: **T122578**

Prelogin: **P596945**

TSR: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEX Saver**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Sulfide	Total As, Pb	Total Hb	VR260BTEXC	NWPH-Dx	Extractions	PAHs	VOCs	Remarks	Sample # (lab only)
River sheen-080217	grab	GW	OT	8-2-17	12:45	1	125mlAmb-S-NaOH+ZnAc	250mlHDPE-HNO3	250mlHDPE-HNO3	40mlAmb-HCl	Hold	by W4 EPH	by 8270-SIM	by 8260		-01
River NAPL 080217	grab	GW	OT	8-2-17	13:30	1					Hold					02
River NAPL 080317	grab	GW	OT	8-3-17	13:30	1					Hold					
		GW														
		GW														
		GW														
		GW														
		GW														
		GW														

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other Surface water

Remarks: **TT9156-R01, PO# 4358 - Hold samples until further instruction from client for analysis to run**

Samples returned via:
 UPS FedEx Courier

Tracking #

Relinquished by: (Signature) **Alice Robinson** Date: **8-3-17** Time: **9:15**

Received by: (Signature) _____ Trip Blank Received: Yes/No HCL/MeOH TBR

Relinquished by: (Signature) _____ Date: _____ Time: _____

Received by: (Signature) _____ Temp: **1.7°C** Bottles Received: **7/60**

Relinquished by: (Signature) _____ Date: **8-5-17** Time: **8:45**

Received for lab by: (Signature) _____ Date: _____ Time: _____

Sample Receipt Checklist
 COC Seal Present/Intact: 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 Headpace: Y N
 Preservation Correct/Checked: Y N

If preservation required by Login: Date/Time

8-032

Condition: **NCF 10K**

Andy Vann

From: Mark Beasley
Sent: Tuesday, August 08, 2017 1:19 PM
To: Login
Subject: FW: BNSF1KEN Hold COC (8-032) - #1796120.03, BNSF - Wishram, WA rec'd 8/5/17
Attachments: Scanned document.pdf

Log the following samples previously on hold as R5 due 8/15:

River Sheen Pour up 2 – 40ml vials and log for NWTPHDXLVINOSGT
River NAPL-080317 Log as oil for SV8270PAHSIM & NWTPHDXNOSGT. Instruct the lab to analyze the black oil substance stuck to the side of the jar.

Thanks
Mark

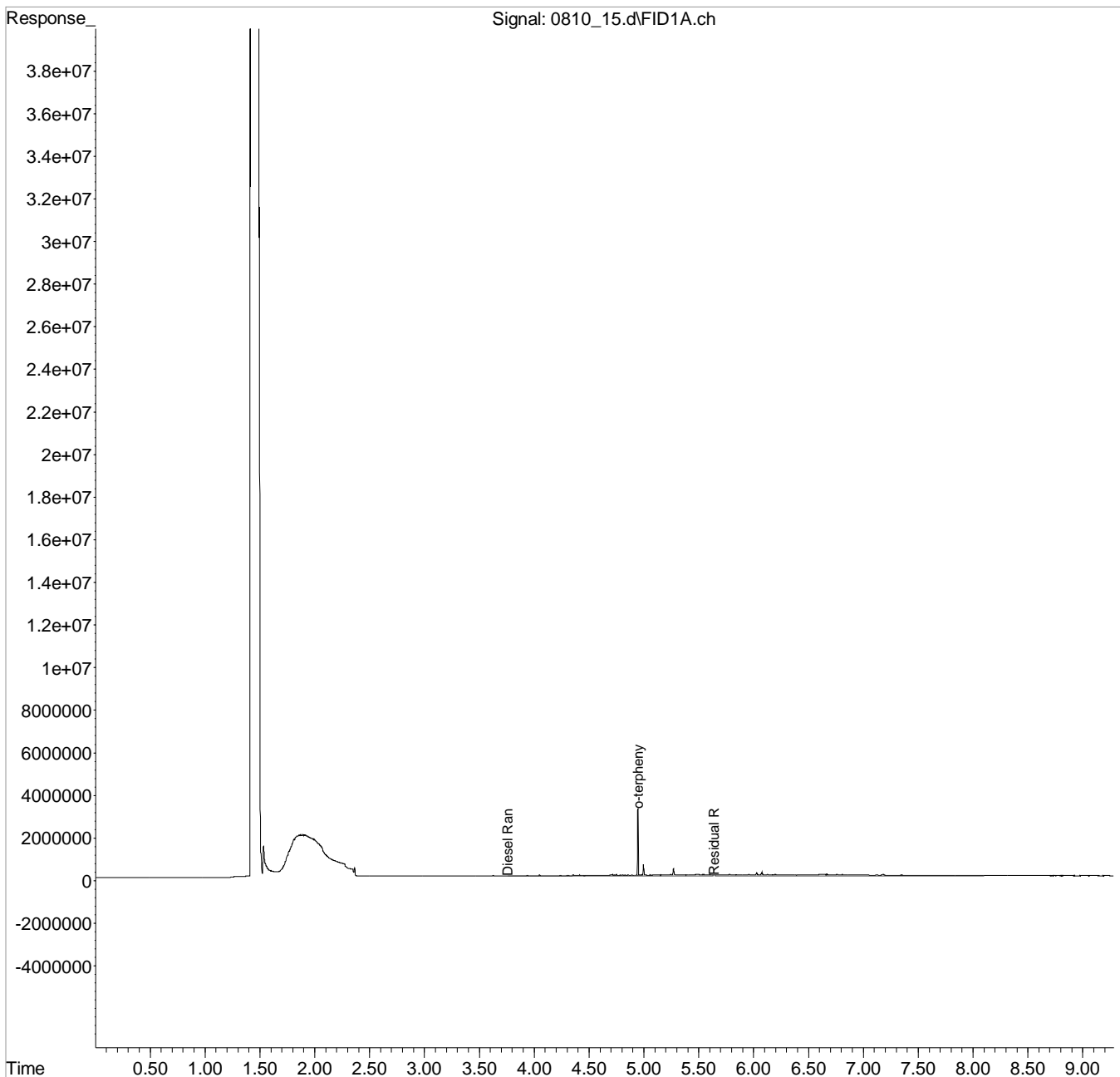
From: Jeremy W. Watkins
Sent: Saturday, August 05, 2017 3:11 PM
To: Mark Beasley; Login
Subject: BNSF1KEN Hold COC (8-032) - #1796120.03, BNSF - Wishram, WA rec'd 8/5/17

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

Data Path : C:\msdchem\1\data\081017\
 Data File : 0810 15.d
 Signal(s) : FID1A.ch
 Acq On : 11 Aug 2017 1:10 am
 Operator : 725
 Sample : L928067-01 1x WG1007876 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 9 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 11 11:54:11 2017
 Quant Method : C:\msdchem\1\methods\EP27H10Q.M
 Quant Title :
 QLast Update : Fri Aug 11 11:02:14 2017
 Response via : Initial Calibration
 Integrator: ChemStation

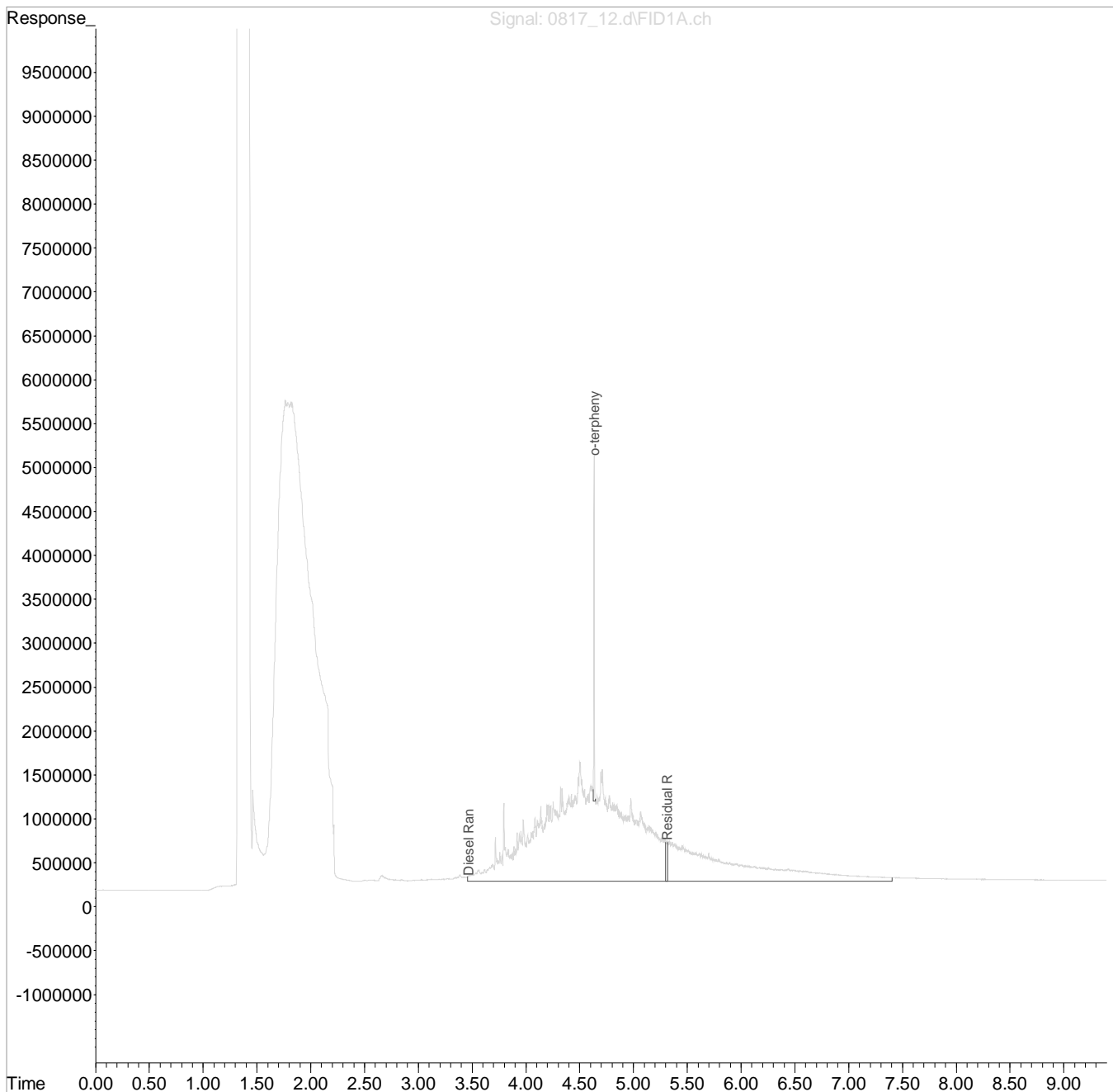
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081717\
 Data File : 0817 12.d
 Signal(s) : FID1A.ch
 Acq On : 17 Aug 2017 1:51 pm
 Operator : 725
 Sample : L928067-02 1x WG1010252 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 8 Sample Multiplier: 0.05
 InstName : SVGC31

Integration File: events.e
 Quant Time: Aug 17 17:07:41 2017
 Quant Method : C:\msdchem\1\methods\EP31H17Q.M
 Quant Title :
 QLast Update : Thu Aug 17 15:14:53 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :



October 16, 2017

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L938628
Samples Received: 09/22/2017
Project Number: 1796120*00
Description: BNSF - Wishram Railyard, WA
Site: BNSF WISHRAM
Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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.



Cp: Cover Page	1	¹Cp
Tc: Table of Contents	2	
Cn: Case Narrative	3	²Tc
Gl: Glossary of Terms	4	
Al: Accreditations & Locations	5	³Cn
Sc: Sample Chain of Custody	6	⁴Gl
		⁵Al
		⁶Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

- ¹ Cp
- ² Tc
- ³ Cn
- ⁴ Gl
- ⁵ Al
- ⁶ Sc

Mark W. Beasley
Technical Service Representative

Project Narrative

L938628 -01 contains subout data that is included after the chain of custody.



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

SDG	Sample Delivery Group.
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.

- ¹Cp
- ²Tc
- ³Cn
- ⁴Gl
- ⁵Al
- ⁶Sc

Qualifier Description

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



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		

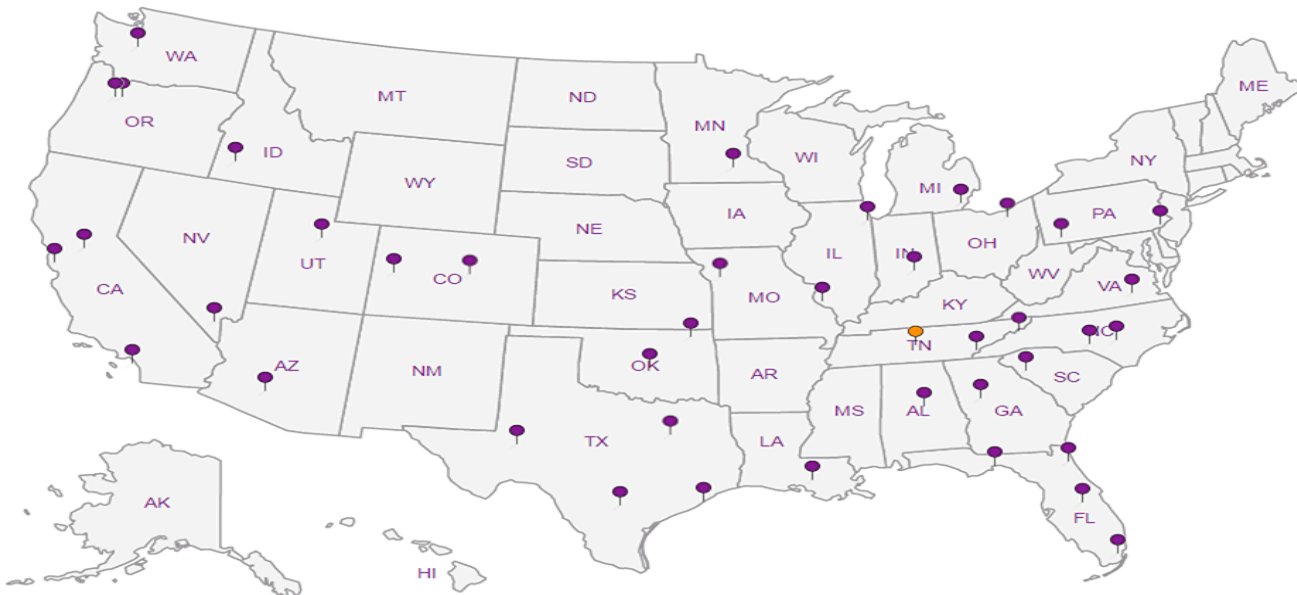
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	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.**



Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:

Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page of



L.A.B. SCIENCES
a subsidiary of *PerkinElmer*

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project
Description: **BNSF - Wishram Railyard, WA**

City/State
Collected: **Wishram, WA**

Phone: **253-835-6400**
Fax:

Client Project #
1796120*00

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson

Site/Facility ID #
BNSF Wishram

P.O. #
4358

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)

Quote #

Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Date Results Needed

Immediately
Packed on Ice: N Y

No.
of
Cnts

Sulfide: 125mlAmb-S-NaOH-ZnAc
Total As, Ph 250mlHDPE-HNO3
Total Pb 250mlHDPE-HNO3
V8260BTEXC 40mlAmb-HCl
WA-EPH

L# **1938609**

Table # **1938628**

Accntnum: **BNSF1KEN**

Template: **T122528**

Prelogin: **P618204**

TSR: **134, Mark W. Beasley**

PB: *7-11-17*

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative	Remarks	Sample # (lab only)
RIVER NAPL-2017090	grab	GW	0	9-20-17	9:00	2			-01-20
		GW							
		GW							
		GW							
		GW							
		GW							
		GW							
		GW							
		GW							
		GW							

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other *Surface water*

Remarks: **TT9156-R04, PO# 4358**

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
UPS FedEx Courier

Tracking #

Sample Receipt Checklist	
COC Seal Present/Intact: <input type="checkbox"/> NP	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
COC Signed/Accurate:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Correct bottles used:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Sufficient volume sent:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
If Applicable	
VOA Zero Headspace:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Preservation Correct/Checked:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Relinquished by: (Signature)
Alice Robinson

Date: **9-21-17**

Time: **11:30**

Received by: (Signature)

Trip Blank Received: Yes No
4xTB
HCl/MeOH
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: *21.0 55*
Bottles Received: **340**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: **9/22/17**
Time: **0845**

Hold: Condition: **NCF / 60**



10 October 2017

Janice Cozby
ESC Lab Sciences
12065 Lebanon Road
Mt Juliet, TN 37122

RE: WG1024240

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)
1710377

Associated SDG ID(s)
N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclosed Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.


Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



17I0377

Sub-Contract Chain of Custody

 **Environmental Science Corp**
12065 Lebanon Road
Mt. Juliet, TN 37122
(615) 773-9756 (615) 758-5859 fax

Sub-Contract Lab : ARI-WA
City / State : Tukwila, WA
Results Needed by : 10/17/17
ESC Purchase Order # : S26438
Send Reports To : Benita Miller BHollins-Miller@esclabsciences.com

WORKGROUP **WG1024240**
Date Created : 2017/09/25 09:27:02

<u>SAMPLENO</u> Container #	<u>MATRIX</u>	<u>Date / Time</u> Collected	<u>PARAMETER</u>	Code	<u>METHOD</u>	<u>Comments</u>
L938628-01	GW	2017/09/20 09:00:0	Miscellaneous Analyses		<i>WA EPH</i>	

23744745
23744746

Relinquished by *Bm* Date: *9/25/17*
 Received by : *Beithing Hall* Date: *9/26/17 11:03*
 Relinquished by _____ Date: _____
 Received by : _____ Date: _____





Cooler Receipt Form

ARI Client: B.H.
Environ ESC
COC No(s): _____ NA
Assigned ARI Job No: 17I0377
Preliminary Examination Phase:

Project Name: _____
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
Tracking No: 7474 0934 3474 NA

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)
 Time: 11:03 3.1
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: D00522
 Cooler Accepted by: B.H. Date: 9/26/17 Time: 11:03

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI: NA
 Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____
 Samples Logged by: BF Date: 9/26/17 Time: 1458

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm" (<math>< 2\text{ mm}</math>)
			Peabubbles → "pb" (2 to <math>< 4\text{ mm}</math>)
			Large → "lg" (4 to <math>< 6\text{ mm}</math>)
			Headspace → "hs" (> 6 mm)



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
L938628-01	1710377-01	Water	25-Sep-2017 00:00	26-Sep-2017 11:03



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

Case Narrative

Sample receipt

One sample as listed on the preceding page was received September 26, 2017 under ARI workorder 1710377. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Extractable Organic Hydrocarbons - WA-Ecology

The sample was extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

There were no target compounds detected in the method blank.

The LCS percent recoveries were within control limits.



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

L938628-01
17I0377-01 (Water)

Washington Department of Ecology Methods

Method: WA EPH
Instrument: FID8

Sampled: 09/25/2017 00:00
Analyzed: 04-Oct-2017 13:09

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BF10687 Sample Size: 500 mL
Prepared: 27-Sep-2017 Final Volume: 1 mL

Sample Cleanup: Cleanup Method: Silica Gel
Cleanup Batch: CFJ0020 Initial Volume: 1 mL
Cleaned: 03-Oct-2017 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics		1	40	ND	ug/L	U
C10-C12 Aliphatics		1	40	ND	ug/L	U
C12-C16 Aliphatics		1	40	ND	ug/L	U
C16-C21 Aliphatics		1	40	ND	ug/L	U
C21-C34 Aliphatics		1	40	ND	ug/L	U
<i>Surrogate: 1-Chloro-octadecane</i>			36-120 %	57.9	%	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics		1	40	ND	ug/L	U
C10-C12 Aromatics		1	40	ND	ug/L	U
C12-C16 Aromatics		1	40	ND	ug/L	U
C16-C21 Aromatics		1	40	ND	ug/L	U
C21-C34 Aromatics		1	40	ND	ug/L	U
<i>Surrogate: o-Terphenyl</i>			41-120 %	61.0	%	



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

Washington Department of Ecology Methods - Quality Control

Batch BFI0687 - EPA 3510C SepF

Instrument: FID8 Analyst: ML

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0687-BLK1)										
Prepared: 27-Sep-2017 Analyzed: 04-Oct-2017 11:11										
C8-C10 Aliphatics	ND	40	ug/L							U
C10-C12 Aliphatics	ND	40	ug/L							U
C12-C16 Aliphatics	ND	40	ug/L							U
C16-C21 Aliphatics	ND	40	ug/L							U
C21-C34 Aliphatics	ND	40	ug/L							U
Surrogate: 1-Chloro-octadecane		211	ug/L	300		70.3	36-120			
Blank (BFI0687-BLK2)										
Prepared: 27-Sep-2017 Analyzed: 04-Oct-2017 13:29										
C8-C10 Aromatics	ND	40	ug/L							U
C10-C12 Aromatics	ND	40	ug/L							U
C12-C16 Aromatics	ND	40	ug/L							U
C16-C21 Aromatics	ND	40	ug/L							U
C21-C34 Aromatics	ND	40	ug/L							U
Surrogate: o-Terphenyl		204	ug/L	300		68.0	41-120			
LCS (BFI0687-BS1)										
Prepared: 27-Sep-2017 Analyzed: 04-Oct-2017 11:30										
C8-C10 Aliphatics	74.8	40	ug/L	150		49.9	12-120			
C10-C12 Aliphatics	95.2	40	ug/L	150		63.5	15-120			
C12-C16 Aliphatics	134	40	ug/L	150		89.6	39-120			
C16-C21 Aliphatics	119	40	ug/L	150		79.6	56-120			
C21-C34 Aliphatics	127	40	ug/L	150		84.4	10-120			
Surrogate: 1-Chloro-octadecane		217	ug/L	300		72.5	36-120			
LCS (BFI0687-BS2)										
Prepared: 27-Sep-2017 Analyzed: 04-Oct-2017 13:49										
C10-C12 Aromatics	89.2	40	ug/L	150		59.5	29-120			
C12-C16 Aromatics	91.4	40	ug/L	150		60.9	39-120			
C16-C21 Aromatics	246	40	ug/L	300		81.9	54-120			
C21-C34 Aromatics	111	40	ug/L	150		74.3	29-120			
Surrogate: o-Terphenyl		206	ug/L	300		68.8	41-120			



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

Certified Analyses included in this Report

Analyte	Certifications
WA EPH in Water	
C8-C10 Aliphatics	DoD-ELAP,NELAP,WADOE
C10-C12 Aliphatics	DoD-ELAP,NELAP,WADOE
C12-C16 Aliphatics	DoD-ELAP,NELAP,WADOE
C16-C21 Aliphatics	DoD-ELAP,NELAP,WADOE
C21-C34 Aliphatics	DoD-ELAP,NELAP,WADOE
C8-C10 Aromatics	DoD-ELAP,NELAP,WADOE
C10-C12 Aromatics	DoD-ELAP,NELAP,WADOE
C12-C16 Aromatics	DoD-ELAP,NELAP,WADOE
C16-C21 Aromatics	DoD-ELAP,NELAP,WADOE
C21-C34 Aromatics	DoD-ELAP,NELAP,WADOE

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	UST-033	09/01/2017
CALAP	California Department of Public Health CAELAP	2748	02/28/2018
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/07/2019
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006	05/11/2018
WADOE	WA Dept of Ecology	C558	06/30/2018
WA-DW	Ecology - Drinking Water	C558	06/30/2018



ESC Lab Sciences
12065 Lebanon Road
Mt Juliet TN, 37122

Project: WG1024240
Project Number: [none]
Project Manager: Janice Cozby

Reported:
10-Oct-2017 13:22

Notes and Definitions

- U This analyte is not detected above the applicable reporting or detection limit.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- [2C] Indicates this result was quantified on the second column on a dual column analysis.

Soil, Reconnaissance, and LNAPL Analytical Reports for 2018

August 27, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1014164
Samples Received: 08/02/2018
Project Number: 1896120.04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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



WMW-19(2.0-2.5) L1014164-01 Solid

Collected by
K. Teague
Collected date/time
07/30/18 15:30
Received date/time
08/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1148398	1	08/07/18 15:41	08/07/18 15:48	JD
Mercury by Method 7471B	WG1147211	1	08/03/18 10:23	08/05/18 16:56	EL
Metals (ICP) by Method 6010C	WG1148345	1	08/07/18 08:39	08/07/18 10:27	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1148961	1	07/30/18 15:30	08/09/18 00:31	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149960	1	07/30/18 15:30	08/09/18 13:00	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1147771	1	08/06/18 06:39	08/06/18 12:26	AAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1147494	1	08/04/18 09:14	08/05/18 15:58	KM

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

RMD-5(2.0-2.5) L1014164-02 Solid

Collected by
K. Teague
Collected date/time
07/30/18 14:55
Received date/time
08/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1148398	1	08/07/18 15:41	08/07/18 15:48	JD
Mercury by Method 7471B	WG1147211	1	08/03/18 10:23	08/05/18 16:58	EL
Metals (ICP) by Method 6010C	WG1148345	1	08/07/18 08:39	08/07/18 10:39	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1148961	1	07/30/18 14:55	08/09/18 00:50	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149960	1	07/30/18 14:55	08/09/18 13:20	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1147771	5	08/06/18 06:39	08/06/18 16:49	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1147494	1	08/04/18 09:14	08/05/18 16:20	KM

RMD-5(7.5-8.0) L1014164-03 Solid

Collected by
K. Teague
Collected date/time
07/31/18 08:55
Received date/time
08/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1148398	1	08/07/18 15:41	08/07/18 15:48	JD
Mercury by Method 7471B	WG1147211	1	08/03/18 10:23	08/05/18 17:00	EL
Metals (ICP) by Method 6010C	WG1148345	1	08/07/18 08:39	08/07/18 10:42	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1148961	1.24	07/31/18 08:55	08/09/18 01:09	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149960	2.48	07/31/18 08:55	08/09/18 14:22	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1147771	20	08/06/18 06:39	08/06/18 17:49	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1147494	1	08/04/18 09:14	08/05/18 21:06	KM

RMD-5(29.5-30.0) L1014164-04 Solid

Collected by
K. Teague
Collected date/time
07/31/18 09:50
Received date/time
08/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1148398	1	08/07/18 15:41	08/07/18 15:48	JD
Mercury by Method 7471B	WG1147211	1	08/03/18 10:23	08/05/18 17:02	EL
Metals (ICP) by Method 6010C	WG1148345	1	08/07/18 08:39	08/07/18 10:50	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1148961	1	07/31/18 09:50	08/09/18 01:28	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149960	1	07/31/18 09:50	08/09/18 14:42	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1147771	1	08/06/18 06:39	08/06/18 11:50	AAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1147943	1	08/05/18 19:40	08/06/18 17:19	KM

RMD-5(49.5-50.0) L1014164-05 Solid

Collected by
K. Teague
Collected date/time
07/31/18 11:15
Received date/time
08/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1148400	1	08/07/18 15:49	08/07/18 15:54	JD
Mercury by Method 7471B	WG1147211	1	08/03/18 10:23	08/05/18 17:05	EL
Metals (ICP) by Method 6010C	WG1148345	1	08/07/18 08:39	08/07/18 10:52	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1148961	1	07/31/18 11:15	08/09/18 01:47	DWR

SAMPLE SUMMARY



RMD-5(49.5-50.0) L1014164-05 Solid

Collected by: K. Teague
 Collected date/time: 07/31/18 11:15
 Received date/time: 08/02/18 08:45

1 Cp

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149960	1	07/31/18 11:15	08/09/18 15:02	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1147771	1	08/06/18 06:39	08/06/18 12:38	AAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1147943	1	08/05/18 19:40	08/06/18 17:41	KM

2 Tc

3 Ss

RMD-6(2.0-2.5) L1014164-06 Solid

Collected by: K. Teague
 Collected date/time: 07/30/18 16:25
 Received date/time: 08/02/18 08:45

4 Cn

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1148400	1	08/07/18 15:49	08/07/18 15:54	JD
Mercury by Method 7471B	WG1147190	1	08/03/18 09:50	08/05/18 15:10	EL
Metals (ICP) by Method 6010C	WG1148345	1	08/07/18 08:39	08/07/18 10:55	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1148961	1.07	07/30/18 16:25	08/09/18 02:06	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149960	1.07	07/30/18 16:25	08/09/18 15:21	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1147771	1	08/06/18 06:39	08/06/18 12:02	AAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1147943	1	08/05/18 19:40	08/06/18 18:02	KM

5 Sr

6 Qc

7 Gl

8 Al

WMW-19(14.0-14.5) L1014164-07 Solid

Collected by: K. Teague
 Collected date/time: 07/31/18 12:30
 Received date/time: 08/02/18 08:45

9 Sc

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1148400	1	08/07/18 15:49	08/07/18 15:54	JD
Mercury by Method 7471B	WG1147190	1	08/03/18 09:50	08/05/18 15:13	EL
Metals (ICP) by Method 6010C	WG1148345	1	08/07/18 08:39	08/07/18 10:57	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1148961	1.4	07/31/18 12:30	08/09/18 02:25	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149960	1.39	07/31/18 12:30	08/09/18 15:41	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1147771	20	08/06/18 06:39	08/06/18 18:37	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1147943	1	08/05/18 19:40	08/06/18 21:12	KM

RB-01-20180731 L1014164-08 GW

Collected by: K. Teague
 Collected date/time: 07/31/18 13:20
 Received date/time: 08/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1146967	1	08/02/18 20:39	08/03/18 10:27	ABL
Metals (ICPMS) by Method 6020A	WG1147428	1	08/04/18 10:52	08/05/18 19:24	LD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1147089	1	08/03/18 03:56	08/03/18 03:56	JHH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1147210	1	08/03/18 12:38	08/03/18 18:48	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1147050	1	08/06/18 16:30	08/07/18 01:51	KM

WMW-20(2.0-2.5) L1014164-09 Solid

Collected by: K. Teague
 Collected date/time: 07/31/18 15:40
 Received date/time: 08/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1148400	1	08/07/18 15:49	08/07/18 15:54	JD
Mercury by Method 7471B	WG1147190	1	08/03/18 09:50	08/05/18 15:15	EL
Metals (ICP) by Method 6010C	WG1148345	1	08/07/18 08:39	08/07/18 11:00	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1148961	1.04	07/31/18 15:40	08/09/18 02:44	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149960	1.03	07/31/18 15:40	08/09/18 16:01	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1147771	1	08/06/18 06:39	08/06/18 12:51	AAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1147943	1	08/05/18 19:40	08/06/18 18:23	KM



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.

Mark W. Beasley
Project Manager

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.3		1	08/07/2018 15:48	WG1148398

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0320		0.0212	1	08/05/2018 16:56	WG1147211

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.63		2.12	1	08/07/2018 10:27	WG1148345
Barium	63.9		0.530	1	08/07/2018 10:27	WG1148345
Cadmium	ND		0.530	1	08/07/2018 10:27	WG1148345
Chromium	9.82		1.06	1	08/07/2018 10:27	WG1148345
Lead	4.84		0.530	1	08/07/2018 10:27	WG1148345
Selenium	ND		2.12	1	08/07/2018 10:27	WG1148345
Silver	ND		1.06	1	08/07/2018 10:27	WG1148345

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0265	1	08/09/2018 00:31	WG1148961
Acrylonitrile	ND		0.0133	1	08/09/2018 00:31	WG1148961
Benzene	ND		0.00106	1	08/09/2018 00:31	WG1148961
Bromobenzene	ND		0.0133	1	08/09/2018 00:31	WG1148961
Bromodichloromethane	ND	J4	0.00265	1	08/09/2018 00:31	WG1148961
Bromoform	ND	JO	0.0265	1	08/09/2018 13:00	WG1149960
Bromomethane	ND		0.0133	1	08/09/2018 00:31	WG1148961
n-Butylbenzene	ND		0.0133	1	08/09/2018 00:31	WG1148961
sec-Butylbenzene	ND		0.0133	1	08/09/2018 00:31	WG1148961
tert-Butylbenzene	ND		0.00530	1	08/09/2018 00:31	WG1148961
Carbon tetrachloride	ND		0.00530	1	08/09/2018 13:00	WG1149960
Chlorobenzene	ND		0.00265	1	08/09/2018 00:31	WG1148961
Chlorodibromomethane	ND		0.00265	1	08/09/2018 00:31	WG1148961
Chloroethane	ND		0.00530	1	08/09/2018 13:00	WG1149960
Chloroform	ND		0.00265	1	08/09/2018 00:31	WG1148961
Chloromethane	ND		0.0133	1	08/09/2018 13:00	WG1149960
2-Chlorotoluene	ND		0.00265	1	08/09/2018 00:31	WG1148961
4-Chlorotoluene	ND		0.00530	1	08/09/2018 00:31	WG1148961
1,2-Dibromo-3-Chloropropane	ND		0.0265	1	08/09/2018 00:31	WG1148961
1,2-Dibromoethane	ND		0.00265	1	08/09/2018 00:31	WG1148961
Dibromomethane	ND		0.00530	1	08/09/2018 00:31	WG1148961
1,2-Dichlorobenzene	ND		0.00530	1	08/09/2018 00:31	WG1148961
1,3-Dichlorobenzene	ND		0.00530	1	08/09/2018 00:31	WG1148961
1,4-Dichlorobenzene	ND		0.00530	1	08/09/2018 00:31	WG1148961
Dichlorodifluoromethane	ND		0.00265	1	08/09/2018 13:00	WG1149960
1,1-Dichloroethane	ND		0.00265	1	08/09/2018 13:00	WG1149960
1,2-Dichloroethane	ND		0.00265	1	08/09/2018 00:31	WG1148961
1,1-Dichloroethene	ND		0.00265	1	08/09/2018 00:31	WG1148961
cis-1,2-Dichloroethene	ND		0.00265	1	08/09/2018 00:31	WG1148961
trans-1,2-Dichloroethene	ND		0.00530	1	08/09/2018 00:31	WG1148961
1,2-Dichloropropane	ND		0.00530	1	08/09/2018 13:00	WG1149960
1,1-Dichloropropene	ND		0.00265	1	08/09/2018 00:31	WG1148961
1,3-Dichloropropane	ND		0.00530	1	08/09/2018 00:31	WG1148961

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00265	1	08/09/2018 00:31	WG1148961
trans-1,3-Dichloropropene	ND		0.00530	1	08/09/2018 00:31	WG1148961
2,2-Dichloropropane	ND		0.00265	1	08/09/2018 00:31	WG1148961
Di-isopropyl ether	ND		0.00106	1	08/09/2018 13:00	WG1149960
Ethylbenzene	ND		0.00265	1	08/09/2018 00:31	WG1148961
Hexachloro-1,3-butadiene	ND		0.0265	1	08/09/2018 00:31	WG1148961
Isopropylbenzene	ND		0.00265	1	08/09/2018 00:31	WG1148961
p-Isopropyltoluene	ND		0.00530	1	08/09/2018 00:31	WG1148961
2-Butanone (MEK)	ND		0.0265	1	08/09/2018 00:31	WG1148961
Methylene Chloride	ND		0.0265	1	08/09/2018 13:00	WG1149960
4-Methyl-2-pentanone (MIBK)	ND		0.0265	1	08/09/2018 00:31	WG1148961
Methyl tert-butyl ether	ND		0.00106	1	08/09/2018 00:31	WG1148961
Naphthalene	ND		0.0133	1	08/09/2018 00:31	WG1148961
n-Propylbenzene	ND		0.00530	1	08/09/2018 00:31	WG1148961
Styrene	ND		0.0133	1	08/09/2018 00:31	WG1148961
1,1,1,2-Tetrachloroethane	ND		0.00265	1	08/09/2018 00:31	WG1148961
1,1,2,2-Tetrachloroethane	ND		0.00265	1	08/09/2018 00:31	WG1148961
1,1,2-Trichlorotrifluoroethane	ND		0.00265	1	08/09/2018 00:31	WG1148961
Tetrachloroethene	ND		0.00265	1	08/09/2018 13:00	WG1149960
Toluene	ND		0.00530	1	08/09/2018 00:31	WG1148961
1,2,3-Trichlorobenzene	ND		0.00265	1	08/09/2018 00:31	WG1148961
1,2,4-Trichlorobenzene	ND		0.0133	1	08/09/2018 00:31	WG1148961
1,1,1-Trichloroethane	ND		0.00265	1	08/09/2018 00:31	WG1148961
1,1,2-Trichloroethane	ND		0.00265	1	08/09/2018 00:31	WG1148961
Trichloroethene	ND		0.00106	1	08/09/2018 00:31	WG1148961
Trichlorofluoromethane	ND		0.00265	1	08/09/2018 00:31	WG1148961
1,2,3-Trichloropropane	ND		0.0133	1	08/09/2018 00:31	WG1148961
1,2,4-Trimethylbenzene	ND		0.00530	1	08/09/2018 00:31	WG1148961
1,2,3-Trimethylbenzene	ND		0.00530	1	08/09/2018 00:31	WG1148961
Vinyl chloride	ND		0.00265	1	08/09/2018 00:31	WG1148961
1,3,5-Trimethylbenzene	ND		0.00530	1	08/09/2018 00:31	WG1148961
o-Xylene	ND		0.00265	1	08/09/2018 00:31	WG1148961
m&p-Xylene	ND		0.00424	1	08/09/2018 00:31	WG1148961
(S) Toluene-d8	101		80.0-120		08/09/2018 00:31	WG1148961
(S) Toluene-d8	114		80.0-120		08/09/2018 13:00	WG1149960
(S) Dibromofluoromethane	83.9		74.0-131		08/09/2018 00:31	WG1148961
(S) Dibromofluoromethane	88.4		74.0-131		08/09/2018 13:00	WG1149960
(S) 4-Bromofluorobenzene	106		64.0-132		08/09/2018 00:31	WG1148961
(S) 4-Bromofluorobenzene	89.1		64.0-132		08/09/2018 13:00	WG1149960

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.24	1	08/06/2018 12:26	WG1147771
Residual Range Organics (RRO)	ND		10.6	1	08/06/2018 12:26	WG1147771
(S) o-Terphenyl	89.2		18.0-148		08/06/2018 12:26	WG1147771

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Acenaphthene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Acenaphthylene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Benzo(a)anthracene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Benzo(a)pyrene	ND		0.00636	1	08/05/2018 15:58	WG1147494



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Benzo(g,h,i)perylene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Benzo(k)fluoranthene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Chrysene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Dibenz(a,h)anthracene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Fluoranthene	0.00804		0.00636	1	08/05/2018 15:58	WG1147494
Fluorene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Indeno(1,2,3-cd)pyrene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Naphthalene	ND		0.0212	1	08/05/2018 15:58	WG1147494
Phenanthrene	ND		0.00636	1	08/05/2018 15:58	WG1147494
Pyrene	0.00749		0.00636	1	08/05/2018 15:58	WG1147494
1-Methylnaphthalene	ND		0.0212	1	08/05/2018 15:58	WG1147494
2-Methylnaphthalene	ND		0.0212	1	08/05/2018 15:58	WG1147494
2-Chloronaphthalene	ND		0.0212	1	08/05/2018 15:58	WG1147494
<i>(S) Nitrobenzene-d5</i>	65.3		14.0-149		08/05/2018 15:58	WG1147494
<i>(S) 2-Fluorobiphenyl</i>	82.7		34.0-125		08/05/2018 15:58	WG1147494
<i>(S) p-Terphenyl-d14</i>	74.5		23.0-120		08/05/2018 15:58	WG1147494

- 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
Total Solids	79.4		1	08/07/2018 15:48	WG1148398

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0252	1	08/05/2018 16:58	WG1147211

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.52	1	08/07/2018 10:39	WG1148345
Barium	69.8		0.630	1	08/07/2018 10:39	WG1148345
Cadmium	ND		0.630	1	08/07/2018 10:39	WG1148345
Chromium	10.9		1.26	1	08/07/2018 10:39	WG1148345
Lead	6.77		0.630	1	08/07/2018 10:39	WG1148345
Selenium	ND		2.52	1	08/07/2018 10:39	WG1148345
Silver	ND		1.26	1	08/07/2018 10:39	WG1148345

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0315	1	08/09/2018 00:50	WG1148961
Acrylonitrile	ND		0.0158	1	08/09/2018 00:50	WG1148961
Benzene	ND		0.00126	1	08/09/2018 00:50	WG1148961
Bromobenzene	ND		0.0158	1	08/09/2018 00:50	WG1148961
Bromodichloromethane	ND	J4	0.00315	1	08/09/2018 00:50	WG1148961
Bromoform	ND	J0	0.0315	1	08/09/2018 13:20	WG1149960
Bromomethane	ND		0.0158	1	08/09/2018 00:50	WG1148961
n-Butylbenzene	ND		0.0158	1	08/09/2018 00:50	WG1148961
sec-Butylbenzene	ND		0.0158	1	08/09/2018 00:50	WG1148961
tert-Butylbenzene	ND		0.00630	1	08/09/2018 00:50	WG1148961
Carbon tetrachloride	ND		0.00630	1	08/09/2018 13:20	WG1149960
Chlorobenzene	ND		0.00315	1	08/09/2018 00:50	WG1148961
Chlorodibromomethane	ND		0.00315	1	08/09/2018 00:50	WG1148961
Chloroethane	ND		0.00630	1	08/09/2018 13:20	WG1149960
Chloroform	ND		0.00315	1	08/09/2018 00:50	WG1148961
Chloromethane	ND		0.0158	1	08/09/2018 13:20	WG1149960
2-Chlorotoluene	ND		0.00315	1	08/09/2018 00:50	WG1148961
4-Chlorotoluene	ND		0.00630	1	08/09/2018 00:50	WG1148961
1,2-Dibromo-3-Chloropropane	ND		0.0315	1	08/09/2018 00:50	WG1148961
1,2-Dibromoethane	ND		0.00315	1	08/09/2018 00:50	WG1148961
Dibromomethane	ND		0.00630	1	08/09/2018 00:50	WG1148961
1,2-Dichlorobenzene	ND		0.00630	1	08/09/2018 00:50	WG1148961
1,3-Dichlorobenzene	ND		0.00630	1	08/09/2018 00:50	WG1148961
1,4-Dichlorobenzene	ND		0.00630	1	08/09/2018 00:50	WG1148961
Dichlorodifluoromethane	ND		0.00315	1	08/09/2018 13:20	WG1149960
1,1-Dichloroethane	ND		0.00315	1	08/09/2018 13:20	WG1149960
1,2-Dichloroethane	ND		0.00315	1	08/09/2018 00:50	WG1148961
1,1-Dichloroethene	ND		0.00315	1	08/09/2018 00:50	WG1148961
cis-1,2-Dichloroethene	ND		0.00315	1	08/09/2018 00:50	WG1148961
trans-1,2-Dichloroethene	ND		0.00630	1	08/09/2018 00:50	WG1148961
1,2-Dichloropropane	ND		0.00630	1	08/09/2018 00:50	WG1148961
1,1-Dichloropropene	ND		0.00315	1	08/09/2018 00:50	WG1148961
1,3-Dichloropropane	ND		0.00630	1	08/09/2018 00:50	WG1148961

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00315	1	08/09/2018 00:50	WG1148961
trans-1,3-Dichloropropene	ND		0.00630	1	08/09/2018 13:20	WG1149960
2,2-Dichloropropane	ND		0.00315	1	08/09/2018 00:50	WG1148961
Di-isopropyl ether	ND		0.00126	1	08/09/2018 13:20	WG1149960
Ethylbenzene	ND		0.00315	1	08/09/2018 00:50	WG1148961
Hexachloro-1,3-butadiene	ND		0.0315	1	08/09/2018 00:50	WG1148961
Isopropylbenzene	ND		0.00315	1	08/09/2018 00:50	WG1148961
p-Isopropyltoluene	ND		0.00630	1	08/09/2018 00:50	WG1148961
2-Butanone (MEK)	ND		0.0315	1	08/09/2018 00:50	WG1148961
Methylene Chloride	ND		0.0315	1	08/09/2018 13:20	WG1149960
4-Methyl-2-pentanone (MIBK)	ND		0.0315	1	08/09/2018 00:50	WG1148961
Methyl tert-butyl ether	ND		0.00126	1	08/09/2018 00:50	WG1148961
Naphthalene	ND		0.0158	1	08/09/2018 00:50	WG1148961
n-Propylbenzene	ND		0.00630	1	08/09/2018 00:50	WG1148961
Styrene	ND		0.0158	1	08/09/2018 00:50	WG1148961
1,1,1,2-Tetrachloroethane	ND		0.00315	1	08/09/2018 00:50	WG1148961
1,1,2,2-Tetrachloroethane	ND		0.00315	1	08/09/2018 00:50	WG1148961
1,1,2-Trichlorotrifluoroethane	ND		0.00315	1	08/09/2018 00:50	WG1148961
Tetrachloroethene	ND		0.00315	1	08/09/2018 13:20	WG1149960
Toluene	ND		0.00630	1	08/09/2018 00:50	WG1148961
1,2,3-Trichlorobenzene	ND		0.00315	1	08/09/2018 00:50	WG1148961
1,2,4-Trichlorobenzene	ND		0.0158	1	08/09/2018 00:50	WG1148961
1,1,1-Trichloroethane	ND		0.00315	1	08/09/2018 00:50	WG1148961
1,1,2-Trichloroethane	ND		0.00315	1	08/09/2018 00:50	WG1148961
Trichloroethene	ND		0.00126	1	08/09/2018 00:50	WG1148961
Trichlorofluoromethane	ND		0.00315	1	08/09/2018 00:50	WG1148961
1,2,3-Trichloropropane	ND		0.0158	1	08/09/2018 00:50	WG1148961
1,2,4-Trimethylbenzene	ND		0.00630	1	08/09/2018 00:50	WG1148961
1,2,3-Trimethylbenzene	ND		0.00630	1	08/09/2018 00:50	WG1148961
Vinyl chloride	ND		0.00315	1	08/09/2018 00:50	WG1148961
1,3,5-Trimethylbenzene	ND		0.00630	1	08/09/2018 00:50	WG1148961
o-Xylene	ND		0.00315	1	08/09/2018 00:50	WG1148961
m&p-Xylene	ND		0.00504	1	08/09/2018 00:50	WG1148961
(S) Toluene-d8	102		80.0-120		08/09/2018 00:50	WG1148961
(S) Toluene-d8	115		80.0-120		08/09/2018 13:20	WG1149960
(S) Dibromofluoromethane	92.5		74.0-131		08/09/2018 00:50	WG1148961
(S) Dibromofluoromethane	88.5		74.0-131		08/09/2018 13:20	WG1149960
(S) 4-Bromofluorobenzene	103		64.0-132		08/09/2018 00:50	WG1148961
(S) 4-Bromofluorobenzene	89.2		64.0-132		08/09/2018 13:20	WG1149960

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		25.2	5	08/06/2018 16:49	WG1147771
Residual Range Organics (RRO)	ND		63.0	5	08/06/2018 16:49	WG1147771
(S) o-Terphenyl	62.5		18.0-148		08/06/2018 16:49	WG1147771

Sample Narrative:

L1014164-02 WG1147771: Cannot run at lower dilution due to viscosity of extract



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Acenaphthene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Acenaphthylene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Benzo(a)anthracene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Benzo(a)pyrene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Benzo(b)fluoranthene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Benzo(g,h,i)perylene	0.00856		0.00756	1	08/05/2018 16:20	WG1147494
Benzo(k)fluoranthene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Chrysene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Dibenz(a,h)anthracene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Fluoranthene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Fluorene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Indeno(1,2,3-cd)pyrene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Naphthalene	ND		0.0252	1	08/05/2018 16:20	WG1147494
Phenanthrene	ND		0.00756	1	08/05/2018 16:20	WG1147494
Pyrene	ND		0.00756	1	08/05/2018 16:20	WG1147494
1-Methylnaphthalene	ND		0.0252	1	08/05/2018 16:20	WG1147494
2-Methylnaphthalene	ND		0.0252	1	08/05/2018 16:20	WG1147494
2-Chloronaphthalene	ND		0.0252	1	08/05/2018 16:20	WG1147494
(S) Nitrobenzene-d5	58.2		14.0-149		08/05/2018 16:20	WG1147494
(S) 2-Fluorobiphenyl	64.8		34.0-125		08/05/2018 16:20	WG1147494
(S) p-Terphenyl-d14	58.9		23.0-120		08/05/2018 16:20	WG1147494

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	98.4		1	08/07/2018 15:48	WG1148398

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0249		0.0203	1	08/05/2018 17:00	WG1147211

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.24		2.03	1	08/07/2018 10:42	WG1148345
Barium	70.2		0.508	1	08/07/2018 10:42	WG1148345
Cadmium	ND		0.508	1	08/07/2018 10:42	WG1148345
Chromium	11.0		1.02	1	08/07/2018 10:42	WG1148345
Lead	8.68		0.508	1	08/07/2018 10:42	WG1148345
Selenium	ND		2.03	1	08/07/2018 10:42	WG1148345
Silver	ND		1.02	1	08/07/2018 10:42	WG1148345

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0315	1.24	08/09/2018 01:09	WG1148961
Acrylonitrile	ND		0.0157	1.24	08/09/2018 01:09	WG1148961
Benzene	ND		0.00126	1.24	08/09/2018 01:09	WG1148961
Bromobenzene	ND		0.0157	1.24	08/09/2018 01:09	WG1148961
Bromodichloromethane	ND	J4	0.00315	1.24	08/09/2018 01:09	WG1148961
Bromoform	ND	J0	0.0630	2.48	08/09/2018 14:22	WG1149960
Bromomethane	ND		0.0157	1.24	08/09/2018 01:09	WG1148961
n-Butylbenzene	ND		0.0157	1.24	08/09/2018 01:09	WG1148961
sec-Butylbenzene	ND		0.0157	1.24	08/09/2018 01:09	WG1148961
tert-Butylbenzene	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
Carbon tetrachloride	ND		0.0126	2.48	08/09/2018 14:22	WG1149960
Chlorobenzene	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
Chlorodibromomethane	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
Chloroethane	ND		0.0126	2.48	08/09/2018 14:22	WG1149960
Chloroform	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
Chloromethane	ND		0.0315	2.48	08/09/2018 14:22	WG1149960
2-Chlorotoluene	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
4-Chlorotoluene	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
1,2-Dibromo-3-Chloropropane	ND		0.0315	1.24	08/09/2018 01:09	WG1148961
1,2-Dibromoethane	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
Dibromomethane	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
1,2-Dichlorobenzene	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
1,3-Dichlorobenzene	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
1,4-Dichlorobenzene	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
Dichlorodifluoromethane	ND		0.00630	2.48	08/09/2018 14:22	WG1149960
1,1-Dichloroethane	ND		0.00630	2.48	08/09/2018 14:22	WG1149960
1,2-Dichloroethane	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
1,1-Dichloroethene	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
cis-1,2-Dichloroethene	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
trans-1,2-Dichloroethene	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
1,2-Dichloropropane	ND		0.0126	2.48	08/09/2018 14:22	WG1149960
1,1-Dichloropropene	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
1,3-Dichloropropane	ND		0.00630	1.24	08/09/2018 01:09	WG1148961

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
trans-1,3-Dichloropropene	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
2,2-Dichloropropane	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
Di-isopropyl ether	ND		0.00252	2.48	08/09/2018 14:22	WG1149960
Ethylbenzene	0.00538		0.00315	1.24	08/09/2018 01:09	WG1148961
Hexachloro-1,3-butadiene	ND		0.0315	1.24	08/09/2018 01:09	WG1148961
Isopropylbenzene	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
p-Isopropyltoluene	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
2-Butanone (MEK)	ND		0.0315	1.24	08/09/2018 01:09	WG1148961
Methylene Chloride	ND		0.0630	2.48	08/09/2018 14:22	WG1149960
4-Methyl-2-pentanone (MIBK)	ND		0.0315	1.24	08/09/2018 01:09	WG1148961
Methyl tert-butyl ether	ND		0.00126	1.24	08/09/2018 01:09	WG1148961
Naphthalene	0.0344		0.0157	1.24	08/09/2018 01:09	WG1148961
n-Propylbenzene	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
Styrene	ND		0.0157	1.24	08/09/2018 01:09	WG1148961
1,1,1,2-Tetrachloroethane	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
1,1,2,2-Tetrachloroethane	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
1,1,2-Trichlorotrifluoroethane	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
Tetrachloroethene	ND		0.00630	2.48	08/09/2018 14:22	WG1149960
Toluene	0.00879		0.00630	1.24	08/09/2018 01:09	WG1148961
1,2,3-Trichlorobenzene	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
1,2,4-Trichlorobenzene	ND		0.0157	1.24	08/09/2018 01:09	WG1148961
1,1,1-Trichloroethane	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
1,1,2-Trichloroethane	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
Trichloroethene	ND		0.00126	1.24	08/09/2018 01:09	WG1148961
Trichlorofluoromethane	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
1,2,3-Trichloropropane	ND		0.0157	1.24	08/09/2018 01:09	WG1148961
1,2,4-Trimethylbenzene	0.00880		0.00630	1.24	08/09/2018 01:09	WG1148961
1,2,3-Trimethylbenzene	0.00992		0.00630	1.24	08/09/2018 01:09	WG1148961
Vinyl chloride	ND		0.00315	1.24	08/09/2018 01:09	WG1148961
1,3,5-Trimethylbenzene	ND		0.00630	1.24	08/09/2018 01:09	WG1148961
o-Xylene	0.0193		0.00315	1.24	08/09/2018 01:09	WG1148961
m&p-Xylene	0.0309		0.00504	1.24	08/09/2018 01:09	WG1148961
(S) Toluene-d8	104		80.0-120		08/09/2018 01:09	WG1148961
(S) Toluene-d8	112		80.0-120		08/09/2018 14:22	WG1149960
(S) Dibromofluoromethane	85.8		74.0-131		08/09/2018 01:09	WG1148961
(S) Dibromofluoromethane	91.5		74.0-131		08/09/2018 14:22	WG1149960
(S) 4-Bromofluorobenzene	103		64.0-132		08/09/2018 01:09	WG1148961
(S) 4-Bromofluorobenzene	87.5		64.0-132		08/09/2018 14:22	WG1149960

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		81.3	20	08/06/2018 17:49	WG1147771
Residual Range Organics (RRO)	307		203	20	08/06/2018 17:49	WG1147771
(S) o-Terphenyl	0.000	J7	18.0-148		08/06/2018 17:49	WG1147771

Sample Narrative:

L1014164-03 WG1147771: Cannot run at lower dilution due to viscosity of extract



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0378		0.00610	1	08/05/2018 21:06	WG1147494
Acenaphthene	ND		0.00610	1	08/05/2018 21:06	WG1147494
Acenaphthylene	ND		0.00610	1	08/05/2018 21:06	WG1147494
Benzo(a)anthracene	0.0708		0.00610	1	08/05/2018 21:06	WG1147494
Benzo(a)pyrene	0.115		0.00610	1	08/05/2018 21:06	WG1147494
Benzo(b)fluoranthene	0.115		0.00610	1	08/05/2018 21:06	WG1147494
Benzo(g,h,i)perylene	0.0805		0.00610	1	08/05/2018 21:06	WG1147494
Benzo(k)fluoranthene	0.0359		0.00610	1	08/05/2018 21:06	WG1147494
Chrysene	0.0720		0.00610	1	08/05/2018 21:06	WG1147494
Dibenz(a,h)anthracene	0.0244		0.00610	1	08/05/2018 21:06	WG1147494
Fluoranthene	0.189		0.00610	1	08/05/2018 21:06	WG1147494
Fluorene	ND		0.00610	1	08/05/2018 21:06	WG1147494
Indeno(1,2,3-cd)pyrene	0.0493		0.00610	1	08/05/2018 21:06	WG1147494
Naphthalene	ND		0.0203	1	08/05/2018 21:06	WG1147494
Phenanthrene	0.0176		0.00610	1	08/05/2018 21:06	WG1147494
Pyrene	0.339		0.00610	1	08/05/2018 21:06	WG1147494
1-Methylnaphthalene	ND		0.0203	1	08/05/2018 21:06	WG1147494
2-Methylnaphthalene	ND		0.0203	1	08/05/2018 21:06	WG1147494
2-Chloronaphthalene	ND		0.0203	1	08/05/2018 21:06	WG1147494
(S) Nitrobenzene-d5	59.2		14.0-149		08/05/2018 21:06	WG1147494
(S) 2-Fluorobiphenyl	86.5		34.0-125		08/05/2018 21:06	WG1147494
(S) p-Terphenyl-d14	68.4		23.0-120		08/05/2018 21:06	WG1147494

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	76.7		1	08/07/2018 15:48	WG1148398

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0467		0.0261	1	08/05/2018 17:02	WG1147211

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.61	1	08/07/2018 10:50	WG1148345
Barium	129		0.652	1	08/07/2018 10:50	WG1148345
Cadmium	ND		0.652	1	08/07/2018 10:50	WG1148345
Chromium	13.4		1.30	1	08/07/2018 10:50	WG1148345
Lead	5.82		0.652	1	08/07/2018 10:50	WG1148345
Selenium	ND		2.61	1	08/07/2018 10:50	WG1148345
Silver	ND		1.30	1	08/07/2018 10:50	WG1148345

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0326	1	08/09/2018 01:28	WG1148961
Acrylonitrile	ND		0.0163	1	08/09/2018 01:28	WG1148961
Benzene	ND		0.00130	1	08/09/2018 01:28	WG1148961
Bromobenzene	ND		0.0163	1	08/09/2018 01:28	WG1148961
Bromodichloromethane	ND	J4	0.00326	1	08/09/2018 01:28	WG1148961
Bromoform	ND	J0	0.0326	1	08/09/2018 14:42	WG1149960
Bromomethane	ND		0.0163	1	08/09/2018 01:28	WG1148961
n-Butylbenzene	ND		0.0163	1	08/09/2018 01:28	WG1148961
sec-Butylbenzene	ND		0.0163	1	08/09/2018 01:28	WG1148961
tert-Butylbenzene	ND		0.00652	1	08/09/2018 01:28	WG1148961
Carbon tetrachloride	ND		0.00652	1	08/09/2018 14:42	WG1149960
Chlorobenzene	ND		0.00326	1	08/09/2018 01:28	WG1148961
Chlorodibromomethane	ND		0.00326	1	08/09/2018 01:28	WG1148961
Chloroethane	ND		0.00652	1	08/09/2018 14:42	WG1149960
Chloroform	ND		0.00326	1	08/09/2018 01:28	WG1148961
Chloromethane	ND		0.0163	1	08/09/2018 14:42	WG1149960
2-Chlorotoluene	ND		0.00326	1	08/09/2018 01:28	WG1148961
4-Chlorotoluene	ND		0.00652	1	08/09/2018 01:28	WG1148961
1,2-Dibromo-3-Chloropropane	ND		0.0326	1	08/09/2018 01:28	WG1148961
1,2-Dibromoethane	ND		0.00326	1	08/09/2018 01:28	WG1148961
Dibromomethane	ND		0.00652	1	08/09/2018 01:28	WG1148961
1,2-Dichlorobenzene	ND		0.00652	1	08/09/2018 01:28	WG1148961
1,3-Dichlorobenzene	ND		0.00652	1	08/09/2018 01:28	WG1148961
1,4-Dichlorobenzene	ND		0.00652	1	08/09/2018 01:28	WG1148961
Dichlorodifluoromethane	ND		0.00326	1	08/09/2018 14:42	WG1149960
1,1-Dichloroethane	ND		0.00326	1	08/09/2018 14:42	WG1149960
1,2-Dichloroethane	ND		0.00326	1	08/09/2018 01:28	WG1148961
1,1-Dichloroethene	ND		0.00326	1	08/09/2018 01:28	WG1148961
cis-1,2-Dichloroethene	ND		0.00326	1	08/09/2018 01:28	WG1148961
trans-1,2-Dichloroethene	ND		0.00652	1	08/09/2018 01:28	WG1148961
1,2-Dichloropropane	ND		0.00652	1	08/09/2018 14:42	WG1149960
1,1-Dichloropropene	ND		0.00326	1	08/09/2018 01:28	WG1148961
1,3-Dichloropropane	ND		0.00652	1	08/09/2018 01:28	WG1148961

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 07/31/18 09:50

L1014164

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00326	1	08/09/2018 01:28	WG1148961
trans-1,3-Dichloropropene	ND		0.00652	1	08/09/2018 01:28	WG1148961
2,2-Dichloropropane	ND		0.00326	1	08/09/2018 01:28	WG1148961
Di-isopropyl ether	ND		0.00130	1	08/09/2018 14:42	WG1149960
Ethylbenzene	ND		0.00326	1	08/09/2018 01:28	WG1148961
Hexachloro-1,3-butadiene	ND		0.0326	1	08/09/2018 01:28	WG1148961
Isopropylbenzene	ND		0.00326	1	08/09/2018 01:28	WG1148961
p-Isopropyltoluene	ND		0.00652	1	08/09/2018 01:28	WG1148961
2-Butanone (MEK)	ND		0.0326	1	08/09/2018 01:28	WG1148961
Methylene Chloride	ND		0.0326	1	08/09/2018 14:42	WG1149960
4-Methyl-2-pentanone (MIBK)	ND		0.0326	1	08/09/2018 01:28	WG1148961
Methyl tert-butyl ether	ND		0.00130	1	08/09/2018 01:28	WG1148961
Naphthalene	ND		0.0163	1	08/09/2018 01:28	WG1148961
n-Propylbenzene	ND		0.00652	1	08/09/2018 01:28	WG1148961
Styrene	ND		0.0163	1	08/09/2018 01:28	WG1148961
1,1,1,2-Tetrachloroethane	ND		0.00326	1	08/09/2018 01:28	WG1148961
1,1,2,2-Tetrachloroethane	ND		0.00326	1	08/09/2018 01:28	WG1148961
1,1,2-Trichlorotrifluoroethane	ND		0.00326	1	08/09/2018 01:28	WG1148961
Tetrachloroethene	ND		0.00326	1	08/09/2018 14:42	WG1149960
Toluene	ND		0.00652	1	08/09/2018 01:28	WG1148961
1,2,3-Trichlorobenzene	ND		0.00326	1	08/09/2018 01:28	WG1148961
1,2,4-Trichlorobenzene	ND		0.0163	1	08/09/2018 01:28	WG1148961
1,1,1-Trichloroethane	ND		0.00326	1	08/09/2018 01:28	WG1148961
1,1,2-Trichloroethane	ND		0.00326	1	08/09/2018 01:28	WG1148961
Trichloroethene	ND		0.00130	1	08/09/2018 01:28	WG1148961
Trichlorofluoromethane	ND		0.00326	1	08/09/2018 01:28	WG1148961
1,2,3-Trichloropropane	ND		0.0163	1	08/09/2018 01:28	WG1148961
1,2,4-Trimethylbenzene	ND		0.00652	1	08/09/2018 01:28	WG1148961
1,2,3-Trimethylbenzene	ND		0.00652	1	08/09/2018 01:28	WG1148961
Vinyl chloride	ND		0.00326	1	08/09/2018 01:28	WG1148961
1,3,5-Trimethylbenzene	ND		0.00652	1	08/09/2018 01:28	WG1148961
o-Xylene	ND		0.00326	1	08/09/2018 01:28	WG1148961
m&p-Xylene	ND		0.00521	1	08/09/2018 01:28	WG1148961
(S) Toluene-d8	101		80.0-120		08/09/2018 01:28	WG1148961
(S) Toluene-d8	114		80.0-120		08/09/2018 14:42	WG1149960
(S) Dibromofluoromethane	84.9		74.0-131		08/09/2018 01:28	WG1148961
(S) Dibromofluoromethane	88.5		74.0-131		08/09/2018 14:42	WG1149960
(S) 4-Bromofluorobenzene	98.0		64.0-132		08/09/2018 01:28	WG1148961
(S) 4-Bromofluorobenzene	90.2		64.0-132		08/09/2018 14:42	WG1149960

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.21	1	08/06/2018 11:50	WG1147771
Residual Range Organics (RRO)	ND		13.0	1	08/06/2018 11:50	WG1147771
(S) o-Terphenyl	77.6		18.0-148		08/06/2018 11:50	WG1147771

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Acenaphthene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Acenaphthylene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Benzo(a)anthracene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Benzo(a)pyrene	ND		0.00782	1	08/06/2018 17:19	WG1147943



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Benzo(g,h,i)perylene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Benzo(k)fluoranthene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Chrysene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Dibenz(a,h)anthracene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Fluoranthene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Fluorene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Indeno(1,2,3-cd)pyrene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Naphthalene	ND		0.0261	1	08/06/2018 17:19	WG1147943
Phenanthrene	ND		0.00782	1	08/06/2018 17:19	WG1147943
Pyrene	ND		0.00782	1	08/06/2018 17:19	WG1147943
1-Methylnaphthalene	ND		0.0261	1	08/06/2018 17:19	WG1147943
2-Methylnaphthalene	ND		0.0261	1	08/06/2018 17:19	WG1147943
2-Chloronaphthalene	ND		0.0261	1	08/06/2018 17:19	WG1147943
(S) Nitrobenzene-d5	88.2		14.0-149		08/06/2018 17:19	WG1147943
(S) 2-Fluorobiphenyl	87.5		34.0-125		08/06/2018 17:19	WG1147943
(S) p-Terphenyl-d14	80.2		23.0-120		08/06/2018 17:19	WG1147943

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
Total Solids	77.2		1	08/07/2018 15:54	WG1148400

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0259	1	08/05/2018 17:05	WG1147211

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.59	1	08/07/2018 10:52	WG1148345
Barium	104		0.648	1	08/07/2018 10:52	WG1148345
Cadmium	ND		0.648	1	08/07/2018 10:52	WG1148345
Chromium	12.2		1.30	1	08/07/2018 10:52	WG1148345
Lead	3.86		0.648	1	08/07/2018 10:52	WG1148345
Selenium	ND		2.59	1	08/07/2018 10:52	WG1148345
Silver	ND		1.30	1	08/07/2018 10:52	WG1148345

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0324	1	08/09/2018 01:47	WG1148961
Acrylonitrile	ND		0.0162	1	08/09/2018 01:47	WG1148961
Benzene	ND		0.00130	1	08/09/2018 01:47	WG1148961
Bromobenzene	ND		0.0162	1	08/09/2018 01:47	WG1148961
Bromodichloromethane	ND	J4	0.00324	1	08/09/2018 01:47	WG1148961
Bromoform	ND	J0	0.0324	1	08/09/2018 15:02	WG1149960
Bromomethane	ND		0.0162	1	08/09/2018 01:47	WG1148961
n-Butylbenzene	ND		0.0162	1	08/09/2018 01:47	WG1148961
sec-Butylbenzene	ND		0.0162	1	08/09/2018 01:47	WG1148961
tert-Butylbenzene	ND		0.00648	1	08/09/2018 01:47	WG1148961
Carbon tetrachloride	ND		0.00648	1	08/09/2018 15:02	WG1149960
Chlorobenzene	ND		0.00324	1	08/09/2018 01:47	WG1148961
Chlorodibromomethane	ND		0.00324	1	08/09/2018 01:47	WG1148961
Chloroethane	ND		0.00648	1	08/09/2018 15:02	WG1149960
Chloroform	ND		0.00324	1	08/09/2018 01:47	WG1148961
Chloromethane	ND		0.0162	1	08/09/2018 15:02	WG1149960
2-Chlorotoluene	ND		0.00324	1	08/09/2018 01:47	WG1148961
4-Chlorotoluene	ND		0.00648	1	08/09/2018 01:47	WG1148961
1,2-Dibromo-3-Chloropropane	ND		0.0324	1	08/09/2018 01:47	WG1148961
1,2-Dibromoethane	ND		0.00324	1	08/09/2018 01:47	WG1148961
Dibromomethane	ND		0.00648	1	08/09/2018 01:47	WG1148961
1,2-Dichlorobenzene	ND		0.00648	1	08/09/2018 01:47	WG1148961
1,3-Dichlorobenzene	ND		0.00648	1	08/09/2018 01:47	WG1148961
1,4-Dichlorobenzene	ND		0.00648	1	08/09/2018 01:47	WG1148961
Dichlorodifluoromethane	ND		0.00324	1	08/09/2018 15:02	WG1149960
1,1-Dichloroethane	ND		0.00324	1	08/09/2018 15:02	WG1149960
1,2-Dichloroethane	ND		0.00324	1	08/09/2018 01:47	WG1148961
1,1-Dichloroethene	ND		0.00324	1	08/09/2018 01:47	WG1148961
cis-1,2-Dichloroethene	ND		0.00324	1	08/09/2018 01:47	WG1148961
trans-1,2-Dichloroethene	ND		0.00648	1	08/09/2018 01:47	WG1148961
1,2-Dichloropropane	ND		0.00648	1	08/09/2018 15:02	WG1149960
1,1-Dichloropropene	ND		0.00324	1	08/09/2018 01:47	WG1148961
1,3-Dichloropropane	ND		0.00648	1	08/09/2018 01:47	WG1148961

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 07/31/18 11:15

L1014164

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00324	1	08/09/2018 01:47	WG1148961
trans-1,3-Dichloropropene	ND		0.00648	1	08/09/2018 01:47	WG1148961
2,2-Dichloropropane	ND		0.00324	1	08/09/2018 01:47	WG1148961
Di-isopropyl ether	ND		0.00130	1	08/09/2018 15:02	WG1149960
Ethylbenzene	ND		0.00324	1	08/09/2018 01:47	WG1148961
Hexachloro-1,3-butadiene	ND		0.0324	1	08/09/2018 01:47	WG1148961
Isopropylbenzene	ND		0.00324	1	08/09/2018 01:47	WG1148961
p-Isopropyltoluene	ND		0.00648	1	08/09/2018 01:47	WG1148961
2-Butanone (MEK)	ND		0.0324	1	08/09/2018 01:47	WG1148961
Methylene Chloride	ND		0.0324	1	08/09/2018 15:02	WG1149960
4-Methyl-2-pentanone (MIBK)	ND		0.0324	1	08/09/2018 01:47	WG1148961
Methyl tert-butyl ether	ND		0.00130	1	08/09/2018 01:47	WG1148961
Naphthalene	ND		0.0162	1	08/09/2018 01:47	WG1148961
n-Propylbenzene	ND		0.00648	1	08/09/2018 01:47	WG1148961
Styrene	ND		0.0162	1	08/09/2018 01:47	WG1148961
1,1,1,2-Tetrachloroethane	ND		0.00324	1	08/09/2018 01:47	WG1148961
1,1,2,2-Tetrachloroethane	ND		0.00324	1	08/09/2018 01:47	WG1148961
1,1,2-Trichlorotrifluoroethane	ND		0.00324	1	08/09/2018 01:47	WG1148961
Tetrachloroethene	ND		0.00324	1	08/09/2018 15:02	WG1149960
Toluene	ND		0.00648	1	08/09/2018 01:47	WG1148961
1,2,3-Trichlorobenzene	ND		0.00324	1	08/09/2018 01:47	WG1148961
1,2,4-Trichlorobenzene	ND		0.0162	1	08/09/2018 01:47	WG1148961
1,1,1-Trichloroethane	ND		0.00324	1	08/09/2018 01:47	WG1148961
1,1,2-Trichloroethane	ND		0.00324	1	08/09/2018 01:47	WG1148961
Trichloroethene	ND		0.00130	1	08/09/2018 01:47	WG1148961
Trichlorofluoromethane	ND		0.00324	1	08/09/2018 01:47	WG1148961
1,2,3-Trichloropropane	ND		0.0162	1	08/09/2018 01:47	WG1148961
1,2,4-Trimethylbenzene	ND		0.00648	1	08/09/2018 01:47	WG1148961
1,2,3-Trimethylbenzene	ND		0.00648	1	08/09/2018 01:47	WG1148961
Vinyl chloride	ND		0.00324	1	08/09/2018 01:47	WG1148961
1,3,5-Trimethylbenzene	ND		0.00648	1	08/09/2018 01:47	WG1148961
o-Xylene	ND		0.00324	1	08/09/2018 01:47	WG1148961
m&p-Xylene	ND		0.00518	1	08/09/2018 01:47	WG1148961
(S) Toluene-d8	107		80.0-120		08/09/2018 01:47	WG1148961
(S) Toluene-d8	113		80.0-120		08/09/2018 15:02	WG1149960
(S) Dibromofluoromethane	83.1		74.0-131		08/09/2018 01:47	WG1148961
(S) Dibromofluoromethane	90.3		74.0-131		08/09/2018 15:02	WG1149960
(S) 4-Bromofluorobenzene	104		64.0-132		08/09/2018 01:47	WG1148961
(S) 4-Bromofluorobenzene	91.7		64.0-132		08/09/2018 15:02	WG1149960

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.18	1	08/06/2018 12:38	WG1147771
Residual Range Organics (RRO)	ND		13.0	1	08/06/2018 12:38	WG1147771
(S) o-Terphenyl	57.3		18.0-148		08/06/2018 12:38	WG1147771

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Acenaphthene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Acenaphthylene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Benzo(a)anthracene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Benzo(a)pyrene	ND		0.00777	1	08/06/2018 17:41	WG1147943



Collected date/time: 07/31/18 11:15

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Benzo(g,h,i)perylene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Benzo(k)fluoranthene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Chrysene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Dibenz(a,h)anthracene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Fluoranthene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Fluorene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Indeno(1,2,3-cd)pyrene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Naphthalene	ND		0.0259	1	08/06/2018 17:41	WG1147943
Phenanthrene	ND		0.00777	1	08/06/2018 17:41	WG1147943
Pyrene	ND		0.00777	1	08/06/2018 17:41	WG1147943
1-Methylnaphthalene	ND		0.0259	1	08/06/2018 17:41	WG1147943
2-Methylnaphthalene	ND		0.0259	1	08/06/2018 17:41	WG1147943
2-Chloronaphthalene	ND		0.0259	1	08/06/2018 17:41	WG1147943
<i>(S)</i> Nitrobenzene-d5	81.7		14.0-149		08/06/2018 17:41	WG1147943
<i>(S)</i> 2-Fluorobiphenyl	80.5		34.0-125		08/06/2018 17:41	WG1147943
<i>(S)</i> p-Terphenyl-d14	69.1		23.0-120		08/06/2018 17:41	WG1147943

- 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	95.9		1	08/07/2018 15:54	WG1148400

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0209	1	08/05/2018 15:10	WG1147190

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.20		2.09	1	08/07/2018 10:55	WG1148345
Barium	67.4		0.522	1	08/07/2018 10:55	WG1148345
Cadmium	ND		0.522	1	08/07/2018 10:55	WG1148345
Chromium	12.2		1.04	1	08/07/2018 10:55	WG1148345
Lead	4.09		0.522	1	08/07/2018 10:55	WG1148345
Selenium	ND		2.09	1	08/07/2018 10:55	WG1148345
Silver	ND		1.04	1	08/07/2018 10:55	WG1148345

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0279	1.07	08/09/2018 02:06	WG1148961
Acrylonitrile	ND		0.0140	1.07	08/09/2018 02:06	WG1148961
Benzene	ND		0.00112	1.07	08/09/2018 02:06	WG1148961
Bromobenzene	ND		0.0140	1.07	08/09/2018 02:06	WG1148961
Bromodichloromethane	ND	J4	0.00279	1.07	08/09/2018 02:06	WG1148961
Bromoform	ND	J0	0.0279	1.07	08/09/2018 15:21	WG1149960
Bromomethane	ND		0.0140	1.07	08/09/2018 02:06	WG1148961
n-Butylbenzene	ND		0.0140	1.07	08/09/2018 02:06	WG1148961
sec-Butylbenzene	ND		0.0140	1.07	08/09/2018 02:06	WG1148961
tert-Butylbenzene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
Carbon tetrachloride	ND		0.00558	1.07	08/09/2018 15:21	WG1149960
Chlorobenzene	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
Chlorodibromomethane	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
Chloroethane	ND		0.00558	1.07	08/09/2018 15:21	WG1149960
Chloroform	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
Chloromethane	ND		0.0140	1.07	08/09/2018 15:21	WG1149960
2-Chlorotoluene	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
4-Chlorotoluene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
1,2-Dibromo-3-Chloropropane	ND		0.0279	1.07	08/09/2018 02:06	WG1148961
1,2-Dibromoethane	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
Dibromomethane	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
1,2-Dichlorobenzene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
1,3-Dichlorobenzene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
1,4-Dichlorobenzene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
Dichlorodifluoromethane	ND		0.00279	1.07	08/09/2018 15:21	WG1149960
1,1-Dichloroethane	ND		0.00279	1.07	08/09/2018 15:21	WG1149960
1,2-Dichloroethane	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
1,1-Dichloroethene	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
cis-1,2-Dichloroethene	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
trans-1,2-Dichloroethene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
1,2-Dichloropropane	ND		0.00558	1.07	08/09/2018 15:21	WG1149960
1,1-Dichloropropene	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
1,3-Dichloropropane	ND		0.00558	1.07	08/09/2018 02:06	WG1148961

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
trans-1,3-Dichloropropene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
2,2-Dichloropropane	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
Di-isopropyl ether	ND		0.00112	1.07	08/09/2018 15:21	WG1149960
Ethylbenzene	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
Hexachloro-1,3-butadiene	ND		0.0279	1.07	08/09/2018 02:06	WG1148961
Isopropylbenzene	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
p-Isopropyltoluene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
2-Butanone (MEK)	ND		0.0279	1.07	08/09/2018 02:06	WG1148961
Methylene Chloride	ND		0.0279	1.07	08/09/2018 15:21	WG1149960
4-Methyl-2-pentanone (MIBK)	ND		0.0279	1.07	08/09/2018 02:06	WG1148961
Methyl tert-butyl ether	ND		0.00112	1.07	08/09/2018 02:06	WG1148961
Naphthalene	ND		0.0140	1.07	08/09/2018 02:06	WG1148961
n-Propylbenzene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
Styrene	ND		0.0140	1.07	08/09/2018 02:06	WG1148961
1,1,1,2-Tetrachloroethane	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
1,1,2,2-Tetrachloroethane	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
1,1,2-Trichlorotrifluoroethane	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
Tetrachloroethene	ND		0.00279	1.07	08/09/2018 15:21	WG1149960
Toluene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
1,2,3-Trichlorobenzene	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
1,2,4-Trichlorobenzene	ND		0.0140	1.07	08/09/2018 02:06	WG1148961
1,1,1-Trichloroethane	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
1,1,2-Trichloroethane	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
Trichloroethene	ND		0.00112	1.07	08/09/2018 02:06	WG1148961
Trichlorofluoromethane	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
1,2,3-Trichloropropane	ND		0.0140	1.07	08/09/2018 02:06	WG1148961
1,2,4-Trimethylbenzene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
1,2,3-Trimethylbenzene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
Vinyl chloride	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
1,3,5-Trimethylbenzene	ND		0.00558	1.07	08/09/2018 02:06	WG1148961
o-Xylene	ND		0.00279	1.07	08/09/2018 02:06	WG1148961
m&p-Xylene	ND		0.00446	1.07	08/09/2018 02:06	WG1148961
(S) Toluene-d8	103		80.0-120		08/09/2018 02:06	WG1148961
(S) Toluene-d8	114		80.0-120		08/09/2018 15:21	WG1149960
(S) Dibromofluoromethane	88.0		74.0-131		08/09/2018 02:06	WG1148961
(S) Dibromofluoromethane	88.6		74.0-131		08/09/2018 15:21	WG1149960
(S) 4-Bromofluorobenzene	102		64.0-132		08/09/2018 02:06	WG1148961
(S) 4-Bromofluorobenzene	89.3		64.0-132		08/09/2018 15:21	WG1149960

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.17	1	08/06/2018 12:02	WG1147771
Residual Range Organics (RRO)	ND		10.4	1	08/06/2018 12:02	WG1147771
(S) o-Terphenyl	108		18.0-148		08/06/2018 12:02	WG1147771

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Acenaphthene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Acenaphthylene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Benzo(a)anthracene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Benzo(a)pyrene	ND		0.00626	1	08/06/2018 18:02	WG1147943



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Benzo(g,h,i)perylene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Benzo(k)fluoranthene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Chrysene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Dibenz(a,h)anthracene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Fluoranthene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Fluorene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Indeno(1,2,3-cd)pyrene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Naphthalene	ND		0.0209	1	08/06/2018 18:02	WG1147943
Phenanthrene	ND		0.00626	1	08/06/2018 18:02	WG1147943
Pyrene	ND		0.00626	1	08/06/2018 18:02	WG1147943
1-Methylnaphthalene	ND		0.0209	1	08/06/2018 18:02	WG1147943
2-Methylnaphthalene	ND		0.0209	1	08/06/2018 18:02	WG1147943
2-Chloronaphthalene	ND		0.0209	1	08/06/2018 18:02	WG1147943
<i>(S)</i> Nitrobenzene-d5	66.9		14.0-149		08/06/2018 18:02	WG1147943
<i>(S)</i> 2-Fluorobiphenyl	71.8		34.0-125		08/06/2018 18:02	WG1147943
<i>(S)</i> p-Terphenyl-d14	67.7		23.0-120		08/06/2018 18:02	WG1147943

- 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	98.4		1	08/07/2018 15:54	WG1148400

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0269		0.0203	1	08/05/2018 15:13	WG1147190

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.23		2.03	1	08/07/2018 10:57	WG1148345
Barium	77.4		0.508	1	08/07/2018 10:57	WG1148345
Cadmium	ND		0.508	1	08/07/2018 10:57	WG1148345
Chromium	11.4		1.02	1	08/07/2018 10:57	WG1148345
Lead	31.3		0.508	1	08/07/2018 10:57	WG1148345
Selenium	ND		2.03	1	08/07/2018 10:57	WG1148345
Silver	ND		1.02	1	08/07/2018 10:57	WG1148345

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0356	1.4	08/09/2018 02:25	WG1148961
Acrylonitrile	ND		0.0178	1.4	08/09/2018 02:25	WG1148961
Benzene	ND		0.00142	1.4	08/09/2018 02:25	WG1148961
Bromobenzene	ND		0.0178	1.4	08/09/2018 02:25	WG1148961
Bromodichloromethane	ND	J4	0.00356	1.4	08/09/2018 02:25	WG1148961
Bromoform	ND	J0	0.0353	1.39	08/09/2018 15:41	WG1149960
Bromomethane	ND		0.0178	1.4	08/09/2018 02:25	WG1148961
n-Butylbenzene	ND		0.0178	1.4	08/09/2018 02:25	WG1148961
sec-Butylbenzene	ND		0.0178	1.4	08/09/2018 02:25	WG1148961
tert-Butylbenzene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
Carbon tetrachloride	ND		0.00706	1.39	08/09/2018 15:41	WG1149960
Chlorobenzene	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
Chlorodibromomethane	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
Chloroethane	ND		0.00706	1.39	08/09/2018 15:41	WG1149960
Chloroform	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
Chloromethane	ND		0.0177	1.39	08/09/2018 15:41	WG1149960
2-Chlorotoluene	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
4-Chlorotoluene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
1,2-Dibromo-3-Chloropropane	ND		0.0356	1.4	08/09/2018 02:25	WG1148961
1,2-Dibromoethane	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
Dibromomethane	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
1,2-Dichlorobenzene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
1,3-Dichlorobenzene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
1,4-Dichlorobenzene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
Dichlorodifluoromethane	ND		0.00353	1.39	08/09/2018 15:41	WG1149960
1,1-Dichloroethane	ND		0.00353	1.39	08/09/2018 15:41	WG1149960
1,2-Dichloroethane	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
1,1-Dichloroethene	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
cis-1,2-Dichloroethene	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
trans-1,2-Dichloroethene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
1,2-Dichloropropane	ND		0.00706	1.39	08/09/2018 15:41	WG1149960
1,1-Dichloropropene	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
1,3-Dichloropropane	ND		0.00712	1.4	08/09/2018 02:25	WG1148961

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
trans-1,3-Dichloropropene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
2,2-Dichloropropane	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
Di-isopropyl ether	ND		0.00141	1.39	08/09/2018 15:41	WG1149960
Ethylbenzene	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
Hexachloro-1,3-butadiene	ND		0.0356	1.4	08/09/2018 02:25	WG1148961
Isopropylbenzene	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
p-Isopropyltoluene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
2-Butanone (MEK)	ND		0.0356	1.4	08/09/2018 02:25	WG1148961
Methylene Chloride	ND		0.0353	1.39	08/09/2018 15:41	WG1149960
4-Methyl-2-pentanone (MIBK)	ND		0.0356	1.4	08/09/2018 02:25	WG1148961
Methyl tert-butyl ether	ND		0.00142	1.4	08/09/2018 02:25	WG1148961
Naphthalene	ND		0.0178	1.4	08/09/2018 02:25	WG1148961
n-Propylbenzene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
Styrene	ND		0.0178	1.4	08/09/2018 02:25	WG1148961
1,1,1,2-Tetrachloroethane	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
1,1,2,2-Tetrachloroethane	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
1,1,2-Trichlorotrifluoroethane	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
Tetrachloroethene	ND		0.00353	1.39	08/09/2018 15:41	WG1149960
Toluene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
1,2,3-Trichlorobenzene	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
1,2,4-Trichlorobenzene	ND		0.0178	1.4	08/09/2018 02:25	WG1148961
1,1,1-Trichloroethane	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
1,1,2-Trichloroethane	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
Trichloroethene	ND		0.00142	1.4	08/09/2018 02:25	WG1148961
Trichlorofluoromethane	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
1,2,3-Trichloropropane	ND		0.0178	1.4	08/09/2018 02:25	WG1148961
1,2,4-Trimethylbenzene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
1,2,3-Trimethylbenzene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
Vinyl chloride	ND		0.00356	1.4	08/09/2018 02:25	WG1148961
1,3,5-Trimethylbenzene	ND		0.00712	1.4	08/09/2018 02:25	WG1148961
o-Xylene	0.00424		0.00356	1.4	08/09/2018 02:25	WG1148961
m&p-Xylene	0.00908		0.00569	1.4	08/09/2018 02:25	WG1148961
(S) Toluene-d8	107		80.0-120		08/09/2018 02:25	WG1148961
(S) Toluene-d8	114		80.0-120		08/09/2018 15:41	WG1149960
(S) Dibromofluoromethane	89.4		74.0-131		08/09/2018 02:25	WG1148961
(S) Dibromofluoromethane	90.0		74.0-131		08/09/2018 15:41	WG1149960
(S) 4-Bromofluorobenzene	106		64.0-132		08/09/2018 02:25	WG1148961
(S) 4-Bromofluorobenzene	93.2		64.0-132		08/09/2018 15:41	WG1149960

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		81.3	20	08/06/2018 18:37	WG1147771
Residual Range Organics (RRO)	ND		203	20	08/06/2018 18:37	WG1147771
(S) o-Terphenyl	124	J7	18.0-148		08/06/2018 18:37	WG1147771

Sample Narrative:

L1014164-07 WG1147771: Cannot run at lower dilution due to viscosity of extract



Collected date/time: 07/31/18 12:30

L1014164

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00610	1	08/06/2018 21:12	WG1147943
Acenaphthene	ND		0.00610	1	08/06/2018 21:12	WG1147943
Acenaphthylene	ND		0.00610	1	08/06/2018 21:12	WG1147943
Benzo(a)anthracene	0.0218		0.00610	1	08/06/2018 21:12	WG1147943
Benzo(a)pyrene	0.0353		0.00610	1	08/06/2018 21:12	WG1147943
Benzo(b)fluoranthene	0.0455		0.00610	1	08/06/2018 21:12	WG1147943
Benzo(g,h,i)perylene	0.0421		0.00610	1	08/06/2018 21:12	WG1147943
Benzo(k)fluoranthene	0.0133		0.00610	1	08/06/2018 21:12	WG1147943
Chrysene	0.0353		0.00610	1	08/06/2018 21:12	WG1147943
Dibenz(a,h)anthracene	0.00719		0.00610	1	08/06/2018 21:12	WG1147943
Fluoranthene	0.0370		0.00610	1	08/06/2018 21:12	WG1147943
Fluorene	ND		0.00610	1	08/06/2018 21:12	WG1147943
Indeno(1,2,3-cd)pyrene	0.0257		0.00610	1	08/06/2018 21:12	WG1147943
Naphthalene	ND		0.0203	1	08/06/2018 21:12	WG1147943
Phenanthrene	0.0131		0.00610	1	08/06/2018 21:12	WG1147943
Pyrene	0.0416		0.00610	1	08/06/2018 21:12	WG1147943
1-Methylnaphthalene	ND		0.0203	1	08/06/2018 21:12	WG1147943
2-Methylnaphthalene	ND		0.0203	1	08/06/2018 21:12	WG1147943
2-Chloronaphthalene	ND		0.0203	1	08/06/2018 21:12	WG1147943
(S) Nitrobenzene-d5	86.1		14.0-149		08/06/2018 21:12	WG1147943
(S) 2-Fluorobiphenyl	83.3		34.0-125		08/06/2018 21:12	WG1147943
(S) p-Terphenyl-d14	79.6		23.0-120		08/06/2018 21:12	WG1147943

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/03/2018 10:27	WG1146967

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/05/2018 19:24	WG1147428
Arsenic	ND		2.00	1	08/05/2018 19:24	WG1147428
Barium	ND		5.00	1	08/05/2018 19:24	WG1147428
Cadmium	ND		1.00	1	08/05/2018 19:24	WG1147428
Chromium	ND		2.00	1	08/05/2018 19:24	WG1147428
Selenium	ND		2.00	1	08/05/2018 19:24	WG1147428
Silver	ND		2.00	1	08/05/2018 19:24	WG1147428

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND	<u>JO</u>	50.0	1	08/03/2018 03:56	WG1147089
Acrolein	ND		50.0	1	08/03/2018 03:56	WG1147089
Acrylonitrile	ND	<u>JO</u>	10.0	1	08/03/2018 03:56	WG1147089
Benzene	ND		1.00	1	08/03/2018 03:56	WG1147089
Bromobenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
Bromodichloromethane	ND		1.00	1	08/03/2018 03:56	WG1147089
Bromoform	ND		1.00	1	08/03/2018 03:56	WG1147089
Bromomethane	ND		5.00	1	08/03/2018 03:56	WG1147089
n-Butylbenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
sec-Butylbenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
tert-Butylbenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
Carbon tetrachloride	ND		1.00	1	08/03/2018 03:56	WG1147089
Chlorobenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
Chlorodibromomethane	ND		1.00	1	08/03/2018 03:56	WG1147089
Chloroethane	ND		5.00	1	08/03/2018 03:56	WG1147089
Chloroform	ND		5.00	1	08/03/2018 03:56	WG1147089
Chloromethane	ND		2.50	1	08/03/2018 03:56	WG1147089
2-Chlorotoluene	ND		1.00	1	08/03/2018 03:56	WG1147089
4-Chlorotoluene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,2-Dibromo-3-Chloropropane	ND	<u>JO</u>	5.00	1	08/03/2018 03:56	WG1147089
1,2-Dibromoethane	ND		1.00	1	08/03/2018 03:56	WG1147089
Dibromomethane	ND		1.00	1	08/03/2018 03:56	WG1147089
1,2-Dichlorobenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,3-Dichlorobenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,4-Dichlorobenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
Dichlorodifluoromethane	ND		5.00	1	08/03/2018 03:56	WG1147089
1,1-Dichloroethane	ND		1.00	1	08/03/2018 03:56	WG1147089
1,2-Dichloroethane	ND		1.00	1	08/03/2018 03:56	WG1147089
1,1-Dichloroethene	ND		1.00	1	08/03/2018 03:56	WG1147089
cis-1,2-Dichloroethene	ND		1.00	1	08/03/2018 03:56	WG1147089
trans-1,2-Dichloroethene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,2-Dichloropropane	ND		1.00	1	08/03/2018 03:56	WG1147089
1,1-Dichloropropene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,3-Dichloropropane	ND		1.00	1	08/03/2018 03:56	WG1147089
cis-1,3-Dichloropropene	ND		1.00	1	08/03/2018 03:56	WG1147089
trans-1,3-Dichloropropene	ND		1.00	1	08/03/2018 03:56	WG1147089
2,2-Dichloropropane	ND		1.00	1	08/03/2018 03:56	WG1147089
Di-isopropyl ether	ND		1.00	1	08/03/2018 03:56	WG1147089
Ethylbenzene	ND		1.00	1	08/03/2018 03:56	WG1147089

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Hexachloro-1,3-butadiene	ND		1.00	1	08/03/2018 03:56	WG1147089
Isopropylbenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
p-Isopropyltoluene	ND		1.00	1	08/03/2018 03:56	WG1147089
2-Butanone (MEK)	ND	<u>JO</u>	10.0	1	08/03/2018 03:56	WG1147089
Methylene Chloride	ND		5.00	1	08/03/2018 03:56	WG1147089
4-Methyl-2-pentanone (MIBK)	ND	<u>JO</u>	10.0	1	08/03/2018 03:56	WG1147089
Methyl tert-butyl ether	ND		1.00	1	08/03/2018 03:56	WG1147089
Naphthalene	ND	<u>JO</u>	5.00	1	08/03/2018 03:56	WG1147089
n-Propylbenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
Styrene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/03/2018 03:56	WG1147089
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/03/2018 03:56	WG1147089
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/03/2018 03:56	WG1147089
Tetrachloroethene	ND		1.00	1	08/03/2018 03:56	WG1147089
Toluene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,2,3-Trichlorobenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,2,4-Trichlorobenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,1,1-Trichloroethane	ND		1.00	1	08/03/2018 03:56	WG1147089
1,1,2-Trichloroethane	ND		1.00	1	08/03/2018 03:56	WG1147089
Trichloroethene	ND		1.00	1	08/03/2018 03:56	WG1147089
Trichlorofluoromethane	ND		5.00	1	08/03/2018 03:56	WG1147089
1,2,3-Trichloropropane	ND		2.50	1	08/03/2018 03:56	WG1147089
1,2,4-Trimethylbenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,2,3-Trimethylbenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
1,3,5-Trimethylbenzene	ND		1.00	1	08/03/2018 03:56	WG1147089
Vinyl chloride	ND		1.00	1	08/03/2018 03:56	WG1147089
o-Xylene	ND		1.00	1	08/03/2018 03:56	WG1147089
m&p-Xylene	ND		2.00	1	08/03/2018 03:56	WG1147089
(S) Toluene-d8	96.4		80.0-120		08/03/2018 03:56	WG1147089
(S) Dibromofluoromethane	94.0		76.0-123		08/03/2018 03:56	WG1147089
(S) 4-Bromofluorobenzene	96.5		80.0-120		08/03/2018 03:56	WG1147089

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

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/03/2018 18:48	WG1147210
Residual Range Organics (RRO)	ND		250	1	08/03/2018 18:48	WG1147210
(S) o-Terphenyl	69.5		52.0-156		08/03/2018 18:48	WG1147210

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Acenaphthene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Acenaphthylene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Benzo(a)anthracene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Benzo(a)pyrene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Benzo(b)fluoranthene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Benzo(g,h,i)perylene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Benzo(k)fluoranthene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Chrysene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Dibenz(a,h)anthracene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Fluoranthene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Fluorene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/07/2018 01:51	WG1147050



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/07/2018 01:51	WG1147050
Phenanthrene	ND		0.0500	1	08/07/2018 01:51	WG1147050
Pyrene	ND		0.0500	1	08/07/2018 01:51	WG1147050
1-Methylnaphthalene	ND		0.250	1	08/07/2018 01:51	WG1147050
2-Methylnaphthalene	ND		0.250	1	08/07/2018 01:51	WG1147050
2-Chloronaphthalene	ND		0.250	1	08/07/2018 01:51	WG1147050
(S) Nitrobenzene-d5	100		31.0-160		08/07/2018 01:51	WG1147050
(S) 2-Fluorobiphenyl	108		48.0-148		08/07/2018 01:51	WG1147050
(S) p-Terphenyl-d14	116		37.0-146		08/07/2018 01:51	WG1147050

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	97.8		1	08/07/2018 15:54	WG1148400

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0285		0.0205	1	08/05/2018 15:15	WG1147190

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.38		2.05	1	08/07/2018 11:00	WG1148345
Barium	69.3		0.511	1	08/07/2018 11:00	WG1148345
Cadmium	ND		0.511	1	08/07/2018 11:00	WG1148345
Chromium	12.2		1.02	1	08/07/2018 11:00	WG1148345
Lead	6.20		0.511	1	08/07/2018 11:00	WG1148345
Selenium	ND		2.05	1	08/07/2018 11:00	WG1148345
Silver	ND		1.02	1	08/07/2018 11:00	WG1148345

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0266	1.04	08/09/2018 02:44	WG1148961
Acrylonitrile	ND		0.0133	1.04	08/09/2018 02:44	WG1148961
Benzene	ND		0.00106	1.04	08/09/2018 02:44	WG1148961
Bromobenzene	ND		0.0133	1.04	08/09/2018 02:44	WG1148961
Bromodichloromethane	ND	J4	0.00266	1.04	08/09/2018 02:44	WG1148961
Bromoform	ND	JO	0.0263	1.03	08/09/2018 16:01	WG1149960
Bromomethane	ND		0.0133	1.04	08/09/2018 02:44	WG1148961
n-Butylbenzene	ND		0.0133	1.04	08/09/2018 02:44	WG1148961
sec-Butylbenzene	ND		0.0133	1.04	08/09/2018 02:44	WG1148961
tert-Butylbenzene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
Carbon tetrachloride	ND		0.00527	1.03	08/09/2018 16:01	WG1149960
Chlorobenzene	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
Chlorodibromomethane	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
Chloroethane	ND		0.00527	1.03	08/09/2018 16:01	WG1149960
Chloroform	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
Chloromethane	ND		0.0132	1.03	08/09/2018 16:01	WG1149960
2-Chlorotoluene	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
4-Chlorotoluene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
1,2-Dibromo-3-Chloropropane	ND		0.0266	1.04	08/09/2018 02:44	WG1148961
1,2-Dibromoethane	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
Dibromomethane	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
1,2-Dichlorobenzene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
1,3-Dichlorobenzene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
1,4-Dichlorobenzene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
Dichlorodifluoromethane	ND		0.00263	1.03	08/09/2018 16:01	WG1149960
1,1-Dichloroethane	ND		0.00263	1.03	08/09/2018 16:01	WG1149960
1,2-Dichloroethane	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
1,1-Dichloroethene	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
cis-1,2-Dichloroethene	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
trans-1,2-Dichloroethene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
1,2-Dichloropropane	ND		0.00527	1.03	08/09/2018 16:01	WG1149960
1,1-Dichloropropene	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
1,3-Dichloropropane	ND		0.00532	1.04	08/09/2018 02:44	WG1148961

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
trans-1,3-Dichloropropene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
2,2-Dichloropropane	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
Di-isopropyl ether	ND	J4	0.00106	1.04	08/09/2018 02:44	WG1148961
Ethylbenzene	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
Hexachloro-1,3-butadiene	ND		0.0266	1.04	08/09/2018 02:44	WG1148961
Isopropylbenzene	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
p-Isopropyltoluene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
2-Butanone (MEK)	ND		0.0266	1.04	08/09/2018 02:44	WG1148961
Methylene Chloride	ND		0.0263	1.03	08/09/2018 16:01	WG1149960
4-Methyl-2-pentanone (MIBK)	ND		0.0266	1.04	08/09/2018 02:44	WG1148961
Methyl tert-butyl ether	ND		0.00106	1.04	08/09/2018 02:44	WG1148961
Naphthalene	ND		0.0133	1.04	08/09/2018 02:44	WG1148961
n-Propylbenzene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
Styrene	ND		0.0133	1.04	08/09/2018 02:44	WG1148961
1,1,1,2-Tetrachloroethane	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
1,1,2,2-Tetrachloroethane	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
1,1,2-Trichlorotrifluoroethane	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
Tetrachloroethene	ND		0.00263	1.03	08/09/2018 16:01	WG1149960
Toluene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
1,2,3-Trichlorobenzene	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
1,2,4-Trichlorobenzene	ND		0.0133	1.04	08/09/2018 02:44	WG1148961
1,1,1-Trichloroethane	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
1,1,2-Trichloroethane	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
Trichloroethene	ND		0.00106	1.04	08/09/2018 02:44	WG1148961
Trichlorofluoromethane	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
1,2,3-Trichloropropane	ND		0.0133	1.04	08/09/2018 02:44	WG1148961
1,2,4-Trimethylbenzene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
1,2,3-Trimethylbenzene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
Vinyl chloride	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
1,3,5-Trimethylbenzene	ND		0.00532	1.04	08/09/2018 02:44	WG1148961
o-Xylene	ND		0.00266	1.04	08/09/2018 02:44	WG1148961
m&p-Xylene	ND		0.00425	1.04	08/09/2018 02:44	WG1148961
(S) Toluene-d8	108		80.0-120		08/09/2018 02:44	WG1148961
(S) Toluene-d8	114		80.0-120		08/09/2018 16:01	WG1149960
(S) Dibromofluoromethane	90.4		74.0-131		08/09/2018 02:44	WG1148961
(S) Dibromofluoromethane	90.6		74.0-131		08/09/2018 16:01	WG1149960
(S) 4-Bromofluorobenzene	100		64.0-132		08/09/2018 02:44	WG1148961
(S) 4-Bromofluorobenzene	91.0		64.0-132		08/09/2018 16:01	WG1149960

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5.30		4.09	1	08/06/2018 12:51	WG1147771
Residual Range Organics (RRO)	ND		10.2	1	08/06/2018 12:51	WG1147771
(S) o-Terphenyl	101		18.0-148		08/06/2018 12:51	WG1147771

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00614	1	08/06/2018 18:23	WG1147943
Acenaphthene	ND		0.00614	1	08/06/2018 18:23	WG1147943
Acenaphthylene	ND		0.00614	1	08/06/2018 18:23	WG1147943
Benzo(a)anthracene	0.0118		0.00614	1	08/06/2018 18:23	WG1147943
Benzo(a)pyrene	0.0121		0.00614	1	08/06/2018 18:23	WG1147943



Collected date/time: 07/31/18 15:40

L1014164

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	0.0161		0.00614	1	08/06/2018 18:23	WG1147943
Benzo(g,h,i)perylene	0.00899		0.00614	1	08/06/2018 18:23	WG1147943
Benzo(k)fluoranthene	ND		0.00614	1	08/06/2018 18:23	WG1147943
Chrysene	0.0138		0.00614	1	08/06/2018 18:23	WG1147943
Dibenz(a,h)anthracene	ND		0.00614	1	08/06/2018 18:23	WG1147943
Fluoranthene	0.0174		0.00614	1	08/06/2018 18:23	WG1147943
Fluorene	ND		0.00614	1	08/06/2018 18:23	WG1147943
Indeno(1,2,3-cd)pyrene	0.00737		0.00614	1	08/06/2018 18:23	WG1147943
Naphthalene	ND		0.0205	1	08/06/2018 18:23	WG1147943
Phenanthrene	ND		0.00614	1	08/06/2018 18:23	WG1147943
Pyrene	0.0174		0.00614	1	08/06/2018 18:23	WG1147943
1-Methylnaphthalene	ND		0.0205	1	08/06/2018 18:23	WG1147943
2-Methylnaphthalene	ND		0.0205	1	08/06/2018 18:23	WG1147943
2-Chloronaphthalene	ND		0.0205	1	08/06/2018 18:23	WG1147943
<i>(S)</i> Nitrobenzene-d5	74.9		14.0-149		08/06/2018 18:23	WG1147943
<i>(S)</i> 2-Fluorobiphenyl	73.7		34.0-125		08/06/2018 18:23	WG1147943
<i>(S)</i> p-Terphenyl-d14	69.3		23.0-120		08/06/2018 18:23	WG1147943

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3331867-1 08/07/18 15:48

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

L1014162-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1014162-05 08/07/18 15:48 • (DUP) R3331867-3 08/07/18 15:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	82.1	80.6	1	1.78		10

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS)

(LCS) R3331867-2 08/07/18 15:48

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

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3331869-1 08/07/18 15:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1014167-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1014167-01 08/07/18 15:54 • (DUP) R3331869-3 08/07/18 15:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	79.8	76.2	1	4.67		10

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3331869-2 08/07/18 15:54

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



Method Blank (MB)

(MB) R3330762-1 08/03/18 10:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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) R3330762-4 08/03/18 11:20 • (LCSD) R3330762-5 08/03/18 11:23

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 %
Mercury	3.00	2.81	2.79	93.5	93.0	80.0-120			0.508	20

⁷ Gl

⁸ Al

L1014252-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1014252-01 08/03/18 10:13 • (MS) R3330762-2 08/03/18 10:15 • (MSD) R3330762-3 08/03/18 10:17

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 %
Mercury	3.00	U	3.69	3.61	123	120	1	75.0-125			2.04	20

⁹ Sc



Method Blank (MB)

(MB) R3331069-1 08/05/18 14:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.00280	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3331069-2 08/05/18 14:09 • (LCSD) R3331069-7 08/05/18 17:31

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.287	0.257	95.6	85.6	80.0-120			11.1	20

L1013262-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1013262-12 08/05/18 14:13 • (MS) R3331069-3 08/05/18 14:16 • (MSD) R3331069-4 08/05/18 14:18

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.0203	0.304	0.333	94.7	104	1	75.0-125			9.00	20

L1013262-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1013262-13 08/05/18 14:20 • (MS) R3331069-5 08/05/18 14:22 • (MSD) R3331069-6 08/05/18 14:31

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.0107	0.235	0.206	74.8	65.2	1	75.0-125	J6	J6	13.0	20



Method Blank (MB)

(MB) R3331071-1 08/05/18 16:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.00280	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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

(LCS) R3331071-2 08/05/18 16:27 • (LCSD) R3331071-3 08/05/18 16:29

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.303	0.294	101	98.1	80.0-120			2.76	20

L1014138-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1014138-03 08/05/18 16:32 • (MS) R3331071-4 08/05/18 16:34 • (MSD) R3331071-5 08/05/18 16:36

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
Mercury	0.370	0.0698	0.391	0.369	86.7	80.8	1	75.0-125			5.77	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3331532-1 08/07/18 10:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Barium	0.220	J	0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.740	2.00
Silver	U		0.280	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3331532-2 08/07/18 10:22 • (LCSD) R3331532-3 08/07/18 10:25

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	93.2	85.2	93.2	85.2	80.0-120			8.94	20
Barium	100	100	91.8	100	91.8	80.0-120			8.84	20
Cadmium	100	95.9	87.8	95.9	87.8	80.0-120			8.81	20
Chromium	100	93.4	85.8	93.4	85.8	80.0-120			8.53	20
Lead	100	95.4	87.6	95.4	87.6	80.0-120			8.60	20
Selenium	100	94.7	86.4	94.7	86.4	80.0-120			9.18	20
Silver	20.0	18.4	16.9	91.9	84.5	80.0-120			8.28	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1014164-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1014164-01 08/07/18 10:27 • (MS) R3331532-6 08/07/18 10:34 • (MSD) R3331532-7 08/07/18 10:37

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	106	2.63	102	99.5	93.7	91.4	1	75.0-125			2.45	20
Barium	106	63.9	170	168	99.8	98.0	1	75.0-125			1.13	20
Cadmium	106	ND	104	102	97.9	96.2	1	75.0-125			1.79	20
Chromium	106	9.82	108	107	93.0	91.2	1	75.0-125			1.77	20
Lead	106	4.84	110	108	99.0	97.3	1	75.0-125			1.62	20
Selenium	106	ND	101	101	95.7	95.0	1	75.0-125			0.717	20
Silver	21.2	ND	19.8	19.4	93.3	91.7	1	75.0-125			1.70	20



Method Blank (MB)

(MB) R3331056-1 08/05/18 18:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Barium	U		0.360	5.00
Cadmium	U		0.160	1.00
Chromium	U		0.540	2.00
Selenium	U		0.380	2.00
Silver	U		0.310	2.00



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

(LCS) R3331056-2 08/05/18 18:51 • (LCSD) R3331056-3 08/05/18 18:56

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	%	%	%			%	%
Antimony	50.0	56.7	56.3	113	113	80.0-120			0.659	20
Arsenic	50.0	48.7	48.0	97.3	95.9	80.0-120			1.46	20
Barium	50.0	47.9	48.3	95.8	96.7	80.0-120			0.937	20
Cadmium	50.0	48.1	48.4	96.1	96.7	80.0-120			0.618	20
Chromium	50.0	50.2	48.9	100	97.9	80.0-120			2.56	20
Selenium	50.0	49.4	50.2	98.8	100	80.0-120			1.54	20
Silver	50.0	50.3	50.0	101	100	80.0-120			0.647	20



L1014449-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1014449-01 08/05/18 19:01 • (MS) R3331056-5 08/05/18 19:10 • (MSD) R3331056-6 08/05/18 19:14

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	%	%		%			%	%
Antimony	50.0	U	57.2	57.1	114	114	1	75.0-125			0.157	20
Arsenic	50.0	6.65	53.7	53.6	94.1	94.0	1	75.0-125			0.0715	20
Barium	50.0	9.07	55.4	56.6	92.7	95.1	1	75.0-125			2.11	20
Cadmium	50.0	U	49.2	48.5	98.4	96.9	1	75.0-125			1.48	20
Chromium	50.0	U	47.4	47.4	94.8	94.8	1	75.0-125			0.0792	20
Selenium	50.0	U	52.6	48.1	105	96.2	1	75.0-125			8.84	20
Silver	50.0	U	50.0	50.2	99.9	100	1	75.0-125			0.380	20



Method Blank (MB)

(MB) R3331492-3 08/03/18 00:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	U		0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3331492-3 08/03/18 00:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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		0.412	1.00
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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	99.2			80.0-120
(S) Dibromofluoromethane	95.5			76.0-123
(S) 4-Bromofluorobenzene	94.9			80.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3331492-1 08/02/18 23:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	89.5	71.6	10.0-160	
Acrolein	125	138	111	10.0-160	
Acrylonitrile	125	95.1	76.0	60.0-142	



Laboratory Control Sample (LCS)

(LCS) R3331492-1 08/02/18 23:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	25.0	25.8	103	69.0-123	
Bromobenzene	25.0	25.0	100	79.0-120	
Bromodichloromethane	25.0	25.8	103	76.0-120	
Bromoform	25.0	24.8	99.2	67.0-132	
Bromomethane	25.0	25.1	100	18.0-160	
n-Butylbenzene	25.0	25.1	100	72.0-126	
sec-Butylbenzene	25.0	26.4	106	74.0-121	
tert-Butylbenzene	25.0	26.5	106	75.0-122	
Carbon tetrachloride	25.0	28.4	114	63.0-122	
Chlorobenzene	25.0	26.6	106	79.0-121	
Chlorodibromomethane	25.0	25.9	103	75.0-125	
Chloroethane	25.0	25.6	102	47.0-152	
Chloroform	25.0	26.2	105	72.0-121	
Chloromethane	25.0	22.9	91.5	48.0-139	
2-Chlorotoluene	25.0	26.2	105	74.0-122	
4-Chlorotoluene	25.0	25.8	103	79.0-120	
1,2-Dibromo-3-Chloropropane	25.0	17.5	70.1	64.0-127	
1,2-Dibromoethane	25.0	23.3	93.2	77.0-123	
Dibromomethane	25.0	23.9	95.4	78.0-120	
1,2-Dichlorobenzene	25.0	24.7	98.7	80.0-120	
1,3-Dichlorobenzene	25.0	25.7	103	72.0-123	
1,4-Dichlorobenzene	25.0	24.6	98.3	77.0-120	
Dichlorodifluoromethane	25.0	20.3	81.4	49.0-155	
1,1-Dichloroethane	25.0	26.5	106	70.0-126	
1,2-Dichloroethane	25.0	24.3	97.1	67.0-126	
1,1-Dichloroethene	25.0	31.4	126	64.0-129	
cis-1,2-Dichloroethene	25.0	27.1	108	73.0-120	
trans-1,2-Dichloroethene	25.0	26.5	106	71.0-121	
1,2-Dichloropropane	25.0	26.7	107	75.0-125	
1,1-Dichloropropene	25.0	26.5	106	71.0-129	
1,3-Dichloropropane	25.0	24.3	97.1	80.0-121	
cis-1,3-Dichloropropene	25.0	26.2	105	79.0-123	
trans-1,3-Dichloropropene	25.0	25.6	102	74.0-127	
2,2-Dichloropropane	25.0	27.1	108	60.0-125	
Di-isopropyl ether	25.0	27.3	109	59.0-133	
Ethylbenzene	25.0	26.3	105	77.0-120	
Hexachloro-1,3-butadiene	25.0	25.6	102	64.0-131	
Isopropylbenzene	25.0	26.3	105	75.0-120	
p-Isopropyltoluene	25.0	26.3	105	74.0-126	
2-Butanone (MEK)	125	90.7	72.6	37.0-158	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3331492-1 08/02/18 23:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methylene Chloride	25.0	28.3	113	66.0-121	
4-Methyl-2-pentanone (MIBK)	125	98.2	78.6	59.0-143	
Methyl tert-butyl ether	25.0	27.9	112	64.0-123	
Naphthalene	25.0	18.0	72.2	62.0-128	
n-Propylbenzene	25.0	25.8	103	79.0-120	
Styrene	25.0	26.9	108	78.0-124	
1,1,1,2-Tetrachloroethane	25.0	27.2	109	75.0-122	
1,1,2,2-Tetrachloroethane	25.0	21.0	84.1	71.0-122	
Tetrachloroethene	25.0	26.8	107	70.0-127	
Toluene	25.0	25.7	103	77.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	30.5	122	61.0-136	
1,2,3-Trichlorobenzene	25.0	21.5	86.1	61.0-133	
1,2,4-Trichlorobenzene	25.0	25.1	100	69.0-129	
1,1,1-Trichloroethane	25.0	29.0	116	68.0-122	
1,1,2-Trichloroethane	25.0	24.3	97.0	78.0-120	
Trichloroethene	25.0	28.2	113	78.0-120	
Trichlorofluoromethane	25.0	26.9	108	56.0-137	
1,2,3-Trichloropropane	25.0	21.7	86.9	72.0-124	
1,2,3-Trimethylbenzene	25.0	25.0	100	75.0-120	
1,2,4-Trimethylbenzene	25.0	25.8	103	75.0-120	
1,3,5-Trimethylbenzene	25.0	26.4	106	75.0-120	
Vinyl chloride	25.0	25.0	100	64.0-133	
o-Xylene	25.0	26.0	104	78.0-120	
m&p-Xylenes	50.0	52.6	105	77.0-120	
(S) Toluene-d8			97.6	80.0-120	
(S) Dibromofluoromethane			96.4	76.0-123	
(S) 4-Bromofluorobenzene			96.5	80.0-120	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3332180-3 08/08/18 22:08

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
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
Chlorobenzene	U		0.000573	0.00250
Chlorodibromomethane	U		0.000450	0.00250
Chloroform	U		0.000415	0.00250
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
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
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	U		0.0125	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

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



Method Blank (MB)

(MB) R3332180-3 08/08/18 22:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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
Toluene	U		0.00125	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000675	0.00250
1,2,3-Trichlorobenzene	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
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
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	110			80.0-120
(S) Dibromofluoromethane	78.3			74.0-131
(S) 4-Bromofluorobenzene	103			64.0-132

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) R3332180-1 08/08/18 19:57 • (LCSD) R3332180-2 08/08/18 20:16

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	0.507	0.519	81.2	83.0	25.3-178			2.30	22.9
Acrylonitrile	0.625	0.568	0.566	90.9	90.5	57.8-143			0.407	20
Benzene	0.125	0.104	0.104	83.5	83.0	72.6-120			0.694	20
Bromobenzene	0.125	0.126	0.124	101	99.2	80.3-115			1.50	20
Bromodichloromethane	0.125	0.154	0.161	123	128	75.3-119	J4	J4	4.45	20
Bromomethane	0.125	0.128	0.132	102	106	23.0-191			3.28	20
n-Butylbenzene	0.125	0.120	0.117	96.3	93.3	74.2-134			3.23	20
sec-Butylbenzene	0.125	0.120	0.117	95.8	93.4	77.8-129			2.64	20
tert-Butylbenzene	0.125	0.114	0.112	91.2	89.9	77.2-129			1.47	20
Chlorobenzene	0.125	0.134	0.129	107	103	78.9-122			3.98	20
Chlorodibromomethane	0.125	0.139	0.133	111	107	76.4-126			3.99	20
Chloroform	0.125	0.131	0.134	105	107	73.3-122			1.63	20



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

(LCS) R3332180-1 08/08/18 19:57 • (LCSD) R3332180-2 08/08/18 20:16

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 %
2-Chlorotoluene	0.125	0.116	0.120	93.1	96.1	74.6-127			3.20	20
4-Chlorotoluene	0.125	0.121	0.123	96.6	98.3	79.5-123			1.74	20
1,2-Dibromo-3-Chloropropane	0.125	0.128	0.118	103	94.0	64.9-131			8.81	20
1,2-Dibromoethane	0.125	0.120	0.122	96.2	97.6	78.7-123			1.43	20
Dibromomethane	0.125	0.130	0.128	104	103	78.5-117			1.17	20
1,2-Dichlorobenzene	0.125	0.123	0.122	98.4	97.4	83.6-119			1.07	20
1,3-Dichlorobenzene	0.125	0.117	0.126	93.5	101	75.9-129			7.35	20
1,4-Dichlorobenzene	0.125	0.114	0.112	90.9	89.7	81.0-115			1.35	20
1,2-Dichloroethane	0.125	0.123	0.137	98.5	110	67.2-121			10.8	20
1,1-Dichloroethene	0.125	0.108	0.107	86.8	85.5	60.6-133			1.46	20
cis-1,2-Dichloroethene	0.125	0.103	0.105	82.2	84.3	76.1-121			2.51	20
trans-1,2-Dichloroethene	0.125	0.114	0.120	91.3	95.7	70.7-124			4.75	20
1,2-Dichloropropane	0.125	0.112	0.104	89.7	83.4	76.9-123			7.29	20
1,1-Dichloropropene	0.125	0.120	0.116	95.7	93.2	71.2-126			2.66	20
1,3-Dichloropropane	0.125	0.130	0.127	104	102	80.3-114			2.42	20
cis-1,3-Dichloropropene	0.125	0.130	0.129	104	103	77.3-123			0.898	20
trans-1,3-Dichloropropene	0.125	0.146	0.153	117	122	73.0-127			4.70	20
2,2-Dichloropropane	0.125	0.137	0.132	110	105	61.9-132			4.07	20
Di-isopropyl ether	0.125	0.0790	0.0805	63.2	64.4	67.2-131	J4	J4	1.96	20
Ethylbenzene	0.125	0.117	0.114	93.3	91.5	78.6-124			1.90	20
Hexachloro-1,3-butadiene	0.125	0.144	0.147	115	117	69.2-136			1.81	20
Isopropylbenzene	0.125	0.117	0.114	93.7	91.5	79.4-126			2.38	20
p-Isopropyltoluene	0.125	0.116	0.115	92.8	92.4	75.4-132			0.402	20
2-Butanone (MEK)	0.625	0.625	0.576	100	92.2	44.5-154			8.06	21.3
4-Methyl-2-pentanone (MIBK)	0.625	0.549	0.557	87.8	89.2	61.1-138			1.52	20
Methyl tert-butyl ether	0.125	0.117	0.124	93.3	99.5	70.2-122			6.52	20
Naphthalene	0.125	0.104	0.107	83.6	85.3	69.9-132			2.07	20
n-Propylbenzene	0.125	0.115	0.112	91.7	89.9	80.2-124			1.96	20
Styrene	0.125	0.117	0.117	93.4	93.7	79.4-124			0.324	20
1,1,1,2-Tetrachloroethane	0.125	0.115	0.120	91.7	95.8	76.7-127			4.43	20
1,1,2,2-Tetrachloroethane	0.125	0.111	0.115	89.0	91.9	78.8-124			3.17	20
Toluene	0.125	0.114	0.116	90.8	92.9	76.7-116			2.26	20
1,1,2-Trichlorotrifluoroethane	0.125	0.117	0.117	93.5	93.6	62.6-138			0.0539	20
1,2,3-Trichlorobenzene	0.125	0.132	0.127	106	101	72.5-137			4.20	20
1,2,4-Trichlorobenzene	0.125	0.116	0.118	92.6	94.4	74.0-137			1.85	20
1,1,1-Trichloroethane	0.125	0.147	0.143	118	114	69.9-127			3.08	20
1,1,2-Trichloroethane	0.125	0.135	0.126	108	101	81.9-119			6.88	20
Trichloroethene	0.125	0.127	0.121	102	96.5	77.2-122			5.27	20
Trichlorofluoromethane	0.125	0.144	0.146	115	116	51.5-151			1.17	20
1,2,3-Trichloropropane	0.125	0.132	0.118	105	94.7	74.0-124			10.7	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) R3332180-1 08/08/18 19:57 • (LCSD) R3332180-2 08/08/18 20:16

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 %
1,2,3-Trimethylbenzene	0.125	0.118	0.117	94.3	93.5	79.4-118			0.852	20
1,2,4-Trimethylbenzene	0.125	0.124	0.121	99.3	96.9	77.1-124			2.41	20
1,3,5-Trimethylbenzene	0.125	0.128	0.123	103	98.3	79.0-125			4.29	20
Vinyl chloride	0.125	0.0954	0.0926	76.3	74.1	58.4-134			2.95	20
o-Xylene	0.125	0.114	0.109	90.9	87.6	78.5-124			3.67	20
m&p-Xylenes	0.250	0.241	0.242	96.4	96.6	77.3-124			0.222	20
(S) Toluene-d8				101	99.6	80.0-120				
(S) Dibromofluoromethane				89.2	92.6	74.0-131				
(S) 4-Bromofluorobenzene				95.6	98.2	64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3332385-2 08/09/18 10:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Bromoform	U		0.00598	0.0250
Carbon tetrachloride	U		0.00108	0.00500
Chloroethane	U		0.00108	0.00500
Chloromethane	U		0.00139	0.0125
Dichlorodifluoromethane	U		0.000818	0.00250
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloropropane	U		0.00127	0.00500
trans-1,3-Dichloropropene	U		0.00153	0.00500
Di-isopropyl ether	U		0.000350	0.00100
Methylene Chloride	U		0.00664	0.0250
Tetrachloroethene	U		0.000700	0.00250
(S) Toluene-d8	114			80.0-120
(S) Dibromofluoromethane	87.0			74.0-131
(S) 4-Bromofluorobenzene	90.6			64.0-132

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3332385-1 08/09/18 09:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromoform	0.125	0.0891	71.3	69.1-135	
Carbon tetrachloride	0.125	0.120	95.8	69.4-129	
Chloroethane	0.125	0.173	139	47.2-147	
Chloromethane	0.125	0.133	107	53.1-135	
Dichlorodifluoromethane	0.125	0.0829	66.3	50.9-139	
1,1-Dichloroethane	0.125	0.141	113	71.7-125	
1,2-Dichloropropane	0.125	0.142	114	76.9-123	
trans-1,3-Dichloropropene	0.125	0.134	107	73.0-127	
Di-isopropyl ether	0.125	0.135	108	67.2-131	
Methylene Chloride	0.125	0.114	91.5	68.2-119	
Tetrachloroethene	0.125	0.135	108	71.1-133	
(S) Toluene-d8			105	80.0-120	
(S) Dibromofluoromethane			98.3	74.0-131	
(S) 4-Bromofluorobenzene			95.5	64.0-132	



Method Blank (MB)

(MB) R3330899-1 08/03/18 16:43

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	87.9			52.0-156

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

(LCS) R3330899-2 08/03/18 17:01 • (LCSD) R3330899-3 08/03/18 17:18

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 %
Diesel Range Organics (DRO)	750	521	515	69.5	68.6	50.0-150			1.22	20
Residual Range Organics (RRO)	750	488	487	65.1	64.9	50.0-150			0.257	20
<i>(S) o-Terphenyl</i>				79.3	69.8	52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3331262-1 08/06/18 11:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	94.9			18.0-148

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

(LCS) R3331262-2 08/06/18 11:26 • (LCSD) R3331262-3 08/06/18 11:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	19.3	19.7	77.3	79.0	50.0-150			2.15	20
Residual Range Organics (RRO)	25.0	18.4	19.2	73.5	77.0	50.0-150			4.58	20
<i>(S) o-Terphenyl</i>				90.2	91.5	18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3331480-3 08/07/18 01:05

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	0.00245	U	0.00212	0.0500
Benzo(g,h,i)perylene	0.00255	U	0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	0.0285	U	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	101			31.0-160
(S) 2-Fluorobiphenyl	111			48.0-148
(S) p-Terphenyl-d14	123			37.0-146

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) R3331480-1 08/07/18 00:19 • (LCSD) R3331480-2 08/07/18 00:42

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 %
Anthracene	2.00	2.29	2.16	114	108	64.0-142			5.84	20
Acenaphthene	2.00	2.22	2.09	111	105	66.0-132			6.03	20
Acenaphthylene	2.00	2.38	2.24	119	112	65.0-132			6.06	20
Benzo(a)anthracene	2.00	2.36	2.24	118	112	59.0-134			5.22	20
Benzo(a)pyrene	2.00	2.32	2.29	116	114	61.0-145			1.30	20
Benzo(b)fluoranthene	2.00	2.28	2.30	114	115	57.0-136			0.873	20
Benzo(g,h,i)perylene	2.00	2.26	2.25	113	112	54.0-140			0.443	20
Benzo(k)fluoranthene	2.00	2.23	2.13	111	106	57.0-141			4.59	20
Chrysene	2.00	2.27	2.19	114	109	63.0-140			3.59	20
Dibenz(a,h)anthracene	2.00	2.25	2.25	112	112	49.0-141			0.000	20
Fluoranthene	2.00	2.37	2.23	118	111	65.0-143			6.09	20



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

(LCS) R3331480-1 08/07/18 00:19 • (LCSD) R3331480-2 08/07/18 00:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	2.31	2.19	115	109	64.0-129			5.33	20
Indeno(1,2,3-cd)pyrene	2.00	2.25	2.25	112	112	53.0-141			0.000	20
Naphthalene	2.00	2.15	2.00	108	100	68.0-129			7.23	20
Phenanthrene	2.00	2.32	2.19	116	109	62.0-132			5.76	20
Pyrene	2.00	2.35	2.25	117	112	58.0-156			4.35	20
1-Methylnaphthalene	2.00	2.22	2.06	111	103	68.0-137			7.48	20
2-Methylnaphthalene	2.00	2.11	1.96	105	98.0	68.0-134			7.37	20
2-Chloronaphthalene	2.00	2.22	2.07	111	103	65.0-129			6.99	20
<i>(S) Nitrobenzene-d5</i>				108	101	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				111	102	48.0-148				
<i>(S) p-Terphenyl-d14</i>				124	120	37.0-146				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3331185-3 08/05/18 13:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	76.9			14.0-149
(S) 2-Fluorobiphenyl	91.8			34.0-125
(S) p-Terphenyl-d14	75.2			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3331185-1 08/05/18 12:19 • (LCSD) R3331185-2 08/05/18 12:41

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 %
Anthracene	0.0800	0.0723	0.0732	90.4	91.5	50.0-125			1.24	20
Acenaphthene	0.0800	0.0675	0.0687	84.4	85.9	52.0-120			1.76	20
Acenaphthylene	0.0800	0.0678	0.0698	84.8	87.3	51.0-120			2.91	20
Benzo(a)anthracene	0.0800	0.0609	0.0615	76.1	76.9	46.0-121			0.980	20
Benzo(a)pyrene	0.0800	0.0602	0.0601	75.3	75.1	42.0-121			0.166	20
Benzo(b)fluoranthene	0.0800	0.0609	0.0622	76.1	77.8	42.0-123			2.11	20
Benzo(g,h,i)perylene	0.0800	0.0633	0.0637	79.1	79.6	43.0-128			0.630	20
Benzo(k)fluoranthene	0.0800	0.0709	0.0724	88.6	90.5	45.0-128			2.09	20
Chrysene	0.0800	0.0728	0.0716	91.0	89.5	48.0-127			1.66	20
Dibenz(a,h)anthracene	0.0800	0.0618	0.0627	77.3	78.4	43.0-132			1.45	20
Fluoranthene	0.0800	0.0673	0.0684	84.1	85.5	49.0-129			1.62	20



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

(LCS) R3331185-1 08/05/18 12:19 • (LCSD) R3331185-2 08/05/18 12:41

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 %
Fluorene	0.0800	0.0666	0.0681	83.3	85.1	50.0-120			2.23	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0641	0.0649	80.1	81.1	44.0-131			1.24	20
Naphthalene	0.0800	0.0672	0.0681	84.0	85.1	50.0-120			1.33	20
Phenanthrene	0.0800	0.0635	0.0643	79.4	80.4	48.0-120			1.25	20
Pyrene	0.0800	0.0623	0.0638	77.9	79.8	48.0-135			2.38	20
1-Methylnaphthalene	0.0800	0.0686	0.0691	85.8	86.4	52.0-122			0.726	20
2-Methylnaphthalene	0.0800	0.0644	0.0660	80.5	82.5	52.0-120			2.45	20
2-Chloronaphthalene	0.0800	0.0686	0.0699	85.8	87.4	50.0-120			1.88	20
(S) Nitrobenzene-d5				74.7	77.1	14.0-149				
(S) 2-Fluorobiphenyl				85.4	88.4	34.0-125				
(S) p-Terphenyl-d14				71.2	72.9	23.0-120				

L1013782-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1013782-01 08/05/18 13:25 • (MS) R3331185-4 08/05/18 13:47 • (MSD) R3331185-5 08/05/18 14:09

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 %
Anthracene	0.0926	0.00335	0.0731	0.0582	75.3	58.9	1	20.0-136			22.7	24
Acenaphthene	0.0926	0.00506	0.0706	0.0567	70.8	55.4	1	29.0-124		J3	21.9	20
Acenaphthylene	0.0926	0.00108	0.0651	0.0574	69.2	60.5	1	35.0-120			12.7	20
Benzo(a)anthracene	0.0926	0.00446	0.0731	0.0486	74.1	47.5	1	13.0-132		J3	40.2	27
Benzo(a)pyrene	0.0926	0.00318	0.0631	0.0469	64.7	47.0	1	14.0-138		J3	29.4	27
Benzo(b)fluoranthene	0.0926	0.00479	0.0661	0.0415	66.2	39.5	1	10.0-129		J3	45.6	31
Benzo(g,h,i)perylene	0.0926	0.00503	0.0686	0.0483	68.7	46.5	1	10.0-133		J3	34.8	30
Benzo(k)fluoranthene	0.0926	0.00154	0.0569	0.0475	59.8	49.4	1	15.0-131			18.1	27
Chrysene	0.0926	0.00647	0.0771	0.0549	76.3	52.1	1	15.0-137		J3	33.7	25
Dibenz(a,h)anthracene	0.0926	U	0.0604	0.0496	65.2	53.3	1	15.0-132			19.7	27
Fluoranthene	0.0926	0.0204	0.140	0.0683	129	51.5	1	13.0-139		J3	68.6	28
Fluorene	0.0926	0.00489	0.0719	0.0548	72.4	53.6	1	27.0-122		J3	27.0	22
Indeno(1,2,3-cd)pyrene	0.0926	0.00179	0.0618	0.0477	64.8	49.3	1	11.0-133			25.7	29
Naphthalene	0.0926	0.0164	0.0839	0.0690	72.9	56.5	1	18.0-136			19.5	21
Phenanthrene	0.0926	0.0232	0.127	0.0665	112	46.6	1	15.0-133		J3	62.3	25
Pyrene	0.0926	0.0181	0.112	0.0613	101	46.4	1	11.0-146		J3	58.3	29
1-Methylnaphthalene	0.0926	0.0126	0.0814	0.0621	74.4	53.3	1	24.0-137		J3	26.9	22
2-Methylnaphthalene	0.0926	0.0161	0.0824	0.0633	71.6	50.8	1	23.0-136		J3	26.2	22
2-Chloronaphthalene	0.0926	U	0.0629	0.0576	68.0	61.9	1	36.0-120			8.88	20
(S) Nitrobenzene-d5					65.8	70.4		14.0-149				
(S) 2-Fluorobiphenyl					69.2	54.7		34.0-125				
(S) p-Terphenyl-d14					55.3	43.4		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3331558-3 08/06/18 16:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	98.4			14.0-149
(S) 2-Fluorobiphenyl	97.2			34.0-125
(S) p-Terphenyl-d14	92.8			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3331558-1 08/06/18 16:16 • (LCSD) R3331558-2 08/06/18 16:37

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 %
Anthracene	0.0800	0.0746	0.0772	93.3	96.5	50.0-125			3.43	20
Acenaphthene	0.0800	0.0741	0.0758	92.6	94.8	52.0-120			2.27	20
Acenaphthylene	0.0800	0.0737	0.0766	92.1	95.8	51.0-120			3.86	20
Benzo(a)anthracene	0.0800	0.0728	0.0736	91.0	92.0	46.0-121			1.09	20
Benzo(a)pyrene	0.0800	0.0659	0.0667	82.4	83.4	42.0-121			1.21	20
Benzo(b)fluoranthene	0.0800	0.0735	0.0783	91.9	97.9	42.0-123			6.32	20
Benzo(g,h,i)perylene	0.0800	0.0774	0.0788	96.8	98.5	43.0-128			1.79	20
Benzo(k)fluoranthene	0.0800	0.0775	0.0750	96.9	93.8	45.0-128			3.28	20
Chrysene	0.0800	0.0749	0.0750	93.6	93.8	48.0-127			0.133	20
Dibenz(a,h)anthracene	0.0800	0.0777	0.0791	97.1	98.9	43.0-132			1.79	20
Fluoranthene	0.0800	0.0777	0.0792	97.1	99.0	49.0-129			1.91	20



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

(LCS) R3331558-1 08/06/18 16:16 • (LCSD) R3331558-2 08/06/18 16:37

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 %
Fluorene	0.0800	0.0743	0.0759	92.9	94.9	50.0-120			2.13	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0775	0.0792	96.9	99.0	44.0-131			2.17	20
Naphthalene	0.0800	0.0731	0.0744	91.4	93.0	50.0-120			1.76	20
Phenanthrene	0.0800	0.0758	0.0778	94.8	97.3	48.0-120			2.60	20
Pyrene	0.0800	0.0735	0.0742	91.9	92.8	48.0-135			0.948	20
1-Methylnaphthalene	0.0800	0.0770	0.0785	96.3	98.1	52.0-122			1.93	20
2-Methylnaphthalene	0.0800	0.0735	0.0751	91.9	93.9	52.0-120			2.15	20
2-Chloronaphthalene	0.0800	0.0745	0.0765	93.1	95.6	50.0-120			2.65	20
<i>(S) Nitrobenzene-d5</i>				96.9	88.2	14.0-149				
<i>(S) 2-Fluorobiphenyl</i>				94.0	98.3	34.0-125				
<i>(S) p-Terphenyl-d14</i>				89.6	92.0	23.0-120				

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



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.

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
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.



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

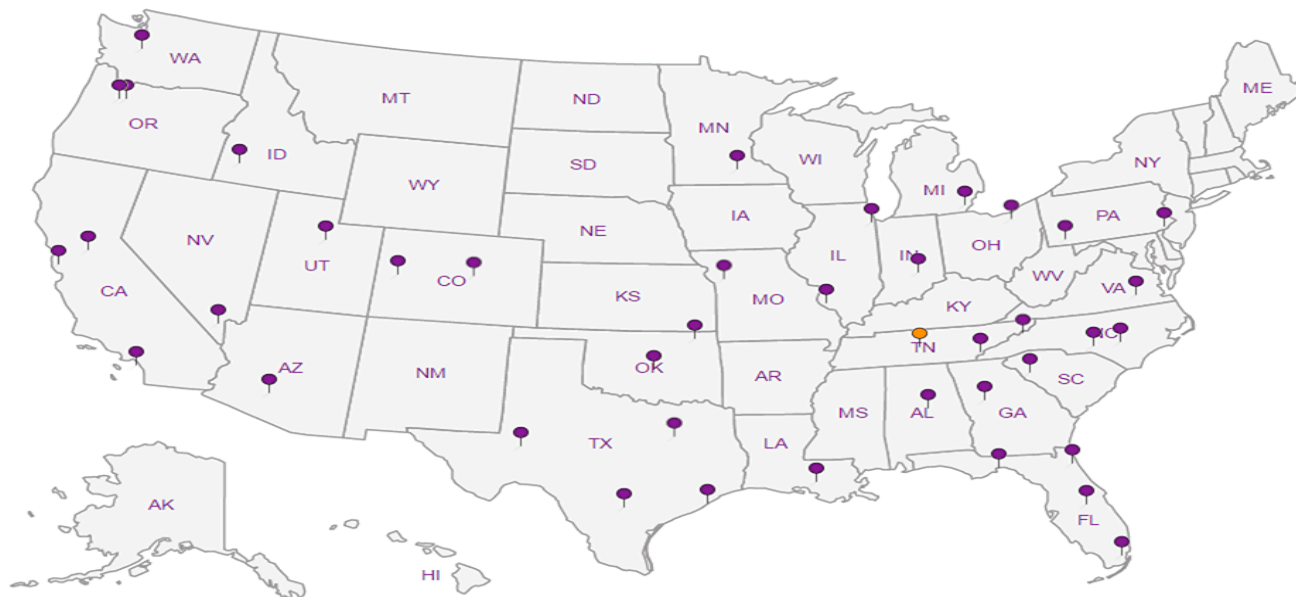
Third Party Federal Accreditations

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.



1 Cp

2 Tc

3 Ss

4 Cn


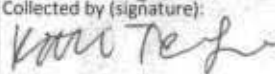
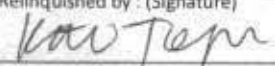
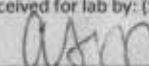
5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001		Billing Information: Accounts Payable 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001		Chain of Custody Page <u> </u> of <u> </u>													
Report to: Ryan Hultgren		Email To: RyanHultgren@kennedyjenks.com, KatieTeague@kennedyjenks.com,															
Project Description: BNSF - Wishram Railyard, WA		City/State Collected: Wishram, WA		12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859													
Phone: 253-835-6400 Fax:		Client Project # 1896120-04		Lab Project # BNSF1KEN-WISHRAM													
Collected by (print): K. Teague		Site/Facility ID #		P.O. #													
Collected by (signature): 		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Quote #													
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>		Date Results Needed		No. of Cntrs													
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	RCRAB Metals, total	TWTPHDX - NO SGT	PAH SIMULVID	V8260C	L# L1019164 F102	
WMW-19(2.0-2.5)		Grab	SS	2-2.5	7/30/18	1530	3	X	X	X	X	X	X	X	X	X	-01
RMD-5(2.0-2.5)			SS	2-2.5	"	1455	3										02
RMD-5(7.5-8.0)			SS	7.5-8	7/31/18	0855	1										03
RMD-5(29.5-30.0)			SS	29.5-30	↓	0950	1										04
RMD-5(49.50.0)			SS	49.5-50	↓	1115	1										05
RMD-6(2.0-2.5)		Y	SS	2-2.5	7/30/18	1625	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	06
WMW-19(14.0-14.5)			SS	14-14.5	7/31/18	1230	1										07
RB-01-20180731		Grab	GWSS	-	7/31/18	1320	7					X	X	X	X		08
WMW-20(2.0-2.5)		Grab	SS	2-2.5	7/31/18	1540	3	X	X	X	X	X	X	X	X	X	09
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Remarks: Include Dx and Gx chromatograms No spaces in sample names		Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier		Tracking # 4492 6218 4284		pH _____ Temp _____ Flow _____ Other _____		Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VDA Zero Headspace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N							
Relinquished by: (Signature) 		Date:	Time:	Received by: (Signature) FedEx		Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> HQ/MeOH <input type="checkbox"/> TBR		Temp: 3.3°C		Bottles Received: 33		If preservation required by Login: Date/Time					
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Temp:		Bottles Received:		If preservation required by Login: Date/Time							
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature) 		Date: 8/2/18		Time: 845		Hold:		Condition: NCF / OK					

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
KatieTeague@kennedyjenks.com

Project
Description: BNSF - Wishram Rallyard, WA

City/State
Collected: WISHRAM, WA

Phone: 253-835-6400
Fax:

Client Project #
1894120-04

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
Katie Teague

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

Immediately Packed on Ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Entrs	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDX no SGT, PAHs 4ozClr-NoPres	TPHDX with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Svr	RCKRAB METALS, TOTAL	NWTPHDX - NO SGT	MSA PAMSIMLIVID	V0260C	Remarks	Sample # (lab only)
WMW-19(2.0-2.5)	Grab	SS	2-2.5	7/30/18	1530	3	X		X		X						-01
RMD-5(2.0-2.5)		SS	2-2.5	"	1455	3											02
RMD-5(7.5-8.0)		SS	7.5-8	7/31/18	0855												03
RMD-5(29.5-30.0)		SS	29.5-30		0950												04
RMD-5(49.5-50.0)		SS	49.5-50		1115												05
RMD-6(2.0-2.5)	Y	SS	2-2.5	7/30/18	1625	Y	Y		Y		Y						06
WMW-19(14.0-14.5)		SS	14-14.5	7/31/18	1230												07
RB-01-20180731	Grab	GWSR	-	7/31/18	1320	7						X	X	X	X		08
WMW-20(2.0-2.5)	Grab	SS	2-2.5	7/31/18	1540	3	X		X		X						09
		SS															

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Blossay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: Include Dx and Gx chromatograms
No Spaus in Sample names

Samples returned via:
 UPS FedEx Courier

Tracking # 4492 0218 4284

Relinquished by: (Signature) <i>Kate Tom</i>	Date:	Time:	Received by: (Signature) FedEx	Trip Blank Received: Yes/No 2 <input checked="" type="checkbox"/> No <input type="checkbox"/> Meq/Meq TER	Temp: 3.3°C	Bottles Received: 33	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 8/2/18	Time: 845	Hold:	Condition: NCF / OK

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical
 17055 1st Baron Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# L1014164
F102

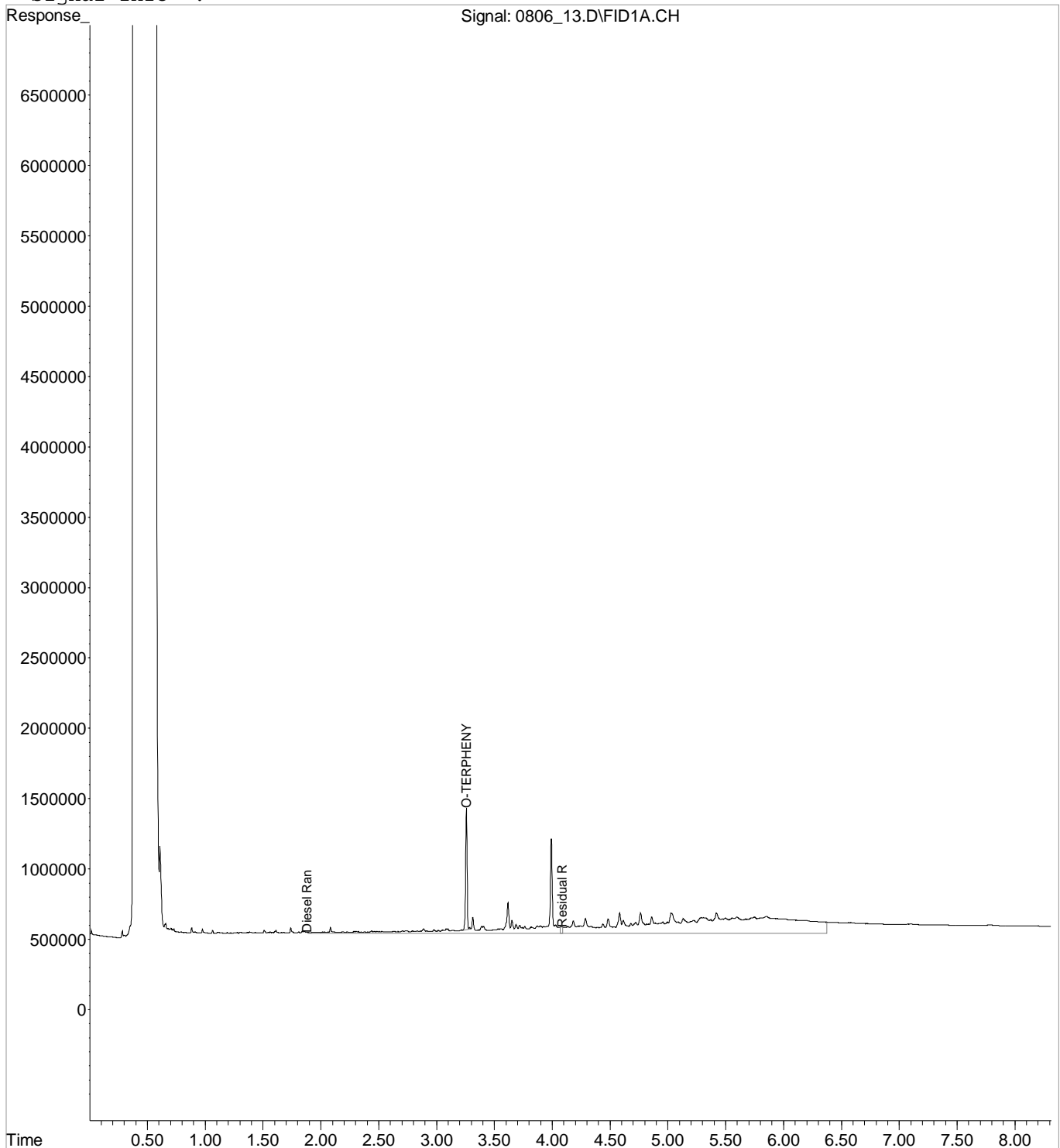
Acctnum: BNSF1KEN
 Template: T138670
 Prelogin: P663874
 TSR: 134 - Mark W. Beasley
 PB:
 Shipped Via: FedEX Ground

Remarks Sample # (lab only)

Data File : C:\MSDCHEM\1\DATA\080618\0806 13.D Vial: 11
 Acq On : 06 Aug 2018 12:26 pm Operator: 647
 Sample : L1014164-01 1x WG1147771 15-0.5 Inst : SVGC16
 Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
 IntFile : events.e
 Quant Time: Aug 6 15:38 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
 Title :
 Last Update : Fri Jun 22 19:37:34 2018
 Response via : Single Level Calibration
 DataAcq Meth : OA12.M

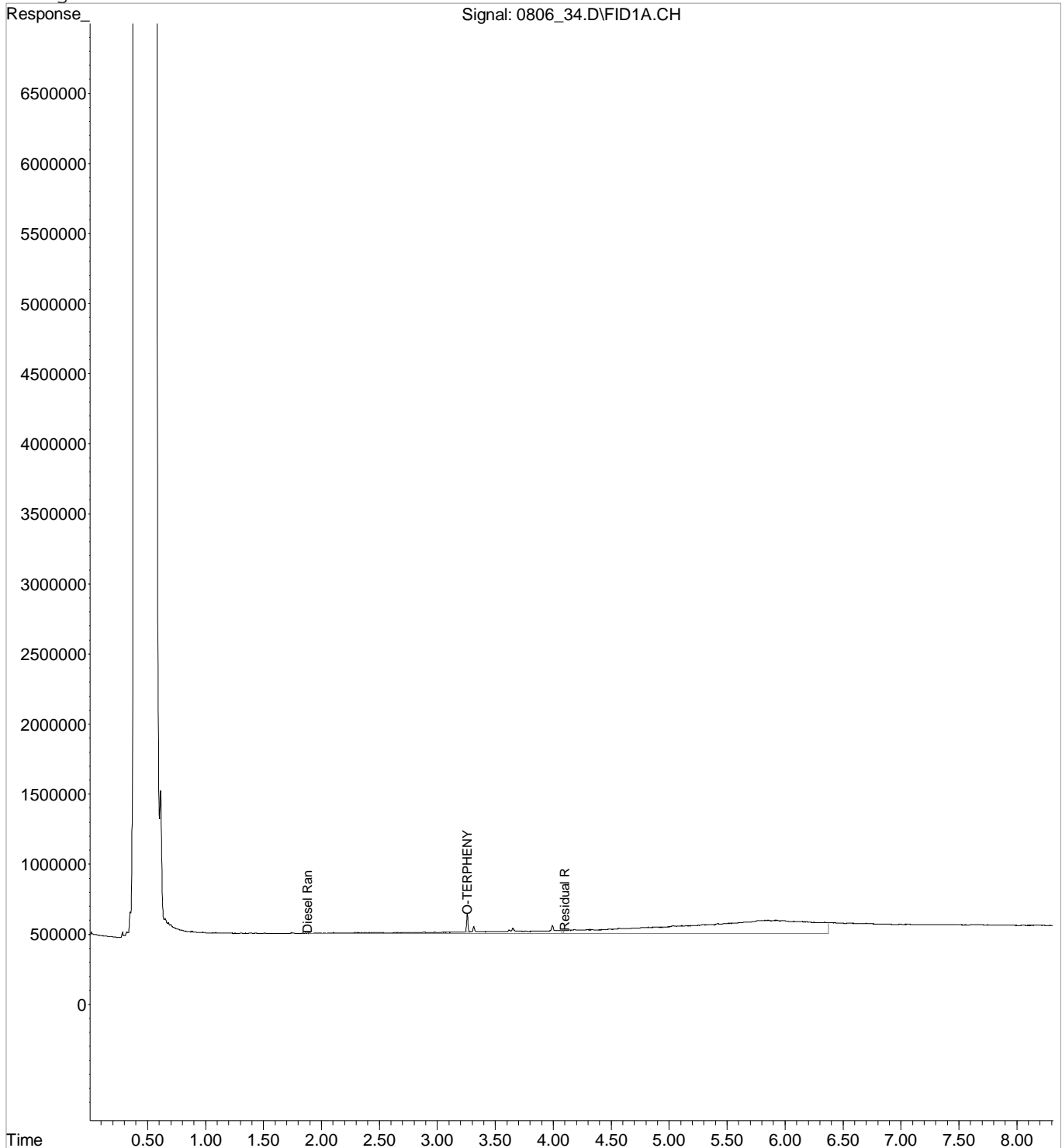
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\080618\0806 34.D Vial: 18
Acq On : 8-6-2018 04:49:48 PM Operator: 647
Sample : L1014164-02 5x WG1147771 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.17
IntFile : events.e
Quant Time: Aug 6 20:03 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

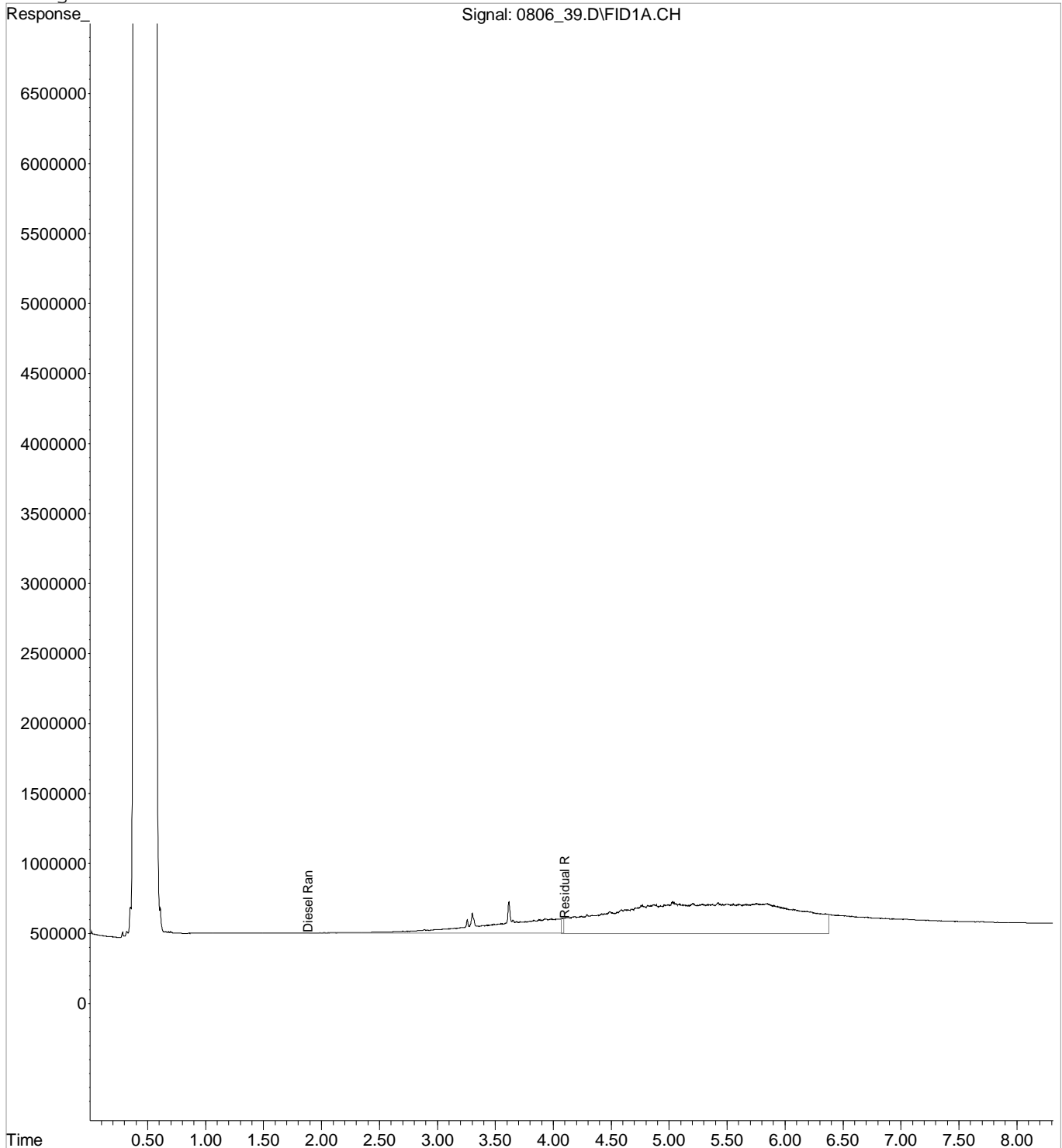
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\080618\0806 39.D Vial: 23
Acq On : 8-6-2018 05:49:50 PM Operator: 647
Sample : L1014164-03 20x WG1147771 15-1 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.67
IntFile : events.e
Quant Time: Aug 6 20:06 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

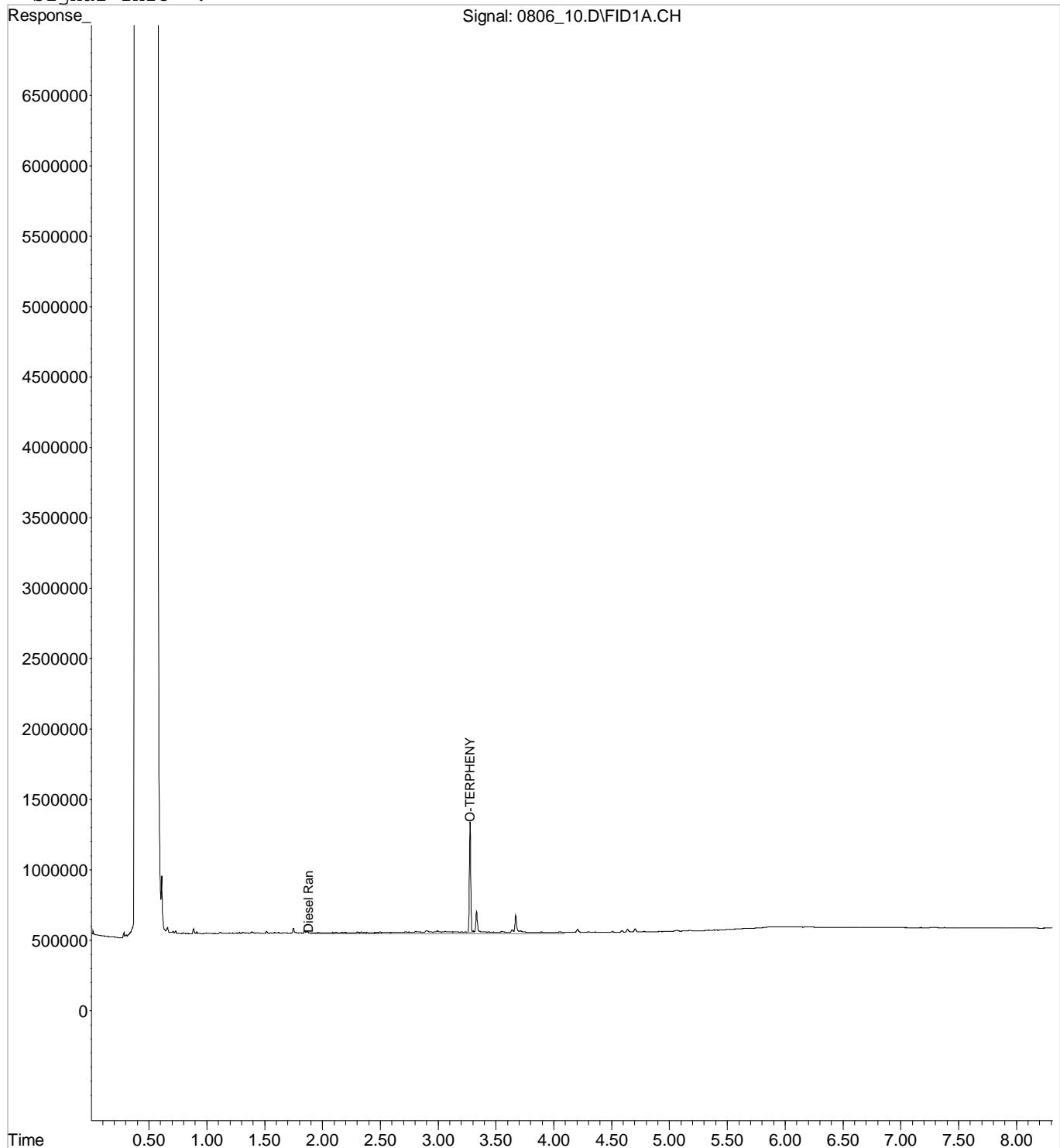
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\080618\0806 10.D Vial: 8
Acq On : 06 Aug 2018 11:50 am Operator: 647
Sample : L1014164-04 1x WG1147771 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 6 15:37 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

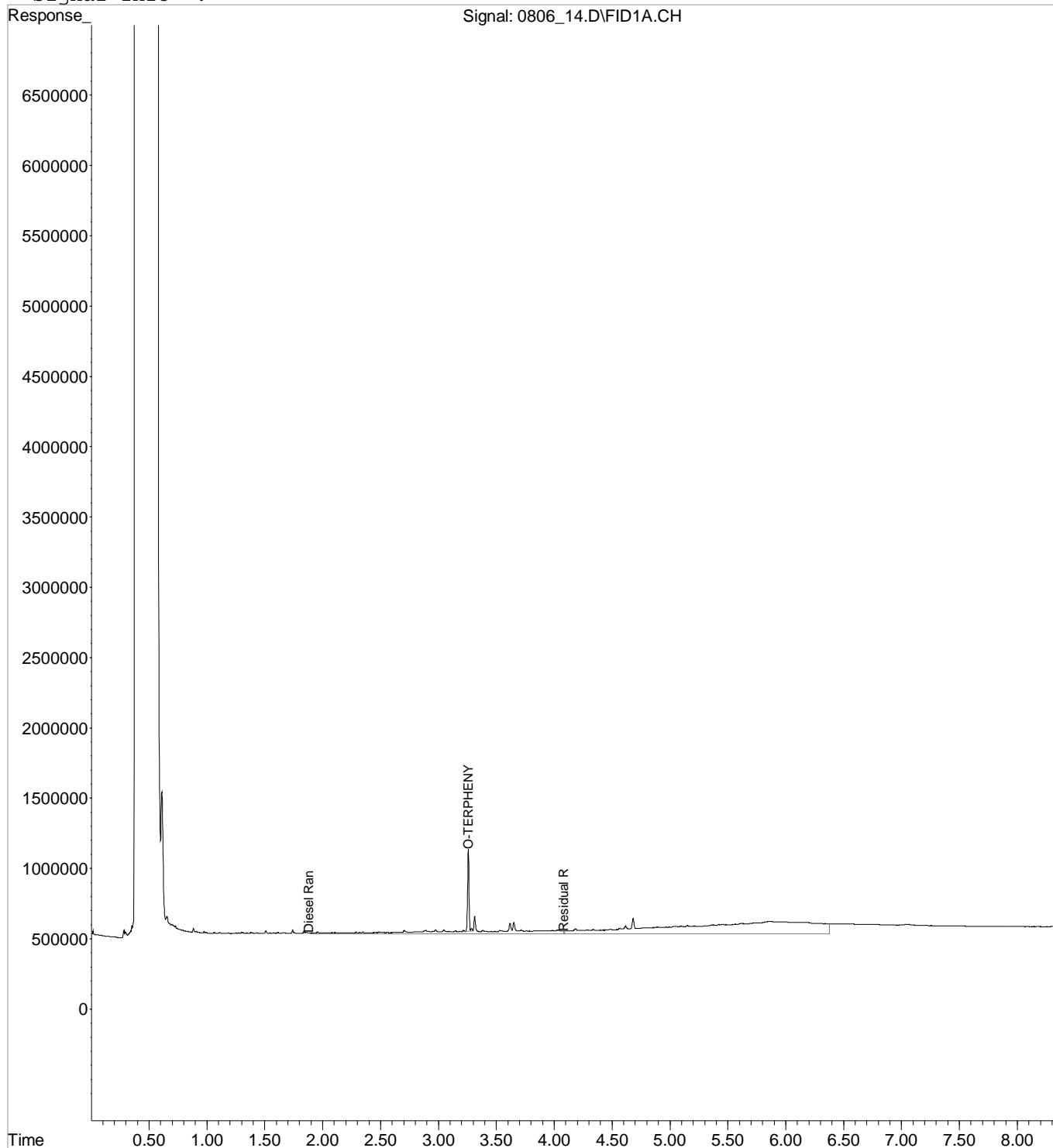
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\080618\0806 14.D Vial: 12
Acq On : 06 Aug 2018 12:38 pm Operator: 647
Sample : L1014164-05 1x WG1147771 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 6 15:38 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

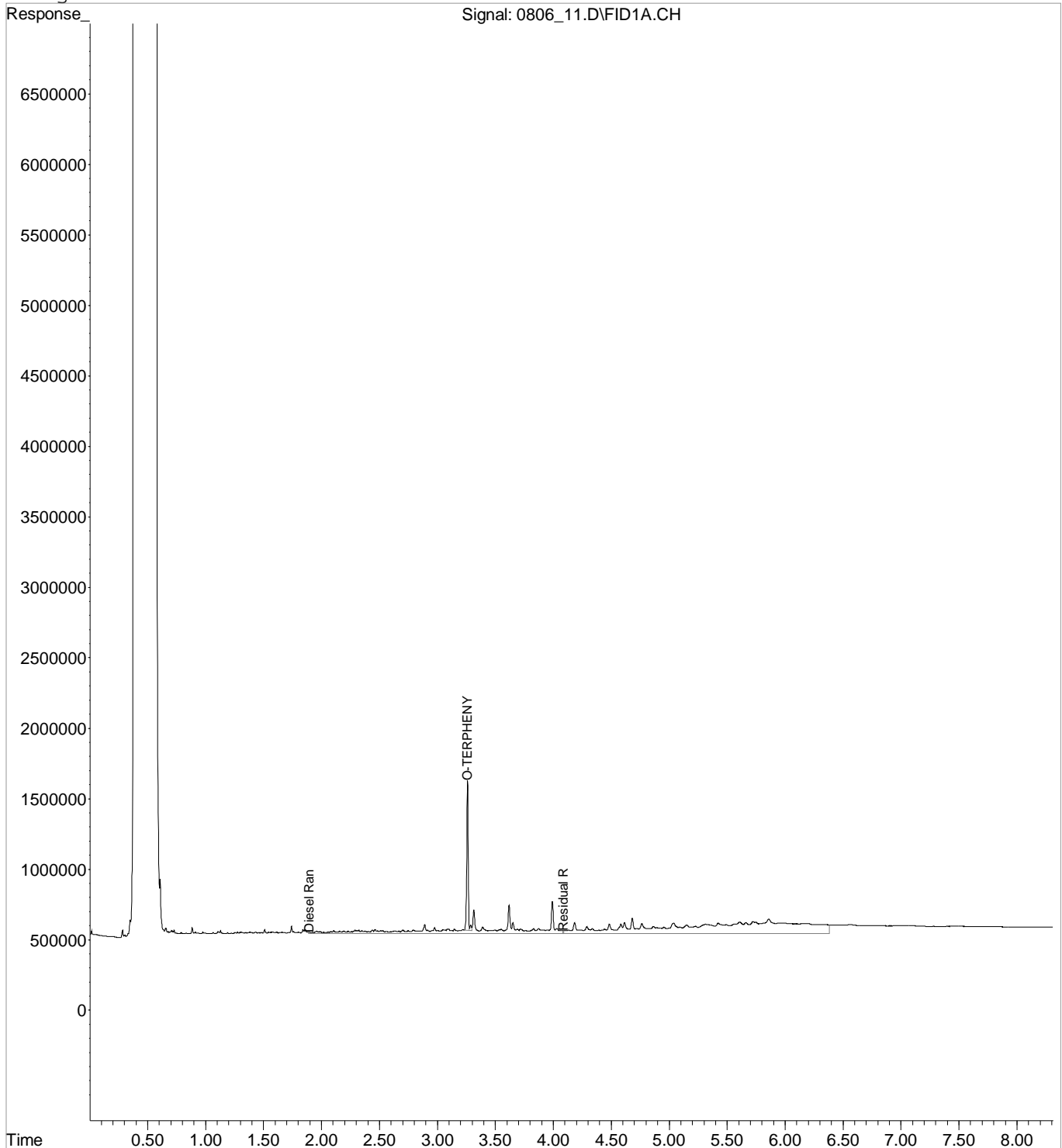
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\080618\0806 11.D Vial: 9
Acq On : 06 Aug 2018 12:02 pm Operator: 647
Sample : L1014164-06 1x WG1147771 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 6 15:37 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

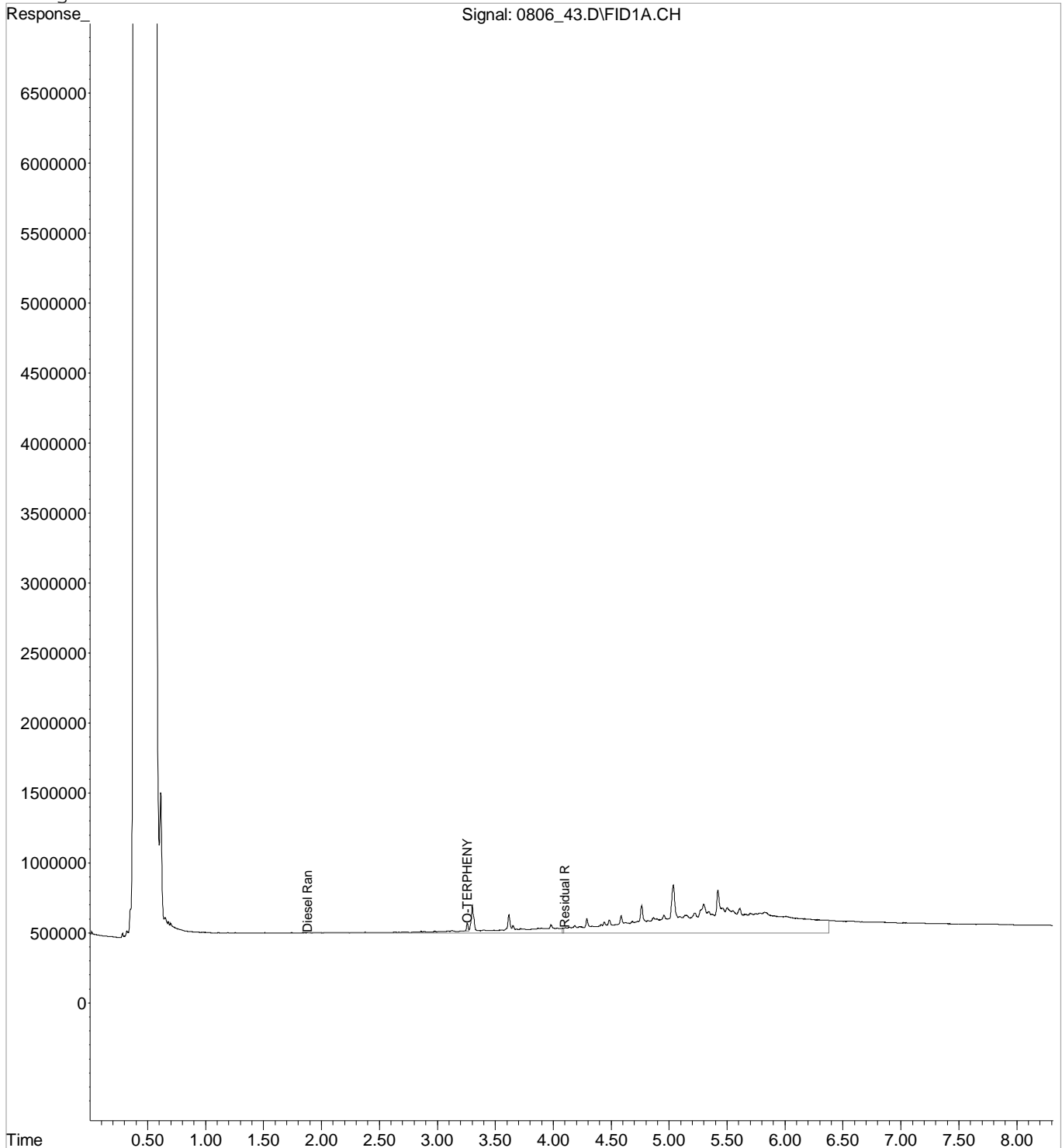
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\080618\0806 43.D Vial: 24
Acq On : 8-6-2018 06:37:53 PM Operator: 647
Sample : L1014164-07 20x WG1147771 15-1 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.67
IntFile : events.e
Quant Time: Aug 6 20:09 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

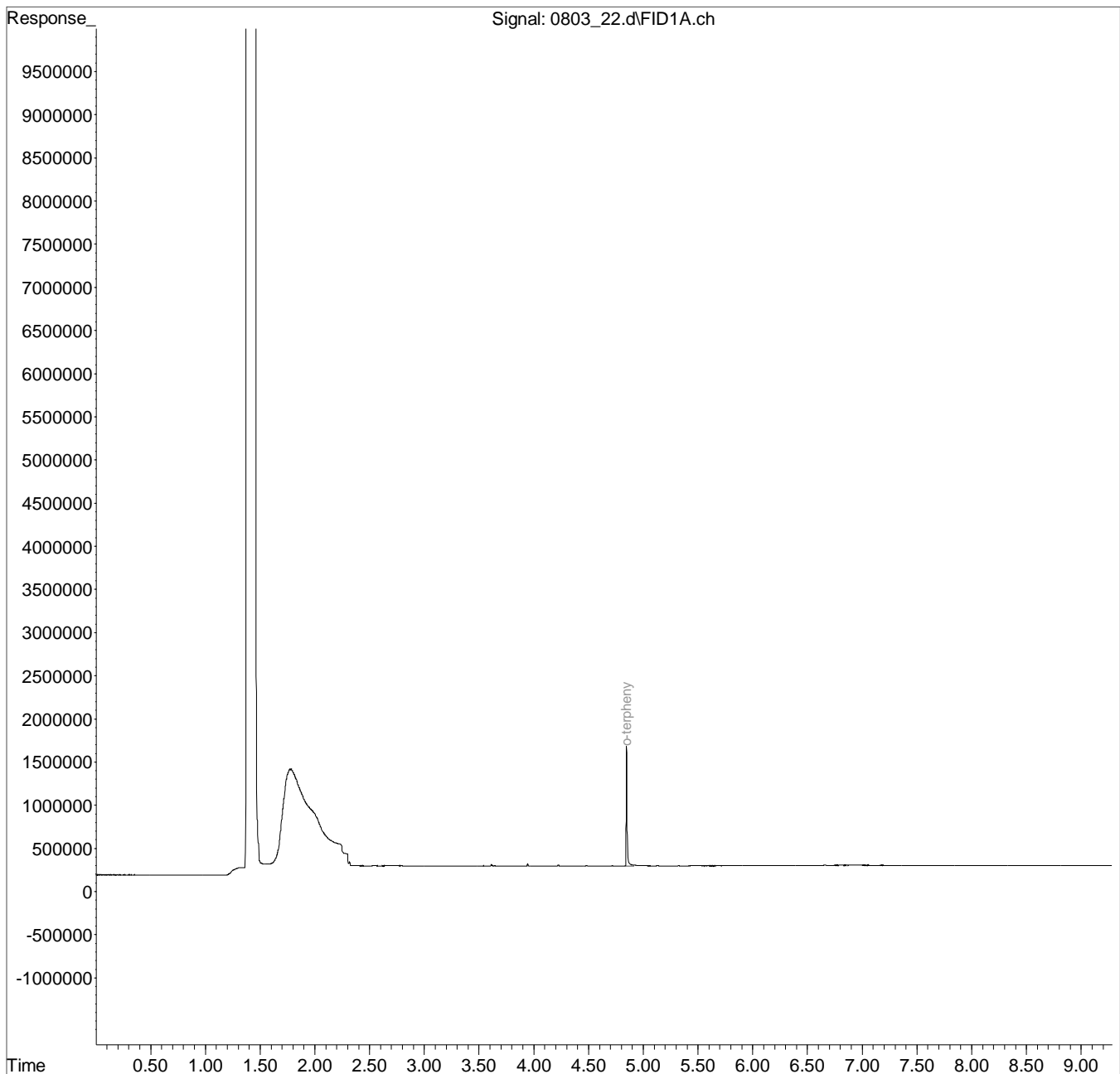
Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\080318\
Data File : 0803 22.d
Signal(s) : FID1A.ch
Acq On : 3 Aug 2018 6:48 pm
Operator : 784
Sample : L1014164-08 1x WG1147210 42-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 12 Sample Multiplier: 0.0476
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 03 21:21:40 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

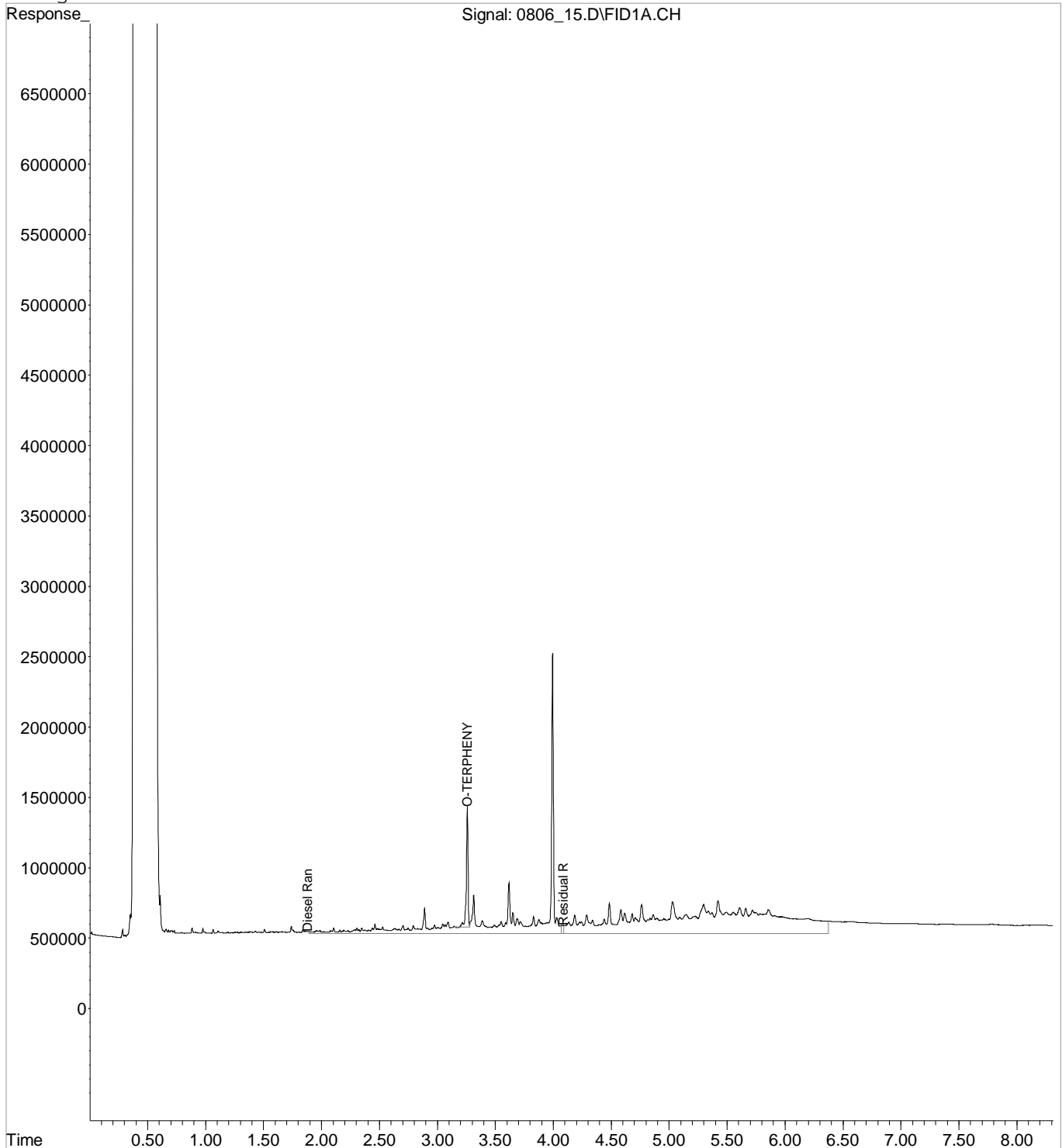
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data File : C:\MSDCHEM\1\DATA\080618\0806 15.D Vial: 13
Acq On : 06 Aug 2018 12:51 pm Operator: 647
Sample : L1014164-09 1x WG1147771 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 6 15:39 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

Volume Inj. :
Signal Phase :
Signal Info :



August 13, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1014895
Samples Received: 08/04/2018
Project Number: 1896120 04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

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



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

SAMPLE SUMMARY



RMD-6(9.5-10.0) L1014895-01 Solid

Collected by
K. Teague
Collected date/time
08/01/18 09:50
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150145	1	08/10/18 13:19	08/10/18 13:32	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 21:39	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 02:32	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1	08/01/18 09:50	08/11/18 23:53	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1	08/01/18 09:50	08/12/18 13:31	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 03:30	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/08/18 21:28	DMG

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

RMD-6(44.5-45.0) L1014895-02 Solid

Collected by
K. Teague
Collected date/time
08/01/18 11:45
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150145	1	08/10/18 13:19	08/10/18 13:32	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 21:41	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 02:34	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1.07	08/01/18 11:45	08/12/18 00:12	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1.07	08/01/18 11:45	08/12/18 13:51	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 00:19	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/08/18 21:49	DMG

6
Qc

7
Gl

8
Al

9
Sc

DUP-01-20180801 L1014895-03 Solid

Collected by
K. Teague
Collected date/time
08/01/18 00:00
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150147	1	08/10/18 13:09	08/10/18 13:17	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 21:48	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 02:37	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1	08/01/18 00:00	08/12/18 00:30	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1	08/01/18 00:00	08/12/18 14:11	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 00:31	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/08/18 22:10	DMG

WMW-20(14.5-15.0) L1014895-04 Solid

Collected by
K. Teague
Collected date/time
08/02/18 08:20
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150147	1	08/10/18 13:09	08/10/18 13:17	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 21:50	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 02:39	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1	08/02/18 08:20	08/12/18 00:49	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1	08/02/18 08:20	08/12/18 14:30	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 01:19	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/08/18 22:31	DMG

WMW-24(2.0-2.5) L1014895-05 Solid

Collected by
K. Teague
Collected date/time
08/02/18 12:45
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150147	1	08/10/18 13:09	08/10/18 13:17	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 21:52	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 02:42	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1	08/02/18 12:45	08/12/18 01:07	BMB

SAMPLE SUMMARY

WMW-24(2.0-2.5) L1014895-05 Solid

Collected by
K. Teague
Collected date/time
08/02/18 12:45
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1	08/02/18 12:45	08/12/18 14:50	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	20	08/09/18 07:42	08/11/18 04:18	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/09/18 03:06	DMG

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

WMW-24(9.5-10.0) L1014895-06 Solid

Collected by
K. Teague
Collected date/time
08/02/18 14:00
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150147	1	08/10/18 13:09	08/10/18 13:17	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 21:13	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 02:01	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1	08/02/18 14:00	08/12/18 01:26	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1	08/02/18 14:00	08/12/18 15:10	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/10/18 23:43	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/08/18 22:53	DMG

WMW-27(9.5-10.0) L1014895-07 Solid

Collected by
K. Teague
Collected date/time
08/03/18 07:50
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150147	1	08/10/18 13:09	08/10/18 13:17	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 21:55	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 02:44	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1	08/03/18 07:50	08/12/18 01:45	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1	08/03/18 07:50	08/12/18 15:30	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 01:30	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/08/18 23:56	DMG

WMW-28(2.0-2.5) L1014895-08 Solid

Collected by
K. Teague
Collected date/time
08/02/18 10:35
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150147	1	08/10/18 13:09	08/10/18 13:17	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 21:57	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 02:47	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1.14	08/02/18 10:35	08/12/18 02:03	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1.14	08/02/18 10:35	08/12/18 15:50	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 03:42	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/09/18 00:17	DMG

WMW-28(13.0-13.5) L1014895-09 Solid

Collected by
K. Teague
Collected date/time
08/02/18 15:30
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150147	1	08/10/18 13:09	08/10/18 13:17	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 21:59	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 02:55	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1	08/02/18 15:30	08/12/18 02:22	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1	08/02/18 15:30	08/12/18 16:10	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 01:42	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/09/18 00:38	DMG

SAMPLE SUMMARY



WMW-29(2.0-2.5) L1014895-10 Solid

Collected by
K. Teague
Collected date/time
08/02/18 11:20
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150147	1	08/10/18 13:09	08/10/18 13:17	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 22:01	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 02:57	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1.12	08/02/18 11:20	08/12/18 02:40	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1.12	08/02/18 11:20	08/12/18 16:29	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	20	08/09/18 07:42	08/11/18 04:30	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	2	08/08/18 14:13	08/09/18 03:27	DMG

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

WMW-30(2.0-2.5) L1014895-11 Solid

Collected by
K. Teague
Collected date/time
08/02/18 11:35
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150147	1	08/10/18 13:09	08/10/18 13:17	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 22:03	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 03:00	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1.32	08/02/18 11:35	08/12/18 02:59	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1.32	08/02/18 11:35	08/12/18 16:48	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 03:54	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/09/18 00:59	DMG

6
Qc

7
Gl

8
Al

9
Sc

TB-02-20180803 L1014895-12 GW

Collected by
K. Teague
Collected date/time
08/02/18 00:00
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149289	1	08/08/18 13:16	08/08/18 13:16	ACG

TB-03-20180803 L1014895-13 GW

Collected by
K. Teague
Collected date/time
08/02/18 00:00
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149289	1	08/08/18 13:36	08/08/18 13:36	ACG

WMW-26(9.5-10.0) L1014895-14 Solid

Collected by
K. Teague
Collected date/time
08/03/18 09:20
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150147	1	08/10/18 13:09	08/10/18 13:17	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 22:06	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 03:02	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1	08/03/18 09:20	08/12/18 03:18	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1	08/03/18 09:20	08/12/18 17:08	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 01:55	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/09/18 01:21	DMG

WMW-29(9.5-10.0) L1014895-15 Solid

Collected by
K. Teague
Collected date/time
08/03/18 10:45
Received date/time
08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150150	1	08/10/18 12:45	08/10/18 12:57	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 22:08	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 03:05	TRB

SAMPLE SUMMARY



WMW-29(9.5-10.0) L1014895-15 Solid

Collected by: K. Teague
 Collected date/time: 08/03/18 10:45
 Received date/time: 08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1.04	08/03/18 10:45	08/12/18 03:36	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1.04	08/03/18 10:45	08/12/18 17:28	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 02:07	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/09/18 01:42	DMG

1 Cp

2 Tc

3 Ss

4 Cn

WMW-30(8.5-9.0) L1014895-16 Solid

Collected by: K. Teague
 Collected date/time: 08/03/18 11:40
 Received date/time: 08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150150	1	08/10/18 12:45	08/10/18 12:57	KDW
Mercury by Method 7471B	WG1148107	1	08/06/18 11:10	08/07/18 22:14	ABL
Metals (ICP) by Method 6010C	WG1147985	1	08/08/18 06:56	08/09/18 03:07	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1.1	08/03/18 11:40	08/12/18 03:55	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1.1	08/03/18 11:40	08/12/18 17:48	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 02:19	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/09/18 02:03	DMG

5 Sr

6 Qc

7 Gl

8 Al

WMW-26(2.0-2.5) L1014895-17 Solid

Collected by: K. Teague
 Collected date/time: 08/03/18 13:15
 Received date/time: 08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150150	1	08/10/18 12:45	08/10/18 12:57	KDW
Mercury by Method 7471B	WG1149076	1	08/08/18 06:33	08/08/18 10:22	EL
Metals (ICP) by Method 6010C	WG1148757	1	08/07/18 18:18	08/08/18 08:44	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1.08	08/03/18 13:15	08/12/18 04:14	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1.08	08/03/18 13:15	08/12/18 18:08	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 02:31	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/09/18 02:24	DMG

9 Sc

WMW-27(2.0-2.5) L1014895-18 Solid

Collected by: K. Teague
 Collected date/time: 08/03/18 10:50
 Received date/time: 08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150150	1	08/10/18 12:45	08/10/18 12:57	KDW
Mercury by Method 7471B	WG1149076	1	08/08/18 06:33	08/08/18 10:24	EL
Metals (ICP) by Method 6010C	WG1148757	1	08/07/18 18:18	08/08/18 08:46	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151244	1.11	08/03/18 10:50	08/12/18 17:41	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151411	1.11	08/03/18 10:50	08/13/18 10:07	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	5	08/09/18 07:42	08/11/18 04:06	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1148863	1	08/08/18 14:13	08/09/18 02:45	DMG

RMD-6(70.5-71.0) L1014895-19 Solid

Collected by: K. Teague
 Collected date/time: 08/03/18 16:00
 Received date/time: 08/04/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1150150	1	08/10/18 12:45	08/10/18 12:57	KDW
Mercury by Method 7471B	WG1149076	1	08/08/18 06:33	08/08/18 10:26	EL
Metals (ICP) by Method 6010C	WG1148757	1	08/07/18 18:18	08/08/18 08:49	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150715	1	08/03/18 16:00	08/12/18 04:32	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151239	1	08/03/18 16:00	08/12/18 18:27	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1149437	1	08/09/18 07:42	08/11/18 02:43	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1150022	1	08/08/18 17:18	08/09/18 14:15	DMG

ACCOUNT:

Kennedy/Jenks Con-BNSF Region 1

PROJECT:

1896120 04

SDG:

L1014895

DATE/TIME:

08/13/18 17:07

PAGE:

6 of 111



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.

Mark W. Beasley
Project Manager

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.2		1	08/10/2018 13:32	WG1150145

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0210	1	08/07/2018 21:39	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.00		2.10	1	08/09/2018 02:32	WG1147985
Barium	82.9		0.525	1	08/09/2018 02:32	WG1147985
Cadmium	ND		0.525	1	08/09/2018 02:32	WG1147985
Chromium	12.3		1.05	1	08/09/2018 02:32	WG1147985
Lead	4.39		0.525	1	08/09/2018 02:32	WG1147985
Selenium	ND		2.10	1	08/09/2018 02:32	WG1147985
Silver	ND		1.05	1	08/09/2018 02:32	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0263	1	08/12/2018 13:31	WG1151239
Acrylonitrile	ND	JO J4	0.0131	1	08/11/2018 23:53	WG1150715
Benzene	ND		0.00105	1	08/11/2018 23:53	WG1150715
Bromobenzene	ND		0.0131	1	08/11/2018 23:53	WG1150715
Bromodichloromethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
Bromoform	ND		0.0263	1	08/11/2018 23:53	WG1150715
Bromomethane	ND	JO	0.0131	1	08/11/2018 23:53	WG1150715
n-Butylbenzene	ND		0.0131	1	08/11/2018 23:53	WG1150715
sec-Butylbenzene	ND		0.0131	1	08/11/2018 23:53	WG1150715
tert-Butylbenzene	ND		0.00525	1	08/11/2018 23:53	WG1150715
Carbon tetrachloride	ND		0.00525	1	08/11/2018 23:53	WG1150715
Chlorobenzene	ND		0.00263	1	08/11/2018 23:53	WG1150715
Chlorodibromomethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
Chloroethane	ND		0.00525	1	08/11/2018 23:53	WG1150715
Chloroform	ND		0.00263	1	08/11/2018 23:53	WG1150715
Chloromethane	ND		0.0131	1	08/11/2018 23:53	WG1150715
2-Chlorotoluene	ND		0.00263	1	08/11/2018 23:53	WG1150715
4-Chlorotoluene	ND		0.00525	1	08/11/2018 23:53	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0263	1	08/11/2018 23:53	WG1150715
1,2-Dibromoethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
Dibromomethane	ND		0.00525	1	08/11/2018 23:53	WG1150715
1,2-Dichlorobenzene	ND		0.00525	1	08/11/2018 23:53	WG1150715
1,3-Dichlorobenzene	ND		0.00525	1	08/11/2018 23:53	WG1150715
1,4-Dichlorobenzene	ND		0.00525	1	08/11/2018 23:53	WG1150715
Dichlorodifluoromethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
1,1-Dichloroethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
1,2-Dichloroethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
1,1-Dichloroethene	ND		0.00263	1	08/11/2018 23:53	WG1150715
cis-1,2-Dichloroethene	ND		0.00263	1	08/11/2018 23:53	WG1150715
trans-1,2-Dichloroethene	ND		0.00525	1	08/11/2018 23:53	WG1150715
1,2-Dichloropropane	ND		0.00525	1	08/11/2018 23:53	WG1150715
1,1-Dichloropropene	ND		0.00263	1	08/11/2018 23:53	WG1150715
1,3-Dichloropropane	ND		0.00525	1	08/11/2018 23:53	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/01/18 09:50

L1014895

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00263	1	08/11/2018 23:53	WG1150715
trans-1,3-Dichloropropene	ND		0.00525	1	08/11/2018 23:53	WG1150715
2,2-Dichloropropane	ND		0.00263	1	08/11/2018 23:53	WG1150715
Di-isopropyl ether	ND		0.00105	1	08/11/2018 23:53	WG1150715
Ethylbenzene	ND		0.00263	1	08/11/2018 23:53	WG1150715
Hexachloro-1,3-butadiene	ND		0.0263	1	08/11/2018 23:53	WG1150715
Isopropylbenzene	ND		0.00263	1	08/11/2018 23:53	WG1150715
p-Isopropyltoluene	ND		0.00525	1	08/11/2018 23:53	WG1150715
2-Butanone (MEK)	ND	<u>JO</u>	0.0263	1	08/11/2018 23:53	WG1150715
Methylene Chloride	ND		0.0263	1	08/11/2018 23:53	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0263	1	08/11/2018 23:53	WG1150715
Methyl tert-butyl ether	ND		0.00105	1	08/11/2018 23:53	WG1150715
Naphthalene	ND		0.0131	1	08/11/2018 23:53	WG1150715
n-Propylbenzene	ND		0.00525	1	08/11/2018 23:53	WG1150715
Styrene	ND		0.0131	1	08/11/2018 23:53	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
Tetrachloroethene	ND		0.00263	1	08/11/2018 23:53	WG1150715
Toluene	ND		0.00525	1	08/11/2018 23:53	WG1150715
1,2,3-Trichlorobenzene	ND	<u>J4</u>	0.00263	1	08/11/2018 23:53	WG1150715
1,2,4-Trichlorobenzene	ND		0.0131	1	08/11/2018 23:53	WG1150715
1,1,1-Trichloroethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
1,1,2-Trichloroethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
Trichloroethene	ND		0.00105	1	08/11/2018 23:53	WG1150715
Trichlorofluoromethane	ND		0.00263	1	08/11/2018 23:53	WG1150715
1,2,3-Trichloropropane	ND		0.0131	1	08/11/2018 23:53	WG1150715
1,2,4-Trimethylbenzene	ND		0.00525	1	08/11/2018 23:53	WG1150715
1,2,3-Trimethylbenzene	ND		0.00525	1	08/11/2018 23:53	WG1150715
Vinyl chloride	ND		0.00263	1	08/11/2018 23:53	WG1150715
1,3,5-Trimethylbenzene	ND		0.00525	1	08/11/2018 23:53	WG1150715
o-Xylene	ND		0.00263	1	08/11/2018 23:53	WG1150715
m&p-Xylene	ND		0.00420	1	08/11/2018 23:53	WG1150715
(S) Toluene-d8	116		80.0-120		08/11/2018 23:53	WG1150715
(S) Toluene-d8	116		80.0-120		08/12/2018 13:31	WG1151239
(S) Dibromofluoromethane	92.0		74.0-131		08/11/2018 23:53	WG1150715
(S) Dibromofluoromethane	84.9		74.0-131		08/12/2018 13:31	WG1151239
(S) 4-Bromofluorobenzene	104		64.0-132		08/11/2018 23:53	WG1150715
(S) 4-Bromofluorobenzene	92.8		64.0-132		08/12/2018 13:31	WG1151239



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.20	1	08/11/2018 03:30	WG1149437
Residual Range Organics (RRO)	ND		10.5	1	08/11/2018 03:30	WG1149437
(S) o-Terphenyl	122		18.0-148		08/11/2018 03:30	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Acenaphthene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Acenaphthylene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Benzo(a)anthracene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Benzo(a)pyrene	ND		0.00631	1	08/08/2018 21:28	WG1148863



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Benzo(g,h,i)perylene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Benzo(k)fluoranthene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Chrysene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Dibenz(a,h)anthracene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Fluoranthene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Fluorene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Naphthalene	ND		0.0210	1	08/08/2018 21:28	WG1148863
Phenanthrene	ND		0.00631	1	08/08/2018 21:28	WG1148863
Pyrene	ND		0.00631	1	08/08/2018 21:28	WG1148863
1-Methylnaphthalene	ND		0.0210	1	08/08/2018 21:28	WG1148863
2-Methylnaphthalene	ND		0.0210	1	08/08/2018 21:28	WG1148863
2-Chloronaphthalene	ND		0.0210	1	08/08/2018 21:28	WG1148863
(S) Nitrobenzene-d5	74.0		14.0-149		08/08/2018 21:28	WG1148863
(S) 2-Fluorobiphenyl	85.9		34.0-125		08/08/2018 21:28	WG1148863
(S) p-Terphenyl-d14	84.5		23.0-120		08/08/2018 21:28	WG1148863

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	79.4		1	08/10/2018 13:32	WG1150145

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0252	1	08/07/2018 21:41	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.52	1	08/09/2018 02:34	WG1147985
Barium	58.0		0.630	1	08/09/2018 02:34	WG1147985
Cadmium	ND		0.630	1	08/09/2018 02:34	WG1147985
Chromium	12.0		1.26	1	08/09/2018 02:34	WG1147985
Lead	2.71		0.630	1	08/09/2018 02:34	WG1147985
Selenium	ND		2.52	1	08/09/2018 02:34	WG1147985
Silver	ND		1.26	1	08/09/2018 02:34	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0337	1.07	08/12/2018 13:51	WG1151239
Acrylonitrile	ND	JO J4	0.0169	1.07	08/12/2018 00:12	WG1150715
Benzene	ND		0.00135	1.07	08/12/2018 00:12	WG1150715
Bromobenzene	ND		0.0169	1.07	08/12/2018 00:12	WG1150715
Bromodichloromethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
Bromoform	ND		0.0337	1.07	08/12/2018 00:12	WG1150715
Bromomethane	ND	JO	0.0169	1.07	08/12/2018 00:12	WG1150715
n-Butylbenzene	ND		0.0169	1.07	08/12/2018 00:12	WG1150715
sec-Butylbenzene	ND		0.0169	1.07	08/12/2018 00:12	WG1150715
tert-Butylbenzene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
Carbon tetrachloride	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
Chlorobenzene	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
Chlorodibromomethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
Chloroethane	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
Chloroform	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
Chloromethane	ND		0.0169	1.07	08/12/2018 00:12	WG1150715
2-Chlorotoluene	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
4-Chlorotoluene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0337	1.07	08/12/2018 00:12	WG1150715
1,2-Dibromoethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
Dibromomethane	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
1,2-Dichlorobenzene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
1,3-Dichlorobenzene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
1,4-Dichlorobenzene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
Dichlorodifluoromethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
1,1-Dichloroethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
1,2-Dichloroethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
1,1-Dichloroethene	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
cis-1,2-Dichloroethene	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
trans-1,2-Dichloroethene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
1,2-Dichloropropane	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
1,1-Dichloropropene	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
1,3-Dichloropropane	ND		0.00674	1.07	08/12/2018 00:12	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/01/18 11:45

L1014895

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
trans-1,3-Dichloropropene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
2,2-Dichloropropane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
Di-isopropyl ether	ND		0.00135	1.07	08/12/2018 00:12	WG1150715
Ethylbenzene	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
Hexachloro-1,3-butadiene	ND		0.0337	1.07	08/12/2018 00:12	WG1150715
Isopropylbenzene	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
p-Isopropyltoluene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
2-Butanone (MEK)	ND	<u>JO</u>	0.0337	1.07	08/12/2018 00:12	WG1150715
Methylene Chloride	ND		0.0337	1.07	08/12/2018 00:12	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0337	1.07	08/12/2018 00:12	WG1150715
Methyl tert-butyl ether	ND		0.00135	1.07	08/12/2018 00:12	WG1150715
Naphthalene	ND		0.0169	1.07	08/12/2018 00:12	WG1150715
n-Propylbenzene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
Styrene	ND		0.0169	1.07	08/12/2018 00:12	WG1150715
1,1,1-Tetrachloroethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
1,1,2-Tetrachloroethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
Tetrachloroethene	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
Toluene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
1,2,3-Trichlorobenzene	ND	<u>J4</u>	0.00337	1.07	08/12/2018 00:12	WG1150715
1,2,4-Trichlorobenzene	ND		0.0169	1.07	08/12/2018 00:12	WG1150715
1,1,1-Trichloroethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
1,1,2-Trichloroethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
Trichloroethene	ND		0.00135	1.07	08/12/2018 00:12	WG1150715
Trichlorofluoromethane	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
1,2,3-Trichloropropane	ND		0.0169	1.07	08/12/2018 00:12	WG1150715
1,2,4-Trimethylbenzene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
1,2,3-Trimethylbenzene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
Vinyl chloride	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
1,3,5-Trimethylbenzene	ND		0.00674	1.07	08/12/2018 00:12	WG1150715
o-Xylene	ND		0.00337	1.07	08/12/2018 00:12	WG1150715
m&p-Xylene	ND		0.00539	1.07	08/12/2018 00:12	WG1150715
(S) Toluene-d8	113		80.0-120		08/12/2018 00:12	WG1150715
(S) Toluene-d8	115		80.0-120		08/12/2018 13:51	WG1151239
(S) Dibromofluoromethane	94.7		74.0-131		08/12/2018 00:12	WG1150715
(S) Dibromofluoromethane	85.9		74.0-131		08/12/2018 13:51	WG1151239
(S) 4-Bromofluorobenzene	100		64.0-132		08/12/2018 00:12	WG1150715
(S) 4-Bromofluorobenzene	98.1		64.0-132		08/12/2018 13:51	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6.07		5.04	1	08/11/2018 00:19	WG1149437
Residual Range Organics (RRO)	ND		12.6	1	08/11/2018 00:19	WG1149437
(S) o-Terphenyl	69.3		18.0-148		08/11/2018 00:19	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Acenaphthene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Acenaphthylene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Benzo(a)anthracene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Benzo(a)pyrene	ND		0.00756	1	08/08/2018 21:49	WG1148863



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Benzo(g,h,i)perylene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Benzo(k)fluoranthene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Chrysene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Dibenz(a,h)anthracene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Fluoranthene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Fluorene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Naphthalene	ND		0.0252	1	08/08/2018 21:49	WG1148863
Phenanthrene	ND		0.00756	1	08/08/2018 21:49	WG1148863
Pyrene	ND		0.00756	1	08/08/2018 21:49	WG1148863
1-Methylnaphthalene	ND		0.0252	1	08/08/2018 21:49	WG1148863
2-Methylnaphthalene	ND		0.0252	1	08/08/2018 21:49	WG1148863
2-Chloronaphthalene	ND		0.0252	1	08/08/2018 21:49	WG1148863
<i>(S)</i> Nitrobenzene-d5	81.5		14.0-149		08/08/2018 21:49	WG1148863
<i>(S)</i> 2-Fluorobiphenyl	86.8		34.0-125		08/08/2018 21:49	WG1148863
<i>(S)</i> p-Terphenyl-d14	83.8		23.0-120		08/08/2018 21:49	WG1148863

- 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
Total Solids	78.7		1	08/10/2018 13:17	WG1150147

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0254	1	08/07/2018 21:48	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.54	1	08/09/2018 02:37	WG1147985
Barium	54.7		0.635	1	08/09/2018 02:37	WG1147985
Cadmium	ND		0.635	1	08/09/2018 02:37	WG1147985
Chromium	12.2		1.27	1	08/09/2018 02:37	WG1147985
Lead	2.47		0.635	1	08/09/2018 02:37	WG1147985
Selenium	ND		2.54	1	08/09/2018 02:37	WG1147985
Silver	ND		1.27	1	08/09/2018 02:37	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0317	1	08/12/2018 14:11	WG1151239
Acrylonitrile	ND	JO J4	0.0159	1	08/12/2018 00:30	WG1150715
Benzene	ND		0.00127	1	08/12/2018 00:30	WG1150715
Bromobenzene	ND		0.0159	1	08/12/2018 00:30	WG1150715
Bromodichloromethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
Bromoform	ND		0.0317	1	08/12/2018 00:30	WG1150715
Bromomethane	ND	JO	0.0159	1	08/12/2018 00:30	WG1150715
n-Butylbenzene	ND		0.0159	1	08/12/2018 00:30	WG1150715
sec-Butylbenzene	ND		0.0159	1	08/12/2018 00:30	WG1150715
tert-Butylbenzene	ND		0.00635	1	08/12/2018 00:30	WG1150715
Carbon tetrachloride	ND		0.00635	1	08/12/2018 00:30	WG1150715
Chlorobenzene	ND		0.00317	1	08/12/2018 00:30	WG1150715
Chlorodibromomethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
Chloroethane	ND		0.00635	1	08/12/2018 00:30	WG1150715
Chloroform	ND		0.00317	1	08/12/2018 00:30	WG1150715
Chloromethane	ND		0.0159	1	08/12/2018 00:30	WG1150715
2-Chlorotoluene	ND		0.00317	1	08/12/2018 00:30	WG1150715
4-Chlorotoluene	ND		0.00635	1	08/12/2018 00:30	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0317	1	08/12/2018 00:30	WG1150715
1,2-Dibromoethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
Dibromomethane	ND		0.00635	1	08/12/2018 00:30	WG1150715
1,2-Dichlorobenzene	ND		0.00635	1	08/12/2018 00:30	WG1150715
1,3-Dichlorobenzene	ND		0.00635	1	08/12/2018 00:30	WG1150715
1,4-Dichlorobenzene	ND		0.00635	1	08/12/2018 00:30	WG1150715
Dichlorodifluoromethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
1,1-Dichloroethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
1,2-Dichloroethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
1,1-Dichloroethene	ND		0.00317	1	08/12/2018 00:30	WG1150715
cis-1,2-Dichloroethene	ND		0.00317	1	08/12/2018 00:30	WG1150715
trans-1,2-Dichloroethene	ND		0.00635	1	08/12/2018 00:30	WG1150715
1,2-Dichloropropane	ND		0.00635	1	08/12/2018 00:30	WG1150715
1,1-Dichloropropene	ND		0.00317	1	08/12/2018 00:30	WG1150715
1,3-Dichloropropane	ND		0.00635	1	08/12/2018 00:30	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00317	1	08/12/2018 00:30	WG1150715
trans-1,3-Dichloropropene	ND		0.00635	1	08/12/2018 00:30	WG1150715
2,2-Dichloropropane	ND		0.00317	1	08/12/2018 00:30	WG1150715
Di-isopropyl ether	ND		0.00127	1	08/12/2018 00:30	WG1150715
Ethylbenzene	ND		0.00317	1	08/12/2018 00:30	WG1150715
Hexachloro-1,3-butadiene	ND		0.0317	1	08/12/2018 00:30	WG1150715
Isopropylbenzene	ND		0.00317	1	08/12/2018 00:30	WG1150715
p-Isopropyltoluene	ND		0.00635	1	08/12/2018 00:30	WG1150715
2-Butanone (MEK)	ND	J0	0.0317	1	08/12/2018 00:30	WG1150715
Methylene Chloride	ND		0.0317	1	08/12/2018 00:30	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0317	1	08/12/2018 00:30	WG1150715
Methyl tert-butyl ether	ND		0.00127	1	08/12/2018 00:30	WG1150715
Naphthalene	ND		0.0159	1	08/12/2018 00:30	WG1150715
n-Propylbenzene	ND		0.00635	1	08/12/2018 00:30	WG1150715
Styrene	ND		0.0159	1	08/12/2018 00:30	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
Tetrachloroethene	ND		0.00317	1	08/12/2018 00:30	WG1150715
Toluene	ND		0.00635	1	08/12/2018 00:30	WG1150715
1,2,3-Trichlorobenzene	ND	J4	0.00317	1	08/12/2018 00:30	WG1150715
1,2,4-Trichlorobenzene	ND		0.0159	1	08/12/2018 00:30	WG1150715
1,1,1-Trichloroethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
1,1,2-Trichloroethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
Trichloroethene	ND		0.00127	1	08/12/2018 00:30	WG1150715
Trichlorofluoromethane	ND		0.00317	1	08/12/2018 00:30	WG1150715
1,2,3-Trichloropropane	ND		0.0159	1	08/12/2018 00:30	WG1150715
1,2,4-Trimethylbenzene	ND		0.00635	1	08/12/2018 00:30	WG1150715
1,2,3-Trimethylbenzene	ND		0.00635	1	08/12/2018 00:30	WG1150715
Vinyl chloride	ND		0.00317	1	08/12/2018 00:30	WG1150715
1,3,5-Trimethylbenzene	ND		0.00635	1	08/12/2018 00:30	WG1150715
o-Xylene	ND		0.00317	1	08/12/2018 00:30	WG1150715
m&p-Xylene	ND		0.00508	1	08/12/2018 00:30	WG1150715
(S) Toluene-d8	112		80.0-120		08/12/2018 00:30	WG1150715
(S) Toluene-d8	115		80.0-120		08/12/2018 14:11	WG1151239
(S) Dibromofluoromethane	93.4		74.0-131		08/12/2018 00:30	WG1150715
(S) Dibromofluoromethane	87.4		74.0-131		08/12/2018 14:11	WG1151239
(S) 4-Bromofluorobenzene	101		64.0-132		08/12/2018 00:30	WG1150715
(S) 4-Bromofluorobenzene	90.1		64.0-132		08/12/2018 14:11	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.08	1	08/11/2018 00:31	WG1149437
Residual Range Organics (RRO)	ND		12.7	1	08/11/2018 00:31	WG1149437
(S) o-Terphenyl	83.7		18.0-148		08/11/2018 00:31	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Acenaphthene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Acenaphthylene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Benzo(a)anthracene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Benzo(a)pyrene	ND		0.00762	1	08/08/2018 22:10	WG1148863



Collected date/time: 08/01/18 00:00

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Benzo(g,h,i)perylene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Benzo(k)fluoranthene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Chrysene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Dibenz(a,h)anthracene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Fluoranthene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Fluorene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Naphthalene	ND		0.0254	1	08/08/2018 22:10	WG1148863
Phenanthrene	ND		0.00762	1	08/08/2018 22:10	WG1148863
Pyrene	ND		0.00762	1	08/08/2018 22:10	WG1148863
1-Methylnaphthalene	ND		0.0254	1	08/08/2018 22:10	WG1148863
2-Methylnaphthalene	ND		0.0254	1	08/08/2018 22:10	WG1148863
2-Chloronaphthalene	ND		0.0254	1	08/08/2018 22:10	WG1148863
(S) Nitrobenzene-d5	68.2		14.0-149		08/08/2018 22:10	WG1148863
(S) 2-Fluorobiphenyl	80.4		34.0-125		08/08/2018 22:10	WG1148863
(S) p-Terphenyl-d14	80.2		23.0-120		08/08/2018 22:10	WG1148863

- 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	88.3		1	08/10/2018 13:17	WG1150147

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0227	1	08/07/2018 21:50	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.27	1	08/09/2018 02:39	WG1147985
Barium	82.7		0.566	1	08/09/2018 02:39	WG1147985
Cadmium	ND		0.566	1	08/09/2018 02:39	WG1147985
Chromium	13.1		1.13	1	08/09/2018 02:39	WG1147985
Lead	3.77		0.566	1	08/09/2018 02:39	WG1147985
Selenium	ND		2.27	1	08/09/2018 02:39	WG1147985
Silver	ND		1.13	1	08/09/2018 02:39	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0283	1	08/12/2018 14:30	WG1151239
Acrylonitrile	ND	JO J4	0.0142	1	08/12/2018 00:49	WG1150715
Benzene	ND		0.00113	1	08/12/2018 00:49	WG1150715
Bromobenzene	ND		0.0142	1	08/12/2018 00:49	WG1150715
Bromodichloromethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
Bromoform	ND		0.0283	1	08/12/2018 00:49	WG1150715
Bromomethane	ND	JO	0.0142	1	08/12/2018 00:49	WG1150715
n-Butylbenzene	ND		0.0142	1	08/12/2018 00:49	WG1150715
sec-Butylbenzene	ND		0.0142	1	08/12/2018 00:49	WG1150715
tert-Butylbenzene	ND		0.00566	1	08/12/2018 00:49	WG1150715
Carbon tetrachloride	ND		0.00566	1	08/12/2018 00:49	WG1150715
Chlorobenzene	ND		0.00283	1	08/12/2018 00:49	WG1150715
Chlorodibromomethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
Chloroethane	ND		0.00566	1	08/12/2018 00:49	WG1150715
Chloroform	ND		0.00283	1	08/12/2018 00:49	WG1150715
Chloromethane	ND		0.0142	1	08/12/2018 00:49	WG1150715
2-Chlorotoluene	ND		0.00283	1	08/12/2018 00:49	WG1150715
4-Chlorotoluene	ND		0.00566	1	08/12/2018 00:49	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0283	1	08/12/2018 00:49	WG1150715
1,2-Dibromoethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
Dibromomethane	ND		0.00566	1	08/12/2018 00:49	WG1150715
1,2-Dichlorobenzene	ND		0.00566	1	08/12/2018 00:49	WG1150715
1,3-Dichlorobenzene	ND		0.00566	1	08/12/2018 00:49	WG1150715
1,4-Dichlorobenzene	ND		0.00566	1	08/12/2018 00:49	WG1150715
Dichlorodifluoromethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
1,1-Dichloroethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
1,2-Dichloroethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
1,1-Dichloroethene	ND		0.00283	1	08/12/2018 00:49	WG1150715
cis-1,2-Dichloroethene	ND		0.00283	1	08/12/2018 00:49	WG1150715
trans-1,2-Dichloroethene	ND		0.00566	1	08/12/2018 00:49	WG1150715
1,2-Dichloropropane	ND		0.00566	1	08/12/2018 00:49	WG1150715
1,1-Dichloropropene	ND		0.00283	1	08/12/2018 00:49	WG1150715
1,3-Dichloropropane	ND		0.00566	1	08/12/2018 00:49	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00283	1	08/12/2018 00:49	WG1150715
trans-1,3-Dichloropropene	ND		0.00566	1	08/12/2018 00:49	WG1150715
2,2-Dichloropropane	ND		0.00283	1	08/12/2018 00:49	WG1150715
Di-isopropyl ether	ND		0.00113	1	08/12/2018 00:49	WG1150715
Ethylbenzene	ND		0.00283	1	08/12/2018 00:49	WG1150715
Hexachloro-1,3-butadiene	ND		0.0283	1	08/12/2018 00:49	WG1150715
Isopropylbenzene	ND		0.00283	1	08/12/2018 00:49	WG1150715
p-Isopropyltoluene	ND		0.00566	1	08/12/2018 00:49	WG1150715
2-Butanone (MEK)	ND	<u>JO</u>	0.0283	1	08/12/2018 00:49	WG1150715
Methylene Chloride	ND		0.0283	1	08/12/2018 00:49	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0283	1	08/12/2018 00:49	WG1150715
Methyl tert-butyl ether	ND		0.00113	1	08/12/2018 00:49	WG1150715
Naphthalene	ND		0.0142	1	08/12/2018 00:49	WG1150715
n-Propylbenzene	ND		0.00566	1	08/12/2018 00:49	WG1150715
Styrene	ND		0.0142	1	08/12/2018 00:49	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
Tetrachloroethene	ND		0.00283	1	08/12/2018 00:49	WG1150715
Toluene	ND		0.00566	1	08/12/2018 00:49	WG1150715
1,2,3-Trichlorobenzene	ND	<u>J4</u>	0.00283	1	08/12/2018 00:49	WG1150715
1,2,4-Trichlorobenzene	ND		0.0142	1	08/12/2018 00:49	WG1150715
1,1,1-Trichloroethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
1,1,2-Trichloroethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
Trichloroethene	ND		0.00113	1	08/12/2018 00:49	WG1150715
Trichlorofluoromethane	ND		0.00283	1	08/12/2018 00:49	WG1150715
1,2,3-Trichloropropane	ND		0.0142	1	08/12/2018 00:49	WG1150715
1,2,4-Trimethylbenzene	ND		0.00566	1	08/12/2018 00:49	WG1150715
1,2,3-Trimethylbenzene	ND		0.00566	1	08/12/2018 00:49	WG1150715
Vinyl chloride	ND		0.00283	1	08/12/2018 00:49	WG1150715
1,3,5-Trimethylbenzene	ND		0.00566	1	08/12/2018 00:49	WG1150715
o-Xylene	ND		0.00283	1	08/12/2018 00:49	WG1150715
m&p-Xylene	ND		0.00453	1	08/12/2018 00:49	WG1150715
(S) Toluene-d8	110		80.0-120		08/12/2018 00:49	WG1150715
(S) Toluene-d8	116		80.0-120		08/12/2018 14:30	WG1151239
(S) Dibromofluoromethane	96.0		74.0-131		08/12/2018 00:49	WG1150715
(S) Dibromofluoromethane	86.2		74.0-131		08/12/2018 14:30	WG1151239
(S) 4-Bromofluorobenzene	98.1		64.0-132		08/12/2018 00:49	WG1150715
(S) 4-Bromofluorobenzene	91.6		64.0-132		08/12/2018 14:30	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.53	1	08/11/2018 01:19	WG1149437
Residual Range Organics (RRO)	ND		11.3	1	08/11/2018 01:19	WG1149437
(S) o-Terphenyl	86.1		18.0-148		08/11/2018 01:19	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Acenaphthene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Acenaphthylene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Benzo(a)anthracene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Benzo(a)pyrene	ND		0.00680	1	08/08/2018 22:31	WG1148863



Collected date/time: 08/02/18 08:20

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Benzo(g,h,i)perylene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Benzo(k)fluoranthene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Chrysene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Dibenz(a,h)anthracene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Fluoranthene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Fluorene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Naphthalene	ND		0.0227	1	08/08/2018 22:31	WG1148863
Phenanthrene	ND		0.00680	1	08/08/2018 22:31	WG1148863
Pyrene	ND		0.00680	1	08/08/2018 22:31	WG1148863
1-Methylnaphthalene	ND		0.0227	1	08/08/2018 22:31	WG1148863
2-Methylnaphthalene	ND		0.0227	1	08/08/2018 22:31	WG1148863
2-Chloronaphthalene	ND		0.0227	1	08/08/2018 22:31	WG1148863
<i>(S)</i> Nitrobenzene-d5	84.5		14.0-149		08/08/2018 22:31	WG1148863
<i>(S)</i> 2-Fluorobiphenyl	94.3		34.0-125		08/08/2018 22:31	WG1148863
<i>(S)</i> p-Terphenyl-d14	92.9		23.0-120		08/08/2018 22:31	WG1148863

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	94.9		1	08/10/2018 13:17	WG1150147

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0211	1	08/07/2018 21:52	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.11	1	08/09/2018 02:42	WG1147985
Barium	73.0		0.527	1	08/09/2018 02:42	WG1147985
Cadmium	ND		0.527	1	08/09/2018 02:42	WG1147985
Chromium	7.92		1.05	1	08/09/2018 02:42	WG1147985
Lead	15.4		0.527	1	08/09/2018 02:42	WG1147985
Selenium	ND		2.11	1	08/09/2018 02:42	WG1147985
Silver	ND		1.05	1	08/09/2018 02:42	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0263	1	08/12/2018 14:50	WG1151239
Acrylonitrile	ND	JO J4	0.0132	1	08/12/2018 01:07	WG1150715
Benzene	ND		0.00105	1	08/12/2018 01:07	WG1150715
Bromobenzene	ND		0.0132	1	08/12/2018 01:07	WG1150715
Bromodichloromethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
Bromoform	ND		0.0263	1	08/12/2018 01:07	WG1150715
Bromomethane	ND	JO	0.0132	1	08/12/2018 01:07	WG1150715
n-Butylbenzene	ND		0.0132	1	08/12/2018 01:07	WG1150715
sec-Butylbenzene	ND		0.0132	1	08/12/2018 01:07	WG1150715
tert-Butylbenzene	ND		0.00527	1	08/12/2018 01:07	WG1150715
Carbon tetrachloride	ND		0.00527	1	08/12/2018 01:07	WG1150715
Chlorobenzene	ND		0.00263	1	08/12/2018 01:07	WG1150715
Chlorodibromomethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
Chloroethane	ND		0.00527	1	08/12/2018 01:07	WG1150715
Chloroform	ND		0.00263	1	08/12/2018 01:07	WG1150715
Chloromethane	ND		0.0132	1	08/12/2018 01:07	WG1150715
2-Chlorotoluene	ND		0.00263	1	08/12/2018 01:07	WG1150715
4-Chlorotoluene	ND		0.00527	1	08/12/2018 01:07	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0263	1	08/12/2018 01:07	WG1150715
1,2-Dibromoethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
Dibromomethane	ND		0.00527	1	08/12/2018 01:07	WG1150715
1,2-Dichlorobenzene	ND		0.00527	1	08/12/2018 01:07	WG1150715
1,3-Dichlorobenzene	ND		0.00527	1	08/12/2018 01:07	WG1150715
1,4-Dichlorobenzene	ND		0.00527	1	08/12/2018 01:07	WG1150715
Dichlorodifluoromethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
1,1-Dichloroethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
1,2-Dichloroethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
1,1-Dichloroethene	ND		0.00263	1	08/12/2018 01:07	WG1150715
cis-1,2-Dichloroethene	ND		0.00263	1	08/12/2018 01:07	WG1150715
trans-1,2-Dichloroethene	ND		0.00527	1	08/12/2018 01:07	WG1150715
1,2-Dichloropropane	ND		0.00527	1	08/12/2018 01:07	WG1150715
1,1-Dichloropropene	ND		0.00263	1	08/12/2018 01:07	WG1150715
1,3-Dichloropropane	ND		0.00527	1	08/12/2018 01:07	WG1150715

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00263	1	08/12/2018 01:07	WG1150715
trans-1,3-Dichloropropene	ND		0.00527	1	08/12/2018 01:07	WG1150715
2,2-Dichloropropane	ND		0.00263	1	08/12/2018 01:07	WG1150715
Di-isopropyl ether	ND		0.00105	1	08/12/2018 01:07	WG1150715
Ethylbenzene	ND		0.00263	1	08/12/2018 01:07	WG1150715
Hexachloro-1,3-butadiene	ND		0.0263	1	08/12/2018 01:07	WG1150715
Isopropylbenzene	ND		0.00263	1	08/12/2018 01:07	WG1150715
p-Isopropyltoluene	ND		0.00527	1	08/12/2018 01:07	WG1150715
2-Butanone (MEK)	ND	J0	0.0263	1	08/12/2018 01:07	WG1150715
Methylene Chloride	ND		0.0263	1	08/12/2018 01:07	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0263	1	08/12/2018 01:07	WG1150715
Methyl tert-butyl ether	ND		0.00105	1	08/12/2018 01:07	WG1150715
Naphthalene	ND		0.0132	1	08/12/2018 01:07	WG1150715
n-Propylbenzene	ND		0.00527	1	08/12/2018 01:07	WG1150715
Styrene	ND		0.0132	1	08/12/2018 01:07	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
Tetrachloroethene	ND		0.00263	1	08/12/2018 01:07	WG1150715
Toluene	ND		0.00527	1	08/12/2018 01:07	WG1150715
1,2,3-Trichlorobenzene	ND	J4	0.00263	1	08/12/2018 01:07	WG1150715
1,2,4-Trichlorobenzene	ND		0.0132	1	08/12/2018 01:07	WG1150715
1,1,1-Trichloroethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
1,1,2-Trichloroethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
Trichloroethene	ND		0.00105	1	08/12/2018 01:07	WG1150715
Trichlorofluoromethane	ND		0.00263	1	08/12/2018 01:07	WG1150715
1,2,3-Trichloropropane	ND		0.0132	1	08/12/2018 01:07	WG1150715
1,2,4-Trimethylbenzene	ND		0.00527	1	08/12/2018 01:07	WG1150715
1,2,3-Trimethylbenzene	ND		0.00527	1	08/12/2018 01:07	WG1150715
Vinyl chloride	ND		0.00263	1	08/12/2018 01:07	WG1150715
1,3,5-Trimethylbenzene	ND		0.00527	1	08/12/2018 01:07	WG1150715
o-Xylene	ND		0.00263	1	08/12/2018 01:07	WG1150715
m&p-Xylene	ND		0.00421	1	08/12/2018 01:07	WG1150715
(S) Toluene-d8	112		80.0-120		08/12/2018 01:07	WG1150715
(S) Toluene-d8	115		80.0-120		08/12/2018 14:50	WG1151239
(S) Dibromofluoromethane	92.9		74.0-131		08/12/2018 01:07	WG1150715
(S) Dibromofluoromethane	86.7		74.0-131		08/12/2018 14:50	WG1151239
(S) 4-Bromofluorobenzene	102		64.0-132		08/12/2018 01:07	WG1150715
(S) 4-Bromofluorobenzene	97.1		64.0-132		08/12/2018 14:50	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		84.3	20	08/11/2018 04:18	WG1149437
Residual Range Organics (RRO)	ND		211	20	08/11/2018 04:18	WG1149437
(S) o-Terphenyl	5.28	J7	18.0-148		08/11/2018 04:18	WG1149437

Sample Narrative:

L1014895-05 WG1149437: Dilution due to sample viscosity.



Collected date/time: 08/02/18 12:45

L1014895

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00875		0.00632	1	08/09/2018 03:06	WG1148863
Acenaphthene	ND		0.00632	1	08/09/2018 03:06	WG1148863
Acenaphthylene	ND		0.00632	1	08/09/2018 03:06	WG1148863
Benzo(a)anthracene	ND		0.00632	1	08/09/2018 03:06	WG1148863
Benzo(a)pyrene	ND		0.00632	1	08/09/2018 03:06	WG1148863
Benzo(b)fluoranthene	0.00780		0.00632	1	08/09/2018 03:06	WG1148863
Benzo(g,h,i)perylene	0.0386		0.00632	1	08/09/2018 03:06	WG1148863
Benzo(k)fluoranthene	ND		0.00632	1	08/09/2018 03:06	WG1148863
Chrysene	ND		0.00632	1	08/09/2018 03:06	WG1148863
Dibenz(a,h)anthracene	ND		0.00632	1	08/09/2018 03:06	WG1148863
Fluoranthene	0.00782		0.00632	1	08/09/2018 03:06	WG1148863
Fluorene	ND		0.00632	1	08/09/2018 03:06	WG1148863
Indeno(1,2,3-cd)pyrene	0.00758		0.00632	1	08/09/2018 03:06	WG1148863
Naphthalene	ND		0.0211	1	08/09/2018 03:06	WG1148863
Phenanthrene	0.00744		0.00632	1	08/09/2018 03:06	WG1148863
Pyrene	0.00699		0.00632	1	08/09/2018 03:06	WG1148863
1-Methylnaphthalene	ND		0.0211	1	08/09/2018 03:06	WG1148863
2-Methylnaphthalene	ND		0.0211	1	08/09/2018 03:06	WG1148863
2-Chloronaphthalene	ND		0.0211	1	08/09/2018 03:06	WG1148863
(S) Nitrobenzene-d5	87.5		14.0-149		08/09/2018 03:06	WG1148863
(S) 2-Fluorobiphenyl	93.8		34.0-125		08/09/2018 03:06	WG1148863
(S) p-Terphenyl-d14	86.0		23.0-120		08/09/2018 03:06	WG1148863

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	88.8		1	08/10/2018 13:17	WG1150147

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0225	1	08/07/2018 21:13	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.25	1	08/09/2018 02:01	WG1147985
Barium	90.4		0.563	1	08/09/2018 02:01	WG1147985
Cadmium	ND		0.563	1	08/09/2018 02:01	WG1147985
Chromium	14.1		1.13	1	08/09/2018 02:01	WG1147985
Lead	3.62		0.563	1	08/09/2018 02:01	WG1147985
Selenium	ND		2.25	1	08/09/2018 02:01	WG1147985
Silver	ND		1.13	1	08/09/2018 02:01	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0282	1	08/12/2018 15:10	WG1151239
Acrylonitrile	ND	JO J4	0.0141	1	08/12/2018 01:26	WG1150715
Benzene	ND		0.00113	1	08/12/2018 01:26	WG1150715
Bromobenzene	ND		0.0141	1	08/12/2018 01:26	WG1150715
Bromodichloromethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
Bromoform	ND		0.0282	1	08/12/2018 01:26	WG1150715
Bromomethane	ND	JO	0.0141	1	08/12/2018 01:26	WG1150715
n-Butylbenzene	ND		0.0141	1	08/12/2018 01:26	WG1150715
sec-Butylbenzene	ND		0.0141	1	08/12/2018 01:26	WG1150715
tert-Butylbenzene	ND		0.00563	1	08/12/2018 01:26	WG1150715
Carbon tetrachloride	ND		0.00563	1	08/12/2018 01:26	WG1150715
Chlorobenzene	ND		0.00282	1	08/12/2018 01:26	WG1150715
Chlorodibromomethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
Chloroethane	ND		0.00563	1	08/12/2018 01:26	WG1150715
Chloroform	ND		0.00282	1	08/12/2018 01:26	WG1150715
Chloromethane	ND		0.0141	1	08/12/2018 01:26	WG1150715
2-Chlorotoluene	ND		0.00282	1	08/12/2018 01:26	WG1150715
4-Chlorotoluene	ND		0.00563	1	08/12/2018 01:26	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0282	1	08/12/2018 01:26	WG1150715
1,2-Dibromoethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
Dibromomethane	ND		0.00563	1	08/12/2018 01:26	WG1150715
1,2-Dichlorobenzene	ND		0.00563	1	08/12/2018 01:26	WG1150715
1,3-Dichlorobenzene	ND		0.00563	1	08/12/2018 01:26	WG1150715
1,4-Dichlorobenzene	ND		0.00563	1	08/12/2018 01:26	WG1150715
Dichlorodifluoromethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
1,1-Dichloroethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
1,2-Dichloroethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
1,1-Dichloroethene	ND		0.00282	1	08/12/2018 01:26	WG1150715
cis-1,2-Dichloroethene	ND		0.00282	1	08/12/2018 01:26	WG1150715
trans-1,2-Dichloroethene	ND		0.00563	1	08/12/2018 01:26	WG1150715
1,2-Dichloropropane	ND		0.00563	1	08/12/2018 01:26	WG1150715
1,1-Dichloropropene	ND		0.00282	1	08/12/2018 01:26	WG1150715
1,3-Dichloropropane	ND		0.00563	1	08/12/2018 01:26	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00282	1	08/12/2018 01:26	WG1150715
trans-1,3-Dichloropropene	ND		0.00563	1	08/12/2018 01:26	WG1150715
2,2-Dichloropropane	ND		0.00282	1	08/12/2018 01:26	WG1150715
Di-isopropyl ether	ND		0.00113	1	08/12/2018 01:26	WG1150715
Ethylbenzene	ND		0.00282	1	08/12/2018 01:26	WG1150715
Hexachloro-1,3-butadiene	ND		0.0282	1	08/12/2018 01:26	WG1150715
Isopropylbenzene	ND		0.00282	1	08/12/2018 01:26	WG1150715
p-Isopropyltoluene	ND		0.00563	1	08/12/2018 01:26	WG1150715
2-Butanone (MEK)	ND	<u>JO</u>	0.0282	1	08/12/2018 01:26	WG1150715
Methylene Chloride	ND		0.0282	1	08/12/2018 01:26	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0282	1	08/12/2018 01:26	WG1150715
Methyl tert-butyl ether	ND		0.00113	1	08/12/2018 01:26	WG1150715
Naphthalene	ND		0.0141	1	08/12/2018 01:26	WG1150715
n-Propylbenzene	ND		0.00563	1	08/12/2018 01:26	WG1150715
Styrene	ND		0.0141	1	08/12/2018 01:26	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
Tetrachloroethene	ND		0.00282	1	08/12/2018 01:26	WG1150715
Toluene	ND		0.00563	1	08/12/2018 01:26	WG1150715
1,2,3-Trichlorobenzene	ND	<u>J4</u>	0.00282	1	08/12/2018 01:26	WG1150715
1,2,4-Trichlorobenzene	ND		0.0141	1	08/12/2018 01:26	WG1150715
1,1,1-Trichloroethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
1,1,2-Trichloroethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
Trichloroethene	ND		0.00113	1	08/12/2018 01:26	WG1150715
Trichlorofluoromethane	ND		0.00282	1	08/12/2018 01:26	WG1150715
1,2,3-Trichloropropane	ND		0.0141	1	08/12/2018 01:26	WG1150715
1,2,4-Trimethylbenzene	ND		0.00563	1	08/12/2018 01:26	WG1150715
1,2,3-Trimethylbenzene	ND		0.00563	1	08/12/2018 01:26	WG1150715
Vinyl chloride	ND		0.00282	1	08/12/2018 01:26	WG1150715
1,3,5-Trimethylbenzene	ND		0.00563	1	08/12/2018 01:26	WG1150715
o-Xylene	ND		0.00282	1	08/12/2018 01:26	WG1150715
m&p-Xylene	ND		0.00451	1	08/12/2018 01:26	WG1150715
(S) Toluene-d8	108		80.0-120		08/12/2018 01:26	WG1150715
(S) Toluene-d8	115		80.0-120		08/12/2018 15:10	WG1151239
(S) Dibromofluoromethane	93.2		74.0-131		08/12/2018 01:26	WG1150715
(S) Dibromofluoromethane	85.5		74.0-131		08/12/2018 15:10	WG1151239
(S) 4-Bromofluorobenzene	97.5		64.0-132		08/12/2018 01:26	WG1150715
(S) 4-Bromofluorobenzene	95.3		64.0-132		08/12/2018 15:10	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.51	1	08/10/2018 23:43	WG1149437
Residual Range Organics (RRO)	ND		11.3	1	08/10/2018 23:43	WG1149437
(S) o-Terphenyl	65.2		18.0-148		08/10/2018 23:43	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Acenaphthene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Acenaphthylene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Benzo(a)anthracene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Benzo(a)pyrene	ND		0.00676	1	08/08/2018 22:53	WG1148863



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Benzo(g,h,i)perylene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Benzo(k)fluoranthene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Chrysene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Dibenz(a,h)anthracene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Fluoranthene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Fluorene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Naphthalene	ND		0.0225	1	08/08/2018 22:53	WG1148863
Phenanthrene	ND		0.00676	1	08/08/2018 22:53	WG1148863
Pyrene	ND		0.00676	1	08/08/2018 22:53	WG1148863
1-Methylnaphthalene	ND		0.0225	1	08/08/2018 22:53	WG1148863
2-Methylnaphthalene	ND		0.0225	1	08/08/2018 22:53	WG1148863
2-Chloronaphthalene	ND		0.0225	1	08/08/2018 22:53	WG1148863
<i>(S)</i> Nitrobenzene-d5	81.7		14.0-149		08/08/2018 22:53	WG1148863
<i>(S)</i> 2-Fluorobiphenyl	85.3		34.0-125		08/08/2018 22:53	WG1148863
<i>(S)</i> p-Terphenyl-d14	78.4		23.0-120		08/08/2018 22:53	WG1148863

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	81.0		1	08/10/2018 13:17	WG1150147

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0247	1	08/07/2018 21:55	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.47	1	08/09/2018 02:44	WG1147985
Barium	86.0		0.617	1	08/09/2018 02:44	WG1147985
Cadmium	ND		0.617	1	08/09/2018 02:44	WG1147985
Chromium	12.1		1.23	1	08/09/2018 02:44	WG1147985
Lead	2.87		0.617	1	08/09/2018 02:44	WG1147985
Selenium	ND		2.47	1	08/09/2018 02:44	WG1147985
Silver	ND		1.23	1	08/09/2018 02:44	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0309	1	08/12/2018 15:30	WG1151239
Acrylonitrile	ND	JO J4	0.0154	1	08/12/2018 01:45	WG1150715
Benzene	ND		0.00123	1	08/12/2018 01:45	WG1150715
Bromobenzene	ND		0.0154	1	08/12/2018 01:45	WG1150715
Bromodichloromethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
Bromoform	ND		0.0309	1	08/12/2018 01:45	WG1150715
Bromomethane	ND	JO	0.0154	1	08/12/2018 01:45	WG1150715
n-Butylbenzene	ND		0.0154	1	08/12/2018 01:45	WG1150715
sec-Butylbenzene	ND		0.0154	1	08/12/2018 01:45	WG1150715
tert-Butylbenzene	ND		0.00617	1	08/12/2018 01:45	WG1150715
Carbon tetrachloride	ND		0.00617	1	08/12/2018 01:45	WG1150715
Chlorobenzene	ND		0.00309	1	08/12/2018 01:45	WG1150715
Chlorodibromomethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
Chloroethane	ND		0.00617	1	08/12/2018 01:45	WG1150715
Chloroform	ND		0.00309	1	08/12/2018 01:45	WG1150715
Chloromethane	ND		0.0154	1	08/12/2018 01:45	WG1150715
2-Chlorotoluene	ND		0.00309	1	08/12/2018 01:45	WG1150715
4-Chlorotoluene	ND		0.00617	1	08/12/2018 01:45	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0309	1	08/12/2018 01:45	WG1150715
1,2-Dibromoethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
Dibromomethane	ND		0.00617	1	08/12/2018 01:45	WG1150715
1,2-Dichlorobenzene	ND		0.00617	1	08/12/2018 01:45	WG1150715
1,3-Dichlorobenzene	ND		0.00617	1	08/12/2018 01:45	WG1150715
1,4-Dichlorobenzene	ND		0.00617	1	08/12/2018 01:45	WG1150715
Dichlorodifluoromethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
1,1-Dichloroethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
1,2-Dichloroethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
1,1-Dichloroethene	ND		0.00309	1	08/12/2018 01:45	WG1150715
cis-1,2-Dichloroethene	ND		0.00309	1	08/12/2018 01:45	WG1150715
trans-1,2-Dichloroethene	ND		0.00617	1	08/12/2018 01:45	WG1150715
1,2-Dichloropropane	ND		0.00617	1	08/12/2018 01:45	WG1150715
1,1-Dichloropropene	ND		0.00309	1	08/12/2018 01:45	WG1150715
1,3-Dichloropropane	ND		0.00617	1	08/12/2018 01:45	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00309	1	08/12/2018 01:45	WG1150715
trans-1,3-Dichloropropene	ND		0.00617	1	08/12/2018 01:45	WG1150715
2,2-Dichloropropane	ND		0.00309	1	08/12/2018 01:45	WG1150715
Di-isopropyl ether	ND		0.00123	1	08/12/2018 01:45	WG1150715
Ethylbenzene	ND		0.00309	1	08/12/2018 01:45	WG1150715
Hexachloro-1,3-butadiene	ND		0.0309	1	08/12/2018 01:45	WG1150715
Isopropylbenzene	ND		0.00309	1	08/12/2018 01:45	WG1150715
p-Isopropyltoluene	ND		0.00617	1	08/12/2018 01:45	WG1150715
2-Butanone (MEK)	ND	<u>JO</u>	0.0309	1	08/12/2018 01:45	WG1150715
Methylene Chloride	ND		0.0309	1	08/12/2018 01:45	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0309	1	08/12/2018 01:45	WG1150715
Methyl tert-butyl ether	ND		0.00123	1	08/12/2018 01:45	WG1150715
Naphthalene	ND		0.0154	1	08/12/2018 01:45	WG1150715
n-Propylbenzene	ND		0.00617	1	08/12/2018 01:45	WG1150715
Styrene	ND		0.0154	1	08/12/2018 01:45	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
Tetrachloroethene	ND		0.00309	1	08/12/2018 01:45	WG1150715
Toluene	ND		0.00617	1	08/12/2018 01:45	WG1150715
1,2,3-Trichlorobenzene	ND	<u>J4</u>	0.00309	1	08/12/2018 01:45	WG1150715
1,2,4-Trichlorobenzene	ND		0.0154	1	08/12/2018 01:45	WG1150715
1,1,1-Trichloroethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
1,1,2-Trichloroethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
Trichloroethene	ND		0.00123	1	08/12/2018 01:45	WG1150715
Trichlorofluoromethane	ND		0.00309	1	08/12/2018 01:45	WG1150715
1,2,3-Trichloropropane	ND		0.0154	1	08/12/2018 01:45	WG1150715
1,2,4-Trimethylbenzene	ND		0.00617	1	08/12/2018 01:45	WG1150715
1,2,3-Trimethylbenzene	ND		0.00617	1	08/12/2018 01:45	WG1150715
Vinyl chloride	ND		0.00309	1	08/12/2018 01:45	WG1150715
1,3,5-Trimethylbenzene	ND		0.00617	1	08/12/2018 01:45	WG1150715
o-Xylene	ND		0.00309	1	08/12/2018 01:45	WG1150715
m&p-Xylene	ND		0.00494	1	08/12/2018 01:45	WG1150715
(S) Toluene-d8	110		80.0-120		08/12/2018 01:45	WG1150715
(S) Toluene-d8	115		80.0-120		08/12/2018 15:30	WG1151239
(S) Dibromofluoromethane	98.8		74.0-131		08/12/2018 01:45	WG1150715
(S) Dibromofluoromethane	87.6		74.0-131		08/12/2018 15:30	WG1151239
(S) 4-Bromofluorobenzene	100		64.0-132		08/12/2018 01:45	WG1150715
(S) 4-Bromofluorobenzene	89.5		64.0-132		08/12/2018 15:30	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.94	1	08/11/2018 01:30	WG1149437
Residual Range Organics (RRO)	ND		12.3	1	08/11/2018 01:30	WG1149437
(S) o-Terphenyl	98.4		18.0-148		08/11/2018 01:30	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Acenaphthene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Acenaphthylene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Benzo(a)anthracene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Benzo(a)pyrene	ND		0.00740	1	08/08/2018 23:56	WG1148863



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Benzo(g,h,i)perylene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Benzo(k)fluoranthene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Chrysene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Dibenz(a,h)anthracene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Fluoranthene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Fluorene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Naphthalene	ND		0.0247	1	08/08/2018 23:56	WG1148863
Phenanthrene	ND		0.00740	1	08/08/2018 23:56	WG1148863
Pyrene	ND		0.00740	1	08/08/2018 23:56	WG1148863
1-Methylnaphthalene	ND		0.0247	1	08/08/2018 23:56	WG1148863
2-Methylnaphthalene	ND		0.0247	1	08/08/2018 23:56	WG1148863
2-Chloronaphthalene	ND		0.0247	1	08/08/2018 23:56	WG1148863
(S) Nitrobenzene-d5	84.2		14.0-149		08/08/2018 23:56	WG1148863
(S) 2-Fluorobiphenyl	88.7		34.0-125		08/08/2018 23:56	WG1148863
(S) p-Terphenyl-d14	84.1		23.0-120		08/08/2018 23:56	WG1148863

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.7		1	08/10/2018 13:17	WG1150147

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0220	1	08/07/2018 21:57	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.20	1	08/09/2018 02:47	WG1147985
Barium	76.3		0.551	1	08/09/2018 02:47	WG1147985
Cadmium	ND		0.551	1	08/09/2018 02:47	WG1147985
Chromium	12.3		1.10	1	08/09/2018 02:47	WG1147985
Lead	3.60		0.551	1	08/09/2018 02:47	WG1147985
Selenium	ND		2.20	1	08/09/2018 02:47	WG1147985
Silver	ND		1.10	1	08/09/2018 02:47	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0314	1.14	08/12/2018 15:50	WG1151239
Acrylonitrile	ND	JO J4	0.0157	1.14	08/12/2018 02:03	WG1150715
Benzene	ND		0.00126	1.14	08/12/2018 02:03	WG1150715
Bromobenzene	ND		0.0157	1.14	08/12/2018 02:03	WG1150715
Bromodichloromethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
Bromoform	ND		0.0314	1.14	08/12/2018 02:03	WG1150715
Bromomethane	ND	JO	0.0157	1.14	08/12/2018 02:03	WG1150715
n-Butylbenzene	ND		0.0157	1.14	08/12/2018 02:03	WG1150715
sec-Butylbenzene	ND		0.0157	1.14	08/12/2018 02:03	WG1150715
tert-Butylbenzene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
Carbon tetrachloride	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
Chlorobenzene	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
Chlorodibromomethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
Chloroethane	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
Chloroform	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
Chloromethane	ND		0.0157	1.14	08/12/2018 02:03	WG1150715
2-Chlorotoluene	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
4-Chlorotoluene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0314	1.14	08/12/2018 02:03	WG1150715
1,2-Dibromoethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
Dibromomethane	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
1,2-Dichlorobenzene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
1,3-Dichlorobenzene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
1,4-Dichlorobenzene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
Dichlorodifluoromethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
1,1-Dichloroethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
1,2-Dichloroethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
1,1-Dichloroethene	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
cis-1,2-Dichloroethene	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
trans-1,2-Dichloroethene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
1,2-Dichloropropane	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
1,1-Dichloropropene	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
1,3-Dichloropropane	ND		0.00628	1.14	08/12/2018 02:03	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
trans-1,3-Dichloropropene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
2,2-Dichloropropane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
Di-isopropyl ether	ND		0.00126	1.14	08/12/2018 02:03	WG1150715
Ethylbenzene	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
Hexachloro-1,3-butadiene	ND		0.0314	1.14	08/12/2018 02:03	WG1150715
Isopropylbenzene	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
p-Isopropyltoluene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
2-Butanone (MEK)	ND	<u>JO</u>	0.0314	1.14	08/12/2018 02:03	WG1150715
Methylene Chloride	ND		0.0314	1.14	08/12/2018 02:03	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0314	1.14	08/12/2018 02:03	WG1150715
Methyl tert-butyl ether	ND		0.00126	1.14	08/12/2018 02:03	WG1150715
Naphthalene	ND		0.0157	1.14	08/12/2018 02:03	WG1150715
n-Propylbenzene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
Styrene	ND		0.0157	1.14	08/12/2018 02:03	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
Tetrachloroethene	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
Toluene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
1,2,3-Trichlorobenzene	ND	<u>J4</u>	0.00314	1.14	08/12/2018 02:03	WG1150715
1,2,4-Trichlorobenzene	ND		0.0157	1.14	08/12/2018 02:03	WG1150715
1,1,1-Trichloroethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
1,1,2-Trichloroethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
Trichloroethene	ND		0.00126	1.14	08/12/2018 02:03	WG1150715
Trichlorofluoromethane	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
1,2,3-Trichloropropane	ND		0.0157	1.14	08/12/2018 02:03	WG1150715
1,2,4-Trimethylbenzene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
1,2,3-Trimethylbenzene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
Vinyl chloride	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
1,3,5-Trimethylbenzene	ND		0.00628	1.14	08/12/2018 02:03	WG1150715
o-Xylene	ND		0.00314	1.14	08/12/2018 02:03	WG1150715
m&p-Xylene	ND		0.00503	1.14	08/12/2018 02:03	WG1150715
(S) Toluene-d8	112		80.0-120		08/12/2018 02:03	WG1150715
(S) Toluene-d8	116		80.0-120		08/12/2018 15:50	WG1151239
(S) Dibromofluoromethane	91.5		74.0-131		08/12/2018 02:03	WG1150715
(S) Dibromofluoromethane	86.2		74.0-131		08/12/2018 15:50	WG1151239
(S) 4-Bromofluorobenzene	106		64.0-132		08/12/2018 02:03	WG1150715
(S) 4-Bromofluorobenzene	91.3		64.0-132		08/12/2018 15:50	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.41	1	08/11/2018 03:42	WG1149437
Residual Range Organics (RRO)	ND		11.0	1	08/11/2018 03:42	WG1149437
(S) o-Terphenyl	130		18.0-148		08/11/2018 03:42	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Acenaphthene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Acenaphthylene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Benzo(a)anthracene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Benzo(a)pyrene	ND		0.00661	1	08/09/2018 00:17	WG1148863



Collected date/time: 08/02/18 10:35

L1014895

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Benzo(g,h,i)perylene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Benzo(k)fluoranthene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Chrysene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Dibenz(a,h)anthracene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Fluoranthene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Fluorene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Naphthalene	ND		0.0220	1	08/09/2018 00:17	WG1148863
Phenanthrene	ND		0.00661	1	08/09/2018 00:17	WG1148863
Pyrene	ND		0.00661	1	08/09/2018 00:17	WG1148863
1-Methylnaphthalene	ND		0.0220	1	08/09/2018 00:17	WG1148863
2-Methylnaphthalene	ND		0.0220	1	08/09/2018 00:17	WG1148863
2-Chloronaphthalene	ND		0.0220	1	08/09/2018 00:17	WG1148863
(S) Nitrobenzene-d5	83.7		14.0-149		08/09/2018 00:17	WG1148863
(S) 2-Fluorobiphenyl	89.0		34.0-125		08/09/2018 00:17	WG1148863
(S) p-Terphenyl-d14	80.2		23.0-120		08/09/2018 00:17	WG1148863

- 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	80.0		1	08/10/2018 13:17	WG1150147

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0250	1	08/07/2018 21:59	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.50	1	08/09/2018 02:55	WG1147985
Barium	81.9		0.625	1	08/09/2018 02:55	WG1147985
Cadmium	ND		0.625	1	08/09/2018 02:55	WG1147985
Chromium	12.1		1.25	1	08/09/2018 02:55	WG1147985
Lead	3.35		0.625	1	08/09/2018 02:55	WG1147985
Selenium	ND		2.50	1	08/09/2018 02:55	WG1147985
Silver	ND		1.25	1	08/09/2018 02:55	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0313	1	08/12/2018 16:10	WG1151239
Acrylonitrile	ND	JO J4	0.0156	1	08/12/2018 02:22	WG1150715
Benzene	ND		0.00125	1	08/12/2018 02:22	WG1150715
Bromobenzene	ND		0.0156	1	08/12/2018 02:22	WG1150715
Bromodichloromethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
Bromoform	ND		0.0313	1	08/12/2018 02:22	WG1150715
Bromomethane	ND	JO	0.0156	1	08/12/2018 02:22	WG1150715
n-Butylbenzene	ND		0.0156	1	08/12/2018 02:22	WG1150715
sec-Butylbenzene	ND		0.0156	1	08/12/2018 02:22	WG1150715
tert-Butylbenzene	ND		0.00625	1	08/12/2018 02:22	WG1150715
Carbon tetrachloride	ND		0.00625	1	08/12/2018 02:22	WG1150715
Chlorobenzene	ND		0.00313	1	08/12/2018 02:22	WG1150715
Chlorodibromomethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
Chloroethane	ND		0.00625	1	08/12/2018 02:22	WG1150715
Chloroform	ND		0.00313	1	08/12/2018 02:22	WG1150715
Chloromethane	ND		0.0156	1	08/12/2018 02:22	WG1150715
2-Chlorotoluene	ND		0.00313	1	08/12/2018 02:22	WG1150715
4-Chlorotoluene	ND		0.00625	1	08/12/2018 02:22	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0313	1	08/12/2018 02:22	WG1150715
1,2-Dibromoethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
Dibromomethane	ND		0.00625	1	08/12/2018 02:22	WG1150715
1,2-Dichlorobenzene	ND		0.00625	1	08/12/2018 02:22	WG1150715
1,3-Dichlorobenzene	ND		0.00625	1	08/12/2018 02:22	WG1150715
1,4-Dichlorobenzene	ND		0.00625	1	08/12/2018 02:22	WG1150715
Dichlorodifluoromethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
1,1-Dichloroethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
1,2-Dichloroethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
1,1-Dichloroethene	ND		0.00313	1	08/12/2018 02:22	WG1150715
cis-1,2-Dichloroethene	ND		0.00313	1	08/12/2018 02:22	WG1150715
trans-1,2-Dichloroethene	ND		0.00625	1	08/12/2018 02:22	WG1150715
1,2-Dichloropropane	ND		0.00625	1	08/12/2018 02:22	WG1150715
1,1-Dichloropropene	ND		0.00313	1	08/12/2018 02:22	WG1150715
1,3-Dichloropropane	ND		0.00625	1	08/12/2018 02:22	WG1150715

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00313	1	08/12/2018 02:22	WG1150715
trans-1,3-Dichloropropene	ND		0.00625	1	08/12/2018 02:22	WG1150715
2,2-Dichloropropane	ND		0.00313	1	08/12/2018 02:22	WG1150715
Di-isopropyl ether	ND		0.00125	1	08/12/2018 02:22	WG1150715
Ethylbenzene	ND		0.00313	1	08/12/2018 02:22	WG1150715
Hexachloro-1,3-butadiene	ND		0.0313	1	08/12/2018 02:22	WG1150715
Isopropylbenzene	ND		0.00313	1	08/12/2018 02:22	WG1150715
p-Isopropyltoluene	ND		0.00625	1	08/12/2018 02:22	WG1150715
2-Butanone (MEK)	ND	J0	0.0313	1	08/12/2018 02:22	WG1150715
Methylene Chloride	ND		0.0313	1	08/12/2018 02:22	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0313	1	08/12/2018 02:22	WG1150715
Methyl tert-butyl ether	ND		0.00125	1	08/12/2018 02:22	WG1150715
Naphthalene	ND		0.0156	1	08/12/2018 02:22	WG1150715
n-Propylbenzene	ND		0.00625	1	08/12/2018 02:22	WG1150715
Styrene	ND		0.0156	1	08/12/2018 02:22	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
Tetrachloroethene	ND		0.00313	1	08/12/2018 02:22	WG1150715
Toluene	ND		0.00625	1	08/12/2018 02:22	WG1150715
1,2,3-Trichlorobenzene	ND	J4	0.00313	1	08/12/2018 02:22	WG1150715
1,2,4-Trichlorobenzene	ND		0.0156	1	08/12/2018 02:22	WG1150715
1,1,1-Trichloroethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
1,1,2-Trichloroethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
Trichloroethene	ND		0.00125	1	08/12/2018 02:22	WG1150715
Trichlorofluoromethane	ND		0.00313	1	08/12/2018 02:22	WG1150715
1,2,3-Trichloropropane	ND		0.0156	1	08/12/2018 02:22	WG1150715
1,2,4-Trimethylbenzene	ND		0.00625	1	08/12/2018 02:22	WG1150715
1,2,3-Trimethylbenzene	ND		0.00625	1	08/12/2018 02:22	WG1150715
Vinyl chloride	ND		0.00313	1	08/12/2018 02:22	WG1150715
1,3,5-Trimethylbenzene	ND		0.00625	1	08/12/2018 02:22	WG1150715
o-Xylene	ND		0.00313	1	08/12/2018 02:22	WG1150715
m&p-Xylene	ND		0.00500	1	08/12/2018 02:22	WG1150715
(S) Toluene-d8	111		80.0-120		08/12/2018 02:22	WG1150715
(S) Toluene-d8	116		80.0-120		08/12/2018 16:10	WG1151239
(S) Dibromofluoromethane	94.6		74.0-131		08/12/2018 02:22	WG1150715
(S) Dibromofluoromethane	86.9		74.0-131		08/12/2018 16:10	WG1151239
(S) 4-Bromofluorobenzene	99.2		64.0-132		08/12/2018 02:22	WG1150715
(S) 4-Bromofluorobenzene	90.0		64.0-132		08/12/2018 16:10	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.00	1	08/11/2018 01:42	WG1149437
Residual Range Organics (RRO)	ND		12.5	1	08/11/2018 01:42	WG1149437
(S) o-Terphenyl	72.2		18.0-148		08/11/2018 01:42	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Acenaphthene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Acenaphthylene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Benzo(a)anthracene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Benzo(a)pyrene	ND		0.00750	1	08/09/2018 00:38	WG1148863



Collected date/time: 08/02/18 15:30

L1014895

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Benzo(g,h,i)perylene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Benzo(k)fluoranthene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Chrysene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Dibenz(a,h)anthracene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Fluoranthene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Fluorene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Naphthalene	ND		0.0250	1	08/09/2018 00:38	WG1148863
Phenanthrene	ND		0.00750	1	08/09/2018 00:38	WG1148863
Pyrene	ND		0.00750	1	08/09/2018 00:38	WG1148863
1-Methylnaphthalene	ND		0.0250	1	08/09/2018 00:38	WG1148863
2-Methylnaphthalene	ND		0.0250	1	08/09/2018 00:38	WG1148863
2-Chloronaphthalene	ND		0.0250	1	08/09/2018 00:38	WG1148863
<i>(S)</i> Nitrobenzene-d5	71.6		14.0-149		08/09/2018 00:38	WG1148863
<i>(S)</i> 2-Fluorobiphenyl	80.8		34.0-125		08/09/2018 00:38	WG1148863
<i>(S)</i> p-Terphenyl-d14	73.3		23.0-120		08/09/2018 00:38	WG1148863

- 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	93.9		1	08/10/2018 13:17	WG1150147

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0388		0.0213	1	08/07/2018 22:01	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.13	1	08/09/2018 02:57	WG1147985
Barium	80.0		0.532	1	08/09/2018 02:57	WG1147985
Cadmium	ND		0.532	1	08/09/2018 02:57	WG1147985
Chromium	12.4		1.06	1	08/09/2018 02:57	WG1147985
Lead	241		0.532	1	08/09/2018 02:57	WG1147985
Selenium	ND		2.13	1	08/09/2018 02:57	WG1147985
Silver	ND		1.06	1	08/09/2018 02:57	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0298	1.12	08/12/2018 16:29	WG1151239
Acrylonitrile	ND	JO J4	0.0149	1.12	08/12/2018 02:40	WG1150715
Benzene	0.00301		0.00119	1.12	08/12/2018 02:40	WG1150715
Bromobenzene	ND		0.0149	1.12	08/12/2018 02:40	WG1150715
Bromodichloromethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
Bromoform	ND		0.0298	1.12	08/12/2018 02:40	WG1150715
Bromomethane	ND	JO	0.0149	1.12	08/12/2018 02:40	WG1150715
n-Butylbenzene	ND		0.0149	1.12	08/12/2018 02:40	WG1150715
sec-Butylbenzene	ND		0.0149	1.12	08/12/2018 02:40	WG1150715
tert-Butylbenzene	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
Carbon tetrachloride	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
Chlorobenzene	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
Chlorodibromomethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
Chloroethane	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
Chloroform	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
Chloromethane	ND		0.0149	1.12	08/12/2018 02:40	WG1150715
2-Chlorotoluene	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
4-Chlorotoluene	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0298	1.12	08/12/2018 02:40	WG1150715
1,2-Dibromoethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
Dibromomethane	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
1,2-Dichlorobenzene	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
1,3-Dichlorobenzene	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
1,4-Dichlorobenzene	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
Dichlorodifluoromethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
1,1-Dichloroethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
1,2-Dichloroethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
1,1-Dichloroethene	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
cis-1,2-Dichloroethene	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
trans-1,2-Dichloroethene	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
1,2-Dichloropropane	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
1,1-Dichloropropene	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
1,3-Dichloropropane	ND		0.00596	1.12	08/12/2018 02:40	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
trans-1,3-Dichloropropene	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
2,2-Dichloropropane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
Di-isopropyl ether	ND		0.00119	1.12	08/12/2018 02:40	WG1150715
Ethylbenzene	0.00336		0.00298	1.12	08/12/2018 02:40	WG1150715
Hexachloro-1,3-butadiene	ND		0.0298	1.12	08/12/2018 02:40	WG1150715
Isopropylbenzene	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
p-Isopropyltoluene	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
2-Butanone (MEK)	ND	J0	0.0298	1.12	08/12/2018 02:40	WG1150715
Methylene Chloride	ND		0.0298	1.12	08/12/2018 02:40	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0298	1.12	08/12/2018 02:40	WG1150715
Methyl tert-butyl ether	ND		0.00119	1.12	08/12/2018 02:40	WG1150715
Naphthalene	0.0183		0.0149	1.12	08/12/2018 02:40	WG1150715
n-Propylbenzene	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
Styrene	ND		0.0149	1.12	08/12/2018 02:40	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
Tetrachloroethene	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
Toluene	0.0401		0.00596	1.12	08/12/2018 02:40	WG1150715
1,2,3-Trichlorobenzene	ND	J4	0.00298	1.12	08/12/2018 02:40	WG1150715
1,2,4-Trichlorobenzene	ND		0.0149	1.12	08/12/2018 02:40	WG1150715
1,1,1-Trichloroethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
1,1,2-Trichloroethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
Trichloroethene	ND		0.00119	1.12	08/12/2018 02:40	WG1150715
Trichlorofluoromethane	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
1,2,3-Trichloropropane	ND		0.0149	1.12	08/12/2018 02:40	WG1150715
1,2,4-Trimethylbenzene	0.0141		0.00596	1.12	08/12/2018 02:40	WG1150715
1,2,3-Trimethylbenzene	ND		0.00596	1.12	08/12/2018 02:40	WG1150715
Vinyl chloride	ND		0.00298	1.12	08/12/2018 02:40	WG1150715
1,3,5-Trimethylbenzene	0.00961		0.00596	1.12	08/12/2018 02:40	WG1150715
o-Xylene	0.0146		0.00298	1.12	08/12/2018 02:40	WG1150715
m&p-Xylene	0.0593		0.00477	1.12	08/12/2018 02:40	WG1150715
(S) Toluene-d8	113		80.0-120		08/12/2018 02:40	WG1150715
(S) Toluene-d8	115		80.0-120		08/12/2018 16:29	WG1151239
(S) Dibromofluoromethane	93.4		74.0-131		08/12/2018 02:40	WG1150715
(S) Dibromofluoromethane	86.8		74.0-131		08/12/2018 16:29	WG1151239
(S) 4-Bromofluorobenzene	103		64.0-132		08/12/2018 02:40	WG1150715
(S) 4-Bromofluorobenzene	89.9		64.0-132		08/12/2018 16:29	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		85.2	20	08/11/2018 04:30	WG1149437
Residual Range Organics (RRO)	ND		213	20	08/11/2018 04:30	WG1149437
(S) o-Terphenyl	6.58	J7	18.0-148		08/11/2018 04:30	WG1149437

Sample Narrative:

L1014895-10 WG1149437: Dilution due to sample viscosity.



Collected date/time: 08/02/18 11:20

L1014895

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0437		0.0128	2	08/09/2018 03:27	WG1148863
Acenaphthene	ND		0.0128	2	08/09/2018 03:27	WG1148863
Acenaphthylene	ND		0.0128	2	08/09/2018 03:27	WG1148863
Benzo(a)anthracene	0.148		0.0128	2	08/09/2018 03:27	WG1148863
Benzo(a)pyrene	0.0675		0.0128	2	08/09/2018 03:27	WG1148863
Benzo(b)fluoranthene	0.147		0.0128	2	08/09/2018 03:27	WG1148863
Benzo(g,h,i)perylene	0.0497		0.0128	2	08/09/2018 03:27	WG1148863
Benzo(k)fluoranthene	0.0413		0.0128	2	08/09/2018 03:27	WG1148863
Chrysene	0.175		0.0128	2	08/09/2018 03:27	WG1148863
Dibenz(a,h)anthracene	0.0162		0.0128	2	08/09/2018 03:27	WG1148863
Fluoranthene	0.408		0.0128	2	08/09/2018 03:27	WG1148863
Fluorene	ND		0.0128	2	08/09/2018 03:27	WG1148863
Indeno(1,2,3-cd)pyrene	0.0377		0.0128	2	08/09/2018 03:27	WG1148863
Naphthalene	ND		0.0426	2	08/09/2018 03:27	WG1148863
Phenanthrene	0.169		0.0128	2	08/09/2018 03:27	WG1148863
Pyrene	0.346		0.0128	2	08/09/2018 03:27	WG1148863
1-Methylnaphthalene	0.0492		0.0426	2	08/09/2018 03:27	WG1148863
2-Methylnaphthalene	0.0885		0.0426	2	08/09/2018 03:27	WG1148863
2-Chloronaphthalene	ND		0.0426	2	08/09/2018 03:27	WG1148863
(S) Nitrobenzene-d5	82.6		14.0-149		08/09/2018 03:27	WG1148863
(S) 2-Fluorobiphenyl	83.0		34.0-125		08/09/2018 03:27	WG1148863
(S) p-Terphenyl-d14	72.0		23.0-120		08/09/2018 03:27	WG1148863

- 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
Total Solids	95.9		1	08/10/2018 13:17	WG1150147

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0209	1	08/07/2018 22:03	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.09	1	08/09/2018 03:00	WG1147985
Barium	75.4		0.522	1	08/09/2018 03:00	WG1147985
Cadmium	ND		0.522	1	08/09/2018 03:00	WG1147985
Chromium	11.9		1.04	1	08/09/2018 03:00	WG1147985
Lead	3.45		0.522	1	08/09/2018 03:00	WG1147985
Selenium	ND		2.09	1	08/09/2018 03:00	WG1147985
Silver	ND		1.04	1	08/09/2018 03:00	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0344	1.32	08/12/2018 16:48	WG1151239
Acrylonitrile	ND	JO J4	0.0172	1.32	08/12/2018 02:59	WG1150715
Benzene	ND		0.00138	1.32	08/12/2018 02:59	WG1150715
Bromobenzene	ND		0.0172	1.32	08/12/2018 02:59	WG1150715
Bromodichloromethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
Bromoform	ND		0.0344	1.32	08/12/2018 02:59	WG1150715
Bromomethane	ND	JO	0.0172	1.32	08/12/2018 02:59	WG1150715
n-Butylbenzene	ND		0.0172	1.32	08/12/2018 02:59	WG1150715
sec-Butylbenzene	ND		0.0172	1.32	08/12/2018 02:59	WG1150715
tert-Butylbenzene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
Carbon tetrachloride	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
Chlorobenzene	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
Chlorodibromomethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
Chloroethane	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
Chloroform	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
Chloromethane	ND		0.0172	1.32	08/12/2018 02:59	WG1150715
2-Chlorotoluene	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
4-Chlorotoluene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0344	1.32	08/12/2018 02:59	WG1150715
1,2-Dibromoethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
Dibromomethane	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
1,2-Dichlorobenzene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
1,3-Dichlorobenzene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
1,4-Dichlorobenzene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
Dichlorodifluoromethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
1,1-Dichloroethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
1,2-Dichloroethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
1,1-Dichloroethene	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
cis-1,2-Dichloroethene	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
trans-1,2-Dichloroethene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
1,2-Dichloropropane	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
1,1-Dichloropropene	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
1,3-Dichloropropane	ND		0.00689	1.32	08/12/2018 02:59	WG1150715

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
trans-1,3-Dichloropropene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
2,2-Dichloropropane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
Di-isopropyl ether	ND		0.00138	1.32	08/12/2018 02:59	WG1150715
Ethylbenzene	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
Hexachloro-1,3-butadiene	ND		0.0344	1.32	08/12/2018 02:59	WG1150715
Isopropylbenzene	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
p-Isopropyltoluene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
2-Butanone (MEK)	ND	<u>JO</u>	0.0344	1.32	08/12/2018 02:59	WG1150715
Methylene Chloride	ND		0.0344	1.32	08/12/2018 02:59	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0344	1.32	08/12/2018 02:59	WG1150715
Methyl tert-butyl ether	ND		0.00138	1.32	08/12/2018 02:59	WG1150715
Naphthalene	ND		0.0172	1.32	08/12/2018 02:59	WG1150715
n-Propylbenzene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
Styrene	ND		0.0172	1.32	08/12/2018 02:59	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
Tetrachloroethene	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
Toluene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
1,2,3-Trichlorobenzene	ND	<u>J4</u>	0.00344	1.32	08/12/2018 02:59	WG1150715
1,2,4-Trichlorobenzene	ND		0.0172	1.32	08/12/2018 02:59	WG1150715
1,1,1-Trichloroethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
1,1,2-Trichloroethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
Trichloroethene	ND		0.00138	1.32	08/12/2018 02:59	WG1150715
Trichlorofluoromethane	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
1,2,3-Trichloropropane	ND		0.0172	1.32	08/12/2018 02:59	WG1150715
1,2,4-Trimethylbenzene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
1,2,3-Trimethylbenzene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
Vinyl chloride	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
1,3,5-Trimethylbenzene	ND		0.00689	1.32	08/12/2018 02:59	WG1150715
o-Xylene	ND		0.00344	1.32	08/12/2018 02:59	WG1150715
m&p-Xylene	ND		0.00551	1.32	08/12/2018 02:59	WG1150715
(S) Toluene-d8	112		80.0-120		08/12/2018 02:59	WG1150715
(S) Toluene-d8	115		80.0-120		08/12/2018 16:48	WG1151239
(S) Dibromofluoromethane	91.5		74.0-131		08/12/2018 02:59	WG1150715
(S) Dibromofluoromethane	87.0		74.0-131		08/12/2018 16:48	WG1151239
(S) 4-Bromofluorobenzene	102		64.0-132		08/12/2018 02:59	WG1150715
(S) 4-Bromofluorobenzene	92.4		64.0-132		08/12/2018 16:48	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.17	1	08/11/2018 03:54	WG1149437
Residual Range Organics (RRO)	ND		10.4	1	08/11/2018 03:54	WG1149437
(S) o-Terphenyl	87.8		18.0-148		08/11/2018 03:54	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Acenaphthene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Acenaphthylene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Benzo(a)anthracene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Benzo(a)pyrene	ND		0.00626	1	08/09/2018 00:59	WG1148863



Collected date/time: 08/02/18 11:35

L1014895

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Benzo(g,h,i)perylene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Benzo(k)fluoranthene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Chrysene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Dibenz(a,h)anthracene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Fluoranthene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Fluorene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Naphthalene	ND		0.0209	1	08/09/2018 00:59	WG1148863
Phenanthrene	ND		0.00626	1	08/09/2018 00:59	WG1148863
Pyrene	ND		0.00626	1	08/09/2018 00:59	WG1148863
1-Methylnaphthalene	ND		0.0209	1	08/09/2018 00:59	WG1148863
2-Methylnaphthalene	ND		0.0209	1	08/09/2018 00:59	WG1148863
2-Chloronaphthalene	ND		0.0209	1	08/09/2018 00:59	WG1148863
<i>(S)</i> Nitrobenzene-d5	86.4		14.0-149		08/09/2018 00:59	WG1148863
<i>(S)</i> 2-Fluorobiphenyl	99.6		34.0-125		08/09/2018 00:59	WG1148863
<i>(S)</i> p-Terphenyl-d14	92.3		23.0-120		08/09/2018 00:59	WG1148863

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/08/2018 13:16	WG1149289
Acrolein	ND		50.0	1	08/08/2018 13:16	WG1149289
Acrylonitrile	ND		10.0	1	08/08/2018 13:16	WG1149289
Benzene	ND		1.00	1	08/08/2018 13:16	WG1149289
Bromobenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
Bromodichloromethane	ND		1.00	1	08/08/2018 13:16	WG1149289
Bromoform	ND		1.00	1	08/08/2018 13:16	WG1149289
Bromomethane	ND		5.00	1	08/08/2018 13:16	WG1149289
n-Butylbenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
sec-Butylbenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
tert-Butylbenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
Carbon tetrachloride	ND		1.00	1	08/08/2018 13:16	WG1149289
Chlorobenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
Chlorodibromomethane	ND		1.00	1	08/08/2018 13:16	WG1149289
Chloroethane	ND		5.00	1	08/08/2018 13:16	WG1149289
Chloroform	ND		5.00	1	08/08/2018 13:16	WG1149289
Chloromethane	ND		2.50	1	08/08/2018 13:16	WG1149289
2-Chlorotoluene	ND		1.00	1	08/08/2018 13:16	WG1149289
4-Chlorotoluene	ND		1.00	1	08/08/2018 13:16	WG1149289
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/08/2018 13:16	WG1149289
1,2-Dibromoethane	ND		1.00	1	08/08/2018 13:16	WG1149289
Dibromomethane	ND		1.00	1	08/08/2018 13:16	WG1149289
1,2-Dichlorobenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
1,3-Dichlorobenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
1,4-Dichlorobenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
Dichlorodifluoromethane	ND		5.00	1	08/08/2018 13:16	WG1149289
1,1-Dichloroethane	ND		1.00	1	08/08/2018 13:16	WG1149289
1,2-Dichloroethane	ND		1.00	1	08/08/2018 13:16	WG1149289
1,1-Dichloroethene	ND		1.00	1	08/08/2018 13:16	WG1149289
cis-1,2-Dichloroethene	ND		1.00	1	08/08/2018 13:16	WG1149289
trans-1,2-Dichloroethene	ND		1.00	1	08/08/2018 13:16	WG1149289
1,2-Dichloropropane	ND		1.00	1	08/08/2018 13:16	WG1149289
1,1-Dichloropropene	ND		1.00	1	08/08/2018 13:16	WG1149289
1,3-Dichloropropane	ND		1.00	1	08/08/2018 13:16	WG1149289
cis-1,3-Dichloropropene	ND		1.00	1	08/08/2018 13:16	WG1149289
trans-1,3-Dichloropropene	ND		1.00	1	08/08/2018 13:16	WG1149289
2,2-Dichloropropane	ND		1.00	1	08/08/2018 13:16	WG1149289
Di-isopropyl ether	ND		1.00	1	08/08/2018 13:16	WG1149289
Ethylbenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
Hexachloro-1,3-butadiene	ND		1.00	1	08/08/2018 13:16	WG1149289
Isopropylbenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
p-Isopropyltoluene	ND		1.00	1	08/08/2018 13:16	WG1149289
2-Butanone (MEK)	ND		10.0	1	08/08/2018 13:16	WG1149289
Methylene Chloride	ND		5.00	1	08/08/2018 13:16	WG1149289
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/08/2018 13:16	WG1149289
Methyl tert-butyl ether	ND		1.00	1	08/08/2018 13:16	WG1149289
Naphthalene	ND		5.00	1	08/08/2018 13:16	WG1149289
n-Propylbenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
Styrene	ND		1.00	1	08/08/2018 13:16	WG1149289
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/08/2018 13:16	WG1149289
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/08/2018 13:16	WG1149289
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/08/2018 13:16	WG1149289
Tetrachloroethene	ND		1.00	1	08/08/2018 13:16	WG1149289
Toluene	ND		1.00	1	08/08/2018 13:16	WG1149289
1,2,3-Trichlorobenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
1,2,4-Trichlorobenzene	ND		1.00	1	08/08/2018 13:16	WG1149289

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/08/2018 13:16	WG1149289
1,1,2-Trichloroethane	ND		1.00	1	08/08/2018 13:16	WG1149289
Trichloroethene	ND		1.00	1	08/08/2018 13:16	WG1149289
Trichlorofluoromethane	ND		5.00	1	08/08/2018 13:16	WG1149289
1,2,3-Trichloropropane	ND		2.50	1	08/08/2018 13:16	WG1149289
1,2,4-Trimethylbenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
1,2,3-Trimethylbenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
1,3,5-Trimethylbenzene	ND		1.00	1	08/08/2018 13:16	WG1149289
Vinyl chloride	ND		1.00	1	08/08/2018 13:16	WG1149289
o-Xylene	ND		1.00	1	08/08/2018 13:16	WG1149289
m&p-Xylene	ND		2.00	1	08/08/2018 13:16	WG1149289
(S) Toluene-d8	101		80.0-120		08/08/2018 13:16	WG1149289
(S) Dibromofluoromethane	102		76.0-123		08/08/2018 13:16	WG1149289
(S) 4-Bromofluorobenzene	98.9		80.0-120		08/08/2018 13:16	WG1149289

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/08/2018 13:36	WG1149289
Acrolein	ND		50.0	1	08/08/2018 13:36	WG1149289
Acrylonitrile	ND		10.0	1	08/08/2018 13:36	WG1149289
Benzene	ND		1.00	1	08/08/2018 13:36	WG1149289
Bromobenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
Bromodichloromethane	ND		1.00	1	08/08/2018 13:36	WG1149289
Bromoform	ND		1.00	1	08/08/2018 13:36	WG1149289
Bromomethane	ND		5.00	1	08/08/2018 13:36	WG1149289
n-Butylbenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
sec-Butylbenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
tert-Butylbenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
Carbon tetrachloride	ND		1.00	1	08/08/2018 13:36	WG1149289
Chlorobenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
Chlorodibromomethane	ND		1.00	1	08/08/2018 13:36	WG1149289
Chloroethane	ND		5.00	1	08/08/2018 13:36	WG1149289
Chloroform	ND		5.00	1	08/08/2018 13:36	WG1149289
Chloromethane	ND		2.50	1	08/08/2018 13:36	WG1149289
2-Chlorotoluene	ND		1.00	1	08/08/2018 13:36	WG1149289
4-Chlorotoluene	ND		1.00	1	08/08/2018 13:36	WG1149289
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/08/2018 13:36	WG1149289
1,2-Dibromoethane	ND		1.00	1	08/08/2018 13:36	WG1149289
Dibromomethane	ND		1.00	1	08/08/2018 13:36	WG1149289
1,2-Dichlorobenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
1,3-Dichlorobenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
1,4-Dichlorobenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
Dichlorodifluoromethane	ND		5.00	1	08/08/2018 13:36	WG1149289
1,1-Dichloroethane	ND		1.00	1	08/08/2018 13:36	WG1149289
1,2-Dichloroethane	ND		1.00	1	08/08/2018 13:36	WG1149289
1,1-Dichloroethene	ND		1.00	1	08/08/2018 13:36	WG1149289
cis-1,2-Dichloroethene	ND		1.00	1	08/08/2018 13:36	WG1149289
trans-1,2-Dichloroethene	ND		1.00	1	08/08/2018 13:36	WG1149289
1,2-Dichloropropane	ND		1.00	1	08/08/2018 13:36	WG1149289
1,1-Dichloropropene	ND		1.00	1	08/08/2018 13:36	WG1149289
1,3-Dichloropropane	ND		1.00	1	08/08/2018 13:36	WG1149289
cis-1,3-Dichloropropene	ND		1.00	1	08/08/2018 13:36	WG1149289
trans-1,3-Dichloropropene	ND		1.00	1	08/08/2018 13:36	WG1149289
2,2-Dichloropropane	ND		1.00	1	08/08/2018 13:36	WG1149289
Di-isopropyl ether	ND		1.00	1	08/08/2018 13:36	WG1149289
Ethylbenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
Hexachloro-1,3-butadiene	ND		1.00	1	08/08/2018 13:36	WG1149289
Isopropylbenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
p-Isopropyltoluene	ND		1.00	1	08/08/2018 13:36	WG1149289
2-Butanone (MEK)	ND		10.0	1	08/08/2018 13:36	WG1149289
Methylene Chloride	ND		5.00	1	08/08/2018 13:36	WG1149289
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/08/2018 13:36	WG1149289
Methyl tert-butyl ether	ND		1.00	1	08/08/2018 13:36	WG1149289
Naphthalene	ND		5.00	1	08/08/2018 13:36	WG1149289
n-Propylbenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
Styrene	ND		1.00	1	08/08/2018 13:36	WG1149289
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/08/2018 13:36	WG1149289
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/08/2018 13:36	WG1149289
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/08/2018 13:36	WG1149289
Tetrachloroethene	ND		1.00	1	08/08/2018 13:36	WG1149289
Toluene	ND		1.00	1	08/08/2018 13:36	WG1149289
1,2,3-Trichlorobenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
1,2,4-Trichlorobenzene	ND		1.00	1	08/08/2018 13:36	WG1149289

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/08/2018 13:36	WG1149289
1,1,2-Trichloroethane	ND		1.00	1	08/08/2018 13:36	WG1149289
Trichloroethene	ND		1.00	1	08/08/2018 13:36	WG1149289
Trichlorofluoromethane	ND		5.00	1	08/08/2018 13:36	WG1149289
1,2,3-Trichloropropane	ND		2.50	1	08/08/2018 13:36	WG1149289
1,2,4-Trimethylbenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
1,2,3-Trimethylbenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
1,3,5-Trimethylbenzene	ND		1.00	1	08/08/2018 13:36	WG1149289
Vinyl chloride	ND		1.00	1	08/08/2018 13:36	WG1149289
o-Xylene	ND		1.00	1	08/08/2018 13:36	WG1149289
m&p-Xylene	ND		2.00	1	08/08/2018 13:36	WG1149289
(S) Toluene-d8	103		80.0-120		08/08/2018 13:36	WG1149289
(S) Dibromofluoromethane	104		76.0-123		08/08/2018 13:36	WG1149289
(S) 4-Bromofluorobenzene	96.5		80.0-120		08/08/2018 13:36	WG1149289

- 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	86.1		1	08/10/2018 13:17	WG1150147

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0232	1	08/07/2018 22:06	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.32	1	08/09/2018 03:02	WG1147985
Barium	84.2		0.581	1	08/09/2018 03:02	WG1147985
Cadmium	ND		0.581	1	08/09/2018 03:02	WG1147985
Chromium	13.1		1.16	1	08/09/2018 03:02	WG1147985
Lead	3.86		0.581	1	08/09/2018 03:02	WG1147985
Selenium	ND		2.32	1	08/09/2018 03:02	WG1147985
Silver	ND		1.16	1	08/09/2018 03:02	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0290	1	08/12/2018 17:08	WG1151239
Acrylonitrile	ND	JO J4	0.0145	1	08/12/2018 03:18	WG1150715
Benzene	ND		0.00116	1	08/12/2018 03:18	WG1150715
Bromobenzene	ND		0.0145	1	08/12/2018 03:18	WG1150715
Bromodichloromethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
Bromoform	ND		0.0290	1	08/12/2018 03:18	WG1150715
Bromomethane	ND	JO	0.0145	1	08/12/2018 03:18	WG1150715
n-Butylbenzene	ND		0.0145	1	08/12/2018 03:18	WG1150715
sec-Butylbenzene	ND		0.0145	1	08/12/2018 03:18	WG1150715
tert-Butylbenzene	ND		0.00581	1	08/12/2018 03:18	WG1150715
Carbon tetrachloride	ND		0.00581	1	08/12/2018 03:18	WG1150715
Chlorobenzene	ND		0.00290	1	08/12/2018 03:18	WG1150715
Chlorodibromomethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
Chloroethane	ND		0.00581	1	08/12/2018 03:18	WG1150715
Chloroform	ND		0.00290	1	08/12/2018 03:18	WG1150715
Chloromethane	ND		0.0145	1	08/12/2018 03:18	WG1150715
2-Chlorotoluene	ND		0.00290	1	08/12/2018 03:18	WG1150715
4-Chlorotoluene	ND		0.00581	1	08/12/2018 03:18	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0290	1	08/12/2018 03:18	WG1150715
1,2-Dibromoethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
Dibromomethane	ND		0.00581	1	08/12/2018 03:18	WG1150715
1,2-Dichlorobenzene	ND		0.00581	1	08/12/2018 03:18	WG1150715
1,3-Dichlorobenzene	ND		0.00581	1	08/12/2018 03:18	WG1150715
1,4-Dichlorobenzene	ND		0.00581	1	08/12/2018 03:18	WG1150715
Dichlorodifluoromethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
1,1-Dichloroethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
1,2-Dichloroethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
1,1-Dichloroethene	ND		0.00290	1	08/12/2018 03:18	WG1150715
cis-1,2-Dichloroethene	ND		0.00290	1	08/12/2018 03:18	WG1150715
trans-1,2-Dichloroethene	ND		0.00581	1	08/12/2018 03:18	WG1150715
1,2-Dichloropropane	ND		0.00581	1	08/12/2018 03:18	WG1150715
1,1-Dichloropropene	ND		0.00290	1	08/12/2018 03:18	WG1150715
1,3-Dichloropropane	ND		0.00581	1	08/12/2018 03:18	WG1150715

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00290	1	08/12/2018 03:18	WG1150715
trans-1,3-Dichloropropene	ND		0.00581	1	08/12/2018 03:18	WG1150715
2,2-Dichloropropane	ND		0.00290	1	08/12/2018 03:18	WG1150715
Di-isopropyl ether	ND		0.00116	1	08/12/2018 03:18	WG1150715
Ethylbenzene	ND		0.00290	1	08/12/2018 03:18	WG1150715
Hexachloro-1,3-butadiene	ND		0.0290	1	08/12/2018 03:18	WG1150715
Isopropylbenzene	ND		0.00290	1	08/12/2018 03:18	WG1150715
p-Isopropyltoluene	ND		0.00581	1	08/12/2018 03:18	WG1150715
2-Butanone (MEK)	ND	J0	0.0290	1	08/12/2018 03:18	WG1150715
Methylene Chloride	ND		0.0290	1	08/12/2018 03:18	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0290	1	08/12/2018 03:18	WG1150715
Methyl tert-butyl ether	ND		0.00116	1	08/12/2018 03:18	WG1150715
Naphthalene	ND		0.0145	1	08/12/2018 03:18	WG1150715
n-Propylbenzene	ND		0.00581	1	08/12/2018 03:18	WG1150715
Styrene	ND		0.0145	1	08/12/2018 03:18	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
Tetrachloroethene	ND		0.00290	1	08/12/2018 03:18	WG1150715
Toluene	ND		0.00581	1	08/12/2018 03:18	WG1150715
1,2,3-Trichlorobenzene	ND	J4	0.00290	1	08/12/2018 03:18	WG1150715
1,2,4-Trichlorobenzene	ND		0.0145	1	08/12/2018 03:18	WG1150715
1,1,1-Trichloroethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
1,1,2-Trichloroethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
Trichloroethene	ND		0.00116	1	08/12/2018 03:18	WG1150715
Trichlorofluoromethane	ND		0.00290	1	08/12/2018 03:18	WG1150715
1,2,3-Trichloropropane	ND		0.0145	1	08/12/2018 03:18	WG1150715
1,2,4-Trimethylbenzene	ND		0.00581	1	08/12/2018 03:18	WG1150715
1,2,3-Trimethylbenzene	ND		0.00581	1	08/12/2018 03:18	WG1150715
Vinyl chloride	ND		0.00290	1	08/12/2018 03:18	WG1150715
1,3,5-Trimethylbenzene	ND		0.00581	1	08/12/2018 03:18	WG1150715
o-Xylene	ND		0.00290	1	08/12/2018 03:18	WG1150715
m&p-Xylene	ND		0.00465	1	08/12/2018 03:18	WG1150715
(S) Toluene-d8	111		80.0-120		08/12/2018 03:18	WG1150715
(S) Toluene-d8	115		80.0-120		08/12/2018 17:08	WG1151239
(S) Dibromofluoromethane	92.7		74.0-131		08/12/2018 03:18	WG1150715
(S) Dibromofluoromethane	87.3		74.0-131		08/12/2018 17:08	WG1151239
(S) 4-Bromofluorobenzene	103		64.0-132		08/12/2018 03:18	WG1150715
(S) 4-Bromofluorobenzene	88.5		64.0-132		08/12/2018 17:08	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.65	1	08/11/2018 01:55	WG1149437
Residual Range Organics (RRO)	ND		11.6	1	08/11/2018 01:55	WG1149437
(S) o-Terphenyl	90.6		18.0-148		08/11/2018 01:55	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Acenaphthene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Acenaphthylene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Benzo(a)anthracene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Benzo(a)pyrene	ND		0.00697	1	08/09/2018 01:21	WG1148863



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Benzo(g,h,i)perylene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Benzo(k)fluoranthene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Chrysene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Dibenz(a,h)anthracene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Fluoranthene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Fluorene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Naphthalene	ND		0.0232	1	08/09/2018 01:21	WG1148863
Phenanthrene	ND		0.00697	1	08/09/2018 01:21	WG1148863
Pyrene	ND		0.00697	1	08/09/2018 01:21	WG1148863
1-Methylnaphthalene	ND		0.0232	1	08/09/2018 01:21	WG1148863
2-Methylnaphthalene	ND		0.0232	1	08/09/2018 01:21	WG1148863
2-Chloronaphthalene	ND		0.0232	1	08/09/2018 01:21	WG1148863
(S) Nitrobenzene-d5	84.8		14.0-149		08/09/2018 01:21	WG1148863
(S) 2-Fluorobiphenyl	81.5		34.0-125		08/09/2018 01:21	WG1148863
(S) p-Terphenyl-d14	75.6		23.0-120		08/09/2018 01:21	WG1148863

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
Total Solids	80.7		1	08/10/2018 12:57	WG1150150

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0248	1	08/07/2018 22:08	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.48	1	08/09/2018 03:05	WG1147985
Barium	110		0.620	1	08/09/2018 03:05	WG1147985
Cadmium	ND		0.620	1	08/09/2018 03:05	WG1147985
Chromium	14.9		1.24	1	08/09/2018 03:05	WG1147985
Lead	4.42		0.620	1	08/09/2018 03:05	WG1147985
Selenium	ND		2.48	1	08/09/2018 03:05	WG1147985
Silver	ND		1.24	1	08/09/2018 03:05	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0322	1.04	08/12/2018 17:28	WG1151239
Acrylonitrile	ND	JO J4	0.0161	1.04	08/12/2018 03:36	WG1150715
Benzene	ND		0.00129	1.04	08/12/2018 03:36	WG1150715
Bromobenzene	ND		0.0161	1.04	08/12/2018 03:36	WG1150715
Bromodichloromethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
Bromoform	ND		0.0322	1.04	08/12/2018 03:36	WG1150715
Bromomethane	ND	JO	0.0161	1.04	08/12/2018 03:36	WG1150715
n-Butylbenzene	ND		0.0161	1.04	08/12/2018 03:36	WG1150715
sec-Butylbenzene	ND		0.0161	1.04	08/12/2018 03:36	WG1150715
tert-Butylbenzene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
Carbon tetrachloride	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
Chlorobenzene	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
Chlorodibromomethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
Chloroethane	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
Chloroform	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
Chloromethane	ND		0.0161	1.04	08/12/2018 03:36	WG1150715
2-Chlorotoluene	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
4-Chlorotoluene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0322	1.04	08/12/2018 03:36	WG1150715
1,2-Dibromoethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
Dibromomethane	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
1,2-Dichlorobenzene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
1,3-Dichlorobenzene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
1,4-Dichlorobenzene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
Dichlorodifluoromethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
1,1-Dichloroethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
1,2-Dichloroethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
1,1-Dichloroethene	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
cis-1,2-Dichloroethene	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
trans-1,2-Dichloroethene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
1,2-Dichloropropane	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
1,1-Dichloropropene	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
1,3-Dichloropropane	ND		0.00645	1.04	08/12/2018 03:36	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
trans-1,3-Dichloropropene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
2,2-Dichloropropane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
Di-isopropyl ether	ND		0.00129	1.04	08/12/2018 03:36	WG1150715
Ethylbenzene	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
Hexachloro-1,3-butadiene	ND		0.0322	1.04	08/12/2018 03:36	WG1150715
Isopropylbenzene	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
p-Isopropyltoluene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
2-Butanone (MEK)	ND	<u>JO</u>	0.0322	1.04	08/12/2018 03:36	WG1150715
Methylene Chloride	ND		0.0322	1.04	08/12/2018 03:36	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0322	1.04	08/12/2018 03:36	WG1150715
Methyl tert-butyl ether	ND		0.00129	1.04	08/12/2018 03:36	WG1150715
Naphthalene	ND		0.0161	1.04	08/12/2018 03:36	WG1150715
n-Propylbenzene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
Styrene	ND		0.0161	1.04	08/12/2018 03:36	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
Tetrachloroethene	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
Toluene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
1,2,3-Trichlorobenzene	ND	<u>J4</u>	0.00322	1.04	08/12/2018 03:36	WG1150715
1,2,4-Trichlorobenzene	ND		0.0161	1.04	08/12/2018 03:36	WG1150715
1,1,1-Trichloroethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
1,1,2-Trichloroethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
Trichloroethene	ND		0.00129	1.04	08/12/2018 03:36	WG1150715
Trichlorofluoromethane	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
1,2,3-Trichloropropane	ND		0.0161	1.04	08/12/2018 03:36	WG1150715
1,2,4-Trimethylbenzene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
1,2,3-Trimethylbenzene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
Vinyl chloride	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
1,3,5-Trimethylbenzene	ND		0.00645	1.04	08/12/2018 03:36	WG1150715
o-Xylene	ND		0.00322	1.04	08/12/2018 03:36	WG1150715
m&p-Xylene	ND		0.00516	1.04	08/12/2018 03:36	WG1150715
(S) Toluene-d8	109		80.0-120		08/12/2018 03:36	WG1150715
(S) Toluene-d8	116		80.0-120		08/12/2018 17:28	WG1151239
(S) Dibromofluoromethane	99.5		74.0-131		08/12/2018 03:36	WG1150715
(S) Dibromofluoromethane	87.3		74.0-131		08/12/2018 17:28	WG1151239
(S) 4-Bromofluorobenzene	101		64.0-132		08/12/2018 03:36	WG1150715
(S) 4-Bromofluorobenzene	95.8		64.0-132		08/12/2018 17:28	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.96	1	08/11/2018 02:07	WG1149437
Residual Range Organics (RRO)	ND		12.4	1	08/11/2018 02:07	WG1149437
(S) o-Terphenyl	71.6		18.0-148		08/11/2018 02:07	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Acenaphthene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Acenaphthylene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Benzo(a)anthracene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Benzo(a)pyrene	ND		0.00744	1	08/09/2018 01:42	WG1148863



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Benzo(g,h,i)perylene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Benzo(k)fluoranthene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Chrysene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Dibenz(a,h)anthracene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Fluoranthene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Fluorene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Naphthalene	ND		0.0248	1	08/09/2018 01:42	WG1148863
Phenanthrene	ND		0.00744	1	08/09/2018 01:42	WG1148863
Pyrene	ND		0.00744	1	08/09/2018 01:42	WG1148863
1-Methylnaphthalene	ND		0.0248	1	08/09/2018 01:42	WG1148863
2-Methylnaphthalene	ND		0.0248	1	08/09/2018 01:42	WG1148863
2-Chloronaphthalene	ND		0.0248	1	08/09/2018 01:42	WG1148863
<i>(S)</i> Nitrobenzene-d5	73.9		14.0-149		08/09/2018 01:42	WG1148863
<i>(S)</i> 2-Fluorobiphenyl	78.9		34.0-125		08/09/2018 01:42	WG1148863
<i>(S)</i> p-Terphenyl-d14	54.0		23.0-120		08/09/2018 01:42	WG1148863

- 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
Total Solids	94.2		1	08/10/2018 12:57	WG1150150

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0212	1	08/07/2018 22:14	WG1148107

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.12	1	08/09/2018 03:07	WG1147985
Barium	72.9		0.531	1	08/09/2018 03:07	WG1147985
Cadmium	ND		0.531	1	08/09/2018 03:07	WG1147985
Chromium	12.9		1.06	1	08/09/2018 03:07	WG1147985
Lead	3.03		0.531	1	08/09/2018 03:07	WG1147985
Selenium	ND		2.12	1	08/09/2018 03:07	WG1147985
Silver	ND		1.06	1	08/09/2018 03:07	WG1147985

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0292	1.1	08/12/2018 17:48	WG1151239
Acrylonitrile	ND	JO J4	0.0146	1.1	08/12/2018 03:55	WG1150715
Benzene	ND		0.00117	1.1	08/12/2018 03:55	WG1150715
Bromobenzene	ND		0.0146	1.1	08/12/2018 03:55	WG1150715
Bromodichloromethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
Bromoform	ND		0.0292	1.1	08/12/2018 03:55	WG1150715
Bromomethane	ND	JO	0.0146	1.1	08/12/2018 03:55	WG1150715
n-Butylbenzene	ND		0.0146	1.1	08/12/2018 03:55	WG1150715
sec-Butylbenzene	ND		0.0146	1.1	08/12/2018 03:55	WG1150715
tert-Butylbenzene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
Carbon tetrachloride	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
Chlorobenzene	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
Chlorodibromomethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
Chloroethane	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
Chloroform	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
Chloromethane	ND		0.0146	1.1	08/12/2018 03:55	WG1150715
2-Chlorotoluene	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
4-Chlorotoluene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0292	1.1	08/12/2018 03:55	WG1150715
1,2-Dibromoethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
Dibromomethane	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
1,2-Dichlorobenzene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
1,3-Dichlorobenzene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
1,4-Dichlorobenzene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
Dichlorodifluoromethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
1,1-Dichloroethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
1,2-Dichloroethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
1,1-Dichloroethene	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
cis-1,2-Dichloroethene	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
trans-1,2-Dichloroethene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
1,2-Dichloropropane	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
1,1-Dichloropropene	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
1,3-Dichloropropane	ND		0.00584	1.1	08/12/2018 03:55	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
trans-1,3-Dichloropropene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
2,2-Dichloropropane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
Di-isopropyl ether	ND		0.00117	1.1	08/12/2018 03:55	WG1150715
Ethylbenzene	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
Hexachloro-1,3-butadiene	ND		0.0292	1.1	08/12/2018 03:55	WG1150715
Isopropylbenzene	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
p-Isopropyltoluene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
2-Butanone (MEK)	ND	J0	0.0292	1.1	08/12/2018 03:55	WG1150715
Methylene Chloride	ND		0.0292	1.1	08/12/2018 03:55	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0292	1.1	08/12/2018 03:55	WG1150715
Methyl tert-butyl ether	ND		0.00117	1.1	08/12/2018 03:55	WG1150715
Naphthalene	ND		0.0146	1.1	08/12/2018 03:55	WG1150715
n-Propylbenzene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
Styrene	ND		0.0146	1.1	08/12/2018 03:55	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
Tetrachloroethene	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
Toluene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
1,2,3-Trichlorobenzene	ND	J4	0.00292	1.1	08/12/2018 03:55	WG1150715
1,2,4-Trichlorobenzene	ND		0.0146	1.1	08/12/2018 03:55	WG1150715
1,1,1-Trichloroethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
1,1,2-Trichloroethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
Trichloroethene	ND		0.00117	1.1	08/12/2018 03:55	WG1150715
Trichlorofluoromethane	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
1,2,3-Trichloropropane	ND		0.0146	1.1	08/12/2018 03:55	WG1150715
1,2,4-Trimethylbenzene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
1,2,3-Trimethylbenzene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
Vinyl chloride	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
1,3,5-Trimethylbenzene	ND		0.00584	1.1	08/12/2018 03:55	WG1150715
o-Xylene	ND		0.00292	1.1	08/12/2018 03:55	WG1150715
m&p-Xylene	ND		0.00467	1.1	08/12/2018 03:55	WG1150715
(S) Toluene-d8	113		80.0-120		08/12/2018 03:55	WG1150715
(S) Toluene-d8	116		80.0-120		08/12/2018 17:48	WG1151239
(S) Dibromofluoromethane	92.4		74.0-131		08/12/2018 03:55	WG1150715
(S) Dibromofluoromethane	87.0		74.0-131		08/12/2018 17:48	WG1151239
(S) 4-Bromofluorobenzene	101		64.0-132		08/12/2018 03:55	WG1150715
(S) 4-Bromofluorobenzene	89.8		64.0-132		08/12/2018 17:48	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.25	1	08/11/2018 02:19	WG1149437
Residual Range Organics (RRO)	ND		10.6	1	08/11/2018 02:19	WG1149437
(S) o-Terphenyl	118		18.0-148		08/11/2018 02:19	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Acenaphthene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Acenaphthylene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Benzo(a)anthracene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Benzo(a)pyrene	ND		0.00637	1	08/09/2018 02:03	WG1148863



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Benzo(g,h,i)perylene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Benzo(k)fluoranthene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Chrysene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Dibenz(a,h)anthracene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Fluoranthene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Fluorene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Naphthalene	ND		0.0212	1	08/09/2018 02:03	WG1148863
Phenanthrene	ND		0.00637	1	08/09/2018 02:03	WG1148863
Pyrene	ND		0.00637	1	08/09/2018 02:03	WG1148863
1-Methylnaphthalene	ND		0.0212	1	08/09/2018 02:03	WG1148863
2-Methylnaphthalene	ND		0.0212	1	08/09/2018 02:03	WG1148863
2-Chloronaphthalene	ND		0.0212	1	08/09/2018 02:03	WG1148863
(S) Nitrobenzene-d5	82.6		14.0-149		08/09/2018 02:03	WG1148863
(S) 2-Fluorobiphenyl	97.6		34.0-125		08/09/2018 02:03	WG1148863
(S) p-Terphenyl-d14	92.3		23.0-120		08/09/2018 02:03	WG1148863

- 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	95.5		1	08/10/2018 12:57	WG1150150

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0716		0.0209	1	08/08/2018 10:22	WG1149076

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.09	1	08/08/2018 08:44	WG1148757
Barium	67.7		0.523	1	08/08/2018 08:44	WG1148757
Cadmium	ND		0.523	1	08/08/2018 08:44	WG1148757
Chromium	8.68		1.05	1	08/08/2018 08:44	WG1148757
Lead	4.06		0.523	1	08/08/2018 08:44	WG1148757
Selenium	ND		2.09	1	08/08/2018 08:44	WG1148757
Silver	ND		1.05	1	08/08/2018 08:44	WG1148757

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0283	1.08	08/12/2018 18:08	WG1151239
Acrylonitrile	ND	JO J4	0.0141	1.08	08/12/2018 04:14	WG1150715
Benzene	ND		0.00113	1.08	08/12/2018 04:14	WG1150715
Bromobenzene	ND		0.0141	1.08	08/12/2018 04:14	WG1150715
Bromodichloromethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
Bromoform	ND		0.0283	1.08	08/12/2018 04:14	WG1150715
Bromomethane	ND	JO	0.0141	1.08	08/12/2018 04:14	WG1150715
n-Butylbenzene	ND		0.0141	1.08	08/12/2018 04:14	WG1150715
sec-Butylbenzene	ND		0.0141	1.08	08/12/2018 04:14	WG1150715
tert-Butylbenzene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
Carbon tetrachloride	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
Chlorobenzene	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
Chlorodibromomethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
Chloroethane	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
Chloroform	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
Chloromethane	ND		0.0141	1.08	08/12/2018 04:14	WG1150715
2-Chlorotoluene	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
4-Chlorotoluene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0283	1.08	08/12/2018 04:14	WG1150715
1,2-Dibromoethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
Dibromomethane	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
1,2-Dichlorobenzene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
1,3-Dichlorobenzene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
1,4-Dichlorobenzene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
Dichlorodifluoromethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
1,1-Dichloroethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
1,2-Dichloroethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
1,1-Dichloroethene	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
cis-1,2-Dichloroethene	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
trans-1,2-Dichloroethene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
1,2-Dichloropropane	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
1,1-Dichloropropene	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
1,3-Dichloropropane	ND		0.00565	1.08	08/12/2018 04:14	WG1150715

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
trans-1,3-Dichloropropene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
2,2-Dichloropropane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
Di-isopropyl ether	ND		0.00113	1.08	08/12/2018 04:14	WG1150715
Ethylbenzene	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
Hexachloro-1,3-butadiene	ND		0.0283	1.08	08/12/2018 04:14	WG1150715
Isopropylbenzene	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
p-Isopropyltoluene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
2-Butanone (MEK)	ND	<u>JO</u>	0.0283	1.08	08/12/2018 04:14	WG1150715
Methylene Chloride	ND		0.0283	1.08	08/12/2018 04:14	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0283	1.08	08/12/2018 04:14	WG1150715
Methyl tert-butyl ether	ND		0.00113	1.08	08/12/2018 04:14	WG1150715
Naphthalene	ND		0.0141	1.08	08/12/2018 04:14	WG1150715
n-Propylbenzene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
Styrene	ND		0.0141	1.08	08/12/2018 04:14	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
Tetrachloroethene	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
Toluene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
1,2,3-Trichlorobenzene	ND	<u>J4</u>	0.00283	1.08	08/12/2018 04:14	WG1150715
1,2,4-Trichlorobenzene	ND		0.0141	1.08	08/12/2018 04:14	WG1150715
1,1,1-Trichloroethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
1,1,2-Trichloroethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
Trichloroethene	ND		0.00113	1.08	08/12/2018 04:14	WG1150715
Trichlorofluoromethane	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
1,2,3-Trichloropropane	ND		0.0141	1.08	08/12/2018 04:14	WG1150715
1,2,4-Trimethylbenzene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
1,2,3-Trimethylbenzene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
Vinyl chloride	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
1,3,5-Trimethylbenzene	ND		0.00565	1.08	08/12/2018 04:14	WG1150715
o-Xylene	ND		0.00283	1.08	08/12/2018 04:14	WG1150715
m&p-Xylene	ND		0.00452	1.08	08/12/2018 04:14	WG1150715
(S) Toluene-d8	110		80.0-120		08/12/2018 04:14	WG1150715
(S) Toluene-d8	116		80.0-120		08/12/2018 18:08	WG1151239
(S) Dibromofluoromethane	96.7		74.0-131		08/12/2018 04:14	WG1150715
(S) Dibromofluoromethane	86.3		74.0-131		08/12/2018 18:08	WG1151239
(S) 4-Bromofluorobenzene	99.0		64.0-132		08/12/2018 04:14	WG1150715
(S) 4-Bromofluorobenzene	92.5		64.0-132		08/12/2018 18:08	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.19	1	08/11/2018 02:31	WG1149437
Residual Range Organics (RRO)	ND		10.5	1	08/11/2018 02:31	WG1149437
(S) o-Terphenyl	104		18.0-148		08/11/2018 02:31	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Acenaphthene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Acenaphthylene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Benzo(a)anthracene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Benzo(a)pyrene	ND		0.00628	1	08/09/2018 02:24	WG1148863



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Benzo(g,h,i)perylene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Benzo(k)fluoranthene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Chrysene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Dibenz(a,h)anthracene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Fluoranthene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Fluorene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Naphthalene	ND		0.0209	1	08/09/2018 02:24	WG1148863
Phenanthrene	ND		0.00628	1	08/09/2018 02:24	WG1148863
Pyrene	ND		0.00628	1	08/09/2018 02:24	WG1148863
1-Methylnaphthalene	ND		0.0209	1	08/09/2018 02:24	WG1148863
2-Methylnaphthalene	ND		0.0209	1	08/09/2018 02:24	WG1148863
2-Chloronaphthalene	ND		0.0209	1	08/09/2018 02:24	WG1148863
<i>(S)</i> Nitrobenzene-d5	78.3		14.0-149		08/09/2018 02:24	WG1148863
<i>(S)</i> 2-Fluorobiphenyl	92.0		34.0-125		08/09/2018 02:24	WG1148863
<i>(S)</i> p-Terphenyl-d14	86.9		23.0-120		08/09/2018 02:24	WG1148863

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
Total Solids	92.9		1	08/10/2018 12:57	WG1150150

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0215	1	08/08/2018 10:24	WG1149076

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.15	1	08/08/2018 08:46	WG1148757
Barium	87.1		0.538	1	08/08/2018 08:46	WG1148757
Cadmium	ND		0.538	1	08/08/2018 08:46	WG1148757
Chromium	10.1		1.08	1	08/08/2018 08:46	WG1148757
Lead	27.0		0.538	1	08/08/2018 08:46	WG1148757
Selenium	ND		2.15	1	08/08/2018 08:46	WG1148757
Silver	ND		1.08	1	08/08/2018 08:46	WG1148757

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0299	1.11	08/13/2018 10:07	WG1151411
Acrylonitrile	ND	J3	0.0149	1.11	08/12/2018 17:41	WG1151244
Benzene	ND		0.00119	1.11	08/12/2018 17:41	WG1151244
Bromobenzene	ND		0.0149	1.11	08/12/2018 17:41	WG1151244
Bromodichloromethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
Bromoform	ND		0.0299	1.11	08/12/2018 17:41	WG1151244
Bromomethane	ND	J0	0.0149	1.11	08/12/2018 17:41	WG1151244
n-Butylbenzene	ND		0.0149	1.11	08/12/2018 17:41	WG1151244
sec-Butylbenzene	ND		0.0149	1.11	08/12/2018 17:41	WG1151244
tert-Butylbenzene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
Carbon tetrachloride	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
Chlorobenzene	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
Chlorodibromomethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
Chloroethane	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
Chloroform	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
Chloromethane	ND		0.0149	1.11	08/12/2018 17:41	WG1151244
2-Chlorotoluene	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
4-Chlorotoluene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
1,2-Dibromo-3-Chloropropane	ND		0.0299	1.11	08/12/2018 17:41	WG1151244
1,2-Dibromoethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
Dibromomethane	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
1,2-Dichlorobenzene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
1,3-Dichlorobenzene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
1,4-Dichlorobenzene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
Dichlorodifluoromethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
1,1-Dichloroethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
1,2-Dichloroethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
1,1-Dichloroethene	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
cis-1,2-Dichloroethene	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
trans-1,2-Dichloroethene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
1,2-Dichloropropane	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
1,1-Dichloropropene	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
1,3-Dichloropropane	ND		0.00597	1.11	08/12/2018 17:41	WG1151244

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
trans-1,3-Dichloropropene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
2,2-Dichloropropane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
Di-isopropyl ether	ND		0.00119	1.11	08/12/2018 17:41	WG1151244
Ethylbenzene	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
Hexachloro-1,3-butadiene	ND		0.0299	1.11	08/12/2018 17:41	WG1151244
Isopropylbenzene	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
p-Isopropyltoluene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
2-Butanone (MEK)	ND		0.0299	1.11	08/12/2018 17:41	WG1151244
Methylene Chloride	ND		0.0299	1.11	08/12/2018 17:41	WG1151244
4-Methyl-2-pentanone (MIBK)	ND		0.0299	1.11	08/12/2018 17:41	WG1151244
Methyl tert-butyl ether	ND		0.00119	1.11	08/12/2018 17:41	WG1151244
Naphthalene	ND		0.0149	1.11	08/12/2018 17:41	WG1151244
n-Propylbenzene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
Styrene	ND		0.0149	1.11	08/12/2018 17:41	WG1151244
1,1,1,2-Tetrachloroethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
1,1,2,2-Tetrachloroethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
1,1,2-Trichlorotrifluoroethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
Tetrachloroethene	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
Toluene	0.00709		0.00597	1.11	08/12/2018 17:41	WG1151244
1,2,3-Trichlorobenzene	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
1,2,4-Trichlorobenzene	ND		0.0149	1.11	08/12/2018 17:41	WG1151244
1,1,1-Trichloroethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
1,1,2-Trichloroethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
Trichloroethene	ND		0.00119	1.11	08/12/2018 17:41	WG1151244
Trichlorofluoromethane	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
1,2,3-Trichloropropane	ND		0.0149	1.11	08/12/2018 17:41	WG1151244
1,2,4-Trimethylbenzene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
1,2,3-Trimethylbenzene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
Vinyl chloride	ND		0.00299	1.11	08/12/2018 17:41	WG1151244
1,3,5-Trimethylbenzene	ND		0.00597	1.11	08/12/2018 17:41	WG1151244
o-Xylene	0.00373		0.00299	1.11	08/12/2018 17:41	WG1151244
m&p-Xylene	0.0112		0.00478	1.11	08/12/2018 17:41	WG1151244
(S) Toluene-d8	112		80.0-120		08/12/2018 17:41	WG1151244
(S) Toluene-d8	115		80.0-120		08/13/2018 10:07	WG1151411
(S) Dibromofluoromethane	95.5		74.0-131		08/12/2018 17:41	WG1151244
(S) Dibromofluoromethane	87.5		74.0-131		08/13/2018 10:07	WG1151411
(S) 4-Bromofluorobenzene	101		64.0-132		08/12/2018 17:41	WG1151244
(S) 4-Bromofluorobenzene	90.3		64.0-132		08/13/2018 10:07	WG1151411

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		21.5	5	08/11/2018 04:06	WG1149437
Residual Range Organics (RRO)	ND		53.8	5	08/11/2018 04:06	WG1149437
(S) o-Terphenyl	114		18.0-148		08/11/2018 04:06	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Acenaphthene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Acenaphthylene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Benzo(a)anthracene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Benzo(a)pyrene	ND		0.00646	1	08/09/2018 02:45	WG1148863



Collected date/time: 08/03/18 10:50

L1014895

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Benzo(g,h,i)perylene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Benzo(k)fluoranthene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Chrysene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Dibenz(a,h)anthracene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Fluoranthene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Fluorene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Indeno(1,2,3-cd)pyrene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Naphthalene	ND		0.0215	1	08/09/2018 02:45	WG1148863
Phenanthrene	ND		0.00646	1	08/09/2018 02:45	WG1148863
Pyrene	ND		0.00646	1	08/09/2018 02:45	WG1148863
1-Methylnaphthalene	ND		0.0215	1	08/09/2018 02:45	WG1148863
2-Methylnaphthalene	ND		0.0215	1	08/09/2018 02:45	WG1148863
2-Chloronaphthalene	ND		0.0215	1	08/09/2018 02:45	WG1148863
<i>(S) Nitrobenzene-d5</i>	69.0		14.0-149		08/09/2018 02:45	WG1148863
<i>(S) 2-Fluorobiphenyl</i>	80.4		34.0-125		08/09/2018 02:45	WG1148863
<i>(S) p-Terphenyl-d14</i>	75.3		23.0-120		08/09/2018 02:45	WG1148863

- 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	74.9		1	08/10/2018 12:57	WG1150150

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0267	1	08/08/2018 10:26	WG1149076

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.67	1	08/08/2018 08:49	WG1148757
Barium	58.8		0.668	1	08/08/2018 08:49	WG1148757
Cadmium	ND		0.668	1	08/08/2018 08:49	WG1148757
Chromium	7.96		1.34	1	08/08/2018 08:49	WG1148757
Lead	2.85		0.668	1	08/08/2018 08:49	WG1148757
Selenium	ND		2.67	1	08/08/2018 08:49	WG1148757
Silver	ND		1.34	1	08/08/2018 08:49	WG1148757

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0334	1	08/12/2018 18:27	WG1151239
Acrylonitrile	ND	JO J4	0.0167	1	08/12/2018 04:32	WG1150715
Benzene	ND		0.00134	1	08/12/2018 04:32	WG1150715
Bromobenzene	ND		0.0167	1	08/12/2018 04:32	WG1150715
Bromodichloromethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
Bromoform	ND		0.0334	1	08/12/2018 04:32	WG1150715
Bromomethane	ND	JO	0.0167	1	08/12/2018 04:32	WG1150715
n-Butylbenzene	ND		0.0167	1	08/12/2018 04:32	WG1150715
sec-Butylbenzene	ND		0.0167	1	08/12/2018 04:32	WG1150715
tert-Butylbenzene	ND		0.00668	1	08/12/2018 04:32	WG1150715
Carbon tetrachloride	ND		0.00668	1	08/12/2018 04:32	WG1150715
Chlorobenzene	ND		0.00334	1	08/12/2018 04:32	WG1150715
Chlorodibromomethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
Chloroethane	ND		0.00668	1	08/12/2018 04:32	WG1150715
Chloroform	ND		0.00334	1	08/12/2018 04:32	WG1150715
Chloromethane	ND		0.0167	1	08/12/2018 04:32	WG1150715
2-Chlorotoluene	ND		0.00334	1	08/12/2018 04:32	WG1150715
4-Chlorotoluene	ND		0.00668	1	08/12/2018 04:32	WG1150715
1,2-Dibromo-3-Chloropropane	ND		0.0334	1	08/12/2018 04:32	WG1150715
1,2-Dibromoethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
Dibromomethane	ND		0.00668	1	08/12/2018 04:32	WG1150715
1,2-Dichlorobenzene	ND		0.00668	1	08/12/2018 04:32	WG1150715
1,3-Dichlorobenzene	ND		0.00668	1	08/12/2018 04:32	WG1150715
1,4-Dichlorobenzene	ND		0.00668	1	08/12/2018 04:32	WG1150715
Dichlorodifluoromethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
1,1-Dichloroethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
1,2-Dichloroethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
1,1-Dichloroethene	ND		0.00334	1	08/12/2018 04:32	WG1150715
cis-1,2-Dichloroethene	ND		0.00334	1	08/12/2018 04:32	WG1150715
trans-1,2-Dichloroethene	ND		0.00668	1	08/12/2018 04:32	WG1150715
1,2-Dichloropropane	ND		0.00668	1	08/12/2018 04:32	WG1150715
1,1-Dichloropropene	ND		0.00334	1	08/12/2018 04:32	WG1150715
1,3-Dichloropropane	ND		0.00668	1	08/12/2018 04:32	WG1150715

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/03/18 16:00

L1014895

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00334	1	08/12/2018 04:32	WG1150715
trans-1,3-Dichloropropene	ND		0.00668	1	08/12/2018 04:32	WG1150715
2,2-Dichloropropane	ND		0.00334	1	08/12/2018 04:32	WG1150715
Di-isopropyl ether	ND		0.00134	1	08/12/2018 04:32	WG1150715
Ethylbenzene	ND		0.00334	1	08/12/2018 04:32	WG1150715
Hexachloro-1,3-butadiene	ND		0.0334	1	08/12/2018 04:32	WG1150715
Isopropylbenzene	ND		0.00334	1	08/12/2018 04:32	WG1150715
p-Isopropyltoluene	ND		0.00668	1	08/12/2018 04:32	WG1150715
2-Butanone (MEK)	ND	J0	0.0334	1	08/12/2018 04:32	WG1150715
Methylene Chloride	ND		0.0334	1	08/12/2018 04:32	WG1150715
4-Methyl-2-pentanone (MIBK)	ND		0.0334	1	08/12/2018 04:32	WG1150715
Methyl tert-butyl ether	ND		0.00134	1	08/12/2018 04:32	WG1150715
Naphthalene	ND		0.0167	1	08/12/2018 04:32	WG1150715
n-Propylbenzene	ND		0.00668	1	08/12/2018 04:32	WG1150715
Styrene	ND		0.0167	1	08/12/2018 04:32	WG1150715
1,1,1,2-Tetrachloroethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
1,1,2,2-Tetrachloroethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
1,1,2-Trichlorotrifluoroethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
Tetrachloroethene	ND		0.00334	1	08/12/2018 04:32	WG1150715
Toluene	ND		0.00668	1	08/12/2018 04:32	WG1150715
1,2,3-Trichlorobenzene	ND	J4	0.00334	1	08/12/2018 04:32	WG1150715
1,2,4-Trichlorobenzene	ND		0.0167	1	08/12/2018 04:32	WG1150715
1,1,1-Trichloroethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
1,1,2-Trichloroethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
Trichloroethene	ND		0.00134	1	08/12/2018 04:32	WG1150715
Trichlorofluoromethane	ND		0.00334	1	08/12/2018 04:32	WG1150715
1,2,3-Trichloropropane	ND		0.0167	1	08/12/2018 04:32	WG1150715
1,2,4-Trimethylbenzene	ND		0.00668	1	08/12/2018 04:32	WG1150715
1,2,3-Trimethylbenzene	ND		0.00668	1	08/12/2018 04:32	WG1150715
Vinyl chloride	ND		0.00334	1	08/12/2018 04:32	WG1150715
1,3,5-Trimethylbenzene	ND		0.00668	1	08/12/2018 04:32	WG1150715
o-Xylene	ND		0.00334	1	08/12/2018 04:32	WG1150715
m&p-Xylene	ND		0.00534	1	08/12/2018 04:32	WG1150715
(S) Toluene-d8	110		80.0-120		08/12/2018 04:32	WG1150715
(S) Toluene-d8	116		80.0-120		08/12/2018 18:27	WG1151239
(S) Dibromofluoromethane	94.1		74.0-131		08/12/2018 04:32	WG1150715
(S) Dibromofluoromethane	88.4		74.0-131		08/12/2018 18:27	WG1151239
(S) 4-Bromofluorobenzene	99.1		64.0-132		08/12/2018 04:32	WG1150715
(S) 4-Bromofluorobenzene	91.0		64.0-132		08/12/2018 18:27	WG1151239

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.34	1	08/11/2018 02:43	WG1149437
Residual Range Organics (RRO)	ND		13.4	1	08/11/2018 02:43	WG1149437
(S) o-Terphenyl	98.9		18.0-148		08/11/2018 02:43	WG1149437

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Acenaphthene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Acenaphthylene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Benzo(a)anthracene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Benzo(a)pyrene	ND		0.00801	1	08/09/2018 14:15	WG1150022



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Benzo(g,h,i)perylene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Benzo(k)fluoranthene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Chrysene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Dibenz(a,h)anthracene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Fluoranthene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Fluorene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Indeno(1,2,3-cd)pyrene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Naphthalene	ND		0.0267	1	08/09/2018 14:15	WG1150022
Phenanthrene	ND		0.00801	1	08/09/2018 14:15	WG1150022
Pyrene	ND		0.00801	1	08/09/2018 14:15	WG1150022
1-Methylnaphthalene	ND		0.0267	1	08/09/2018 14:15	WG1150022
2-Methylnaphthalene	ND		0.0267	1	08/09/2018 14:15	WG1150022
2-Chloronaphthalene	ND		0.0267	1	08/09/2018 14:15	WG1150022
(S) Nitrobenzene-d5	90.6		14.0-149		08/09/2018 14:15	WG1150022
(S) 2-Fluorobiphenyl	94.7		34.0-125		08/09/2018 14:15	WG1150022
(S) p-Terphenyl-d14	85.9		23.0-120		08/09/2018 14:15	WG1150022

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



Method Blank (MB)

(MB) R3332923-1 08/10/18 13:32

Analyte	MB Result %	<u>MB Qualifier</u>	MB MDL %	MB RDL %
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1014886-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1014886-12 08/10/18 13:32 • (DUP) R3332923-3 08/10/18 13:32

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits
Total Solids	92.8	92.6	1	0.210		10

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3332923-2 08/10/18 13:32

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



Method Blank (MB)

(MB) R3332922-1 08/10/18 13:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1014895-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1014895-06 08/10/18 13:17 • (DUP) R3332922-3 08/10/18 13:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	88.8	86.1	1	3.07		10

Laboratory Control Sample (LCS)

(LCS) R3332922-2 08/10/18 13:17

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



Method Blank (MB)

(MB) R3332920-1 08/10/18 12:57

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

¹ Cp

² Tc

³ Ss

L1014896-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1014896-01 08/10/18 12:57 • (DUP) R3332920-3 08/10/18 12:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	88.3	88.1	1	0.234		10

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS)

(LCS) R3332920-2 08/10/18 12:57

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

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3331756-1 08/07/18 21:06

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

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

(LCS) R3331756-2 08/07/18 21:09 • (LCSD) R3331756-3 08/07/18 21:11

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 %
Mercury	0.300	0.306	0.309	102	103	80.0-120			0.894	20

L1014895-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1014895-06 08/07/18 21:13 • (MS) R3331756-4 08/07/18 21:22 • (MSD) R3331756-5 08/07/18 21:24

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 %
Mercury	0.338	ND	0.350	0.350	103	103	1	75.0-125			0.000	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3331881-1 08/08/18 10:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.00280	0.0200

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3331881-2 08/08/18 10:09 • (LCSD) R3331881-3 08/08/18 10:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.278	0.283	92.6	94.4	80.0-120			1.96	20

L1015176-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1015176-09 08/08/18 10:13 • (MS) R3331881-4 08/08/18 10:15 • (MSD) R3331881-5 08/08/18 10:18

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.0159	0.316	0.329	99.9	104	1	75.0-125			4.11	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3332104-1 08/09/18 01:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.740	2.00
Silver	U		0.280	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3332104-2 08/09/18 01:56 • (LCSD) R3332104-3 08/09/18 01:59

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	95.8	95.7	95.8	95.7	80.0-120			0.0770	20
Barium	100	100	100	100	100	80.0-120			0.486	20
Cadmium	100	95.7	95.7	95.7	95.7	80.0-120			0.0145	20
Chromium	100	99.2	98.4	99.2	98.4	80.0-120			0.753	20
Lead	100	98.9	99.0	98.9	99.0	80.0-120			0.169	20
Selenium	100	96.2	96.2	96.2	96.2	80.0-120			0.0933	20
Silver	20.0	18.3	18.4	91.6	91.8	80.0-120			0.225	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1014895-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1014895-06 08/09/18 02:01 • (MS) R3332104-6 08/09/18 02:09 • (MSD) R3332104-7 08/09/18 02:11

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	113	ND	106	106	93.8	93.8	1	75.0-125			0.0604	20
Barium	113	90.4	207	198	104	95.5	1	75.0-125			4.69	20
Cadmium	113	ND	106	106	93.9	93.8	1	75.0-125			0.107	20
Chromium	113	14.1	121	120	95.1	93.8	1	75.0-125			1.23	20
Lead	113	3.62	117	116	101	99.8	1	75.0-125			1.11	20
Selenium	113	ND	107	105	94.8	93.4	1	75.0-125			1.46	20
Silver	22.5	ND	19.7	19.5	87.3	86.5	1	75.0-125			0.937	20



Method Blank (MB)

(MB) R3331884-1 08/08/18 08:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.740	2.00
Silver	U		0.280	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3331884-2 08/08/18 08:12 • (LCSD) R3331884-3 08/08/18 08:14

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	99.2	97.2	99.2	97.2	80.0-120			1.97	20
Barium	100	105	103	105	103	80.0-120			2.39	20
Cadmium	100	98.7	96.7	98.7	96.7	80.0-120			2.08	20
Chromium	100	100	98.2	100	98.2	80.0-120			1.98	20
Lead	100	98.8	97.0	98.8	97.0	80.0-120			1.85	20
Selenium	100	99.6	97.4	99.6	97.4	80.0-120			2.22	20
Silver	20.0	19.1	18.8	95.5	93.9	80.0-120			1.66	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1014815-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1014815-02 08/08/18 08:17 • (MS) R3331884-6 08/08/18 08:25 • (MSD) R3331884-7 08/08/18 08:27

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	103	5.13	106	108	98.2	99.3	1	75.0-125			1.11	20
Barium	103	90.4	190	208	97.0	114	1	75.0-125			8.97	20
Cadmium	103	ND	102	102	98.9	98.5	1	75.0-125			0.425	20
Chromium	103	11.6	113	118	97.9	103	1	75.0-125			4.50	20
Lead	103	15.4	120	123	102	105	1	75.0-125			2.57	20
Selenium	103	ND	103	102	99.4	99.1	1	75.0-125			0.346	20
Silver	20.6	ND	20.2	20.1	98.0	97.5	1	75.0-125			0.507	20



Method Blank (MB)

(MB) R3332216-3 08/08/18 11:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	0.332	U	0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3332216-3 08/08/18 11:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
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		0.412	1.00
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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	102			80.0-120
(S) Dibromofluoromethane	105			76.0-123
(S) 4-Bromofluorobenzene	97.7			80.0-120

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

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

(LCS) R3332216-1 08/08/18 10:11 • (LCSD) R3332216-2 08/08/18 10:31

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	125	105	99.7	84.2	10.0-160			16.9	23
Acrolein	125	98.3	105	78.6	84.3	10.0-160			6.99	20
Acrylonitrile	125	113	111	90.4	88.9	60.0-142			1.70	20



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

(LCS) R3332216-1 08/08/18 10:11 • (LCSD) R3332216-2 08/08/18 10:31

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	23.5	23.3	94.0	93.3	69.0-123			0.739	20
Bromobenzene	25.0	24.1	25.0	96.4	99.8	79.0-120			3.45	20
Bromodichloromethane	25.0	24.8	24.5	99.2	98.2	76.0-120			1.03	20
Bromoform	25.0	26.9	27.1	108	108	67.0-132			0.660	20
Bromomethane	25.0	26.4	26.8	106	107	18.0-160			1.33	20
n-Butylbenzene	25.0	23.9	25.3	95.7	101	72.0-126			5.41	20
sec-Butylbenzene	25.0	25.0	26.9	100	108	74.0-121			7.30	20
tert-Butylbenzene	25.0	24.6	26.6	98.4	106	75.0-122			7.80	20
Carbon tetrachloride	25.0	25.5	24.8	102	99.3	63.0-122			2.76	20
Chlorobenzene	25.0	27.4	27.2	109	109	79.0-121			0.537	20
Chlorodibromomethane	25.0	28.0	27.8	112	111	75.0-125			0.997	20
Chloroethane	25.0	24.4	24.0	97.7	95.9	47.0-152			1.88	20
Chloroform	25.0	24.1	24.0	96.5	95.8	72.0-121			0.706	20
Chloromethane	25.0	22.1	22.1	88.3	88.3	48.0-139			0.0264	20
2-Chlorotoluene	25.0	24.5	26.3	98.1	105	74.0-122			6.98	20
4-Chlorotoluene	25.0	25.2	26.0	101	104	79.0-120			3.34	20
1,2-Dibromo-3-Chloropropane	25.0	24.1	27.2	96.3	109	64.0-127			12.0	20
1,2-Dibromoethane	25.0	26.4	26.7	105	107	77.0-123			1.39	20
Dibromomethane	25.0	24.5	25.0	98.0	100	78.0-120			2.13	20
1,2-Dichlorobenzene	25.0	24.1	26.1	96.5	104	80.0-120			7.69	20
1,3-Dichlorobenzene	25.0	25.9	29.0	104	116	72.0-123			11.4	20
1,4-Dichlorobenzene	25.0	22.9	23.7	91.5	94.9	77.0-120			3.69	20
Dichlorodifluoromethane	25.0	29.9	28.6	120	114	49.0-155			4.54	20
1,1-Dichloroethane	25.0	23.9	24.0	95.6	95.9	70.0-126			0.317	20
1,2-Dichloroethane	25.0	25.4	25.0	102	100	67.0-126			1.82	20
1,1-Dichloroethene	25.0	24.5	25.2	97.9	101	64.0-129			2.97	20
cis-1,2-Dichloroethene	25.0	22.9	23.4	91.7	93.4	73.0-120			1.84	20
trans-1,2-Dichloroethene	25.0	24.5	24.6	98.2	98.4	71.0-121			0.248	20
1,2-Dichloropropane	25.0	23.9	24.0	95.7	95.8	75.0-125			0.159	20
1,1-Dichloropropene	25.0	25.0	24.8	100	99.1	71.0-129			1.05	20
1,3-Dichloropropane	25.0	26.8	26.2	107	105	80.0-121			2.32	20
cis-1,3-Dichloropropene	25.0	26.3	27.3	105	109	79.0-123			3.44	20
trans-1,3-Dichloropropene	25.0	26.8	27.2	107	109	74.0-127			1.43	20
2,2-Dichloropropane	25.0	26.5	26.6	106	106	60.0-125			0.203	20
Di-isopropyl ether	25.0	22.2	22.0	88.8	87.9	59.0-133			0.990	20
Ethylbenzene	25.0	27.7	28.1	111	112	77.0-120			1.45	20
Hexachloro-1,3-butadiene	25.0	25.7	27.7	103	111	64.0-131			7.32	20
Isopropylbenzene	25.0	24.0	26.0	96.0	104	75.0-120			7.99	20
p-Isopropyltoluene	25.0	25.0	27.2	100	109	74.0-126			8.42	20
2-Butanone (MEK)	125	120	111	95.9	88.7	37.0-158			7.75	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) R3332216-1 08/08/18 10:11 • (LCSD) R3332216-2 08/08/18 10:31

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 %
Methylene Chloride	25.0	23.2	23.4	92.7	93.6	66.0-121			0.934	20
4-Methyl-2-pentanone (MIBK)	125	116	113	93.0	90.6	59.0-143			2.64	20
Methyl tert-butyl ether	25.0	24.5	24.1	98.1	96.4	64.0-123			1.70	20
Naphthalene	25.0	24.0	26.2	95.9	105	62.0-128			8.87	20
n-Propylbenzene	25.0	24.8	27.1	99.3	108	79.0-120			8.80	20
Styrene	25.0	23.8	26.2	95.3	105	78.0-124			9.41	20
1,1,1,2-Tetrachloroethane	25.0	25.5	27.0	102	108	75.0-122			5.89	20
1,1,2,2-Tetrachloroethane	25.0	23.3	25.1	93.1	100	71.0-122			7.46	20
Tetrachloroethene	25.0	28.7	28.3	115	113	70.0-127			1.54	20
Toluene	25.0	25.6	25.5	103	102	77.0-120			0.445	20
1,1,2-Trichlorotrifluoroethane	25.0	28.3	27.7	113	111	61.0-136			1.89	20
1,2,3-Trichlorobenzene	25.0	23.6	26.3	94.6	105	61.0-133			10.8	20
1,2,4-Trichlorobenzene	25.0	25.8	27.3	103	109	69.0-129			5.63	20
1,1,1-Trichloroethane	25.0	25.9	26.1	104	104	68.0-122			0.670	20
1,1,2-Trichloroethane	25.0	25.7	25.9	103	103	78.0-120			0.666	20
Trichloroethene	25.0	25.1	24.8	100	99.1	78.0-120			1.08	20
Trichlorofluoromethane	25.0	28.7	27.7	115	111	56.0-137			3.37	20
1,2,3-Trichloropropane	25.0	23.6	26.6	94.5	106	72.0-124			11.7	20
1,2,3-Trimethylbenzene	25.0	23.9	26.0	95.5	104	75.0-120			8.44	20
1,2,4-Trimethylbenzene	25.0	25.0	26.6	100	106	75.0-120			5.85	20
1,3,5-Trimethylbenzene	25.0	23.6	25.2	94.3	101	75.0-120			6.64	20
Vinyl chloride	25.0	24.9	24.9	99.4	99.7	64.0-133			0.247	20
o-Xylene	25.0	27.7	27.5	111	110	78.0-120			0.485	20
m&p-Xylenes	50.0	51.7	52.8	103	106	77.0-120			2.08	20
(S) Toluene-d8				104	105	80.0-120				
(S) Dibromofluoromethane				99.4	99.3	76.0-123				
(S) 4-Bromofluorobenzene				94.1	99.8	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3332893-3 08/11/18 22:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
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
p-Isopropyltoluene	U		0.00233	0.00500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3332893-3 08/11/18 22:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	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
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	112			80.0-120
(S) Dibromofluoromethane	95.0			74.0-131
(S) 4-Bromofluorobenzene	98.8			64.0-132

- 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) R3332893-1 08/11/18 20:44 • (LCSD) R3332893-2 08/11/18 21:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.625	0.346	0.344	55.4	55.1	57.8-143	J4	J4	0.541	20
Benzene	0.125	0.105	0.107	84.2	85.7	72.6-120			1.72	20
Bromobenzene	0.125	0.119	0.124	95.4	99.0	80.3-115			3.76	20
Bromodichloromethane	0.125	0.112	0.113	90.0	90.4	75.3-119			0.526	20
Bromoform	0.125	0.125	0.128	100	102	69.1-135			1.95	20



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

(LCS) R3332893-1 08/11/18 20:44 • (LCSD) R3332893-2 08/11/18 21:02

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 %
Bromomethane	0.125	0.0874	0.0943	69.9	75.4	23.0-191			7.55	20
n-Butylbenzene	0.125	0.121	0.128	97.1	102	74.2-134			5.32	20
sec-Butylbenzene	0.125	0.120	0.126	96.2	101	77.8-129			4.59	20
tert-Butylbenzene	0.125	0.118	0.126	94.1	101	77.2-129			6.70	20
Carbon tetrachloride	0.125	0.116	0.117	93.1	93.9	69.4-129			0.831	20
Chlorobenzene	0.125	0.137	0.141	110	113	78.9-122			2.79	20
Chlorodibromomethane	0.125	0.141	0.139	113	112	76.4-126			0.904	20
Chloroethane	0.125	0.119	0.127	95.4	102	47.2-147			6.24	20
Chloroform	0.125	0.109	0.103	87.0	82.8	73.3-122			5.02	20
Chloromethane	0.125	0.136	0.143	109	114	53.1-135			4.36	20
2-Chlorotoluene	0.125	0.115	0.119	92.2	95.1	74.6-127			3.16	20
4-Chlorotoluene	0.125	0.113	0.120	90.6	95.6	79.5-123			5.40	20
1,2-Dibromo-3-Chloropropane	0.125	0.132	0.129	105	103	64.9-131			2.15	20
1,2-Dibromoethane	0.125	0.136	0.140	109	112	78.7-123			2.68	20
Dibromomethane	0.125	0.116	0.117	93.1	93.3	78.5-117			0.134	20
1,2-Dichlorobenzene	0.125	0.127	0.129	101	103	83.6-119			1.63	20
1,3-Dichlorobenzene	0.125	0.122	0.126	97.7	101	75.9-129			3.08	20
1,4-Dichlorobenzene	0.125	0.121	0.123	96.4	98.5	81.0-115			2.16	20
Dichlorodifluoromethane	0.125	0.127	0.135	101	108	50.9-139			6.47	20
1,1-Dichloroethane	0.125	0.130	0.123	104	98.1	71.7-125			5.69	20
1,2-Dichloroethane	0.125	0.116	0.115	92.6	91.8	67.2-121			0.888	20
1,1-Dichloroethene	0.125	0.135	0.141	108	112	60.6-133			4.15	20
cis-1,2-Dichloroethene	0.125	0.117	0.111	93.7	88.8	76.1-121			5.31	20
trans-1,2-Dichloroethene	0.125	0.112	0.111	89.7	89.2	70.7-124			0.533	20
1,2-Dichloropropane	0.125	0.136	0.139	109	111	76.9-123			2.05	20
1,1-Dichloropropene	0.125	0.117	0.115	93.8	92.2	71.2-126			1.74	20
1,3-Dichloropropane	0.125	0.128	0.136	102	109	80.3-114			5.91	20
cis-1,3-Dichloropropene	0.125	0.132	0.135	106	108	77.3-123			1.85	20
trans-1,3-Dichloropropene	0.125	0.136	0.137	109	109	73.0-127			0.600	20
2,2-Dichloropropane	0.125	0.103	0.101	82.0	80.5	61.9-132			1.92	20
Di-isopropyl ether	0.125	0.139	0.135	111	108	67.2-131			2.89	20
Ethylbenzene	0.125	0.135	0.144	108	115	78.6-124			6.65	20
Hexachloro-1,3-butadiene	0.125	0.143	0.154	115	124	69.2-136			7.51	20
Isopropylbenzene	0.125	0.118	0.124	94.1	99.1	79.4-126			5.12	20
p-Isopropyltoluene	0.125	0.121	0.126	96.5	101	75.4-132			4.29	20
2-Butanone (MEK)	0.625	0.355	0.363	56.7	58.0	44.5-154			2.21	21.3
Methylene Chloride	0.125	0.115	0.0974	92.4	77.9	68.2-119			17.0	20
4-Methyl-2-pentanone (MIBK)	0.625	0.702	0.700	112	112	61.1-138			0.235	20
Methyl tert-butyl ether	0.125	0.113	0.101	90.1	81.0	70.2-122			10.7	20
Naphthalene	0.125	0.133	0.134	106	107	69.9-132			0.747	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) R3332893-1 08/11/18 20:44 • (LCSD) R3332893-2 08/11/18 21:02

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 %
n-Propylbenzene	0.125	0.112	0.119	89.5	95.0	80.2-124			5.96	20
Styrene	0.125	0.122	0.124	97.8	99.1	79.4-124			1.34	20
1,1,1,2-Tetrachloroethane	0.125	0.136	0.136	109	109	76.7-127			0.0726	20
1,1,2,2-Tetrachloroethane	0.125	0.111	0.110	88.8	87.7	78.8-124			1.17	20
Tetrachloroethene	0.125	0.142	0.152	114	121	71.1-133			6.40	20
Toluene	0.125	0.127	0.133	101	106	76.7-116			4.83	20
1,1,2-Trichlorotrifluoroethane	0.125	0.122	0.136	97.6	109	62.6-138			11.1	20
1,2,3-Trichlorobenzene	0.125	0.171	0.179	137	143	72.5-137		J4	4.87	20
1,2,4-Trichlorobenzene	0.125	0.149	0.155	119	124	74.0-137			3.76	20
1,1,1-Trichloroethane	0.125	0.120	0.120	96.4	96.3	69.9-127			0.0988	20
1,1,2-Trichloroethane	0.125	0.131	0.137	105	110	81.9-119			4.29	20
Trichloroethene	0.125	0.133	0.141	106	113	77.2-122			6.26	20
Trichlorofluoromethane	0.125	0.122	0.139	97.9	112	51.5-151			13.1	20
1,2,3-Trichloropropane	0.125	0.115	0.114	92.2	90.9	74.0-124			1.42	20
1,2,3-Trimethylbenzene	0.125	0.115	0.119	92.0	95.1	79.4-118			3.34	20
1,2,4-Trimethylbenzene	0.125	0.120	0.124	95.7	99.4	77.1-124			3.79	20
1,3,5-Trimethylbenzene	0.125	0.119	0.125	95.3	99.7	79.0-125			4.57	20
Vinyl chloride	0.125	0.122	0.126	97.7	101	58.4-134			3.21	20
o-Xylene	0.125	0.137	0.143	109	114	78.5-124			4.17	20
m&p-Xylenes	0.250	0.260	0.279	104	111	77.3-124			6.98	20
(S) Toluene-d8				110	113	80.0-120				
(S) Dibromofluoromethane				92.9	85.3	74.0-131				
(S) 4-Bromofluorobenzene				94.9	95.6	64.0-132				

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



Method Blank (MB)

(MB) R3333010-2 08/12/18 11:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
(S) Toluene-d8	115			80.0-120
(S) Dibromofluoromethane	85.7			74.0-131
(S) 4-Bromofluorobenzene	89.1			64.0-132

Laboratory Control Sample (LCS)

(LCS) R3333010-1 08/12/18 10:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.644	103	25.3-178	
(S) Toluene-d8			106	80.0-120	
(S) Dibromofluoromethane			94.5	74.0-131	
(S) 4-Bromofluorobenzene			92.0	64.0-132	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3333005-3 08/12/18 12:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
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
p-Isopropyltoluene	U		0.00233	0.00500

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



Method Blank (MB)

(MB) R3333005-3 08/12/18 12:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	0.00178	<u>J</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
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	109			80.0-120
(S) Dibromofluoromethane	99.7			74.0-131
(S) 4-Bromofluorobenzene	98.5			64.0-132

- 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) R3333005-1 08/12/18 11:20 • (LCSD) R3333005-2 08/12/18 11:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.625	0.501	0.674	80.1	108	57.8-143		<u>J3</u>	29.5	20
Benzene	0.125	0.102	0.0988	81.5	79.0	72.6-120			3.05	20
Bromobenzene	0.125	0.114	0.112	91.2	89.2	80.3-115			2.12	20
Bromodichloromethane	0.125	0.108	0.105	86.5	83.8	75.3-119			3.11	20
Bromoform	0.125	0.121	0.121	96.5	96.5	69.1-135			0.0415	20



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

(LCS) R3333005-1 08/12/18 11:20 • (LCSD) R3333005-2 08/12/18 11:38

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 %
Bromomethane	0.125	0.0848	0.0772	67.9	61.8	23.0-191			9.36	20
n-Butylbenzene	0.125	0.119	0.116	95.1	92.8	74.2-134			2.42	20
sec-Butylbenzene	0.125	0.115	0.112	92.4	89.2	77.8-129			3.44	20
tert-Butylbenzene	0.125	0.113	0.108	90.6	86.3	77.2-129			4.86	20
Carbon tetrachloride	0.125	0.113	0.106	90.1	85.1	69.4-129			5.76	20
Chlorobenzene	0.125	0.129	0.120	103	96.1	78.9-122			7.07	20
Chlorodibromomethane	0.125	0.130	0.124	104	99.3	76.4-126			4.74	20
Chloroethane	0.125	0.115	0.110	91.7	88.2	47.2-147			3.93	20
Chloroform	0.125	0.106	0.104	85.0	83.3	73.3-122			2.05	20
Chloromethane	0.125	0.126	0.118	101	94.1	53.1-135			7.07	20
2-Chlorotoluene	0.125	0.112	0.108	90.0	86.1	74.6-127			4.37	20
4-Chlorotoluene	0.125	0.110	0.106	87.9	85.1	79.5-123			3.20	20
1,2-Dibromo-3-Chloropropane	0.125	0.131	0.122	105	97.3	64.9-131			7.78	20
1,2-Dibromoethane	0.125	0.127	0.120	102	96.3	78.7-123			5.29	20
Dibromomethane	0.125	0.108	0.109	86.6	87.6	78.5-117			1.04	20
1,2-Dichlorobenzene	0.125	0.122	0.119	97.2	95.2	83.6-119			2.12	20
1,3-Dichlorobenzene	0.125	0.117	0.113	93.2	90.4	75.9-129			3.03	20
1,4-Dichlorobenzene	0.125	0.115	0.115	91.6	91.9	81.0-115			0.261	20
Dichlorodifluoromethane	0.125	0.126	0.117	101	93.8	50.9-139			7.06	20
1,1-Dichloroethane	0.125	0.120	0.123	95.8	98.3	71.7-125			2.62	20
1,2-Dichloroethane	0.125	0.118	0.118	94.3	94.4	67.2-121			0.0568	20
1,1-Dichloroethene	0.125	0.129	0.125	103	100	60.6-133			3.00	20
cis-1,2-Dichloroethene	0.125	0.109	0.110	87.2	88.0	76.1-121			0.843	20
trans-1,2-Dichloroethene	0.125	0.108	0.104	86.4	83.1	70.7-124			3.87	20
1,2-Dichloropropane	0.125	0.135	0.130	108	104	76.9-123			3.73	20
1,1-Dichloropropene	0.125	0.114	0.107	90.9	85.4	71.2-126			6.23	20
1,3-Dichloropropane	0.125	0.124	0.118	99.5	94.3	80.3-114			5.43	20
cis-1,3-Dichloropropene	0.125	0.125	0.118	100	94.5	77.3-123			5.90	20
trans-1,3-Dichloropropene	0.125	0.119	0.115	94.9	92.1	73.0-127			2.98	20
2,2-Dichloropropane	0.125	0.107	0.0999	85.9	79.9	61.9-132			7.14	20
Di-isopropyl ether	0.125	0.133	0.133	106	106	67.2-131			0.184	20
Ethylbenzene	0.125	0.123	0.115	98.1	92.2	78.6-124			6.14	20
Hexachloro-1,3-butadiene	0.125	0.140	0.121	112	97.1	69.2-136			14.4	20
Isopropylbenzene	0.125	0.116	0.113	92.6	90.0	79.4-126			2.86	20
p-Isopropyltoluene	0.125	0.115	0.111	92.0	89.1	75.4-132			3.26	20
2-Butanone (MEK)	0.625	0.456	0.506	72.9	81.0	44.5-154			10.5	21.3
Methylene Chloride	0.125	0.108	0.112	86.5	89.6	68.2-119			3.49	20
4-Methyl-2-pentanone (MIBK)	0.625	0.684	0.681	110	109	61.1-138			0.479	20
Methyl tert-butyl ether	0.125	0.109	0.112	86.9	89.3	70.2-122			2.76	20
Naphthalene	0.125	0.127	0.115	102	91.7	69.9-132			10.3	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) R3333005-1 08/12/18 11:20 • (LCSD) R3333005-2 08/12/18 11:38

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 %
n-Propylbenzene	0.125	0.110	0.108	88.2	86.5	80.2-124			2.00	20
Styrene	0.125	0.116	0.112	92.9	89.6	79.4-124			3.61	20
1,1,1,2-Tetrachloroethane	0.125	0.124	0.119	99.1	95.5	76.7-127			3.72	20
1,1,2,2-Tetrachloroethane	0.125	0.113	0.110	90.1	87.7	78.8-124			2.69	20
Tetrachloroethene	0.125	0.132	0.124	106	99.6	71.1-133			6.01	20
Toluene	0.125	0.121	0.114	96.9	90.9	76.7-116			6.40	20
1,1,2-Trichlorotrifluoroethane	0.125	0.131	0.118	105	94.3	62.6-138			10.5	20
1,2,3-Trichlorobenzene	0.125	0.161	0.141	129	113	72.5-137			13.1	20
1,2,4-Trichlorobenzene	0.125	0.136	0.121	109	96.9	74.0-137			11.4	20
1,1,1-Trichloroethane	0.125	0.117	0.111	93.7	88.9	69.9-127			5.17	20
1,1,2-Trichloroethane	0.125	0.128	0.118	103	94.6	81.9-119			8.10	20
Trichloroethene	0.125	0.121	0.119	97.2	95.2	77.2-122			2.08	20
Trichlorofluoromethane	0.125	0.125	0.112	100	89.5	51.5-151			11.2	20
1,2,3-Trichloropropane	0.125	0.107	0.115	85.3	92.4	74.0-124			8.01	20
1,2,3-Trimethylbenzene	0.125	0.110	0.108	88.4	86.1	79.4-118			2.66	20
1,2,4-Trimethylbenzene	0.125	0.116	0.113	92.8	90.4	77.1-124			2.54	20
1,3,5-Trimethylbenzene	0.125	0.113	0.110	90.2	87.7	79.0-125			2.86	20
Vinyl chloride	0.125	0.117	0.101	93.4	80.7	58.4-134			14.6	20
o-Xylene	0.125	0.127	0.120	101	95.9	78.5-124			5.51	20
m&p-Xylenes	0.250	0.238	0.224	95.2	89.5	77.3-124			6.14	20
(S) Toluene-d8				110	109	80.0-120				
(S) Dibromofluoromethane				91.4	96.2	74.0-131				
(S) 4-Bromofluorobenzene				97.3	97.3	64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3333091-2 08/13/18 09:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
(S) Toluene-d8	114			80.0-120
(S) Dibromofluoromethane	88.7			74.0-131
(S) 4-Bromofluorobenzene	89.7			64.0-132

Laboratory Control Sample (LCS)

(LCS) R3333091-1 08/13/18 08:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.674	108	25.3-178	
(S) Toluene-d8			106	80.0-120	
(S) Dibromofluoromethane			96.6	74.0-131	
(S) 4-Bromofluorobenzene			89.8	64.0-132	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3332832-1 08/10/18 23:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	110			18.0-148

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

(LCS) R3332832-2 08/10/18 23:19 • (LCSD) R3332832-3 08/10/18 23:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	19.6	17.1	78.3	68.3	50.0-150			13.6	20
Residual Range Organics (RRO)	25.0	20.7	19.1	83.0	76.6	50.0-150			8.04	20
(S) o-Terphenyl				106	91.6	18.0-148				

L1014895-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1014895-06 08/10/18 23:43 • (MS) R3332832-4 08/10/18 23:55 • (MSD) R3332832-5 08/11/18 00:07

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	28.2	ND	20.4	18.2	68.2	60.5	1	50.0-150			11.4	20
Residual Range Organics (RRO)	28.2	ND	21.8	20.8	77.5	74.0	1	50.0-150			4.64	20
(S) o-Terphenyl					92.0	80.3		18.0-148				

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



Method Blank (MB)

(MB) R3332170-3 08/08/18 19:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	87.1			14.0-149
(S) 2-Fluorobiphenyl	96.3			34.0-125
(S) p-Terphenyl-d14	89.4			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3332170-1 08/08/18 19:00 • (LCSD) R3332170-2 08/08/18 19:21

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 %
Anthracene	0.0800	0.0751	0.0757	93.9	94.6	50.0-125			0.796	20
Acenaphthene	0.0800	0.0753	0.0744	94.1	93.0	52.0-120			1.20	20
Acenaphthylene	0.0800	0.0782	0.0770	97.8	96.3	51.0-120			1.55	20
Benzo(a)anthracene	0.0800	0.0757	0.0734	94.6	91.8	46.0-121			3.09	20
Benzo(a)pyrene	0.0800	0.0611	0.0620	76.4	77.5	42.0-121			1.46	20
Benzo(b)fluoranthene	0.0800	0.0753	0.0743	94.1	92.9	42.0-123			1.34	20
Benzo(g,h,i)perylene	0.0800	0.0772	0.0753	96.5	94.1	43.0-128			2.49	20
Benzo(k)fluoranthene	0.0800	0.0742	0.0718	92.8	89.8	45.0-128			3.29	20
Chrysene	0.0800	0.0742	0.0736	92.8	92.0	48.0-127			0.812	20
Dibenz(a,h)anthracene	0.0800	0.0786	0.0775	98.2	96.9	43.0-132			1.41	20
Fluoranthene	0.0800	0.0813	0.0807	102	101	49.0-129			0.741	20



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM [L1014895-01,02,03,04,05,06,07,08,09,10,11,14,15,16,17,18](#)

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

(LCS) R3332170-1 08/08/18 19:00 • (LCSD) R3332170-2 08/08/18 19:21

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 %
Fluorene	0.0800	0.0773	0.0774	96.6	96.8	50.0-120			0.129	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0777	0.0764	97.1	95.5	44.0-131			1.69	20
Naphthalene	0.0800	0.0741	0.0720	92.6	90.0	50.0-120			2.87	20
Phenanthrene	0.0800	0.0759	0.0758	94.9	94.8	48.0-120			0.132	20
Pyrene	0.0800	0.0726	0.0708	90.8	88.5	48.0-135			2.51	20
1-Methylnaphthalene	0.0800	0.0807	0.0793	101	99.1	52.0-122			1.75	20
2-Methylnaphthalene	0.0800	0.0772	0.0753	96.5	94.1	52.0-120			2.49	20
2-Chloronaphthalene	0.0800	0.0771	0.0762	96.4	95.3	50.0-120			1.17	20
<i>(S) Nitrobenzene-d5</i>				85.7	84.2	14.0-149				
<i>(S) 2-Fluorobiphenyl</i>				92.8	92.3	34.0-125				
<i>(S) p-Terphenyl-d14</i>				86.7	87.8	23.0-120				

L1014895-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1014895-06 08/08/18 22:53 • (MS) R3332170-4 08/08/18 23:14 • (MSD) R3332170-5 08/08/18 23:35

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	0.0901	ND	0.0884	0.0863	98.1	95.8	1	20.0-136			2.45	24
Acenaphthene	0.0901	ND	0.0855	0.0828	94.9	91.9	1	29.0-124			3.21	20
Acenaphthylene	0.0901	ND	0.0871	0.0843	96.6	93.5	1	35.0-120			3.29	20
Benzo(a)anthracene	0.0901	ND	0.0834	0.0815	92.5	90.4	1	13.0-132			2.32	27
Benzo(a)pyrene	0.0901	ND	0.0840	0.0818	93.3	90.8	1	14.0-138			2.72	27
Benzo(b)fluoranthene	0.0901	ND	0.0820	0.0802	91.0	89.0	1	10.0-129			2.22	31
Benzo(g,h,i)perylene	0.0901	ND	0.0872	0.0849	96.8	94.3	1	10.0-133			2.62	30
Benzo(k)fluoranthene	0.0901	ND	0.0837	0.0813	92.9	90.3	1	15.0-131			2.87	27
Chrysene	0.0901	ND	0.0826	0.0810	91.6	89.9	1	15.0-137			1.93	25
Dibenz(a,h)anthracene	0.0901	ND	0.0895	0.0871	99.3	96.6	1	15.0-132			2.68	27
Fluoranthene	0.0901	ND	0.0949	0.0910	105	101	1	13.0-139			4.12	28
Fluorene	0.0901	ND	0.0884	0.0857	98.1	95.1	1	27.0-122			3.10	22
Indeno(1,2,3-cd)pyrene	0.0901	ND	0.0879	0.0861	97.5	95.5	1	11.0-133			2.07	29
Naphthalene	0.0901	ND	0.0830	0.0807	92.1	89.5	1	18.0-136			2.89	21
Phenanthrene	0.0901	ND	0.0862	0.0836	95.6	92.8	1	15.0-133			3.05	25
Pyrene	0.0901	ND	0.0799	0.0788	88.6	87.4	1	11.0-146			1.42	29
1-Methylnaphthalene	0.0901	ND	0.0906	0.0887	101	98.4	1	24.0-137			2.14	22
2-Methylnaphthalene	0.0901	ND	0.0870	0.0843	96.5	93.5	1	23.0-136			3.16	22
2-Chloronaphthalene	0.0901	ND	0.0873	0.0846	96.9	93.9	1	36.0-120			3.15	20
<i>(S) Nitrobenzene-d5</i>					86.1	88.0		14.0-149				
<i>(S) 2-Fluorobiphenyl</i>					93.8	97.5		34.0-125				
<i>(S) p-Terphenyl-d14</i>					85.0	91.5		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3332321-3 08/09/18 13:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	105			14.0-149
(S) 2-Fluorobiphenyl	113			34.0-125
(S) p-Terphenyl-d14	114			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3332321-1 08/09/18 13:12 • (LCSD) R3332321-2 08/09/18 13:33

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 %
Anthracene	0.0800	0.0762	0.0758	95.3	94.8	50.0-125			0.526	20
Acenaphthene	0.0800	0.0756	0.0759	94.5	94.9	52.0-120			0.396	20
Acenaphthylene	0.0800	0.0742	0.0742	92.8	92.8	51.0-120			0.000	20
Benzo(a)anthracene	0.0800	0.0728	0.0719	91.0	89.9	46.0-121			1.24	20
Benzo(a)pyrene	0.0800	0.0639	0.0636	79.9	79.5	42.0-121			0.471	20
Benzo(b)fluoranthene	0.0800	0.0753	0.0763	94.1	95.4	42.0-123			1.32	20
Benzo(g,h,i)perylene	0.0800	0.0792	0.0789	99.0	98.6	43.0-128			0.380	20
Benzo(k)fluoranthene	0.0800	0.0776	0.0763	97.0	95.4	45.0-128			1.69	20
Chrysene	0.0800	0.0780	0.0776	97.5	97.0	48.0-127			0.514	20
Dibenz(a,h)anthracene	0.0800	0.0814	0.0814	102	102	43.0-132			0.000	20
Fluoranthene	0.0800	0.0804	0.0799	101	99.9	49.0-129			0.624	20



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

(LCS) R3332321-1 08/09/18 13:12 • (LCSD) R3332321-2 08/09/18 13:33

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 %
Fluorene	0.0800	0.0759	0.0761	94.9	95.1	50.0-120			0.263	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0802	0.0800	100	100	44.0-131			0.250	20
Naphthalene	0.0800	0.0715	0.0715	89.4	89.4	50.0-120			0.000	20
Phenanthrene	0.0800	0.0794	0.0793	99.3	99.1	48.0-120			0.126	20
Pyrene	0.0800	0.0748	0.0745	93.5	93.1	48.0-135			0.402	20
1-Methylnaphthalene	0.0800	0.0766	0.0769	95.8	96.1	52.0-122			0.391	20
2-Methylnaphthalene	0.0800	0.0740	0.0739	92.5	92.4	52.0-120			0.135	20
2-Chloronaphthalene	0.0800	0.0766	0.0769	95.8	96.1	50.0-120			0.391	20
<i>(S) Nitrobenzene-d5</i>				91.5	87.6	14.0-149				
<i>(S) 2-Fluorobiphenyl</i>				96.9	93.2	34.0-125				
<i>(S) p-Terphenyl-d14</i>				93.0	89.2	23.0-120				

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



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.

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

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.



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

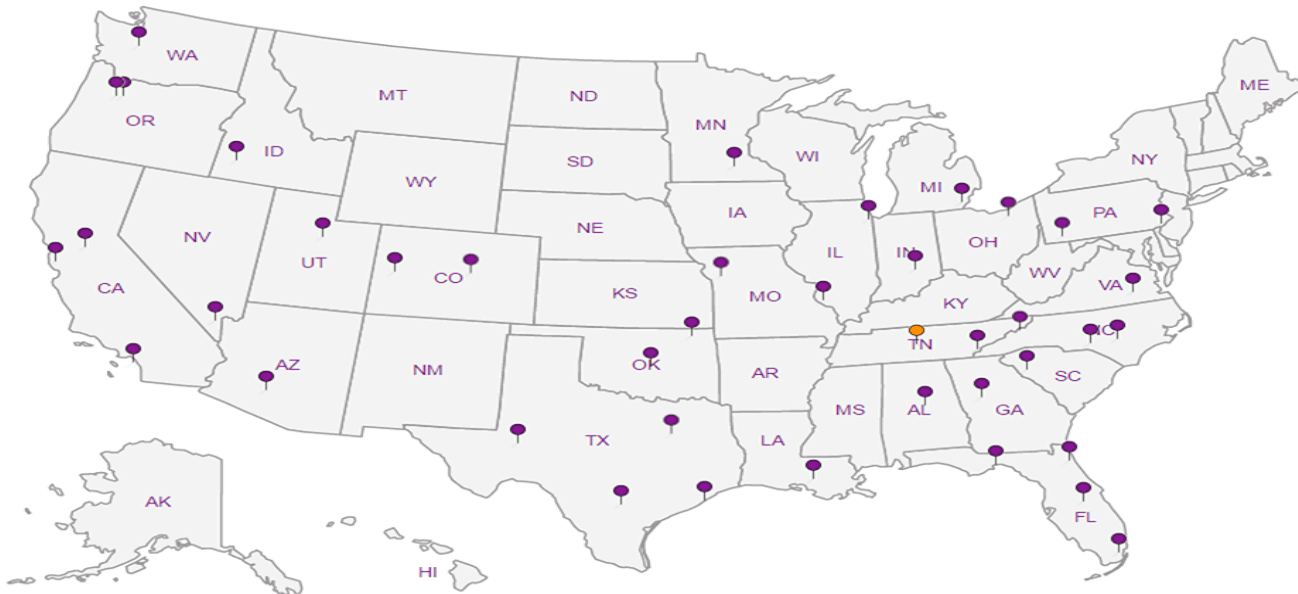
Third Party Federal Accreditations

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.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Accounts Payable
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
 Katie.Teague@kennedyjenks.com

Project Description: **BNSF - Wishram Railyard, WA**
 City/State Collected: **Wishram, WA**

Phone: **253-835-6400**
 Client Project #: **1890120 04**
 Lab Project #: **BNSF1KEN-WISHRAM**

Collected by (print): **K Teague**
 Site/Facility ID #
 P.O. #

Collected by (signature): *Katie Teague*
Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day
 Date Results Needed
 No. of Cntrs

Chain of Custody Page 1 of 2



12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **1014895**
H168

Acctnum: **BNSF1KEN**
 Template: **T138670**
 Prelogin: **P663876**
 TSR: **134 - Mark W. Beasley**
 PB: **7-23-18**

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	TPHDx no SGT
RMD-6(9.5-10.0)	Grab	SS	9.5-10	8/1/18	0950	3	X	X			X	
RMD-6(44.5-45.0)		SS	4.5-45	↓	1145							
DVP-01-20180801		SS	—	↓	—							
WMW-20(14.5-15.0)		SS	14.5-15	8/2/18	0820							
WMW-24(2.0-2.5)		SS	2-2.5	↓	1245							
WMW-24(9.5-10.0)		SS	9.5-10	↓	1400							
WMW-24(9.5-10.0)MS		SS	↓	↓	↓	12	X	X	X	X	X	
WMW-24(9.5-10.0)MSD		SS	↓	↓	↓	1	X	X	X	X	X	
WMW-26(2.0-2.5)		SS	2-2.5	8/2/18	1315							
WMW-27(2.0-2.5)		SS	2-2.5	8/2/18	1050							

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - Waste Water
 DW - Drinking Water
 OT - Other

Remarks: Include Dx and Gx chromatograms
No spaces in sample names. Analyze WMW-24(9.5-10.0)MS + MSD samples for just Dx (no SGT).

Samples returned via:
 UPS FedEx Courier

Tracking # **4492 6218 2053 / 4492 6218 2064**

pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist
 COC Seal Present/Intact: 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) *Katie Teague* Date: **8/3/18** Time: **1300**

Received by: (Signature) *FedEx* Trip Blank Received: Yes No
4 (2 HCl) (2 MeOH) TBR

Temp: **4.7°C** Bottles Received: **53**

Relinquished by: (Signature) Date: _____ Time: _____

Received by: (Signature) Date: **8/4/18** Time: **8:45**

If preservation required by Login: Date/Time **6:05 AM / 1/18**

Hold: _____ Condition: **OK**

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
Katie.Teague@kennedyjenks.com

Project:
Description: BNSF - Wishram Rail yard, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1890120 04

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
Kate Teague

Rush? (Lab MUST Be Notified)

Quote #

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Date Results Needed

No.
of
Cnts

Immediately
Packed on Ice N Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	Remarks	Sample # (lab only)
NMW-27(9.5-10.0)	Grab	SS	9.5-10	8/3/18	0750	3	X	X	X				07
NMW-28(2.0-2.5)	↓	SS	2-2.5	8/2/18	1035	3	↓	↓	↓				08
NMW-28(13.0-13.5)	↓	SS	13-13.5	↓	1530	3	↓	↓	↓				09
NMW-29(2.0-2.5)	↓	SS	2-2.5	↓	1120	3	↓	↓	↓				10
NMW-30(2.0-2.5)	↓	SS	2-2.5	↓	1135	3	↓	↓	↓				11
TB-02-20180803	—	SS	—	—	—	1					X		12
TB-03-20180803	—	SS	—	—	—	1					X		13
NMW-26(9.5-10.0)	Grab	SS	9.5-10	8/3/18	0920	3	X	X	X				14
NMW-29(9.5-10.0)	Grab	SS	9.5-10	8/3/18	1045	3	X	X	X				15
NMW-30(8.5-9.0)	↓	SS	8.5-9	↓	1140	3	X	X	X				16

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: Include Dx and Gx chromatograms
No spaces in sample names.

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist
COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N

Samples returned via:
UPS FedEx Courier

Tracking # 4492 6218 2052 / 4492 6218 2064

If Applicable
VQA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by: (Signature) <i>Kate Teague</i>	Date: 8/3/18	Time: 1300	Received by: (Signature) FedEx	Trip Blank Received: Yes/No 4 (2 HCL, 2 MeOH) (HCL/MeOH) TBR	Temp: °C 4.73	Bottles Received: 53	If preservation required by Login: Date/Time 6:05 AM/HR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C	Bottles Received:	If preservation required by Login: Date/Time	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/14/18	Time: 8:45	Hold:	Condition: NCF / OK



Login #:1014895	Client:BNSF1KEN	Date:08/04/18	Evaluated by:Matthew Lockhart
-----------------	-----------------	---------------	-------------------------------

Non-Conformance (check applicable items)

Sample Integrity		Chain of Custody Clarification	
Parameter(s) past holding time		Login Clarification Needed	If Broken Container:
Improper temperature		Chain of custody is incomplete	Insufficient packing material around container
Improper container type		Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation		Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courie
Insufficient sample volume.	X	Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.		Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.		Trip Blank not received.	If no Chain of Custody:
Broken container	X	Client did not "X" analysis.	Received by:
Broken container:		Chain of Custody is missing	Date/Time:
Sufficient sample remains			Temp./Cont. Rec./pH:
			Carrier:
			Tracking#

Login Comments: 1) Client did not mark analysis for: WMW-26(2.0-2.5) and WMW-27(2.0-2.5).
 2) Client sent an additional sample not listed on the COC RMD-6 (70.5-71.0)

Client informed by:	Call	Email	Voice Mail	Date: 8/6/18	Time: 0900
TSR Initials: MB	Client Contact: Katie Teague				

Login Instructions:

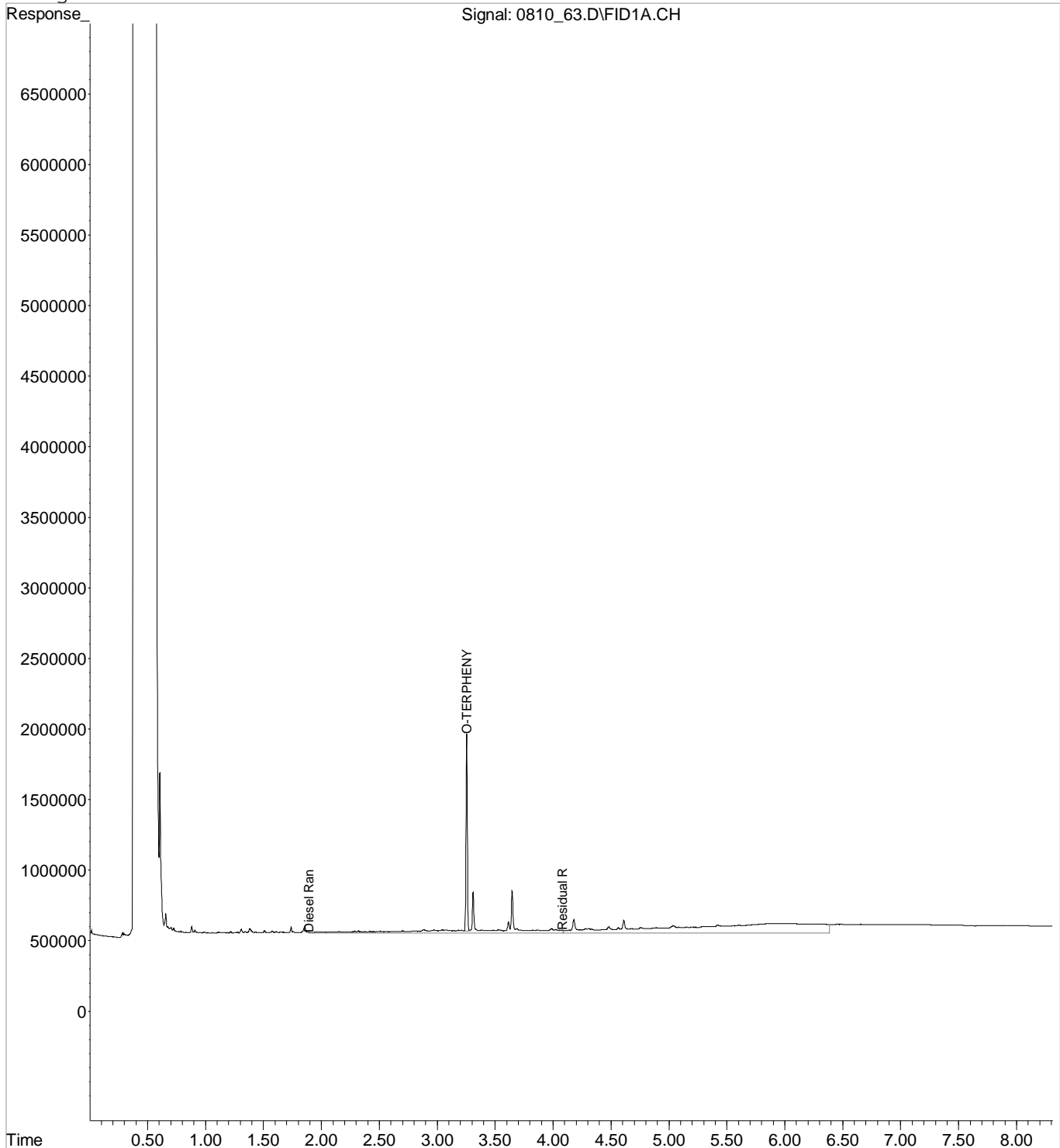
- 1) Log for MRCRA8, NWTPHDXNOSGT, SV8270PAHSIMD, V8260C, TERRACORE, & TS
- 2) Log for MRCRA8, NWTPHDXNOSGT, SV8270PAHSIMD, V8260C, TERRACORE, & TS

3) Log the 2 water trip blanks, place the soil trip blanks on hold

Data File : C:\MSDCHEM\1\DATA\081018\0810 63.D Vial: 43
Acq On : 8-11-2018 03:30:55 AM Operator: 647
Sample : L1014895-01 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:43 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

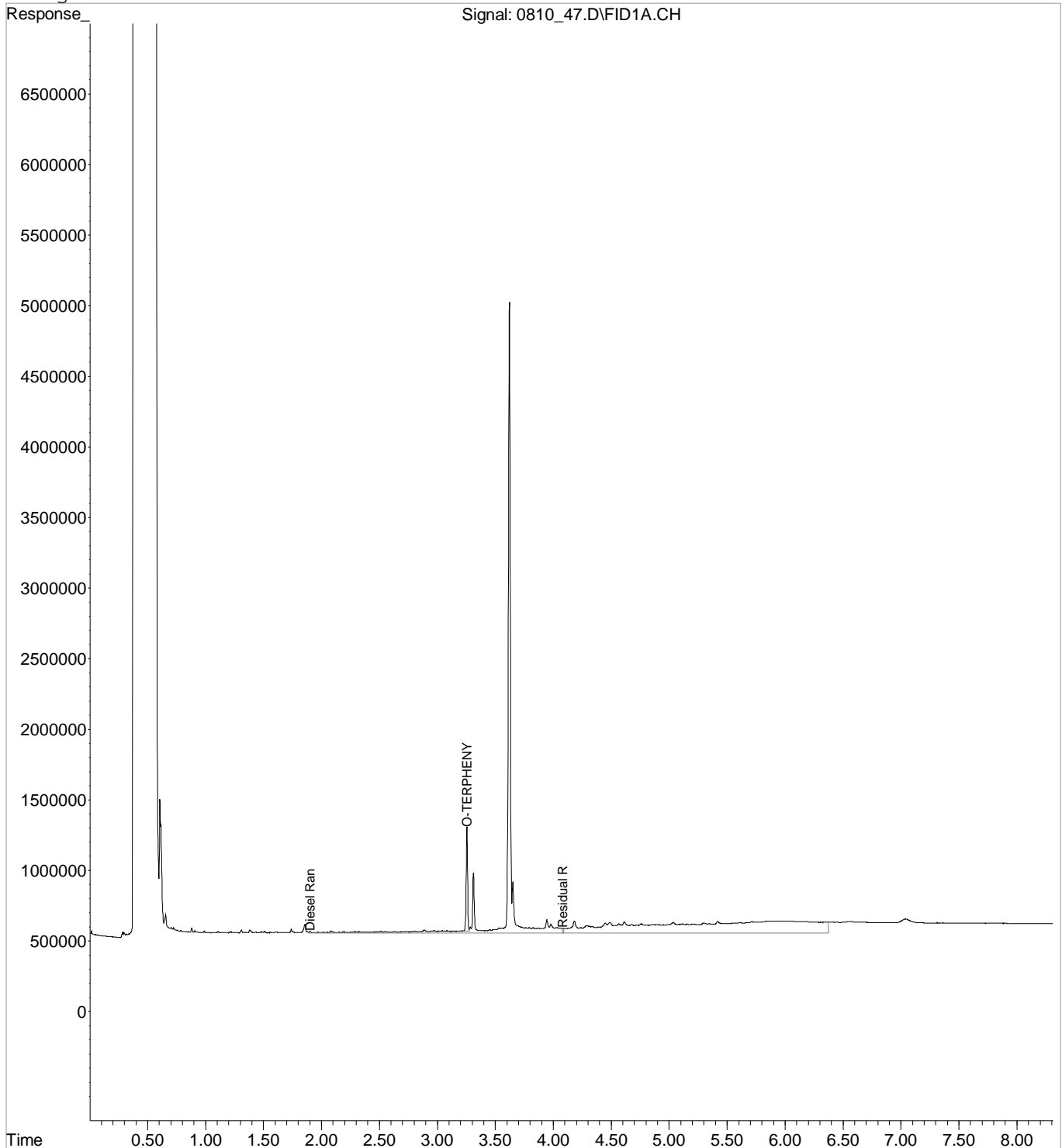
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 47.D Vial: 33
Acq On : 11 Aug 2018 12:19 am Operator: 647
Sample : L1014895-02 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:30 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

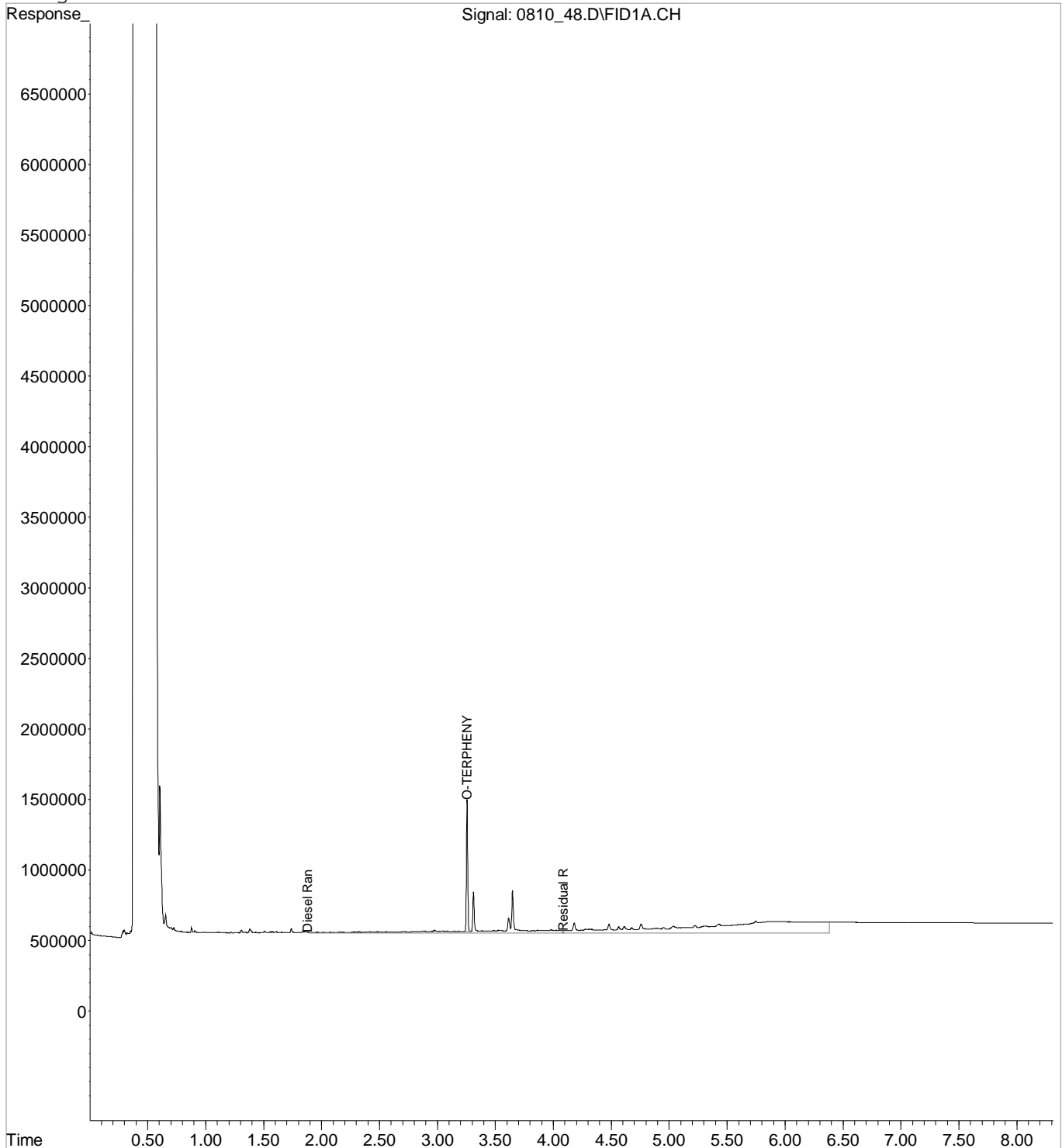
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 48.D Vial: 34
Acq On : 11 Aug 2018 12:31 am Operator: 647
Sample : L1014895-03 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:31 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

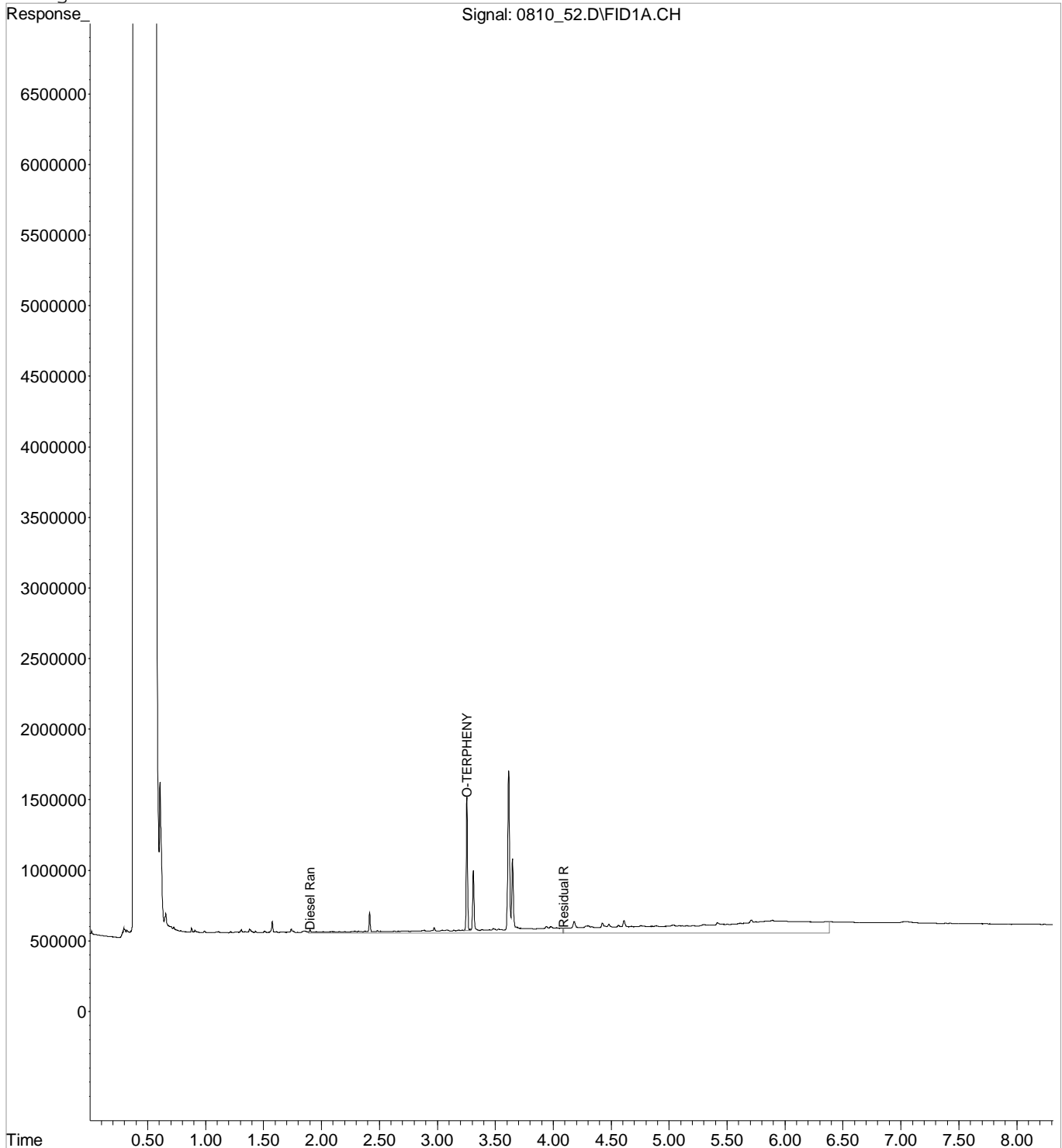
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 52.D Vial: 35
Acq On : 8-11-2018 01:19:05 AM Operator: 647
Sample : L1014895-04 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:32 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

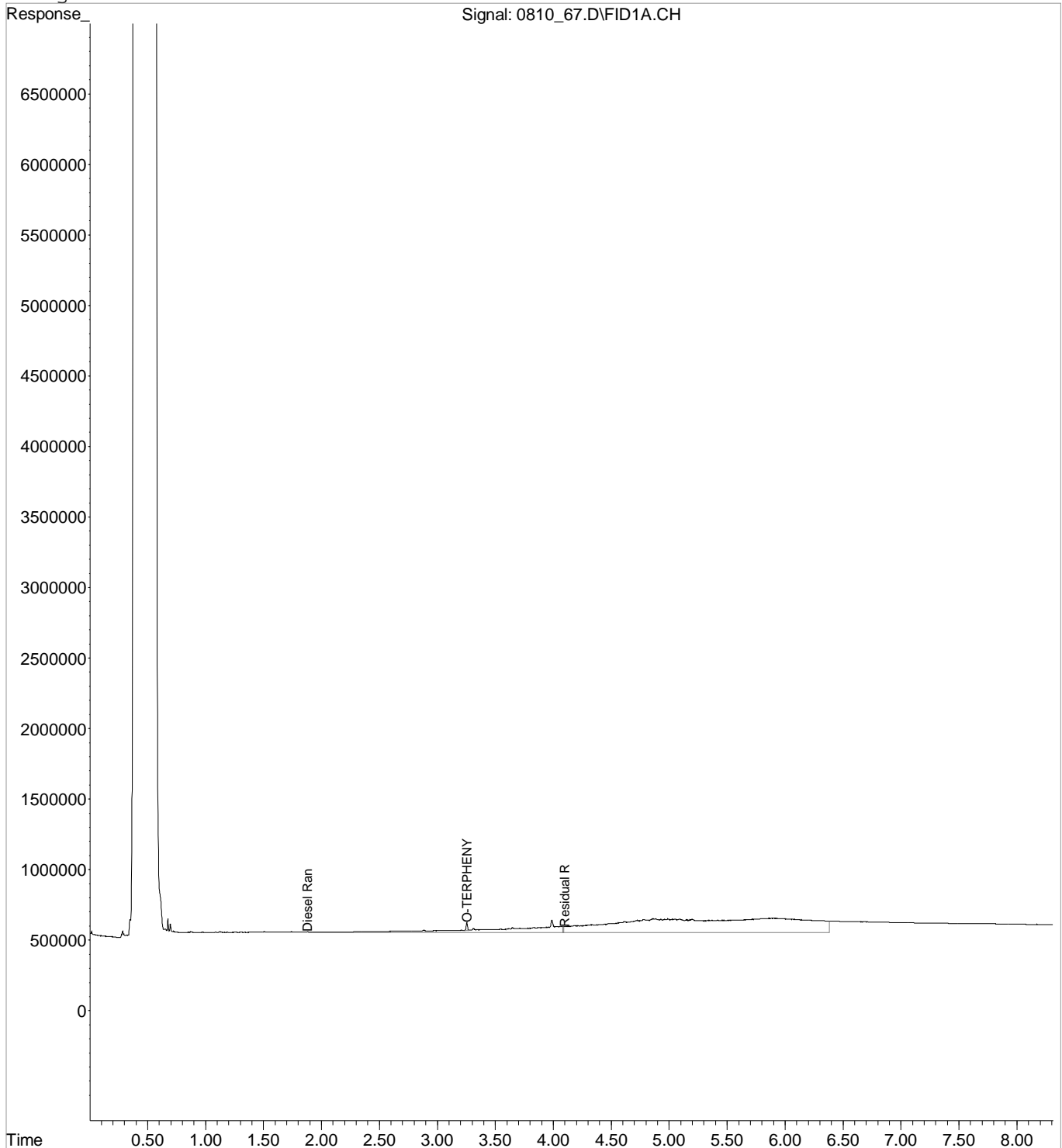
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 67.D Vial: 47
Acq On : 8-11-2018 04:18:43 AM Operator: 647
Sample : L1014895-05 20x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.67
IntFile : events.e
Quant Time: Aug 11 10:53 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

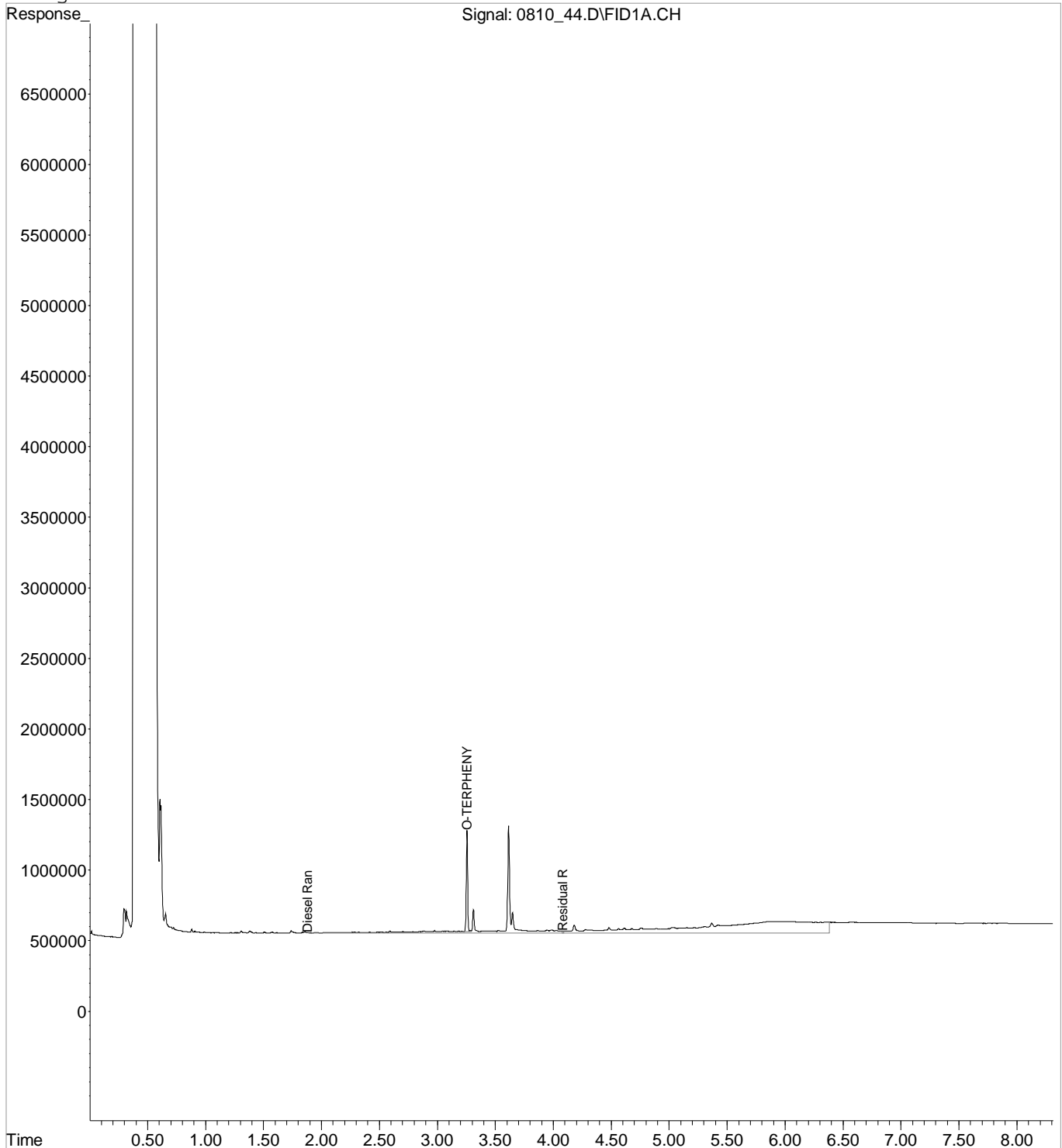
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 44.D Vial: 30
Acq On : 10 Aug 2018 11:43 pm Operator: 647
Sample : L1014895-06 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:24 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

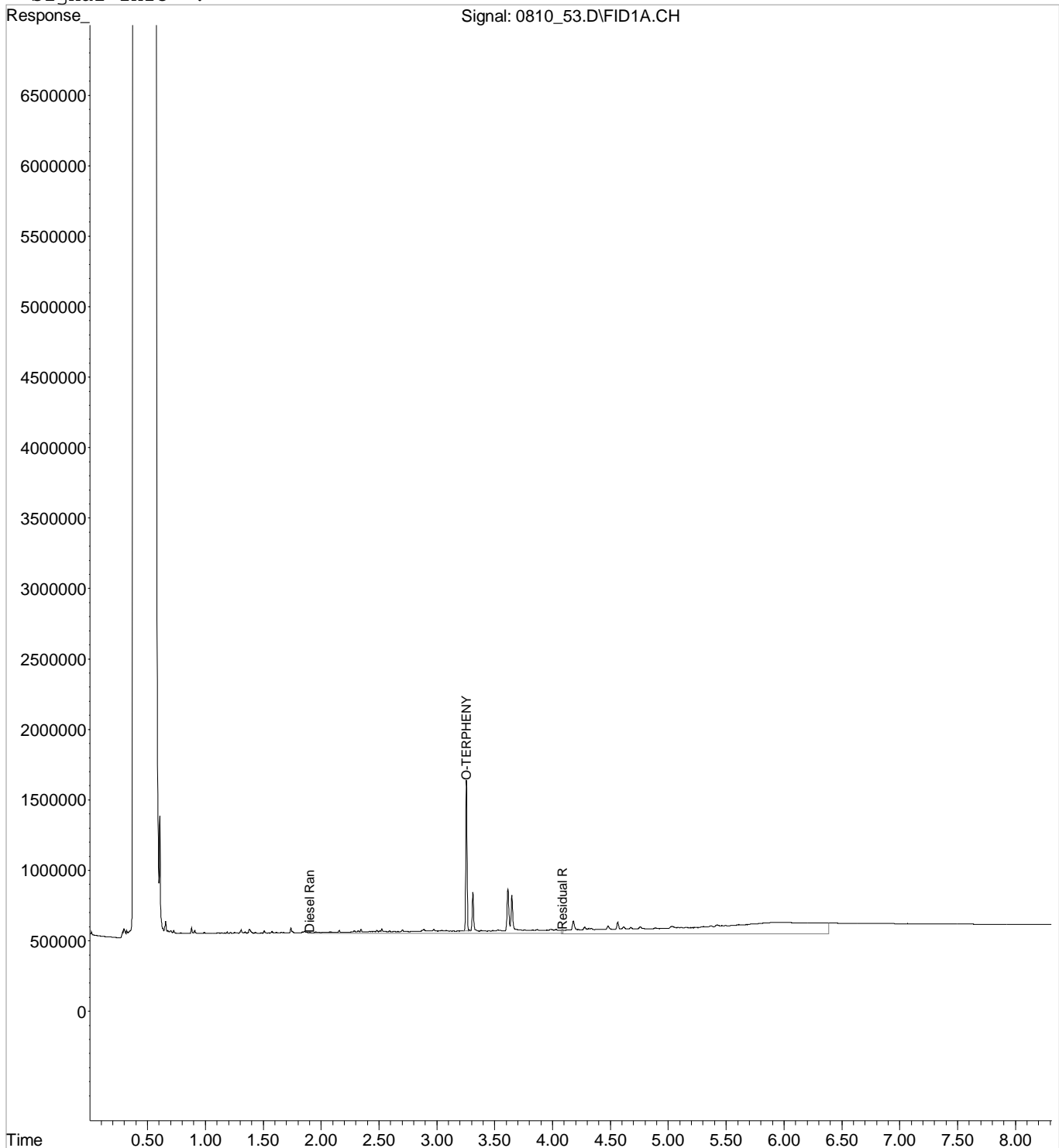
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 53.D Vial: 36
Acq On : 8-11-2018 01:30:57 AM Operator: 647
Sample : L1014895-07 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:33 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

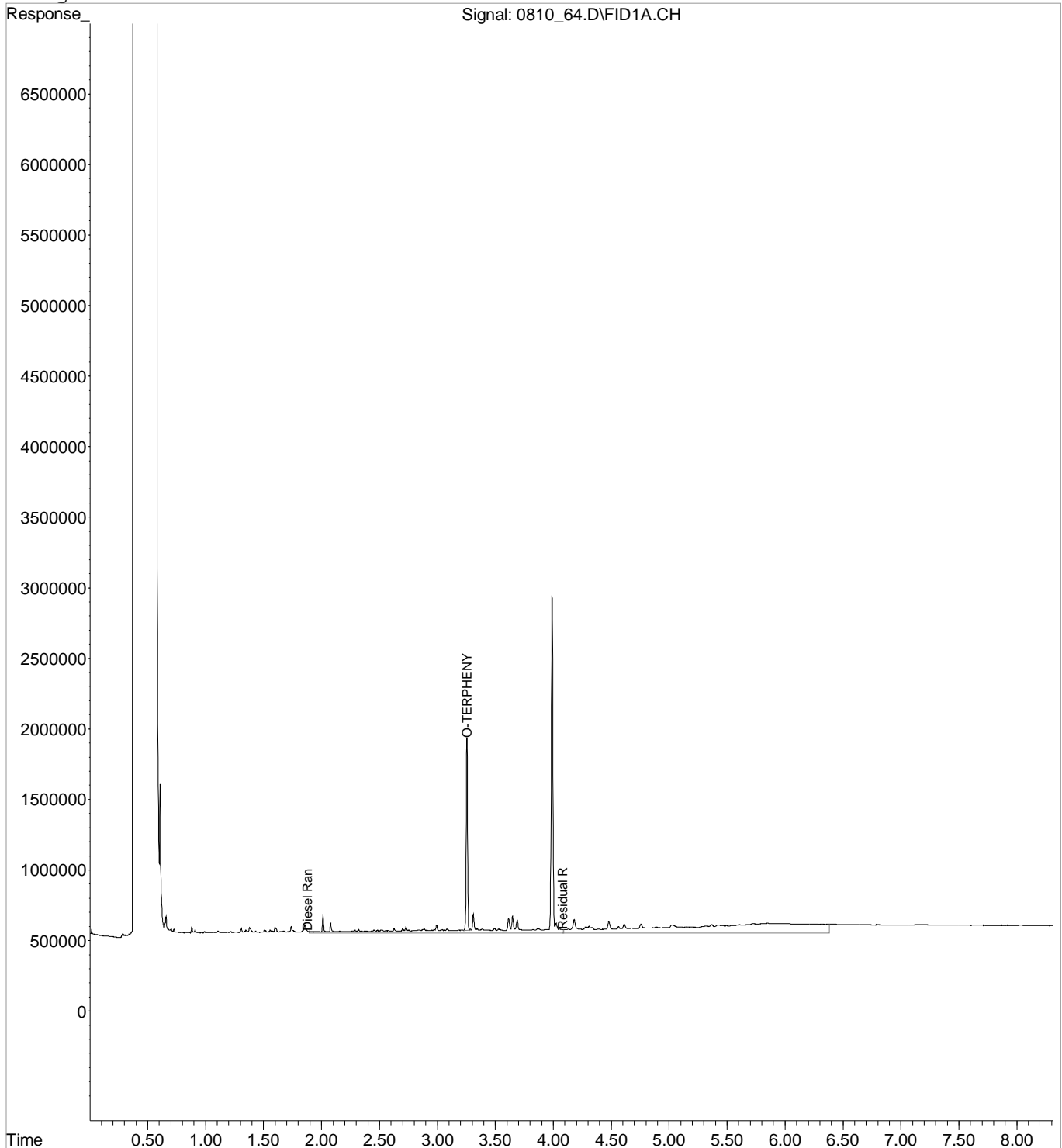
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 64.D Vial: 44
Acq On : 8-11-2018 03:42:53 AM Operator: 647
Sample : L1014895-08 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:48 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

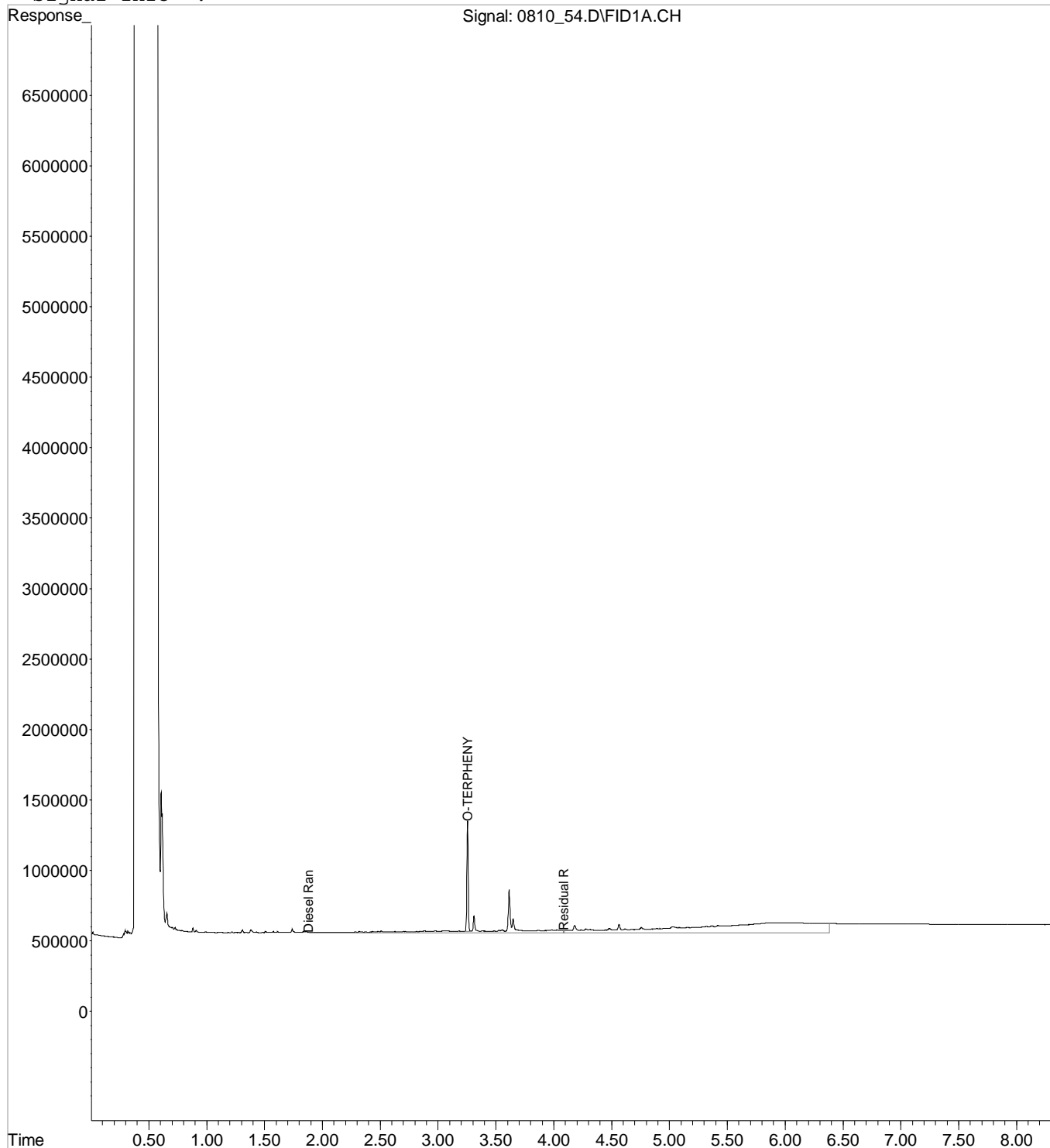
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 54.D Vial: 37
Acq On : 8-11-2018 01:42:53 AM Operator: 647
Sample : L1014895-09 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:34 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

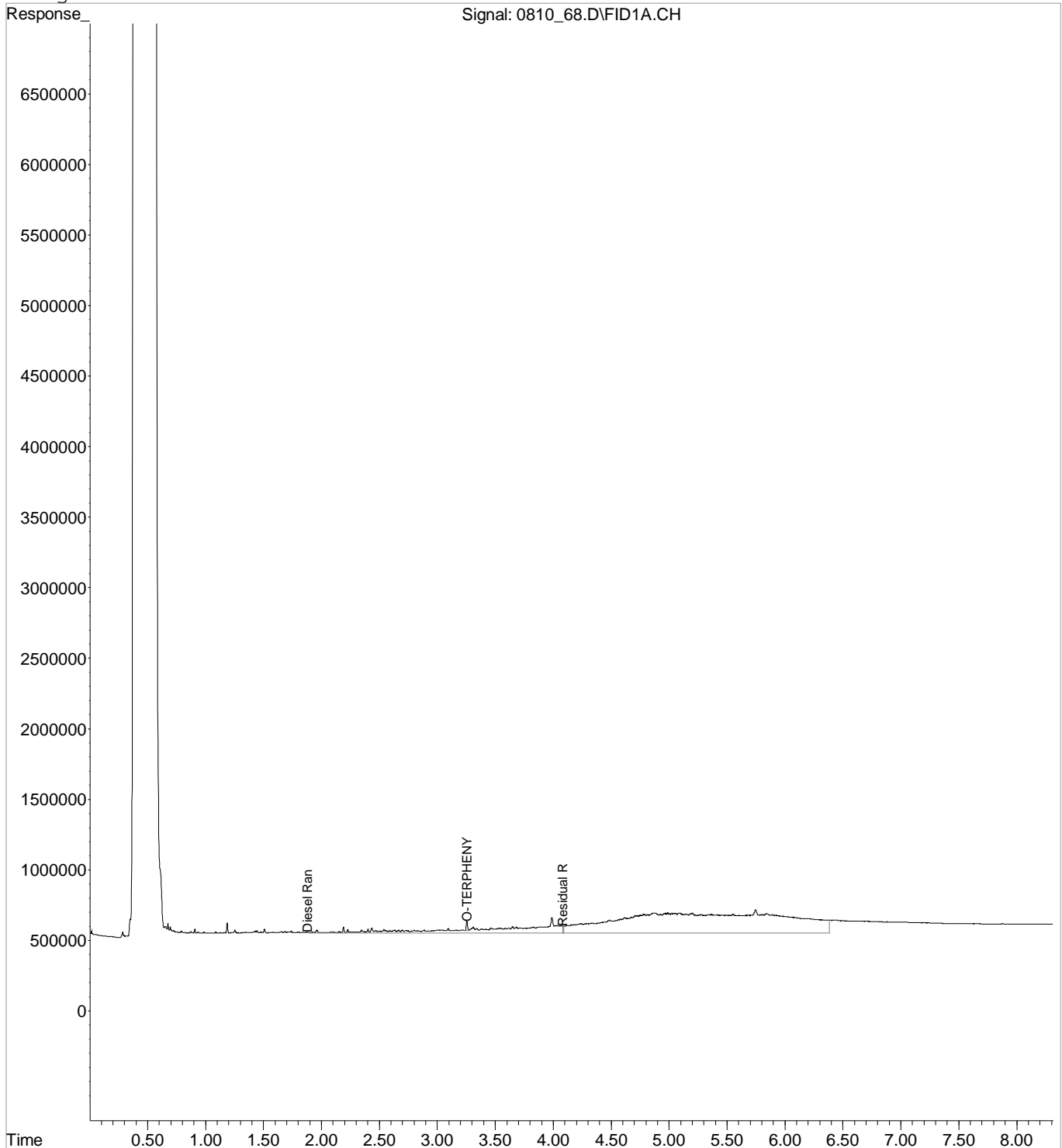
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 68.D Vial: 48
Acq On : 8-11-2018 04:30:45 AM Operator: 647
Sample : L1014895-10 20x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.67
IntFile : events.e
Quant Time: Aug 11 10:54 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

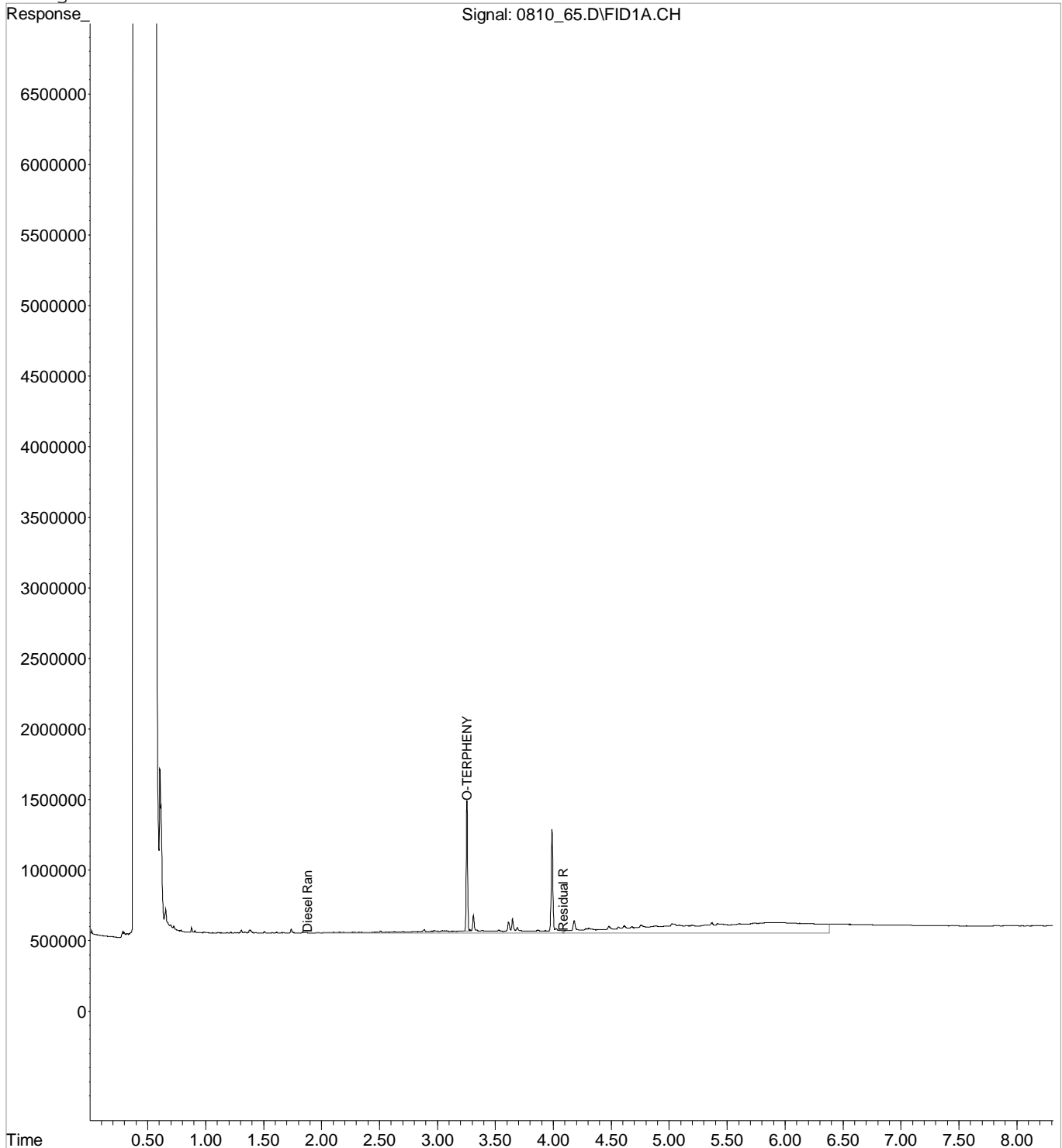
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 65.D Vial: 45
Acq On : 8-11-2018 03:54:51 AM Operator: 647
Sample : L1014895-11 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:50 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

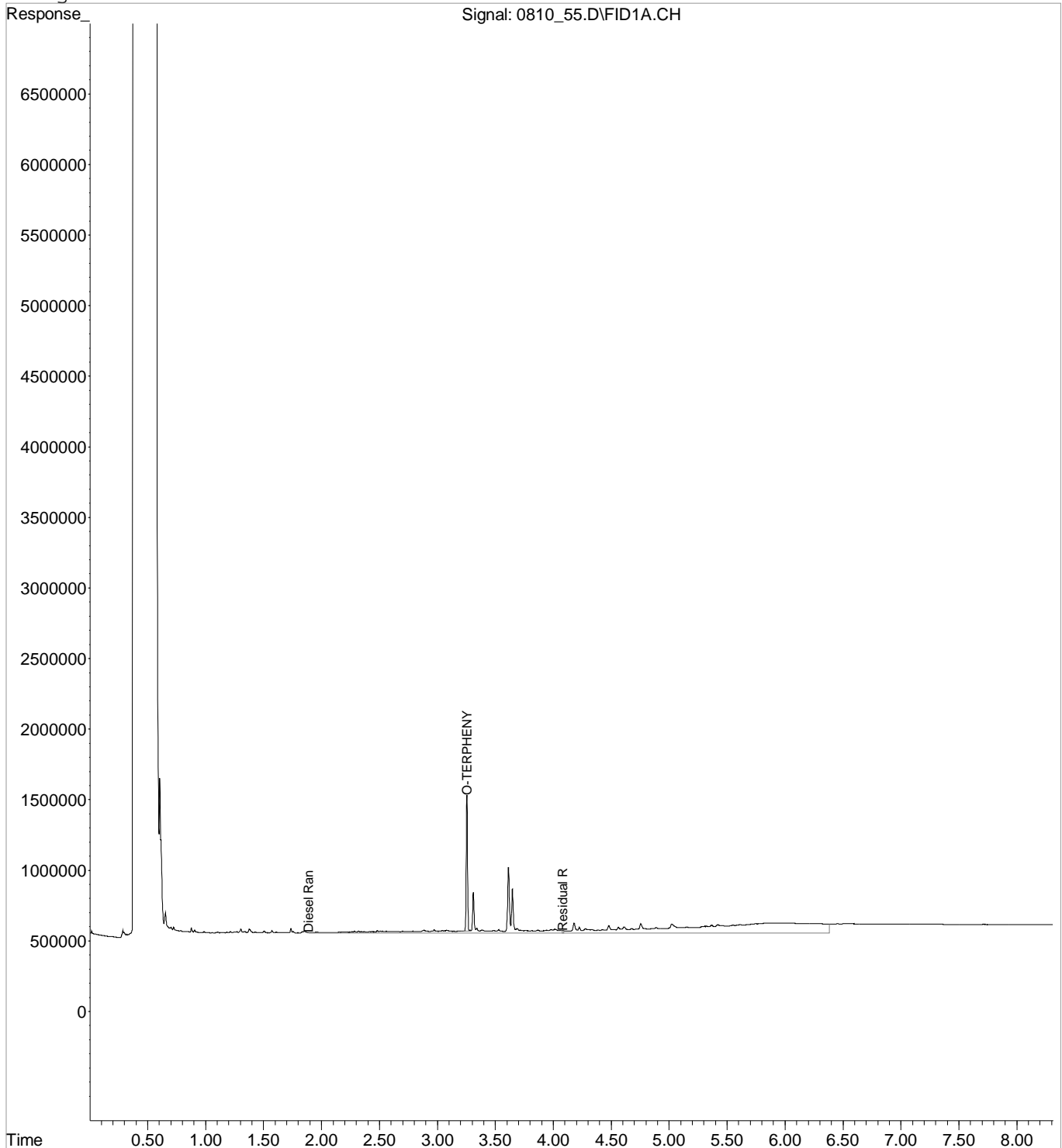
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 55.D Vial: 38
Acq On : 8-11-2018 01:55:29 AM Operator: 647
Sample : L1014895-14 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:34 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

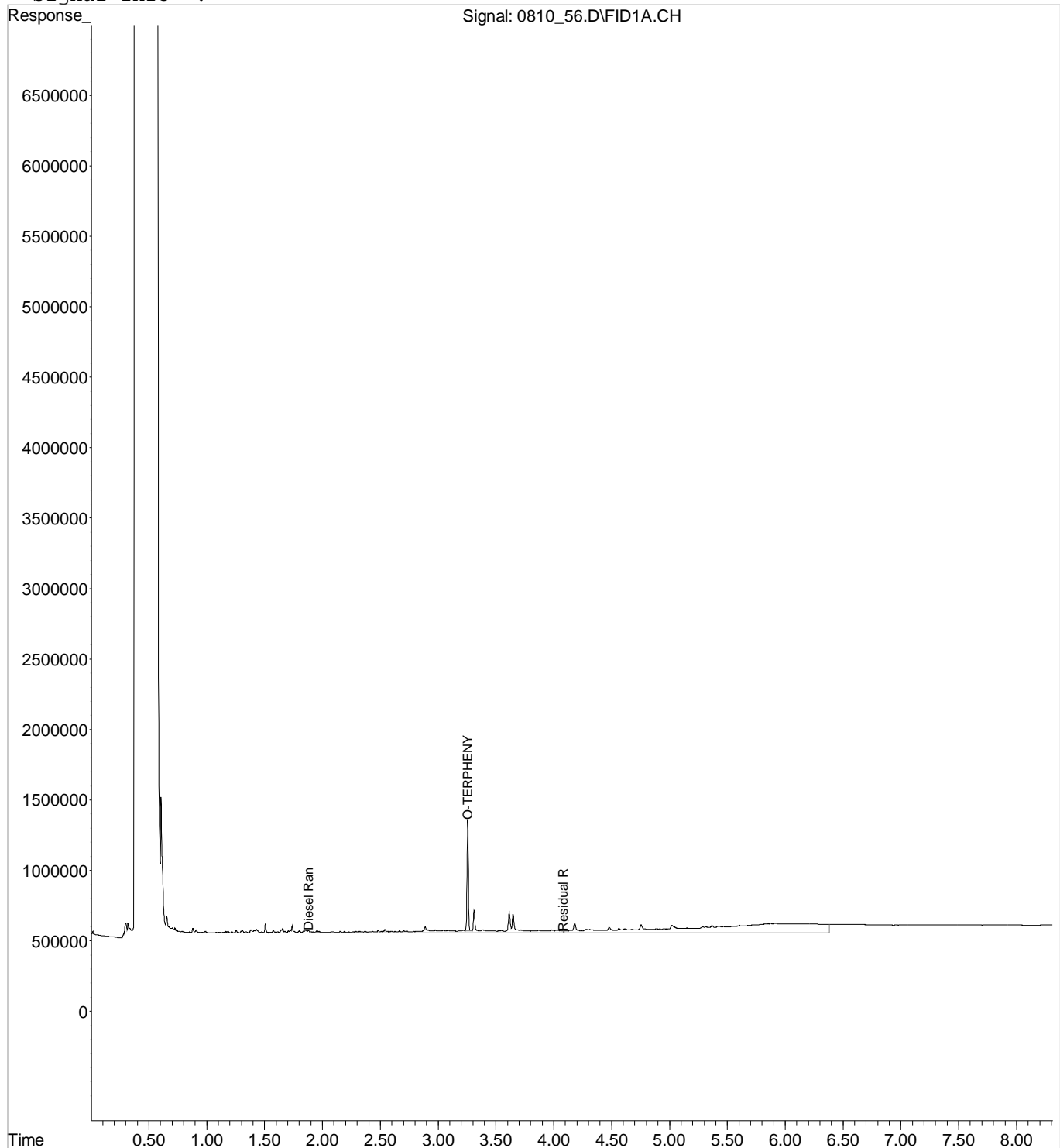
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 56.D Vial: 39
Acq On : 8-11-2018 02:07:26 AM Operator: 647
Sample : L1014895-15 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:35 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

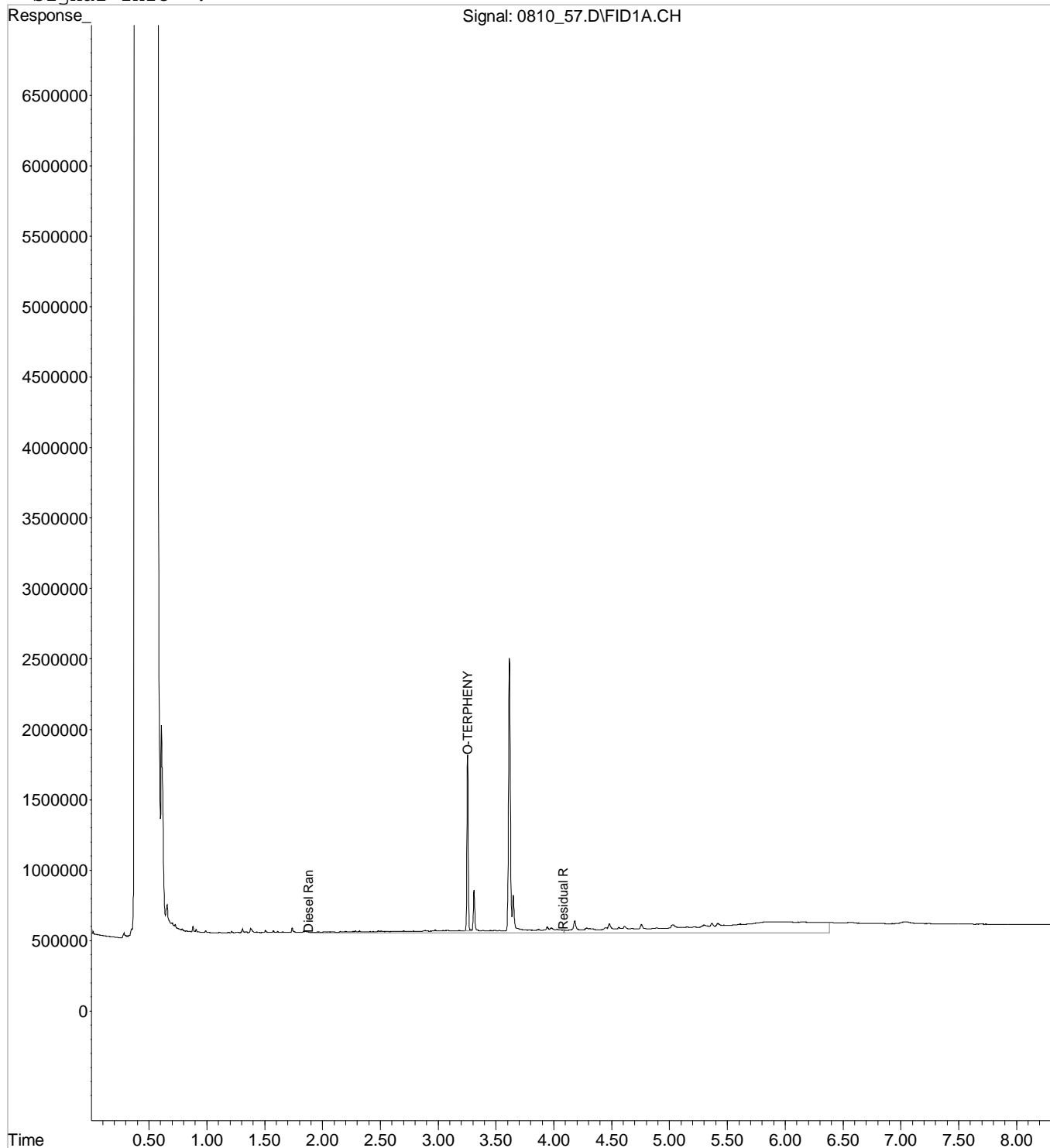
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 57.D Vial: 40
Acq On : 8-11-2018 02:19:26 AM Operator: 647
Sample : L1014895-16 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:36 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

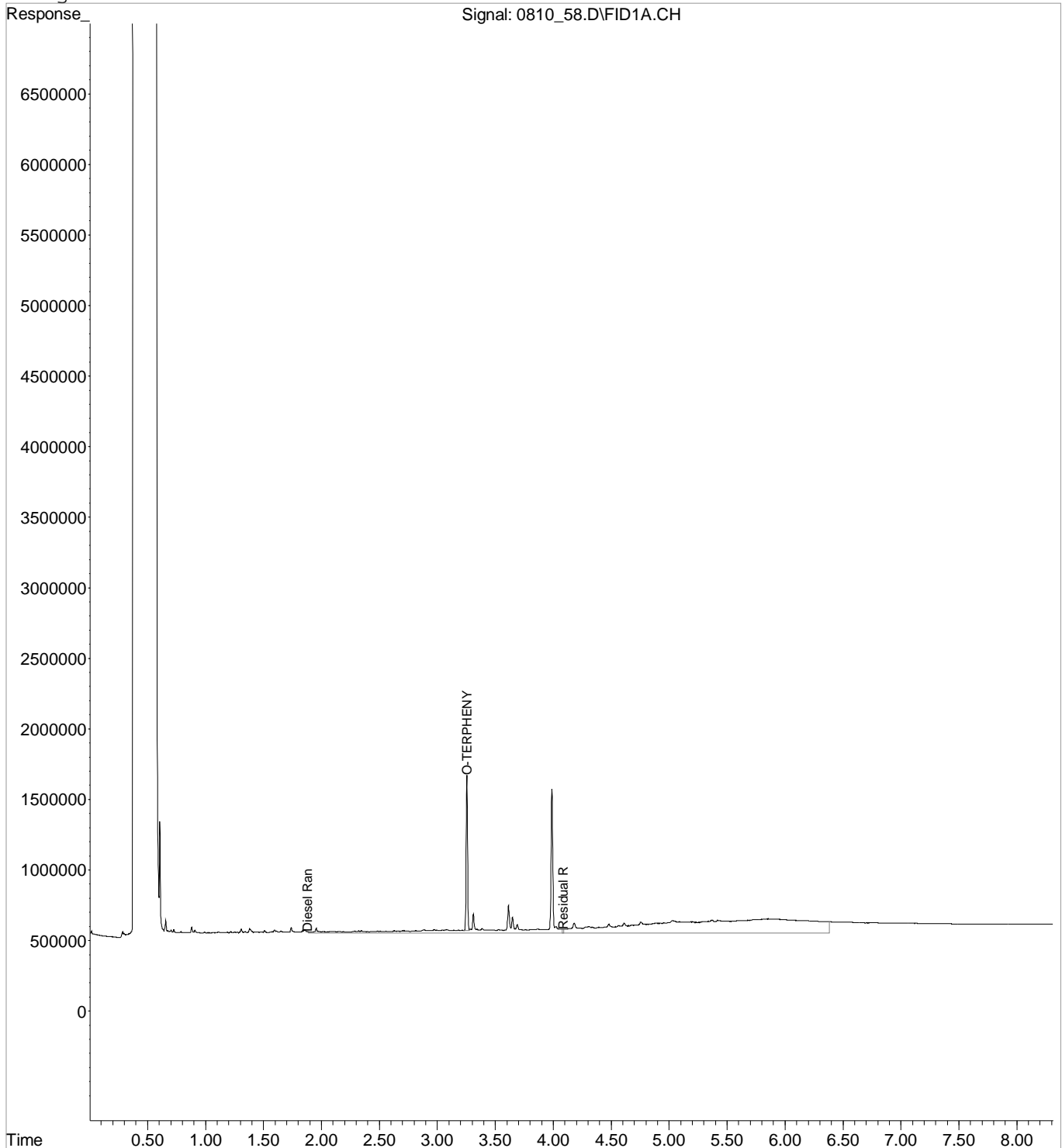
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 58.D Vial: 41
Acq On : 8-11-2018 02:31:21 AM Operator: 647
Sample : L1014895-17 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:37 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

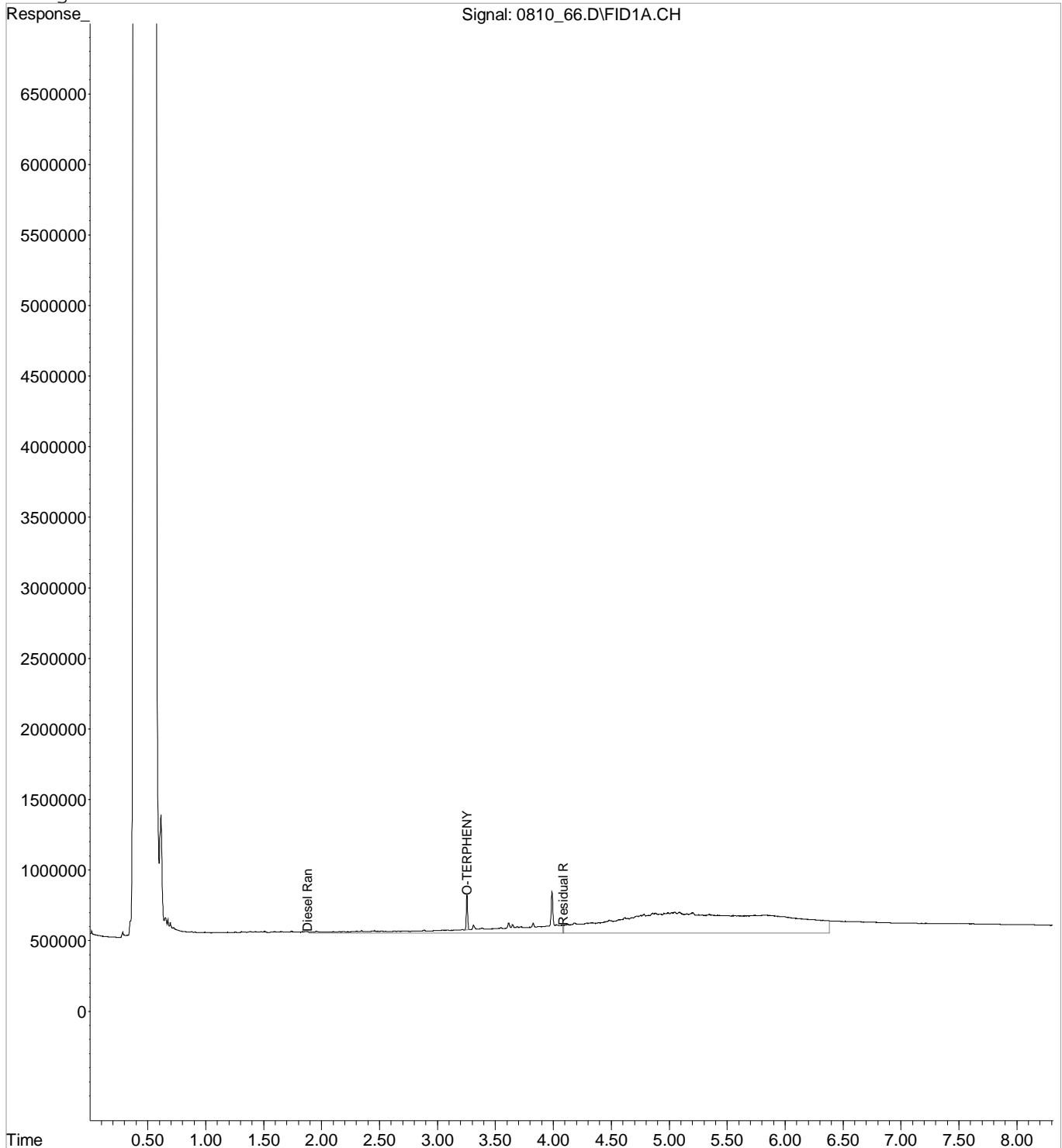
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 66.D Vial: 46
Acq On : 8-11-2018 04:06:49 AM Operator: 647
Sample : L1014895-18 5x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.17
IntFile : events.e
Quant Time: Aug 11 10:52 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

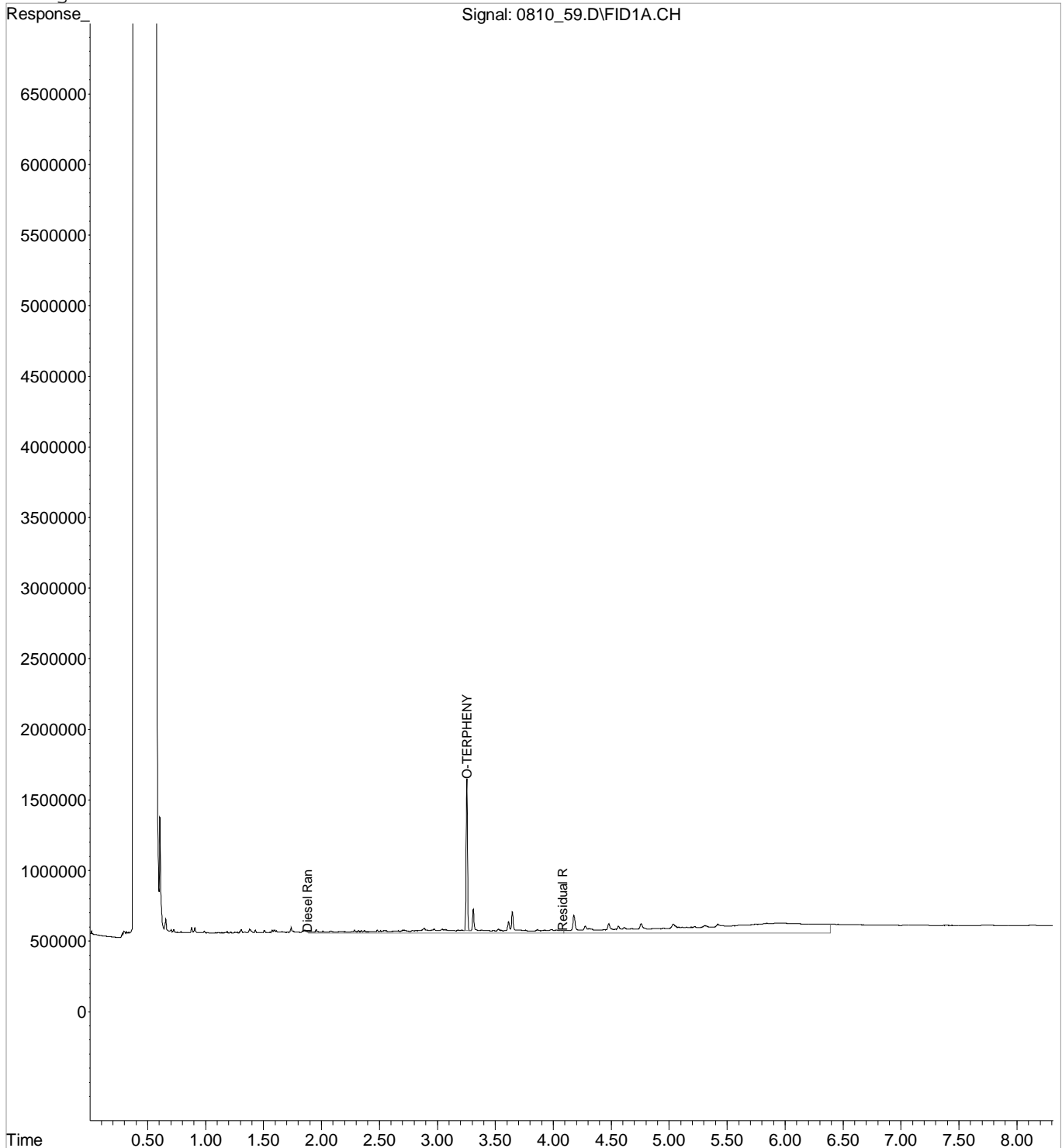
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081018\0810 59.D Vial: 42
Acq On : 8-11-2018 02:43:18 AM Operator: 647
Sample : L1014895-19 1x WG1149437 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 11 10:38 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

Volume Inj. :
Signal Phase :
Signal Info :



August 15, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1015598
Samples Received: 08/08/2018
Project Number: 1896120.04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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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WMW-21(2.0-2.5) L1015598-03	12	8 Al
WMW-21(9.5-10.0) L1015598-04	15	9 Sc
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SAMPLE SUMMARY



WMW-23(2.0-2.5) L1015598-01 Solid

Collected by
K. Teague
Collected date/time
08/06/18 13:30
Received date/time
08/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151554	1	08/14/18 09:08	08/14/18 09:21	KS
Mercury by Method 7471B	WG1149793	1	08/09/18 08:47	08/09/18 14:49	EL
Metals (ICP) by Method 6010C	WG1150174	1	08/10/18 08:43	08/10/18 11:43	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151298	1	08/06/18 13:30	08/13/18 18:29	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151743	1	08/06/18 13:30	08/14/18 03:51	JHH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150118	1	08/10/18 15:11	08/11/18 18:29	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1149656	1	08/09/18 09:16	08/09/18 17:44	DMG

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

WMW-22(1.5-2.0) L1015598-02 Solid

Collected by
K. Teague
Collected date/time
08/06/18 15:05
Received date/time
08/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151554	1	08/14/18 09:08	08/14/18 09:21	KS
Mercury by Method 7471B	WG1149793	1	08/09/18 08:47	08/09/18 14:52	EL
Metals (ICP) by Method 6010C	WG1150174	1	08/10/18 08:43	08/10/18 11:55	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151298	1	08/06/18 15:05	08/13/18 18:47	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151743	1	08/06/18 15:05	08/14/18 04:10	JHH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150118	1	08/10/18 15:11	08/11/18 19:23	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1149656	1	08/09/18 09:16	08/09/18 18:50	DMG

6
Qc

7
Gl

8
Al

9
Sc

WMW-21(2.0-2.5) L1015598-03 Solid

Collected by
K. Teague
Collected date/time
08/06/18 15:55
Received date/time
08/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151554	1	08/14/18 09:08	08/14/18 09:21	KS
Mercury by Method 7471B	WG1149793	1	08/09/18 08:47	08/09/18 14:54	EL
Metals (ICP) by Method 6010C	WG1150174	1	08/10/18 08:43	08/10/18 11:58	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151298	1	08/06/18 15:55	08/13/18 19:06	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151743	1	08/06/18 15:55	08/14/18 04:30	JHH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150118	1	08/10/18 15:11	08/11/18 19:36	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1149656	1	08/09/18 09:16	08/09/18 19:12	DMG

WMW-21(9.5-10.0) L1015598-04 Solid

Collected by
K. Teague
Collected date/time
08/07/18 08:25
Received date/time
08/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151554	1	08/14/18 09:08	08/14/18 09:21	KS
Mercury by Method 7471B	WG1149793	1	08/09/18 08:47	08/09/18 15:02	EL
Metals (ICP) by Method 6010C	WG1150174	1	08/10/18 08:43	08/10/18 12:05	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151747	1	08/07/18 08:25	08/14/18 01:23	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151906	1	08/07/18 08:25	08/14/18 11:44	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150118	1	08/10/18 15:11	08/11/18 19:50	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1149656	1	08/09/18 09:16	08/09/18 19:34	DMG

WMW-22(13.0-13.5) L1015598-05 Solid

Collected by
K. Teague
Collected date/time
08/07/18 11:30
Received date/time
08/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151554	1	08/14/18 09:08	08/14/18 09:21	KS
Mercury by Method 7471B	WG1149793	1	08/09/18 08:47	08/09/18 15:05	EL
Metals (ICP) by Method 6010C	WG1150174	1	08/10/18 08:43	08/10/18 12:08	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151747	1	08/07/18 11:30	08/14/18 01:41	DWR

SAMPLE SUMMARY



WMW-22(13.0-13.5) L1015598-05 Solid

Collected by
K. Teague
Collected date/time
08/07/18 11:30
Received date/time
08/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151906	1	08/07/18 11:30	08/14/18 12:04	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150118	1	08/10/18 15:11	08/11/18 20:03	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1149656	1	08/09/18 09:16	08/09/18 19:56	DMG

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

WMW-23(5.5-6.0) L1015598-06 Solid

Collected by
K. Teague
Collected date/time
08/07/18 13:10
Received date/time
08/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151556	1	08/14/18 08:53	08/14/18 09:01	KS
Mercury by Method 7471B	WG1149793	1	08/09/18 08:47	08/09/18 15:07	EL
Metals (ICP) by Method 6010C	WG1150174	1	08/10/18 08:43	08/10/18 12:10	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151747	1	08/07/18 13:10	08/14/18 02:00	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1151906	1	08/07/18 13:10	08/14/18 12:24	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150118	1	08/10/18 15:11	08/11/18 19:09	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1149656	1	08/09/18 09:16	08/09/18 20:18	DMG

TB-04-20180807 L1015598-07 GW

Collected by
K. Teague
Collected date/time
08/07/18 00:00
Received date/time
08/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1149953	1	08/09/18 14:58	08/09/18 14:58	JHH



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.

Mark W. Beasley
Project Manager

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	96.1		1	08/14/2018 09:21	WG1151554

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0208	1	08/09/2018 14:49	WG1149793

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	3.00	O1	2.08	1	08/10/2018 11:43	WG1150174
Barium	81.1		0.520	1	08/10/2018 11:43	WG1150174
Cadmium	ND		0.520	1	08/10/2018 11:43	WG1150174
Chromium	12.7		1.04	1	08/10/2018 11:43	WG1150174
Lead	4.73		0.520	1	08/10/2018 11:43	WG1150174
Selenium	ND	O1	2.08	1	08/10/2018 11:43	WG1150174
Silver	ND	O1	1.04	1	08/10/2018 11:43	WG1150174

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0260	1	08/14/2018 03:51	WG1151743
Acrylonitrile	ND		0.0130	1	08/13/2018 18:29	WG1151298
Benzene	ND		0.00104	1	08/13/2018 18:29	WG1151298
Bromobenzene	ND		0.0130	1	08/13/2018 18:29	WG1151298
Bromodichloromethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
Bromoform	ND		0.0260	1	08/13/2018 18:29	WG1151298
Bromomethane	ND	J0	0.0130	1	08/13/2018 18:29	WG1151298
n-Butylbenzene	ND		0.0130	1	08/13/2018 18:29	WG1151298
sec-Butylbenzene	ND		0.0130	1	08/13/2018 18:29	WG1151298
tert-Butylbenzene	ND		0.00520	1	08/13/2018 18:29	WG1151298
Carbon tetrachloride	ND	J6	0.00520	1	08/13/2018 18:29	WG1151298
Chlorobenzene	ND		0.00260	1	08/13/2018 18:29	WG1151298
Chlorodibromomethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
Chloroethane	ND		0.00520	1	08/13/2018 18:29	WG1151298
Chloroform	ND		0.00260	1	08/13/2018 18:29	WG1151298
Chloromethane	ND		0.0130	1	08/13/2018 18:29	WG1151298
2-Chlorotoluene	ND		0.00260	1	08/13/2018 18:29	WG1151298
4-Chlorotoluene	ND		0.00520	1	08/13/2018 18:29	WG1151298
1,2-Dibromo-3-Chloropropane	ND	J4	0.0260	1	08/13/2018 18:29	WG1151298
1,2-Dibromoethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
Dibromomethane	ND		0.00520	1	08/13/2018 18:29	WG1151298
1,2-Dichlorobenzene	ND		0.00520	1	08/13/2018 18:29	WG1151298
1,3-Dichlorobenzene	ND		0.00520	1	08/13/2018 18:29	WG1151298
1,4-Dichlorobenzene	ND		0.00520	1	08/13/2018 18:29	WG1151298
Dichlorodifluoromethane	ND	J6	0.00260	1	08/13/2018 18:29	WG1151298
1,1-Dichloroethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
1,2-Dichloroethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
1,1-Dichloroethene	ND		0.00260	1	08/13/2018 18:29	WG1151298
cis-1,2-Dichloroethene	ND		0.00260	1	08/13/2018 18:29	WG1151298
trans-1,2-Dichloroethene	ND	J6	0.00520	1	08/13/2018 18:29	WG1151298
1,2-Dichloropropane	ND		0.00520	1	08/13/2018 18:29	WG1151298
1,1-Dichloropropene	ND		0.00260	1	08/13/2018 18:29	WG1151298
1,3-Dichloropropane	ND		0.00520	1	08/13/2018 18:29	WG1151298

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00260	1	08/13/2018 18:29	WG1151298
trans-1,3-Dichloropropene	ND		0.00520	1	08/13/2018 18:29	WG1151298
2,2-Dichloropropane	ND	J6	0.00260	1	08/13/2018 18:29	WG1151298
Di-isopropyl ether	ND		0.00104	1	08/13/2018 18:29	WG1151298
Ethylbenzene	ND		0.00260	1	08/13/2018 18:29	WG1151298
Hexachloro-1,3-butadiene	ND		0.0260	1	08/13/2018 18:29	WG1151298
Isopropylbenzene	ND		0.00260	1	08/13/2018 18:29	WG1151298
p-Isopropyltoluene	ND		0.00520	1	08/13/2018 18:29	WG1151298
2-Butanone (MEK)	ND	J3	0.0260	1	08/13/2018 18:29	WG1151298
Methylene Chloride	ND		0.0260	1	08/13/2018 18:29	WG1151298
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0260	1	08/13/2018 18:29	WG1151298
Methyl tert-butyl ether	ND		0.00104	1	08/13/2018 18:29	WG1151298
Naphthalene	ND		0.0130	1	08/13/2018 18:29	WG1151298
n-Propylbenzene	ND		0.00520	1	08/13/2018 18:29	WG1151298
Styrene	ND		0.0130	1	08/13/2018 18:29	WG1151298
1,1,1,2-Tetrachloroethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
1,1,2,2-Tetrachloroethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
1,1,2-Trichlorotrifluoroethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
Tetrachloroethene	ND		0.00260	1	08/13/2018 18:29	WG1151298
Toluene	ND		0.00520	1	08/13/2018 18:29	WG1151298
1,2,3-Trichlorobenzene	ND	J4	0.00260	1	08/13/2018 18:29	WG1151298
1,2,4-Trichlorobenzene	ND		0.0130	1	08/13/2018 18:29	WG1151298
1,1,1-Trichloroethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
1,1,2-Trichloroethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
Trichloroethene	ND		0.00104	1	08/13/2018 18:29	WG1151298
Trichlorofluoromethane	ND		0.00260	1	08/13/2018 18:29	WG1151298
1,2,3-Trichloropropane	ND		0.0130	1	08/13/2018 18:29	WG1151298
1,2,4-Trimethylbenzene	ND		0.00520	1	08/13/2018 18:29	WG1151298
1,2,3-Trimethylbenzene	ND		0.00520	1	08/13/2018 18:29	WG1151298
Vinyl chloride	ND		0.00260	1	08/13/2018 18:29	WG1151298
1,3,5-Trimethylbenzene	ND		0.00520	1	08/13/2018 18:29	WG1151298
o-Xylene	ND		0.00260	1	08/13/2018 18:29	WG1151298
m&p-Xylene	ND		0.00416	1	08/13/2018 18:29	WG1151298
(S) Toluene-d8	114		80.0-120		08/13/2018 18:29	WG1151298
(S) Toluene-d8	116		80.0-120		08/14/2018 03:51	WG1151743
(S) Dibromofluoromethane	89.2		74.0-131		08/13/2018 18:29	WG1151298
(S) Dibromofluoromethane	88.5		74.0-131		08/14/2018 03:51	WG1151743
(S) 4-Bromofluorobenzene	98.6		64.0-132		08/13/2018 18:29	WG1151298
(S) 4-Bromofluorobenzene	91.4		64.0-132		08/14/2018 03:51	WG1151743

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND	J3 J6	4.16	1	08/11/2018 18:29	WG1150118
Residual Range Organics (RRO)	ND	J3	10.4	1	08/11/2018 18:29	WG1150118
(S) o-Terphenyl	69.3		18.0-148		08/11/2018 18:29	WG1150118

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Acenaphthene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Acenaphthylene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Benzo(a)anthracene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Benzo(a)pyrene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656



Collected date/time: 08/06/18 13:30

L1015598

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00624	1	08/09/2018 17:44	WG1149656
Benzo(g,h,i)perylene	ND		0.00624	1	08/09/2018 17:44	WG1149656
Benzo(k)fluoranthene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Chrysene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Dibenz(a,h)anthracene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Fluoranthene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Fluorene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Indeno(1,2,3-cd)pyrene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Naphthalene	ND		0.0208	1	08/09/2018 17:44	WG1149656
Phenanthrene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
Pyrene	ND	J3	0.00624	1	08/09/2018 17:44	WG1149656
1-Methylnaphthalene	ND		0.0208	1	08/09/2018 17:44	WG1149656
2-Methylnaphthalene	ND		0.0208	1	08/09/2018 17:44	WG1149656
2-Chloronaphthalene	ND	J3	0.0208	1	08/09/2018 17:44	WG1149656
(S) Nitrobenzene-d5	69.2		14.0-149		08/09/2018 17:44	WG1149656
(S) 2-Fluorobiphenyl	90.1		34.0-125		08/09/2018 17:44	WG1149656
(S) p-Terphenyl-d14	90.6		23.0-120		08/09/2018 17:44	WG1149656

- 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
Total Solids	87.3		1	08/14/2018 09:21	WG1151554

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	0.0483		0.0229	1	08/09/2018 14:52	WG1149793

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	2.79		2.29	1	08/10/2018 11:55	WG1150174
Barium	64.1		0.573	1	08/10/2018 11:55	WG1150174
Cadmium	ND		0.573	1	08/10/2018 11:55	WG1150174
Chromium	9.08		1.15	1	08/10/2018 11:55	WG1150174
Lead	7.73		0.573	1	08/10/2018 11:55	WG1150174
Selenium	ND		2.29	1	08/10/2018 11:55	WG1150174
Silver	ND		1.15	1	08/10/2018 11:55	WG1150174

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0286	1	08/14/2018 04:10	WG1151743
Acrylonitrile	ND		0.0143	1	08/13/2018 18:47	WG1151298
Benzene	ND		0.00115	1	08/13/2018 18:47	WG1151298
Bromobenzene	ND		0.0143	1	08/13/2018 18:47	WG1151298
Bromodichloromethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
Bromoform	ND		0.0286	1	08/13/2018 18:47	WG1151298
Bromomethane	ND	JO	0.0143	1	08/13/2018 18:47	WG1151298
n-Butylbenzene	ND		0.0143	1	08/13/2018 18:47	WG1151298
sec-Butylbenzene	ND		0.0143	1	08/13/2018 18:47	WG1151298
tert-Butylbenzene	ND		0.00573	1	08/13/2018 18:47	WG1151298
Carbon tetrachloride	ND		0.00573	1	08/13/2018 18:47	WG1151298
Chlorobenzene	ND		0.00286	1	08/13/2018 18:47	WG1151298
Chlorodibromomethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
Chloroethane	ND		0.00573	1	08/13/2018 18:47	WG1151298
Chloroform	ND		0.00286	1	08/13/2018 18:47	WG1151298
Chloromethane	ND		0.0143	1	08/13/2018 18:47	WG1151298
2-Chlorotoluene	ND		0.00286	1	08/13/2018 18:47	WG1151298
4-Chlorotoluene	ND		0.00573	1	08/13/2018 18:47	WG1151298
1,2-Dibromo-3-Chloropropane	ND	J4	0.0286	1	08/13/2018 18:47	WG1151298
1,2-Dibromoethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
Dibromomethane	ND		0.00573	1	08/13/2018 18:47	WG1151298
1,2-Dichlorobenzene	ND		0.00573	1	08/13/2018 18:47	WG1151298
1,3-Dichlorobenzene	ND		0.00573	1	08/13/2018 18:47	WG1151298
1,4-Dichlorobenzene	ND		0.00573	1	08/13/2018 18:47	WG1151298
Dichlorodifluoromethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
1,1-Dichloroethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
1,2-Dichloroethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
1,1-Dichloroethene	ND		0.00286	1	08/13/2018 18:47	WG1151298
cis-1,2-Dichloroethene	ND		0.00286	1	08/13/2018 18:47	WG1151298
trans-1,2-Dichloroethene	ND		0.00573	1	08/13/2018 18:47	WG1151298
1,2-Dichloropropane	ND		0.00573	1	08/13/2018 18:47	WG1151298
1,1-Dichloropropene	ND		0.00286	1	08/13/2018 18:47	WG1151298
1,3-Dichloropropane	ND		0.00573	1	08/13/2018 18:47	WG1151298

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00286	1	08/13/2018 18:47	WG1151298
trans-1,3-Dichloropropene	ND		0.00573	1	08/13/2018 18:47	WG1151298
2,2-Dichloropropane	ND		0.00286	1	08/13/2018 18:47	WG1151298
Di-isopropyl ether	ND		0.00115	1	08/13/2018 18:47	WG1151298
Ethylbenzene	ND		0.00286	1	08/13/2018 18:47	WG1151298
Hexachloro-1,3-butadiene	ND		0.0286	1	08/13/2018 18:47	WG1151298
Isopropylbenzene	ND		0.00286	1	08/13/2018 18:47	WG1151298
p-Isopropyltoluene	ND		0.00573	1	08/13/2018 18:47	WG1151298
2-Butanone (MEK)	ND		0.0286	1	08/13/2018 18:47	WG1151298
Methylene Chloride	ND		0.0286	1	08/13/2018 18:47	WG1151298
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0286	1	08/13/2018 18:47	WG1151298
Methyl tert-butyl ether	ND		0.00115	1	08/13/2018 18:47	WG1151298
Naphthalene	ND		0.0143	1	08/13/2018 18:47	WG1151298
n-Propylbenzene	ND		0.00573	1	08/13/2018 18:47	WG1151298
Styrene	ND		0.0143	1	08/13/2018 18:47	WG1151298
1,1,1,2-Tetrachloroethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
1,1,2,2-Tetrachloroethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
1,1,2-Trichlorotrifluoroethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
Tetrachloroethene	ND		0.00286	1	08/13/2018 18:47	WG1151298
Toluene	ND		0.00573	1	08/13/2018 18:47	WG1151298
1,2,3-Trichlorobenzene	ND	J4	0.00286	1	08/13/2018 18:47	WG1151298
1,2,4-Trichlorobenzene	ND		0.0143	1	08/13/2018 18:47	WG1151298
1,1,1-Trichloroethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
1,1,2-Trichloroethane	ND		0.00286	1	08/13/2018 18:47	WG1151298
Trichloroethene	ND		0.00115	1	08/13/2018 18:47	WG1151298
Trichlorofluoromethane	ND	J3	0.00286	1	08/13/2018 18:47	WG1151298
1,2,3-Trichloropropane	ND		0.0143	1	08/13/2018 18:47	WG1151298
1,2,4-Trimethylbenzene	ND		0.00573	1	08/13/2018 18:47	WG1151298
1,2,3-Trimethylbenzene	ND		0.00573	1	08/13/2018 18:47	WG1151298
Vinyl chloride	ND		0.00286	1	08/13/2018 18:47	WG1151298
1,3,5-Trimethylbenzene	ND		0.00573	1	08/13/2018 18:47	WG1151298
o-Xylene	ND		0.00286	1	08/13/2018 18:47	WG1151298
m&p-Xylene	ND		0.00458	1	08/13/2018 18:47	WG1151298
(S) Toluene-d8	114		80.0-120		08/13/2018 18:47	WG1151298
(S) Toluene-d8	115		80.0-120		08/14/2018 04:10	WG1151743
(S) Dibromofluoromethane	81.1		74.0-131		08/13/2018 18:47	WG1151298
(S) Dibromofluoromethane	88.1		74.0-131		08/14/2018 04:10	WG1151743
(S) 4-Bromofluorobenzene	99.5		64.0-132		08/13/2018 18:47	WG1151298
(S) 4-Bromofluorobenzene	89.9		64.0-132		08/14/2018 04:10	WG1151743

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.58	1	08/11/2018 19:23	WG1150118
Residual Range Organics (RRO)	ND		11.5	1	08/11/2018 19:23	WG1150118
(S) o-Terphenyl	66.6		18.0-148		08/11/2018 19:23	WG1150118

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0118		0.00687	1	08/09/2018 18:50	WG1149656
Acenaphthene	ND		0.00687	1	08/09/2018 18:50	WG1149656
Acenaphthylene	ND		0.00687	1	08/09/2018 18:50	WG1149656
Benzo(a)anthracene	0.0330		0.00687	1	08/09/2018 18:50	WG1149656
Benzo(a)pyrene	0.0326		0.00687	1	08/09/2018 18:50	WG1149656



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	0.0448		0.00687	1	08/09/2018 18:50	WG1149656
Benzo(g,h,i)perylene	0.0305		0.00687	1	08/09/2018 18:50	WG1149656
Benzo(k)fluoranthene	0.0160		0.00687	1	08/09/2018 18:50	WG1149656
Chrysene	0.0334		0.00687	1	08/09/2018 18:50	WG1149656
Dibenz(a,h)anthracene	0.00740		0.00687	1	08/09/2018 18:50	WG1149656
Fluoranthene	0.0604		0.00687	1	08/09/2018 18:50	WG1149656
Fluorene	ND		0.00687	1	08/09/2018 18:50	WG1149656
Indeno(1,2,3-cd)pyrene	0.0238		0.00687	1	08/09/2018 18:50	WG1149656
Naphthalene	ND		0.0229	1	08/09/2018 18:50	WG1149656
Phenanthrene	0.0276		0.00687	1	08/09/2018 18:50	WG1149656
Pyrene	0.0515		0.00687	1	08/09/2018 18:50	WG1149656
1-Methylnaphthalene	ND		0.0229	1	08/09/2018 18:50	WG1149656
2-Methylnaphthalene	ND		0.0229	1	08/09/2018 18:50	WG1149656
2-Chloronaphthalene	ND		0.0229	1	08/09/2018 18:50	WG1149656
<i>(S)</i> Nitrobenzene-d5	73.9		14.0-149		08/09/2018 18:50	WG1149656
<i>(S)</i> 2-Fluorobiphenyl	97.3		34.0-125		08/09/2018 18:50	WG1149656
<i>(S)</i> p-Terphenyl-d14	92.8		23.0-120		08/09/2018 18:50	WG1149656

- 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	80.6		1	08/14/2018 09:21	WG1151554

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0439		0.0248	1	08/09/2018 14:54	WG1149793

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.48	1	08/10/2018 11:58	WG1150174
Barium	65.5		0.620	1	08/10/2018 11:58	WG1150174
Cadmium	ND		0.620	1	08/10/2018 11:58	WG1150174
Chromium	12.8		1.24	1	08/10/2018 11:58	WG1150174
Lead	11.9		0.620	1	08/10/2018 11:58	WG1150174
Selenium	ND		2.48	1	08/10/2018 11:58	WG1150174
Silver	ND		1.24	1	08/10/2018 11:58	WG1150174

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0310	1	08/14/2018 04:30	WG1151743
Acrylonitrile	ND		0.0155	1	08/13/2018 19:06	WG1151298
Benzene	ND		0.00124	1	08/13/2018 19:06	WG1151298
Bromobenzene	ND		0.0155	1	08/13/2018 19:06	WG1151298
Bromodichloromethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
Bromoform	ND		0.0310	1	08/13/2018 19:06	WG1151298
Bromomethane	ND	<u>JO</u>	0.0155	1	08/13/2018 19:06	WG1151298
n-Butylbenzene	ND		0.0155	1	08/13/2018 19:06	WG1151298
sec-Butylbenzene	ND		0.0155	1	08/13/2018 19:06	WG1151298
tert-Butylbenzene	ND		0.00620	1	08/13/2018 19:06	WG1151298
Carbon tetrachloride	ND		0.00620	1	08/13/2018 19:06	WG1151298
Chlorobenzene	ND		0.00310	1	08/13/2018 19:06	WG1151298
Chlorodibromomethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
Chloroethane	ND		0.00620	1	08/13/2018 19:06	WG1151298
Chloroform	ND		0.00310	1	08/13/2018 19:06	WG1151298
Chloromethane	ND		0.0155	1	08/13/2018 19:06	WG1151298
2-Chlorotoluene	ND		0.00310	1	08/13/2018 19:06	WG1151298
4-Chlorotoluene	ND		0.00620	1	08/13/2018 19:06	WG1151298
1,2-Dibromo-3-Chloropropane	ND	<u>J4</u>	0.0310	1	08/13/2018 19:06	WG1151298
1,2-Dibromoethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
Dibromomethane	ND		0.00620	1	08/13/2018 19:06	WG1151298
1,2-Dichlorobenzene	ND		0.00620	1	08/13/2018 19:06	WG1151298
1,3-Dichlorobenzene	ND		0.00620	1	08/13/2018 19:06	WG1151298
1,4-Dichlorobenzene	ND		0.00620	1	08/13/2018 19:06	WG1151298
Dichlorodifluoromethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
1,1-Dichloroethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
1,2-Dichloroethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
1,1-Dichloroethene	ND		0.00310	1	08/13/2018 19:06	WG1151298
cis-1,2-Dichloroethene	ND		0.00310	1	08/13/2018 19:06	WG1151298
trans-1,2-Dichloroethene	ND		0.00620	1	08/13/2018 19:06	WG1151298
1,2-Dichloropropane	ND		0.00620	1	08/13/2018 19:06	WG1151298
1,1-Dichloropropene	ND		0.00310	1	08/13/2018 19:06	WG1151298
1,3-Dichloropropane	ND		0.00620	1	08/13/2018 19:06	WG1151298

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00310	1	08/13/2018 19:06	WG1151298
trans-1,3-Dichloropropene	ND		0.00620	1	08/13/2018 19:06	WG1151298
2,2-Dichloropropane	ND		0.00310	1	08/13/2018 19:06	WG1151298
Di-isopropyl ether	ND		0.00124	1	08/13/2018 19:06	WG1151298
Ethylbenzene	ND		0.00310	1	08/13/2018 19:06	WG1151298
Hexachloro-1,3-butadiene	ND		0.0310	1	08/13/2018 19:06	WG1151298
Isopropylbenzene	ND		0.00310	1	08/13/2018 19:06	WG1151298
p-Isopropyltoluene	ND		0.00620	1	08/13/2018 19:06	WG1151298
2-Butanone (MEK)	ND		0.0310	1	08/13/2018 19:06	WG1151298
Methylene Chloride	ND		0.0310	1	08/13/2018 19:06	WG1151298
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0310	1	08/13/2018 19:06	WG1151298
Methyl tert-butyl ether	ND		0.00124	1	08/13/2018 19:06	WG1151298
Naphthalene	0.0197		0.0155	1	08/13/2018 19:06	WG1151298
n-Propylbenzene	ND		0.00620	1	08/13/2018 19:06	WG1151298
Styrene	ND		0.0155	1	08/13/2018 19:06	WG1151298
1,1,1,2-Tetrachloroethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
1,1,2,2-Tetrachloroethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
1,1,2-Trichlorotrifluoroethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
Tetrachloroethene	ND		0.00310	1	08/13/2018 19:06	WG1151298
Toluene	ND		0.00620	1	08/13/2018 19:06	WG1151298
1,2,3-Trichlorobenzene	ND	J4	0.00310	1	08/13/2018 19:06	WG1151298
1,2,4-Trichlorobenzene	ND		0.0155	1	08/13/2018 19:06	WG1151298
1,1,1-Trichloroethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
1,1,2-Trichloroethane	ND		0.00310	1	08/13/2018 19:06	WG1151298
Trichloroethene	ND		0.00124	1	08/13/2018 19:06	WG1151298
Trichlorofluoromethane	ND	J3	0.00310	1	08/13/2018 19:06	WG1151298
1,2,3-Trichloropropane	ND		0.0155	1	08/13/2018 19:06	WG1151298
1,2,4-Trimethylbenzene	0.0125		0.00620	1	08/13/2018 19:06	WG1151298
1,2,3-Trimethylbenzene	0.0174		0.00620	1	08/13/2018 19:06	WG1151298
Vinyl chloride	ND		0.00310	1	08/13/2018 19:06	WG1151298
1,3,5-Trimethylbenzene	ND		0.00620	1	08/13/2018 19:06	WG1151298
o-Xylene	0.0106		0.00310	1	08/13/2018 19:06	WG1151298
m&p-Xylene	0.0110		0.00496	1	08/13/2018 19:06	WG1151298
(S) Toluene-d8	109		80.0-120		08/13/2018 19:06	WG1151298
(S) Toluene-d8	115		80.0-120		08/14/2018 04:30	WG1151743
(S) Dibromofluoromethane	98.5		74.0-131		08/13/2018 19:06	WG1151298
(S) Dibromofluoromethane	89.3		74.0-131		08/14/2018 04:30	WG1151743
(S) 4-Bromofluorobenzene	98.8		64.0-132		08/13/2018 19:06	WG1151298
(S) 4-Bromofluorobenzene	85.0		64.0-132		08/14/2018 04:30	WG1151743

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.96	1	08/11/2018 19:36	WG1150118
Residual Range Organics (RRO)	ND		12.4	1	08/11/2018 19:36	WG1150118
(S) o-Terphenyl	48.6		18.0-148		08/11/2018 19:36	WG1150118

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00745	1	08/09/2018 19:12	WG1149656
Acenaphthene	ND		0.00745	1	08/09/2018 19:12	WG1149656
Acenaphthylene	ND		0.00745	1	08/09/2018 19:12	WG1149656
Benzo(a)anthracene	0.0295		0.00745	1	08/09/2018 19:12	WG1149656
Benzo(a)pyrene	0.0246		0.00745	1	08/09/2018 19:12	WG1149656



Collected date/time: 08/06/18 15:55

L1015598

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	0.0367		0.00745	1	08/09/2018 19:12	WG1149656
Benzo(g,h,i)perylene	0.0172		0.00745	1	08/09/2018 19:12	WG1149656
Benzo(k)fluoranthene	0.0122		0.00745	1	08/09/2018 19:12	WG1149656
Chrysene	0.0272		0.00745	1	08/09/2018 19:12	WG1149656
Dibenz(a,h)anthracene	ND		0.00745	1	08/09/2018 19:12	WG1149656
Fluoranthene	0.0494		0.00745	1	08/09/2018 19:12	WG1149656
Fluorene	ND		0.00745	1	08/09/2018 19:12	WG1149656
Indeno(1,2,3-cd)pyrene	0.0158		0.00745	1	08/09/2018 19:12	WG1149656
Naphthalene	ND		0.0248	1	08/09/2018 19:12	WG1149656
Phenanthrene	ND		0.00745	1	08/09/2018 19:12	WG1149656
Pyrene	0.0400		0.00745	1	08/09/2018 19:12	WG1149656
1-Methylnaphthalene	ND		0.0248	1	08/09/2018 19:12	WG1149656
2-Methylnaphthalene	ND		0.0248	1	08/09/2018 19:12	WG1149656
2-Chloronaphthalene	ND		0.0248	1	08/09/2018 19:12	WG1149656
<i>(S)</i> Nitrobenzene-d5	71.5		14.0-149		08/09/2018 19:12	WG1149656
<i>(S)</i> 2-Fluorobiphenyl	88.8		34.0-125		08/09/2018 19:12	WG1149656
<i>(S)</i> p-Terphenyl-d14	78.2		23.0-120		08/09/2018 19:12	WG1149656

- 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	86.8		1	08/14/2018 09:21	WG1151554

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0231	1	08/09/2018 15:02	WG1149793

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.77		2.31	1	08/10/2018 12:05	WG1150174
Barium	96.6		0.576	1	08/10/2018 12:05	WG1150174
Cadmium	ND		0.576	1	08/10/2018 12:05	WG1150174
Chromium	11.9		1.15	1	08/10/2018 12:05	WG1150174
Lead	48.8		0.576	1	08/10/2018 12:05	WG1150174
Selenium	ND		2.31	1	08/10/2018 12:05	WG1150174
Silver	ND		1.15	1	08/10/2018 12:05	WG1150174

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0288	1	08/14/2018 11:44	WG1151906
Acrylonitrile	ND	J3	0.0144	1	08/14/2018 01:23	WG1151747
Benzene	ND		0.00115	1	08/14/2018 01:23	WG1151747
Bromobenzene	ND		0.0144	1	08/14/2018 01:23	WG1151747
Bromodichloromethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
Bromoform	ND		0.0288	1	08/14/2018 01:23	WG1151747
Bromomethane	ND	J0	0.0144	1	08/14/2018 01:23	WG1151747
n-Butylbenzene	ND		0.0144	1	08/14/2018 01:23	WG1151747
sec-Butylbenzene	ND		0.0144	1	08/14/2018 01:23	WG1151747
tert-Butylbenzene	ND		0.00576	1	08/14/2018 01:23	WG1151747
Carbon tetrachloride	ND		0.00576	1	08/14/2018 01:23	WG1151747
Chlorobenzene	ND		0.00288	1	08/14/2018 01:23	WG1151747
Chlorodibromomethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
Chloroethane	ND		0.00576	1	08/14/2018 01:23	WG1151747
Chloroform	ND		0.00288	1	08/14/2018 01:23	WG1151747
Chloromethane	ND		0.0144	1	08/14/2018 01:23	WG1151747
2-Chlorotoluene	ND		0.00288	1	08/14/2018 01:23	WG1151747
4-Chlorotoluene	ND		0.00576	1	08/14/2018 01:23	WG1151747
1,2-Dibromo-3-Chloropropane	ND		0.0288	1	08/14/2018 01:23	WG1151747
1,2-Dibromoethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
Dibromomethane	ND		0.00576	1	08/14/2018 01:23	WG1151747
1,2-Dichlorobenzene	ND		0.00576	1	08/14/2018 01:23	WG1151747
1,3-Dichlorobenzene	ND		0.00576	1	08/14/2018 01:23	WG1151747
1,4-Dichlorobenzene	ND		0.00576	1	08/14/2018 01:23	WG1151747
Dichlorodifluoromethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
1,1-Dichloroethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
1,2-Dichloroethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
1,1-Dichloroethene	ND		0.00288	1	08/14/2018 01:23	WG1151747
cis-1,2-Dichloroethene	ND		0.00288	1	08/14/2018 01:23	WG1151747
trans-1,2-Dichloroethene	ND		0.00576	1	08/14/2018 01:23	WG1151747
1,2-Dichloropropane	ND		0.00576	1	08/14/2018 01:23	WG1151747
1,1-Dichloropropene	ND		0.00288	1	08/14/2018 01:23	WG1151747
1,3-Dichloropropane	ND		0.00576	1	08/14/2018 01:23	WG1151747

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00288	1	08/14/2018 01:23	WG1151747
trans-1,3-Dichloropropene	ND		0.00576	1	08/14/2018 01:23	WG1151747
2,2-Dichloropropane	ND		0.00288	1	08/14/2018 01:23	WG1151747
Di-isopropyl ether	ND		0.00115	1	08/14/2018 01:23	WG1151747
Ethylbenzene	ND		0.00288	1	08/14/2018 01:23	WG1151747
Hexachloro-1,3-butadiene	ND		0.0288	1	08/14/2018 01:23	WG1151747
Isopropylbenzene	ND		0.00288	1	08/14/2018 01:23	WG1151747
p-Isopropyltoluene	ND		0.00576	1	08/14/2018 01:23	WG1151747
2-Butanone (MEK)	ND		0.0288	1	08/14/2018 01:23	WG1151747
Methylene Chloride	ND		0.0288	1	08/14/2018 01:23	WG1151747
4-Methyl-2-pentanone (MIBK)	ND		0.0288	1	08/14/2018 01:23	WG1151747
Methyl tert-butyl ether	ND		0.00115	1	08/14/2018 01:23	WG1151747
Naphthalene	ND		0.0144	1	08/14/2018 01:23	WG1151747
n-Propylbenzene	ND		0.00576	1	08/14/2018 01:23	WG1151747
Styrene	ND		0.0144	1	08/14/2018 01:23	WG1151747
1,1,1,2-Tetrachloroethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
1,1,2,2-Tetrachloroethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
1,1,2-Trichlorotrifluoroethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
Tetrachloroethene	ND		0.00288	1	08/14/2018 01:23	WG1151747
Toluene	ND		0.00576	1	08/14/2018 01:23	WG1151747
1,2,3-Trichlorobenzene	ND		0.00288	1	08/14/2018 01:23	WG1151747
1,2,4-Trichlorobenzene	ND		0.0144	1	08/14/2018 01:23	WG1151747
1,1,1-Trichloroethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
1,1,2-Trichloroethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
Trichloroethene	ND		0.00115	1	08/14/2018 01:23	WG1151747
Trichlorofluoromethane	ND		0.00288	1	08/14/2018 01:23	WG1151747
1,2,3-Trichloropropane	ND		0.0144	1	08/14/2018 01:23	WG1151747
1,2,4-Trimethylbenzene	ND		0.00576	1	08/14/2018 01:23	WG1151747
1,2,3-Trimethylbenzene	ND		0.00576	1	08/14/2018 01:23	WG1151747
Vinyl chloride	ND		0.00288	1	08/14/2018 01:23	WG1151747
1,3,5-Trimethylbenzene	ND		0.00576	1	08/14/2018 01:23	WG1151747
o-Xylene	0.00571		0.00288	1	08/14/2018 01:23	WG1151747
m&p-Xylene	0.00679		0.00461	1	08/14/2018 01:23	WG1151747
(S) Toluene-d8	109		80.0-120		08/14/2018 01:23	WG1151747
(S) Toluene-d8	115		80.0-120		08/14/2018 11:44	WG1151906
(S) Dibromofluoromethane	96.5		74.0-131		08/14/2018 01:23	WG1151747
(S) Dibromofluoromethane	88.1		74.0-131		08/14/2018 11:44	WG1151906
(S) 4-Bromofluorobenzene	98.4		64.0-132		08/14/2018 01:23	WG1151747
(S) 4-Bromofluorobenzene	89.5		64.0-132		08/14/2018 11:44	WG1151906

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6.49		4.61	1	08/11/2018 19:50	WG1150118
Residual Range Organics (RRO)	29.8		11.5	1	08/11/2018 19:50	WG1150118
(S) o-Terphenyl	53.7		18.0-148		08/11/2018 19:50	WG1150118

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Acenaphthene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Acenaphthylene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Benzo(a)anthracene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Benzo(a)pyrene	ND		0.00692	1	08/09/2018 19:34	WG1149656



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Benzo(g,h,i)perylene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Benzo(k)fluoranthene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Chrysene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Dibenz(a,h)anthracene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Fluoranthene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Fluorene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Indeno(1,2,3-cd)pyrene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Naphthalene	ND		0.0231	1	08/09/2018 19:34	WG1149656
Phenanthrene	ND		0.00692	1	08/09/2018 19:34	WG1149656
Pyrene	ND		0.00692	1	08/09/2018 19:34	WG1149656
1-Methylnaphthalene	ND		0.0231	1	08/09/2018 19:34	WG1149656
2-Methylnaphthalene	ND		0.0231	1	08/09/2018 19:34	WG1149656
2-Chloronaphthalene	ND		0.0231	1	08/09/2018 19:34	WG1149656
(S) Nitrobenzene-d5	68.1		14.0-149		08/09/2018 19:34	WG1149656
(S) 2-Fluorobiphenyl	95.6		34.0-125		08/09/2018 19:34	WG1149656
(S) p-Terphenyl-d14	97.5		23.0-120		08/09/2018 19:34	WG1149656

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	86.2		1	08/14/2018 09:21	WG1151554

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0290		0.0232	1	08/09/2018 15:05	WG1149793

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	4.43		2.32	1	08/10/2018 12:08	WG1150174
Barium	36.5		0.580	1	08/10/2018 12:08	WG1150174
Cadmium	ND		0.580	1	08/10/2018 12:08	WG1150174
Chromium	3.83		1.16	1	08/10/2018 12:08	WG1150174
Lead	184		0.580	1	08/10/2018 12:08	WG1150174
Selenium	ND		2.32	1	08/10/2018 12:08	WG1150174
Silver	ND		1.16	1	08/10/2018 12:08	WG1150174

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0290	1	08/14/2018 12:04	WG1151906
Acrylonitrile	ND	J3	0.0145	1	08/14/2018 01:41	WG1151747
Benzene	ND		0.00116	1	08/14/2018 01:41	WG1151747
Bromobenzene	ND		0.0145	1	08/14/2018 01:41	WG1151747
Bromodichloromethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
Bromoform	ND		0.0290	1	08/14/2018 01:41	WG1151747
Bromomethane	ND	J0	0.0145	1	08/14/2018 01:41	WG1151747
n-Butylbenzene	ND		0.0145	1	08/14/2018 01:41	WG1151747
sec-Butylbenzene	ND		0.0145	1	08/14/2018 01:41	WG1151747
tert-Butylbenzene	ND		0.00580	1	08/14/2018 01:41	WG1151747
Carbon tetrachloride	ND		0.00580	1	08/14/2018 01:41	WG1151747
Chlorobenzene	ND		0.00290	1	08/14/2018 01:41	WG1151747
Chlorodibromomethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
Chloroethane	ND		0.00580	1	08/14/2018 01:41	WG1151747
Chloroform	ND		0.00290	1	08/14/2018 01:41	WG1151747
Chloromethane	ND		0.0145	1	08/14/2018 01:41	WG1151747
2-Chlorotoluene	ND		0.00290	1	08/14/2018 01:41	WG1151747
4-Chlorotoluene	ND		0.00580	1	08/14/2018 01:41	WG1151747
1,2-Dibromo-3-Chloropropane	ND		0.0290	1	08/14/2018 01:41	WG1151747
1,2-Dibromoethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
Dibromomethane	ND		0.00580	1	08/14/2018 01:41	WG1151747
1,2-Dichlorobenzene	ND		0.00580	1	08/14/2018 01:41	WG1151747
1,3-Dichlorobenzene	ND		0.00580	1	08/14/2018 01:41	WG1151747
1,4-Dichlorobenzene	ND		0.00580	1	08/14/2018 01:41	WG1151747
Dichlorodifluoromethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
1,1-Dichloroethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
1,2-Dichloroethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
1,1-Dichloroethene	ND		0.00290	1	08/14/2018 01:41	WG1151747
cis-1,2-Dichloroethene	ND		0.00290	1	08/14/2018 01:41	WG1151747
trans-1,2-Dichloroethene	ND		0.00580	1	08/14/2018 01:41	WG1151747
1,2-Dichloropropane	ND		0.00580	1	08/14/2018 01:41	WG1151747
1,1-Dichloropropene	ND		0.00290	1	08/14/2018 01:41	WG1151747
1,3-Dichloropropane	ND		0.00580	1	08/14/2018 01:41	WG1151747

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00290	1	08/14/2018 01:41	WG1151747
trans-1,3-Dichloropropene	ND		0.00580	1	08/14/2018 01:41	WG1151747
2,2-Dichloropropane	ND		0.00290	1	08/14/2018 01:41	WG1151747
Di-isopropyl ether	ND		0.00116	1	08/14/2018 01:41	WG1151747
Ethylbenzene	ND		0.00290	1	08/14/2018 01:41	WG1151747
Hexachloro-1,3-butadiene	ND		0.0290	1	08/14/2018 01:41	WG1151747
Isopropylbenzene	ND		0.00290	1	08/14/2018 01:41	WG1151747
p-Isopropyltoluene	ND		0.00580	1	08/14/2018 01:41	WG1151747
2-Butanone (MEK)	ND		0.0290	1	08/14/2018 01:41	WG1151747
Methylene Chloride	ND		0.0290	1	08/14/2018 01:41	WG1151747
4-Methyl-2-pentanone (MIBK)	ND		0.0290	1	08/14/2018 01:41	WG1151747
Methyl tert-butyl ether	ND		0.00116	1	08/14/2018 01:41	WG1151747
Naphthalene	ND		0.0145	1	08/14/2018 01:41	WG1151747
n-Propylbenzene	ND		0.00580	1	08/14/2018 01:41	WG1151747
Styrene	ND		0.0145	1	08/14/2018 01:41	WG1151747
1,1,1,2-Tetrachloroethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
1,1,2,2-Tetrachloroethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
1,1,2-Trichlorotrifluoroethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
Tetrachloroethene	ND		0.00290	1	08/14/2018 01:41	WG1151747
Toluene	ND		0.00580	1	08/14/2018 01:41	WG1151747
1,2,3-Trichlorobenzene	ND		0.00290	1	08/14/2018 01:41	WG1151747
1,2,4-Trichlorobenzene	ND		0.0145	1	08/14/2018 01:41	WG1151747
1,1,1-Trichloroethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
1,1,2-Trichloroethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
Trichloroethene	ND		0.00116	1	08/14/2018 01:41	WG1151747
Trichlorofluoromethane	ND		0.00290	1	08/14/2018 01:41	WG1151747
1,2,3-Trichloropropane	ND		0.0145	1	08/14/2018 01:41	WG1151747
1,2,4-Trimethylbenzene	ND		0.00580	1	08/14/2018 01:41	WG1151747
1,2,3-Trimethylbenzene	ND		0.00580	1	08/14/2018 01:41	WG1151747
Vinyl chloride	ND		0.00290	1	08/14/2018 01:41	WG1151747
1,3,5-Trimethylbenzene	ND		0.00580	1	08/14/2018 01:41	WG1151747
o-Xylene	ND		0.00290	1	08/14/2018 01:41	WG1151747
m&p-Xylene	0.00485		0.00464	1	08/14/2018 01:41	WG1151747
(S) Toluene-d8	111		80.0-120		08/14/2018 01:41	WG1151747
(S) Toluene-d8	114		80.0-120		08/14/2018 12:04	WG1151906
(S) Dibromofluoromethane	94.4		74.0-131		08/14/2018 01:41	WG1151747
(S) Dibromofluoromethane	88.9		74.0-131		08/14/2018 12:04	WG1151906
(S) 4-Bromofluorobenzene	98.0		64.0-132		08/14/2018 01:41	WG1151747
(S) 4-Bromofluorobenzene	90.0		64.0-132		08/14/2018 12:04	WG1151906

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5.44		4.64	1	08/11/2018 20:03	WG1150118
Residual Range Organics (RRO)	35.5		11.6	1	08/11/2018 20:03	WG1150118
(S) o-Terphenyl	51.0		18.0-148		08/11/2018 20:03	WG1150118

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Acenaphthene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Acenaphthylene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Benzo(a)anthracene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Benzo(a)pyrene	ND		0.00696	1	08/09/2018 19:56	WG1149656



Collected date/time: 08/07/18 11:30

L1015598

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Benzo(g,h,i)perylene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Benzo(k)fluoranthene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Chrysene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Dibenz(a,h)anthracene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Fluoranthene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Fluorene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Indeno(1,2,3-cd)pyrene	ND		0.00696	1	08/09/2018 19:56	WG1149656
Naphthalene	0.0233		0.0232	1	08/09/2018 19:56	WG1149656
Phenanthrene	0.0187		0.00696	1	08/09/2018 19:56	WG1149656
Pyrene	ND		0.00696	1	08/09/2018 19:56	WG1149656
1-Methylnaphthalene	ND		0.0232	1	08/09/2018 19:56	WG1149656
2-Methylnaphthalene	0.0347		0.0232	1	08/09/2018 19:56	WG1149656
2-Chloronaphthalene	ND		0.0232	1	08/09/2018 19:56	WG1149656
(S) Nitrobenzene-d5	67.6		14.0-149		08/09/2018 19:56	WG1149656
(S) 2-Fluorobiphenyl	87.9		34.0-125		08/09/2018 19:56	WG1149656
(S) p-Terphenyl-d14	87.9		23.0-120		08/09/2018 19:56	WG1149656

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	97.0		1	08/14/2018 09:01	WG1151556

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0206	1	08/09/2018 15:07	WG1149793

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.71		2.06	1	08/10/2018 12:10	WG1150174
Barium	51.4		0.516	1	08/10/2018 12:10	WG1150174
Cadmium	ND		0.516	1	08/10/2018 12:10	WG1150174
Chromium	11.7		1.03	1	08/10/2018 12:10	WG1150174
Lead	5.37		0.516	1	08/10/2018 12:10	WG1150174
Selenium	ND		2.06	1	08/10/2018 12:10	WG1150174
Silver	ND		1.03	1	08/10/2018 12:10	WG1150174

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0258	1	08/14/2018 12:24	WG1151906
Acrylonitrile	ND	J3	0.0129	1	08/14/2018 02:00	WG1151747
Benzene	ND		0.00103	1	08/14/2018 02:00	WG1151747
Bromobenzene	ND		0.0129	1	08/14/2018 02:00	WG1151747
Bromodichloromethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
Bromoform	ND		0.0258	1	08/14/2018 02:00	WG1151747
Bromomethane	ND	J0	0.0129	1	08/14/2018 02:00	WG1151747
n-Butylbenzene	ND		0.0129	1	08/14/2018 02:00	WG1151747
sec-Butylbenzene	ND		0.0129	1	08/14/2018 02:00	WG1151747
tert-Butylbenzene	ND		0.00516	1	08/14/2018 02:00	WG1151747
Carbon tetrachloride	ND		0.00516	1	08/14/2018 02:00	WG1151747
Chlorobenzene	ND		0.00258	1	08/14/2018 02:00	WG1151747
Chlorodibromomethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
Chloroethane	ND		0.00516	1	08/14/2018 02:00	WG1151747
Chloroform	ND		0.00258	1	08/14/2018 02:00	WG1151747
Chloromethane	ND		0.0129	1	08/14/2018 02:00	WG1151747
2-Chlorotoluene	ND		0.00258	1	08/14/2018 02:00	WG1151747
4-Chlorotoluene	ND		0.00516	1	08/14/2018 02:00	WG1151747
1,2-Dibromo-3-Chloropropane	ND		0.0258	1	08/14/2018 02:00	WG1151747
1,2-Dibromoethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
Dibromomethane	ND		0.00516	1	08/14/2018 02:00	WG1151747
1,2-Dichlorobenzene	ND		0.00516	1	08/14/2018 02:00	WG1151747
1,3-Dichlorobenzene	ND		0.00516	1	08/14/2018 02:00	WG1151747
1,4-Dichlorobenzene	ND		0.00516	1	08/14/2018 02:00	WG1151747
Dichlorodifluoromethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
1,1-Dichloroethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
1,2-Dichloroethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
1,1-Dichloroethene	ND		0.00258	1	08/14/2018 02:00	WG1151747
cis-1,2-Dichloroethene	ND		0.00258	1	08/14/2018 02:00	WG1151747
trans-1,2-Dichloroethene	ND		0.00516	1	08/14/2018 02:00	WG1151747
1,2-Dichloropropane	ND		0.00516	1	08/14/2018 02:00	WG1151747
1,1-Dichloropropene	ND		0.00258	1	08/14/2018 02:00	WG1151747
1,3-Dichloropropane	ND		0.00516	1	08/14/2018 02:00	WG1151747

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00258	1	08/14/2018 02:00	WG1151747
trans-1,3-Dichloropropene	ND		0.00516	1	08/14/2018 02:00	WG1151747
2,2-Dichloropropane	ND		0.00258	1	08/14/2018 02:00	WG1151747
Di-isopropyl ether	ND		0.00103	1	08/14/2018 02:00	WG1151747
Ethylbenzene	ND		0.00258	1	08/14/2018 02:00	WG1151747
Hexachloro-1,3-butadiene	ND		0.0258	1	08/14/2018 02:00	WG1151747
Isopropylbenzene	ND		0.00258	1	08/14/2018 02:00	WG1151747
p-Isopropyltoluene	ND		0.00516	1	08/14/2018 02:00	WG1151747
2-Butanone (MEK)	ND		0.0258	1	08/14/2018 02:00	WG1151747
Methylene Chloride	ND		0.0258	1	08/14/2018 02:00	WG1151747
4-Methyl-2-pentanone (MIBK)	ND		0.0258	1	08/14/2018 02:00	WG1151747
Methyl tert-butyl ether	ND		0.00103	1	08/14/2018 02:00	WG1151747
Naphthalene	ND		0.0129	1	08/14/2018 02:00	WG1151747
n-Propylbenzene	ND		0.00516	1	08/14/2018 02:00	WG1151747
Styrene	ND		0.0129	1	08/14/2018 02:00	WG1151747
1,1,1,2-Tetrachloroethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
1,1,2,2-Tetrachloroethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
1,1,2-Trichlorotrifluoroethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
Tetrachloroethene	ND		0.00258	1	08/14/2018 02:00	WG1151747
Toluene	ND		0.00516	1	08/14/2018 02:00	WG1151747
1,2,3-Trichlorobenzene	ND		0.00258	1	08/14/2018 02:00	WG1151747
1,2,4-Trichlorobenzene	ND		0.0129	1	08/14/2018 02:00	WG1151747
1,1,1-Trichloroethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
1,1,2-Trichloroethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
Trichloroethene	ND		0.00103	1	08/14/2018 02:00	WG1151747
Trichlorofluoromethane	ND		0.00258	1	08/14/2018 02:00	WG1151747
1,2,3-Trichloropropane	ND		0.0129	1	08/14/2018 02:00	WG1151747
1,2,4-Trimethylbenzene	ND		0.00516	1	08/14/2018 02:00	WG1151747
1,2,3-Trimethylbenzene	ND		0.00516	1	08/14/2018 02:00	WG1151747
Vinyl chloride	ND		0.00258	1	08/14/2018 02:00	WG1151747
1,3,5-Trimethylbenzene	ND		0.00516	1	08/14/2018 02:00	WG1151747
o-Xylene	ND		0.00258	1	08/14/2018 02:00	WG1151747
m&p-Xylene	ND		0.00413	1	08/14/2018 02:00	WG1151747
(S) Toluene-d8	110		80.0-120		08/14/2018 02:00	WG1151747
(S) Toluene-d8	115		80.0-120		08/14/2018 12:24	WG1151906
(S) Dibromofluoromethane	94.1		74.0-131		08/14/2018 02:00	WG1151747
(S) Dibromofluoromethane	88.1		74.0-131		08/14/2018 12:24	WG1151906
(S) 4-Bromofluorobenzene	100		64.0-132		08/14/2018 02:00	WG1151747
(S) 4-Bromofluorobenzene	88.5		64.0-132		08/14/2018 12:24	WG1151906

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.13	1	08/11/2018 19:09	WG1150118
Residual Range Organics (RRO)	ND		10.3	1	08/11/2018 19:09	WG1150118
(S) o-Terphenyl	73.0		18.0-148		08/11/2018 19:09	WG1150118

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Acenaphthene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Acenaphthylene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Benzo(a)anthracene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Benzo(a)pyrene	ND		0.00619	1	08/09/2018 20:18	WG1149656



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Benzo(g,h,i)perylene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Benzo(k)fluoranthene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Chrysene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Dibenz(a,h)anthracene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Fluoranthene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Fluorene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Indeno(1,2,3-cd)pyrene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Naphthalene	ND		0.0206	1	08/09/2018 20:18	WG1149656
Phenanthrene	ND		0.00619	1	08/09/2018 20:18	WG1149656
Pyrene	ND		0.00619	1	08/09/2018 20:18	WG1149656
1-Methylnaphthalene	ND		0.0206	1	08/09/2018 20:18	WG1149656
2-Methylnaphthalene	ND		0.0206	1	08/09/2018 20:18	WG1149656
2-Chloronaphthalene	ND		0.0206	1	08/09/2018 20:18	WG1149656
(S) Nitrobenzene-d5	74.2		14.0-149		08/09/2018 20:18	WG1149656
(S) 2-Fluorobiphenyl	98.7		34.0-125		08/09/2018 20:18	WG1149656
(S) p-Terphenyl-d14	97.6		23.0-120		08/09/2018 20:18	WG1149656

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/09/2018 14:58	WG1149953
Acrolein	ND	<u>JO</u>	50.0	1	08/09/2018 14:58	WG1149953
Acrylonitrile	ND		10.0	1	08/09/2018 14:58	WG1149953
Benzene	ND		1.00	1	08/09/2018 14:58	WG1149953
Bromobenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
Bromodichloromethane	ND		1.00	1	08/09/2018 14:58	WG1149953
Bromoform	ND		1.00	1	08/09/2018 14:58	WG1149953
Bromomethane	ND		5.00	1	08/09/2018 14:58	WG1149953
n-Butylbenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
sec-Butylbenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
tert-Butylbenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
Carbon tetrachloride	ND		1.00	1	08/09/2018 14:58	WG1149953
Chlorobenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
Chlorodibromomethane	ND		1.00	1	08/09/2018 14:58	WG1149953
Chloroethane	ND		5.00	1	08/09/2018 14:58	WG1149953
Chloroform	ND		5.00	1	08/09/2018 14:58	WG1149953
Chloromethane	ND		2.50	1	08/09/2018 14:58	WG1149953
2-Chlorotoluene	ND		1.00	1	08/09/2018 14:58	WG1149953
4-Chlorotoluene	ND		1.00	1	08/09/2018 14:58	WG1149953
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/09/2018 14:58	WG1149953
1,2-Dibromoethane	ND		1.00	1	08/09/2018 14:58	WG1149953
Dibromomethane	ND		1.00	1	08/09/2018 14:58	WG1149953
1,2-Dichlorobenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
1,3-Dichlorobenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
1,4-Dichlorobenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
Dichlorodifluoromethane	ND		5.00	1	08/09/2018 14:58	WG1149953
1,1-Dichloroethane	ND		1.00	1	08/09/2018 14:58	WG1149953
1,2-Dichloroethane	ND		1.00	1	08/09/2018 14:58	WG1149953
1,1-Dichloroethene	ND		1.00	1	08/09/2018 14:58	WG1149953
cis-1,2-Dichloroethene	ND		1.00	1	08/09/2018 14:58	WG1149953
trans-1,2-Dichloroethene	ND		1.00	1	08/09/2018 14:58	WG1149953
1,2-Dichloropropane	ND		1.00	1	08/09/2018 14:58	WG1149953
1,1-Dichloropropene	ND		1.00	1	08/09/2018 14:58	WG1149953
1,3-Dichloropropane	ND		1.00	1	08/09/2018 14:58	WG1149953
cis-1,3-Dichloropropene	ND		1.00	1	08/09/2018 14:58	WG1149953
trans-1,3-Dichloropropene	ND		1.00	1	08/09/2018 14:58	WG1149953
2,2-Dichloropropane	ND		1.00	1	08/09/2018 14:58	WG1149953
Di-isopropyl ether	ND		1.00	1	08/09/2018 14:58	WG1149953
Ethylbenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
Hexachloro-1,3-butadiene	ND		1.00	1	08/09/2018 14:58	WG1149953
Isopropylbenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
p-Isopropyltoluene	ND		1.00	1	08/09/2018 14:58	WG1149953
2-Butanone (MEK)	ND		10.0	1	08/09/2018 14:58	WG1149953
Methylene Chloride	ND		5.00	1	08/09/2018 14:58	WG1149953
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/09/2018 14:58	WG1149953
Methyl tert-butyl ether	ND		1.00	1	08/09/2018 14:58	WG1149953
Naphthalene	ND		5.00	1	08/09/2018 14:58	WG1149953
n-Propylbenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
Styrene	ND		1.00	1	08/09/2018 14:58	WG1149953
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/09/2018 14:58	WG1149953
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/09/2018 14:58	WG1149953
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/09/2018 14:58	WG1149953
Tetrachloroethene	ND		1.00	1	08/09/2018 14:58	WG1149953
Toluene	ND		1.00	1	08/09/2018 14:58	WG1149953
1,2,3-Trichlorobenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
1,2,4-Trichlorobenzene	ND		1.00	1	08/09/2018 14:58	WG1149953

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/09/2018 14:58	WG1149953
1,1,2-Trichloroethane	ND		1.00	1	08/09/2018 14:58	WG1149953
Trichloroethene	ND		1.00	1	08/09/2018 14:58	WG1149953
Trichlorofluoromethane	ND		5.00	1	08/09/2018 14:58	WG1149953
1,2,3-Trichloropropane	ND		2.50	1	08/09/2018 14:58	WG1149953
1,2,4-Trimethylbenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
1,2,3-Trimethylbenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
1,3,5-Trimethylbenzene	ND		1.00	1	08/09/2018 14:58	WG1149953
Vinyl chloride	ND		1.00	1	08/09/2018 14:58	WG1149953
o-Xylene	ND		1.00	1	08/09/2018 14:58	WG1149953
m&p-Xylene	ND		2.00	1	08/09/2018 14:58	WG1149953
(S) Toluene-d8	108		80.0-120		08/09/2018 14:58	WG1149953
(S) Dibromofluoromethane	98.3		76.0-123		08/09/2018 14:58	WG1149953
(S) 4-Bromofluorobenzene	94.2		80.0-120		08/09/2018 14:58	WG1149953

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



Method Blank (MB)

(MB) R3333721-1 08/14/18 09:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

L1015593-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1015593-01 08/14/18 09:21 • (DUP) R3333721-3 08/14/18 09:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	76.9	77.8	1	1.11		10

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS)

(LCS) R3333721-2 08/14/18 09:21

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

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3333717-1 08/14/18 09:01

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1015637-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1015637-01 08/14/18 09:01 • (DUP) R3333717-3 08/14/18 09:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	89.4	87.0	1	2.73		10

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R3333717-2 08/14/18 09:01

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

⁹Sc



Method Blank (MB)

(MB) R3332477-1 08/09/18 14:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.00280	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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

(LCS) R3332477-2 08/09/18 14:34 • (LCSD) R3332477-3 08/09/18 14:37

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.282	0.286	94.1	95.4	80.0-120			1.42	20

L1015786-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1015786-01 08/09/18 14:39 • (MS) R3332477-4 08/09/18 14:42 • (MSD) R3332477-5 08/09/18 14:44

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.0807	0.376	0.341	98.5	86.8	1	75.0-125			9.75	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3332709-1 08/10/18 11:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.740	2.00
Silver	U		0.280	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3332709-2 08/10/18 11:38 • (LCSD) R3332709-3 08/10/18 11:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	96.9	96.9	96.9	96.9	80.0-120			0.00892	20
Barium	100	105	105	105	105	80.0-120			0.198	20
Cadmium	100	101	101	101	101	80.0-120			0.182	20
Chromium	100	97.1	98.2	97.1	98.2	80.0-120			1.14	20
Lead	100	99.2	98.8	99.2	98.8	80.0-120			0.414	20
Selenium	100	95.5	95.9	95.5	95.9	80.0-120			0.443	20
Silver	20.0	19.1	19.2	95.4	96.2	80.0-120			0.881	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1015598-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1015598-01 08/10/18 11:43 • (MS) R3332709-6 08/10/18 11:50 • (MSD) R3332709-7 08/10/18 11:53

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	104	3.00	103	100	96.2	93.7	1	75.0-125			2.63	20
Barium	104	81.1	182	180	97.4	94.8	1	75.0-125			1.52	20
Cadmium	104	ND	106	103	102	98.9	1	75.0-125			3.04	20
Chromium	104	12.7	112	110	95.6	93.7	1	75.0-125			1.75	20
Lead	104	4.73	110	112	101	103	1	75.0-125			1.45	20
Selenium	104	ND	100	97.0	95.4	92.5	1	75.0-125			3.03	20
Silver	20.8	ND	20.4	19.9	98.0	95.4	1	75.0-125			2.69	20



Method Blank (MB)

(MB) R3332628-3 08/09/18 09:53

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	U		0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3332628-3 08/09/18 09:53

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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		0.412	1.00
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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	106			80.0-120
(S) Dibromofluoromethane	101			76.0-123
(S) 4-Bromofluorobenzene	92.1			80.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R3332628-1 08/09/18 08:53 • (LCSD) R3332628-2 08/09/18 09:13

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 %
Acetone	125	143	139	114	111	10.0-160			2.65	23
Acrolein	125	96.8	97.0	77.4	77.6	10.0-160			0.256	20
Acrylonitrile	125	115	113	91.6	90.3	60.0-142			1.51	20



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

(LCS) R3332628-1 08/09/18 08:53 • (LCSD) R3332628-2 08/09/18 09:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Benzene	25.0	23.1	22.3	92.5	89.4	69.0-123			3.44	20
Bromobenzene	25.0	21.4	22.6	85.6	90.4	79.0-120			5.47	20
Bromodichloromethane	25.0	25.0	24.9	99.9	99.6	76.0-120			0.337	20
Bromoform	25.0	24.2	25.2	97.0	101	67.0-132			4.02	20
Bromomethane	25.0	27.4	26.8	110	107	18.0-160			2.15	20
n-Butylbenzene	25.0	22.7	23.8	90.8	95.0	72.0-126			4.52	20
sec-Butylbenzene	25.0	24.5	24.9	98.0	99.5	74.0-121			1.50	20
tert-Butylbenzene	25.0	23.4	25.1	93.7	100	75.0-122			7.00	20
Carbon tetrachloride	25.0	27.4	26.8	110	107	63.0-122			2.28	20
Chlorobenzene	25.0	28.8	29.4	115	118	79.0-121			2.29	20
Chlorodibromomethane	25.0	28.9	29.6	116	118	75.0-125			2.27	20
Chloroethane	25.0	22.1	23.4	88.2	93.5	47.0-152			5.80	20
Chloroform	25.0	23.9	24.7	95.6	98.9	72.0-121			3.32	20
Chloromethane	25.0	22.5	22.6	90.0	90.5	48.0-139			0.486	20
2-Chlorotoluene	25.0	23.6	24.4	94.2	97.5	74.0-122			3.40	20
4-Chlorotoluene	25.0	23.4	24.6	93.6	98.4	79.0-120			5.10	20
1,2-Dibromo-3-Chloropropane	25.0	22.3	25.2	89.1	101	64.0-127			12.3	20
1,2-Dibromoethane	25.0	27.9	28.0	112	112	77.0-123			0.298	20
Dibromomethane	25.0	23.7	24.7	94.8	98.7	78.0-120			4.10	20
1,2-Dichlorobenzene	25.0	24.7	25.4	98.8	102	80.0-120			2.89	20
1,3-Dichlorobenzene	25.0	25.6	27.6	102	110	72.0-123			7.56	20
1,4-Dichlorobenzene	25.0	22.1	23.8	88.3	95.3	77.0-120			7.65	20
Dichlorodifluoromethane	25.0	29.5	30.6	118	123	49.0-155			3.66	20
1,1-Dichloroethane	25.0	23.1	23.2	92.5	92.7	70.0-126			0.177	20
1,2-Dichloroethane	25.0	27.7	27.4	111	110	67.0-126			0.930	20
1,1-Dichloroethene	25.0	24.4	24.2	97.7	96.8	64.0-129			0.882	20
cis-1,2-Dichloroethene	25.0	23.6	23.4	94.3	93.7	73.0-120			0.562	20
trans-1,2-Dichloroethene	25.0	23.5	24.0	93.9	96.1	71.0-121			2.28	20
1,2-Dichloropropane	25.0	22.8	23.4	91.4	93.8	75.0-125			2.59	20
1,1-Dichloropropene	25.0	24.8	25.2	99.3	101	71.0-129			1.56	20
1,3-Dichloropropane	25.0	27.6	27.6	110	111	80.0-121			0.130	20
cis-1,3-Dichloropropene	25.0	27.1	27.5	108	110	79.0-123			1.40	20
trans-1,3-Dichloropropene	25.0	28.5	28.4	114	114	74.0-127			0.298	20
2,2-Dichloropropane	25.0	26.0	26.2	104	105	60.0-125			0.798	20
Di-isopropyl ether	25.0	23.0	23.0	92.0	91.9	59.0-133			0.0539	20
Ethylbenzene	25.0	29.8	29.5	119	118	77.0-120			1.15	20
Hexachloro-1,3-butadiene	25.0	23.5	25.4	94.1	102	64.0-131			7.88	20
Isopropylbenzene	25.0	22.7	23.6	90.7	94.6	75.0-120			4.14	20
p-Isopropyltoluene	25.0	24.3	25.6	97.3	102	74.0-126			5.12	20
2-Butanone (MEK)	125	115	110	91.7	88.4	37.0-158			3.74	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) R3332628-1 08/09/18 08:53 • (LCSD) R3332628-2 08/09/18 09:13

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 %
Methylene Chloride	25.0	21.5	22.3	86.2	89.4	66.0-121			3.69	20
4-Methyl-2-pentanone (MIBK)	125	128	131	103	105	59.0-143			1.85	20
Methyl tert-butyl ether	25.0	23.6	24.5	94.5	97.9	64.0-123			3.58	20
Naphthalene	25.0	22.6	23.5	90.5	94.1	62.0-128			3.96	20
n-Propylbenzene	25.0	23.6	24.5	94.3	97.9	79.0-120			3.70	20
Styrene	25.0	22.5	22.5	90.1	90.1	78.0-124			0.0246	20
1,1,1,2-Tetrachloroethane	25.0	29.8	30.2	119	121	75.0-122			1.45	20
1,1,2,2-Tetrachloroethane	25.0	20.2	20.6	80.8	82.3	71.0-122			1.81	20
Tetrachloroethene	25.0	30.2	30.1	121	120	70.0-127			0.508	20
Toluene	25.0	26.1	27.0	105	108	77.0-120			3.10	20
1,1,2-Trichlorotrifluoroethane	25.0	28.1	27.5	112	110	61.0-136			2.20	20
1,2,3-Trichlorobenzene	25.0	23.2	24.3	92.9	97.4	61.0-133			4.68	20
1,2,4-Trichlorobenzene	25.0	24.1	25.4	96.4	102	69.0-129			5.29	20
1,1,1-Trichloroethane	25.0	27.1	27.2	108	109	68.0-122			0.347	20
1,1,2-Trichloroethane	25.0	26.5	27.4	106	109	78.0-120			3.28	20
Trichloroethene	25.0	25.2	25.3	101	101	78.0-120			0.716	20
Trichlorofluoromethane	25.0	29.7	30.1	119	120	56.0-137			1.20	20
1,2,3-Trichloropropane	25.0	24.2	25.7	96.8	103	72.0-124			6.20	20
1,2,3-Trimethylbenzene	25.0	23.9	24.7	95.6	98.6	75.0-120			3.13	20
1,2,4-Trimethylbenzene	25.0	23.8	25.1	95.1	100	75.0-120			5.28	20
1,3,5-Trimethylbenzene	25.0	22.1	23.3	88.5	93.1	75.0-120			5.13	20
Vinyl chloride	25.0	24.1	24.5	96.5	98.0	64.0-133			1.54	20
o-Xylene	25.0	29.6	30.0	118	120	78.0-120			1.43	20
m&p-Xylenes	50.0	55.8	57.1	112	114	77.0-120			2.31	20
(S) Toluene-d8				108	110	80.0-120				
(S) Dibromofluoromethane				102	99.7	76.0-123				
(S) 4-Bromofluorobenzene				86.8	90.5	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3333250-3 08/13/18 09:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
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
p-Isopropyltoluene	U		0.00233	0.00500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3333250-3 08/13/18 09:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	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
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	108			80.0-120
(S) Dibromofluoromethane	95.7			74.0-131
(S) 4-Bromofluorobenzene	99.1			64.0-132

- 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) R3333250-1 08/13/18 08:21 • (LCSD) R3333250-2 08/13/18 08:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.625	0.602	0.495	96.4	79.2	57.8-143			19.6	20
Benzene	0.125	0.112	0.108	89.2	86.2	72.6-120			3.45	20
Bromobenzene	0.125	0.124	0.125	99.5	100	80.3-115			0.798	20
Bromodichloromethane	0.125	0.114	0.114	91.0	91.3	75.3-119			0.294	20
Bromoform	0.125	0.140	0.143	112	114	69.1-135			1.61	20



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

(LCS) R3333250-1 08/13/18 08:21 • (LCSD) R3333250-2 08/13/18 08:40

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 %
Bromomethane	0.125	0.0883	0.0935	70.6	74.8	23.0-191			5.69	20
n-Butylbenzene	0.125	0.120	0.121	95.8	96.5	74.2-134			0.713	20
sec-Butylbenzene	0.125	0.119	0.119	94.8	95.1	77.8-129			0.298	20
tert-Butylbenzene	0.125	0.117	0.117	93.7	93.8	77.2-129			0.0401	20
Carbon tetrachloride	0.125	0.124	0.124	98.9	99.4	69.4-129			0.570	20
Chlorobenzene	0.125	0.132	0.132	105	106	78.9-122			0.456	20
Chlorodibromomethane	0.125	0.141	0.142	113	113	76.4-126			0.299	20
Chloroethane	0.125	0.121	0.124	96.9	98.8	47.2-147			1.99	20
Chloroform	0.125	0.114	0.108	91.6	86.3	73.3-122			5.93	20
Chloromethane	0.125	0.144	0.139	115	111	53.1-135			3.91	20
2-Chlorotoluene	0.125	0.115	0.120	92.2	95.9	74.6-127			3.98	20
4-Chlorotoluene	0.125	0.114	0.116	91.5	93.0	79.5-123			1.68	20
1,2-Dibromo-3-Chloropropane	0.125	0.157	0.167	126	133	64.9-131		J4	5.95	20
1,2-Dibromoethane	0.125	0.140	0.142	112	114	78.7-123			1.26	20
Dibromomethane	0.125	0.121	0.116	96.8	93.1	78.5-117			3.81	20
1,2-Dichlorobenzene	0.125	0.130	0.134	104	107	83.6-119			2.63	20
1,3-Dichlorobenzene	0.125	0.120	0.126	96.1	100	75.9-129			4.40	20
1,4-Dichlorobenzene	0.125	0.122	0.124	97.7	99.3	81.0-115			1.63	20
Dichlorodifluoromethane	0.125	0.124	0.111	99.0	88.5	50.9-139			11.2	20
1,1-Dichloroethane	0.125	0.139	0.130	112	104	71.7-125			7.12	20
1,2-Dichloroethane	0.125	0.124	0.119	99.0	94.9	67.2-121			4.22	20
1,1-Dichloroethene	0.125	0.146	0.143	117	114	60.6-133			2.32	20
cis-1,2-Dichloroethene	0.125	0.123	0.116	98.6	92.8	76.1-121			6.08	20
trans-1,2-Dichloroethene	0.125	0.122	0.120	97.2	96.3	70.7-124			1.01	20
1,2-Dichloropropane	0.125	0.147	0.145	118	116	76.9-123			1.64	20
1,1-Dichloropropene	0.125	0.122	0.126	97.5	101	71.2-126			3.21	20
1,3-Dichloropropane	0.125	0.133	0.136	106	109	80.3-114			2.37	20
cis-1,3-Dichloropropene	0.125	0.126	0.128	101	102	77.3-123			1.08	20
trans-1,3-Dichloropropene	0.125	0.128	0.127	102	102	73.0-127			0.360	20
2,2-Dichloropropane	0.125	0.0968	0.102	77.5	81.6	61.9-132			5.21	20
Di-isopropyl ether	0.125	0.145	0.143	116	114	67.2-131			1.19	20
Ethylbenzene	0.125	0.130	0.133	104	106	78.6-124			2.00	20
Hexachloro-1,3-butadiene	0.125	0.134	0.139	107	111	69.2-136			3.15	20
Isopropylbenzene	0.125	0.117	0.119	93.9	94.9	79.4-126			1.06	20
p-Isopropyltoluene	0.125	0.116	0.119	92.4	95.3	75.4-132			3.14	20
2-Butanone (MEK)	0.625	0.545	0.485	87.2	77.6	44.5-154			11.6	21.3
Methylene Chloride	0.125	0.127	0.113	101	90.5	68.2-119			11.3	20
4-Methyl-2-pentanone (MIBK)	0.625	0.873	0.889	140	142	61.1-138	J4	J4	1.92	20
Methyl tert-butyl ether	0.125	0.116	0.112	93.1	89.5	70.2-122			4.01	20
Naphthalene	0.125	0.144	0.149	115	119	69.9-132			3.89	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) R3333250-1 08/13/18 08:21 • (LCSD) R3333250-2 08/13/18 08:40

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 %
n-Propylbenzene	0.125	0.114	0.116	91.4	92.7	80.2-124			1.41	20
Styrene	0.125	0.123	0.126	98.5	101	79.4-124			2.56	20
1,1,1,2-Tetrachloroethane	0.125	0.129	0.127	103	101	76.7-127			1.57	20
1,1,2,2-Tetrachloroethane	0.125	0.125	0.128	99.6	103	78.8-124			3.10	20
Tetrachloroethene	0.125	0.137	0.138	110	111	71.1-133			0.527	20
Toluene	0.125	0.124	0.123	99.3	98.2	76.7-116			1.08	20
1,1,2-Trichlorotrifluoroethane	0.125	0.136	0.139	109	111	62.6-138			2.19	20
1,2,3-Trichlorobenzene	0.125	0.164	0.173	132	139	72.5-137		J4	5.33	20
1,2,4-Trichlorobenzene	0.125	0.142	0.149	114	119	74.0-137			4.74	20
1,1,1-Trichloroethane	0.125	0.126	0.122	101	97.3	69.9-127			3.40	20
1,1,2-Trichloroethane	0.125	0.136	0.137	109	110	81.9-119			0.445	20
Trichloroethene	0.125	0.140	0.144	112	115	77.2-122			3.04	20
Trichlorofluoromethane	0.125	0.146	0.0966	116	77.3	51.5-151		J3	40.4	20
1,2,3-Trichloropropane	0.125	0.146	0.145	116	116	74.0-124			0.351	20
1,2,3-Trimethylbenzene	0.125	0.115	0.116	92.3	93.2	79.4-118			0.985	20
1,2,4-Trimethylbenzene	0.125	0.119	0.121	95.4	96.7	77.1-124			1.30	20
1,3,5-Trimethylbenzene	0.125	0.118	0.119	94.5	94.9	79.0-125			0.359	20
Vinyl chloride	0.125	0.129	0.122	103	97.6	58.4-134			5.18	20
o-Xylene	0.125	0.132	0.133	105	106	78.5-124			0.664	20
m&p-Xylenes	0.250	0.250	0.253	100	101	77.3-124			0.910	20
(S) Toluene-d8				105	104	80.0-120				
(S) Dibromofluoromethane				95.3	91.3	74.0-131				
(S) 4-Bromofluorobenzene				97.0	97.8	64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1015598-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1015598-01 08/13/18 18:29 • (MS) R3333250-4 08/13/18 19:43 • (MSD) R3333250-5 08/13/18 20:02

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.650	ND	0.735	0.876	109	130	1.04	39.3-152			17.5	27.2
Benzene	0.130	ND	0.0748	0.0688	55.3	50.8	1.04	47.8-131			8.39	22.8
Bromobenzene	0.130	ND	0.102	0.101	75.1	74.6	1.04	40.0-130			0.732	27.4
Bromodichloromethane	0.130	ND	0.0909	0.0893	67.2	66.0	1.04	50.6-128			1.88	22.8
Bromoform	0.130	ND	0.118	0.125	87.4	92.3	1.04	43.3-139			5.51	25.9
Bromomethane	0.130	ND	0.0366	0.0284	27.0	21.0	1.04	5.00-189			25.0	26.7
n-Butylbenzene	0.130	ND	0.0998	0.0912	73.8	67.5	1.04	23.6-146			8.97	39.2
sec-Butylbenzene	0.130	ND	0.0964	0.0846	71.3	62.6	1.04	31.0-142			13.0	34.7
tert-Butylbenzene	0.130	ND	0.0926	0.0830	68.4	61.4	1.04	36.9-142			10.9	31.7
Carbon tetrachloride	0.130	ND	0.0710	0.0608	52.5	44.9	1.04	46.0-140		J6	15.5	27.2



L1015598-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1015598-01 08/13/18 18:29 • (MS) R3333250-4 08/13/18 19:43 • (MSD) R3333250-5 08/13/18 20:02

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 %
Chlorobenzene	0.130	ND	0.102	0.100	75.5	73.9	1.04	44.1-134			2.16	25.7
Chlorodibromomethane	0.130	ND	0.124	0.128	91.4	94.6	1.04	49.7-134			3.41	24
Chloroethane	0.130	ND	0.0415	0.0391	30.7	28.9	1.04	5.00-164			6.09	28.4
Chloroform	0.130	ND	0.0814	0.0777	60.2	57.4	1.04	51.2-133			4.71	22.8
Chloromethane	0.130	ND	0.0636	0.0548	47.0	40.5	1.04	31.4-141			14.9	24.6
2-Chlorotoluene	0.130	ND	0.0975	0.0948	72.1	70.1	1.04	36.1-137			2.73	28.9
4-Chlorotoluene	0.130	ND	0.0903	0.0904	66.8	66.9	1.04	35.4-137			0.137	29.8
1,2-Dibromo-3-Chloropropane	0.130	ND	0.112	0.129	82.5	95.6	1.04	40.4-138			14.8	30.8
1,2-Dibromoethane	0.130	ND	0.120	0.124	88.7	91.6	1.04	50.2-133			3.14	23.6
Dibromomethane	0.130	ND	0.0996	0.101	73.7	74.4	1.04	52.4-128			0.950	23
1,2-Dichlorobenzene	0.130	ND	0.106	0.113	78.7	83.3	1.04	34.6-139			5.71	29.9
1,3-Dichlorobenzene	0.130	ND	0.100	0.102	74.2	75.2	1.04	28.4-142			1.31	31.2
1,4-Dichlorobenzene	0.130	ND	0.103	0.103	75.8	75.9	1.04	35.0-133			0.0649	31.1
Dichlorodifluoromethane	0.130	ND	0.0531	0.0393	39.3	29.0	1.04	31.2-144		J6	30.0	30.2
1,1-Dichloroethane	0.130	ND	0.0925	0.0847	68.4	62.7	1.04	49.1-136			8.79	22.9
1,2-Dichloroethane	0.130	ND	0.108	0.109	79.9	80.3	1.04	47.1-129			0.486	22.7
1,1-Dichloroethene	0.130	ND	0.0770	0.0660	56.9	48.8	1.04	36.1-142			15.4	25.6
cis-1,2-Dichloroethene	0.130	ND	0.0848	0.0788	62.7	58.3	1.04	50.6-133			7.40	23
trans-1,2-Dichloroethene	0.130	ND	0.0665	0.0585	49.2	43.3	1.04	43.8-135		J6	12.7	24.8
1,2-Dichloropropane	0.130	ND	0.109	0.105	80.8	77.5	1.04	50.3-134			4.15	22.7
1,1-Dichloropropene	0.130	ND	0.0696	0.0586	51.4	43.3	1.04	43.0-137			17.2	26.4
1,3-Dichloropropane	0.130	ND	0.119	0.126	87.9	92.9	1.04	51.4-127			5.46	23.1
cis-1,3-Dichloropropene	0.130	ND	0.107	0.107	79.2	79.1	1.04	48.4-134			0.174	23.6
trans-1,3-Dichloropropene	0.130	ND	0.119	0.112	88.0	83.1	1.04	46.6-135			5.72	25.3
2,2-Dichloropropane	0.130	ND	0.0616	0.0548	45.5	40.5	1.04	45.2-141		J6	11.6	26.6
Di-isopropyl ether	0.130	ND	0.108	0.110	79.8	81.1	1.04	46.7-140			1.63	23.5
Ethylbenzene	0.130	ND	0.0935	0.0865	69.2	63.9	1.04	44.8-135			7.86	26.9
Hexachloro-1,3-butadiene	0.130	ND	0.114	0.111	84.6	81.8	1.04	10.0-149			3.28	40
Isopropylbenzene	0.130	ND	0.0879	0.0791	65.0	58.5	1.04	41.9-139			10.5	29.3
p-Isopropyltoluene	0.130	ND	0.0945	0.0869	69.9	64.2	1.04	27.3-146			8.40	35.1
2-Butanone (MEK)	0.650	ND	0.438	0.792	64.7	117	1.04	23.9-170		J3	57.6	28.3
Methylene Chloride	0.130	ND	0.100	0.101	66.6	66.7	1.04	46.7-125			0.152	22.2
4-Methyl-2-pentanone (MIBK)	0.650	ND	0.622	0.694	91.9	103	1.04	42.4-146			11.1	26.7
Methyl tert-butyl ether	0.130	ND	0.0898	0.0996	66.4	73.6	1.04	50.4-131			10.3	24.8
Naphthalene	0.130	ND	0.107	0.128	79.3	94.3	1.04	18.4-145			17.2	34
n-Propylbenzene	0.130	ND	0.0887	0.0802	65.6	59.3	1.04	35.2-139			10.1	31.9
Styrene	0.130	ND	0.0978	0.0961	72.3	71.0	1.04	39.7-137			1.75	28.2
1,1,1,2-Tetrachloroethane	0.130	ND	0.102	0.0989	75.1	73.1	1.04	48.8-136			2.72	25.5
1,1,2,2-Tetrachloroethane	0.130	ND	0.108	0.118	79.6	87.3	1.04	45.7-140			9.23	26.4

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1015598-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1015598-01 08/13/18 18:29 • (MS) R3333250-4 08/13/18 19:43 • (MSD) R3333250-5 08/13/18 20:02

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 %
Tetrachloroethene	0.130	ND	0.0918	0.0773	67.8	57.1	1.04	37.7-140			17.1	29.2
Toluene	0.130	ND	0.0883	0.0823	65.3	60.9	1.04	47.8-127			7.00	24.3
1,1,2-Trichlorotrifluoroethane	0.130	ND	0.0821	0.0618	60.7	45.7	1.04	35.7-146			28.3	28.8
1,2,3-Trichlorobenzene	0.130	ND	0.126	0.150	93.5	111	1.04	10.0-150			17.2	38.5
1,2,4-Trichlorobenzene	0.130	ND	0.112	0.129	82.8	95.1	1.04	10.0-153			13.8	39.3
1,1,1-Trichloroethane	0.130	ND	0.0778	0.0670	57.5	49.6	1.04	49.0-138			14.9	25.3
1,1,2-Trichloroethane	0.130	ND	0.122	0.125	89.9	92.2	1.04	52.3-132			2.51	23.4
Trichloroethene	0.130	ND	0.0909	0.0811	67.2	60.0	1.04	48.0-132			11.3	24.8
Trichlorofluoromethane	0.130	ND	0.125	0.0929	92.5	68.7	1.04	12.8-169			29.6	29.7
1,2,3-Trichloropropane	0.130	ND	0.113	0.124	83.5	91.4	1.04	44.4-138			9.01	26.3
1,2,3-Trimethylbenzene	0.130	ND	0.0934	0.0926	69.1	68.5	1.04	41.0-133			0.850	27.6
1,2,4-Trimethylbenzene	0.130	ND	0.0945	0.0916	69.9	67.7	1.04	32.9-139			3.17	30.6
1,3,5-Trimethylbenzene	0.130	ND	0.0921	0.0844	68.1	62.4	1.04	37.1-138			8.75	30.6
Vinyl chloride	0.130	ND	0.0573	0.0458	42.4	33.9	1.04	32.0-146			22.4	26.3
o-Xylene	0.130	ND	0.0962	0.0924	71.1	68.3	1.04	43.2-136			4.07	26.2
m&p-Xylenes	0.260	ND	0.182	0.169	67.3	62.6	1.04	42.2-134			7.25	27.1
(S) Toluene-d8					110	111		80.0-120				
(S) Dibromofluoromethane					91.9	90.9		74.0-131				
(S) 4-Bromofluorobenzene					99.7	99.0		64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3333322-3 08/13/18 21:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
(S) Toluene-d8	115			80.0-120
(S) Dibromofluoromethane	86.6			74.0-131
(S) 4-Bromofluorobenzene	87.6			64.0-132

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

(LCS) R3333322-1 08/13/18 20:38 • (LCSD) R3333322-2 08/13/18 20:58

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	0.717	0.795	115	127	25.3-178			10.2	22.9
(S) Toluene-d8				105	105	80.0-120				
(S) Dibromofluoromethane				99.2	98.1	74.0-131				
(S) 4-Bromofluorobenzene				86.1	92.3	64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3333333-3 08/13/18 22:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
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
p-Isopropyltoluene	U		0.00233	0.00500

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3333333-3 08/13/18 22:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	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
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	111			80.0-120
(S) Dibromofluoromethane	95.7			74.0-131
(S) 4-Bromofluorobenzene	100			64.0-132

- 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) R3333333-1 08/13/18 20:58 • (LCSD) R3333333-2 08/13/18 21:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.625	0.624	0.426	99.9	68.2	57.8-143		J3	37.8	20
Benzene	0.125	0.109	0.110	86.9	88.0	72.6-120			1.27	20
Bromobenzene	0.125	0.120	0.123	95.8	98.3	80.3-115			2.59	20
Bromodichloromethane	0.125	0.111	0.114	88.6	91.3	75.3-119			2.90	20
Bromoform	0.125	0.124	0.126	98.8	101	69.1-135			2.24	20



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

(LCS) R3333333-1 08/13/18 20:58 • (LCSD) R3333333-2 08/13/18 21:17

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 %
Bromomethane	0.125	0.0874	0.0885	69.9	70.8	23.0-191			1.31	20
n-Butylbenzene	0.125	0.126	0.128	101	103	74.2-134			1.73	20
sec-Butylbenzene	0.125	0.124	0.125	98.8	99.7	77.8-129			0.832	20
tert-Butylbenzene	0.125	0.138	0.124	110	99.4	77.2-129			10.2	20
Carbon tetrachloride	0.125	0.117	0.121	94.0	96.4	69.4-129			2.56	20
Chlorobenzene	0.125	0.133	0.136	106	109	78.9-122			2.32	20
Chlorodibromomethane	0.125	0.136	0.139	109	111	76.4-126			2.26	20
Chloroethane	0.125	0.120	0.121	96.3	96.8	47.2-147			0.525	20
Chloroform	0.125	0.110	0.107	88.3	85.8	73.3-122			2.87	20
Chloromethane	0.125	0.125	0.135	99.8	108	53.1-135			7.85	20
2-Chlorotoluene	0.125	0.118	0.128	94.1	102	74.6-127			8.20	20
4-Chlorotoluene	0.125	0.116	0.120	92.9	95.9	79.5-123			3.22	20
1,2-Dibromo-3-Chloropropane	0.125	0.129	0.135	103	108	64.9-131			4.15	20
1,2-Dibromoethane	0.125	0.130	0.136	104	109	78.7-123			4.73	20
Dibromomethane	0.125	0.114	0.114	91.3	91.4	78.5-117			0.189	20
1,2-Dichlorobenzene	0.125	0.126	0.126	100	101	83.6-119			0.687	20
1,3-Dichlorobenzene	0.125	0.123	0.123	98.0	98.6	75.9-129			0.553	20
1,4-Dichlorobenzene	0.125	0.122	0.122	97.4	97.4	81.0-115			0.0123	20
Dichlorodifluoromethane	0.125	0.115	0.116	91.7	92.5	50.9-139			0.887	20
1,1-Dichloroethane	0.125	0.132	0.126	105	101	71.7-125			4.58	20
1,2-Dichloroethane	0.125	0.120	0.122	95.8	97.2	67.2-121			1.51	20
1,1-Dichloroethene	0.125	0.140	0.142	112	113	60.6-133			1.20	20
cis-1,2-Dichloroethene	0.125	0.114	0.119	91.3	94.8	76.1-121			3.82	20
trans-1,2-Dichloroethene	0.125	0.113	0.116	90.5	92.6	70.7-124			2.34	20
1,2-Dichloropropane	0.125	0.139	0.140	111	112	76.9-123			0.587	20
1,1-Dichloropropene	0.125	0.119	0.124	95.6	98.8	71.2-126			3.32	20
1,3-Dichloropropane	0.125	0.125	0.132	99.7	106	80.3-114			5.74	20
cis-1,3-Dichloropropene	0.125	0.130	0.132	104	106	77.3-123			1.81	20
trans-1,3-Dichloropropene	0.125	0.131	0.133	104	107	73.0-127			1.97	20
2,2-Dichloropropane	0.125	0.111	0.114	88.7	90.9	61.9-132			2.46	20
Di-isopropyl ether	0.125	0.143	0.135	115	108	67.2-131			5.88	20
Ethylbenzene	0.125	0.131	0.137	105	110	78.6-124			4.54	20
Hexachloro-1,3-butadiene	0.125	0.150	0.155	120	124	69.2-136			3.06	20
Isopropylbenzene	0.125	0.120	0.123	95.9	98.1	79.4-126			2.22	20
p-Isopropyltoluene	0.125	0.122	0.123	97.6	98.6	75.4-132			1.04	20
2-Butanone (MEK)	0.625	0.408	0.451	65.2	72.1	44.5-154			10.0	21.3
Methylene Chloride	0.125	0.116	0.113	92.5	90.7	68.2-119			1.97	20
4-Methyl-2-pentanone (MIBK)	0.625	0.694	0.751	111	120	61.1-138			7.87	20
Methyl tert-butyl ether	0.125	0.115	0.109	91.6	86.9	70.2-122			5.34	20
Naphthalene	0.125	0.131	0.133	105	106	69.9-132			1.25	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) R3333333-1 08/13/18 20:58 • (LCSD) R3333333-2 08/13/18 21:17

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 %
n-Propylbenzene	0.125	0.115	0.119	92.1	95.3	80.2-124			3.48	20
Styrene	0.125	0.122	0.120	97.7	96.1	79.4-124			1.60	20
1,1,1,2-Tetrachloroethane	0.125	0.130	0.135	104	108	76.7-127			3.75	20
1,1,2,2-Tetrachloroethane	0.125	0.114	0.117	90.9	93.7	78.8-124			3.08	20
Tetrachloroethene	0.125	0.142	0.144	113	115	71.1-133			1.58	20
Toluene	0.125	0.126	0.130	101	104	76.7-116			3.35	20
1,1,2-Trichlorotrifluoroethane	0.125	0.139	0.142	111	114	62.6-138			2.22	20
1,2,3-Trichlorobenzene	0.125	0.168	0.170	135	136	72.5-137			0.655	20
1,2,4-Trichlorobenzene	0.125	0.149	0.146	119	117	74.0-137			2.37	20
1,1,1-Trichloroethane	0.125	0.126	0.125	101	99.9	69.9-127			0.721	20
1,1,2-Trichloroethane	0.125	0.128	0.134	103	107	81.9-119			4.44	20
Trichloroethene	0.125	0.133	0.135	106	108	77.2-122			1.46	20
Trichlorofluoromethane	0.125	0.126	0.127	101	101	51.5-151			0.465	20
1,2,3-Trichloropropane	0.125	0.114	0.116	91.5	93.2	74.0-124			1.86	20
1,2,3-Trimethylbenzene	0.125	0.115	0.117	92.1	93.4	79.4-118			1.42	20
1,2,4-Trimethylbenzene	0.125	0.122	0.122	97.5	97.5	77.1-124			0.0156	20
1,3,5-Trimethylbenzene	0.125	0.119	0.122	95.5	97.8	79.0-125			2.42	20
Vinyl chloride	0.125	0.115	0.122	92.2	97.7	58.4-134			5.80	20
o-Xylene	0.125	0.130	0.135	104	108	78.5-124			3.74	20
m&p-Xylenes	0.250	0.255	0.261	102	104	77.3-124			1.99	20
(S) Toluene-d8				111	113	80.0-120				
(S) Dibromofluoromethane				93.5	90.5	74.0-131				
(S) 4-Bromofluorobenzene				96.4	97.1	64.0-132				

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

L1017132-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017132-02 08/14/18 00:08 • (MS) R3333333-4 08/14/18 07:35 • (MSD) R3333333-5 08/14/18 07:53

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 %
Acrylonitrile	0.625	ND	0.531	0.512	84.9	82.0	1	39.3-152			3.51	27.2
Benzene	0.125	ND	0.108	0.108	86.7	86.3	1	47.8-131			0.478	22.8
Bromobenzene	0.125	ND	0.129	0.126	103	101	1	40.0-130			2.08	27.4
Bromodichloromethane	0.125	ND	0.117	0.105	93.6	83.8	1	50.6-128			11.1	22.8
Bromoform	0.125	ND	0.129	0.137	103	110	1	43.3-139			5.91	25.9
Bromomethane	0.125	ND	0.0667	0.0719	53.3	57.5	1	5.00-189			7.63	26.7
n-Butylbenzene	0.125	ND	0.134	0.129	107	103	1	23.6-146			4.10	39.2
sec-Butylbenzene	0.125	ND	0.131	0.126	105	101	1	31.0-142			3.30	34.7
tert-Butylbenzene	0.125	ND	0.129	0.123	103	98.1	1	36.9-142			4.68	31.7
Carbon tetrachloride	0.125	ND	0.118	0.114	94.5	91.6	1	46.0-140			3.12	27.2



L1017132-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017132-02 08/14/18 00:08 • (MS) R3333333-4 08/14/18 07:35 • (MSD) R3333333-5 08/14/18 07:53

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 %
Chlorobenzene	0.125	ND	0.144	0.139	115	111	1	44.1-134			3.39	25.7
Chlorodibromomethane	0.125	ND	0.145	0.142	116	114	1	49.7-134			2.16	24
Chloroethane	0.125	ND	0.0792	0.0845	63.4	67.6	1	5.00-164			6.44	28.4
Chloroform	0.125	ND	0.110	0.102	88.4	81.9	1	51.2-133			7.65	22.8
Chloromethane	0.125	ND	0.144	0.144	115	115	1	31.4-141			0.0153	24.6
2-Chlorotoluene	0.125	ND	0.125	0.121	100	96.9	1	36.1-137			3.34	28.9
4-Chlorotoluene	0.125	ND	0.123	0.123	98.7	98.4	1	35.4-137			0.303	29.8
1,2-Dibromo-3-Chloropropane	0.125	ND	0.126	0.132	101	106	1	40.4-138			4.65	30.8
1,2-Dibromoethane	0.125	ND	0.141	0.139	113	111	1	50.2-133			1.48	23.6
Dibromomethane	0.125	ND	0.116	0.111	93.1	88.8	1	52.4-128			4.80	23
1,2-Dichlorobenzene	0.125	ND	0.130	0.132	104	106	1	34.6-139			1.61	29.9
1,3-Dichlorobenzene	0.125	ND	0.129	0.127	103	102	1	28.4-142			1.23	31.2
1,4-Dichlorobenzene	0.125	ND	0.129	0.127	103	102	1	35.0-133			1.06	31.1
Dichlorodifluoromethane	0.125	ND	0.120	0.124	95.9	99.4	1	31.2-144			3.62	30.2
1,1-Dichloroethane	0.125	ND	0.132	0.121	106	96.6	1	49.1-136			8.83	22.9
1,2-Dichloroethane	0.125	ND	0.122	0.103	97.3	82.5	1	47.1-129			16.4	22.7
1,1-Dichloroethene	0.125	ND	0.143	0.134	115	107	1	36.1-142			6.85	25.6
cis-1,2-Dichloroethene	0.125	ND	0.117	0.104	93.7	83.3	1	50.6-133			11.7	23
trans-1,2-Dichloroethene	0.125	ND	0.116	0.114	93.1	91.6	1	43.8-135			1.65	24.8
1,2-Dichloropropane	0.125	ND	0.146	0.142	117	114	1	50.3-134			2.71	22.7
1,1-Dichloropropene	0.125	ND	0.125	0.122	100	97.2	1	43.0-137			3.11	26.4
1,3-Dichloropropane	0.125	ND	0.137	0.136	109	109	1	51.4-127			0.393	23.1
cis-1,3-Dichloropropene	0.125	ND	0.137	0.134	110	107	1	48.4-134			2.47	23.6
trans-1,3-Dichloropropene	0.125	ND	0.141	0.135	113	108	1	46.6-135			4.08	25.3
2,2-Dichloropropane	0.125	ND	0.104	0.0965	83.2	77.2	1	45.2-141			7.52	26.6
Di-isopropyl ether	0.125	ND	0.137	0.127	110	101	1	46.7-140			8.01	23.5
Ethylbenzene	0.125	ND	0.143	0.132	115	106	1	44.8-135			7.96	26.9
Hexachloro-1,3-butadiene	0.125	ND	0.161	0.153	129	122	1	10.0-149			5.33	40
Isopropylbenzene	0.125	ND	0.129	0.124	103	99.3	1	41.9-139			4.01	29.3
p-Isopropyltoluene	0.125	ND	0.131	0.126	104	101	1	27.3-146			3.14	35.1
2-Butanone (MEK)	0.625	ND	0.361	0.0994	57.8	15.9	1	23.9-170		J3 J6	114	28.3
Methylene Chloride	0.125	ND	0.123	0.115	87.1	80.1	1	46.7-125			7.35	22.2
4-Methyl-2-pentanone (MIBK)	0.625	ND	0.669	0.744	107	119	1	42.4-146			10.6	26.7
Methyl tert-butyl ether	0.125	ND	0.106	0.102	84.4	81.8	1	50.4-131			3.13	24.8
Naphthalene	0.125	ND	0.132	0.135	105	108	1	18.4-145			2.34	34
n-Propylbenzene	0.125	ND	0.124	0.122	99.6	97.3	1	35.2-139			2.31	31.9
Styrene	0.125	ND	0.129	0.127	103	102	1	39.7-137			0.987	28.2
1,1,1,2-Tetrachloroethane	0.125	ND	0.134	0.134	107	107	1	48.8-136			0.182	25.5
1,1,2,2-Tetrachloroethane	0.125	ND	0.119	0.124	95.2	99.2	1	45.7-140			4.15	26.4
Tetrachloroethene	0.125	ND	0.158	0.151	126	121	1	37.7-140			4.54	29.2

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1017132-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017132-02 08/14/18 00:08 • (MS) R3333333-4 08/14/18 07:35 • (MSD) R3333333-5 08/14/18 07:53

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 %
Toluene	0.125	ND	0.141	0.131	112	105	1	47.8-127			7.22	24.3
1,1,2-Trichlorotrifluoroethane	0.125	ND	0.138	0.139	110	111	1	35.7-146			1.02	28.8
1,2,3-Trichlorobenzene	0.125	ND	0.177	0.175	142	140	1	10.0-150			1.32	38.5
1,2,4-Trichlorobenzene	0.125	ND	0.152	0.154	122	123	1	10.0-153			1.06	39.3
1,1,1-Trichloroethane	0.125	ND	0.120	0.115	96.2	92.0	1	49.0-138			4.49	25.3
1,1,2-Trichloroethane	0.125	ND	0.140	0.136	112	109	1	52.3-132			2.55	23.4
Trichloroethene	0.125	ND	0.141	0.137	113	109	1	48.0-132			3.01	24.8
Trichlorofluoromethane	0.125	ND	0.232	0.244	186	195	1	12.8-169	J5	J5	5.02	29.7
1,2,3-Trichloropropane	0.125	ND	0.114	0.130	91.4	104	1	44.4-138			12.8	26.3
1,2,3-Trimethylbenzene	0.125	ND	0.117	0.117	93.8	93.8	1	41.0-133			0.0316	27.6
1,2,4-Trimethylbenzene	0.125	ND	0.128	0.126	102	101	1	32.9-139			1.72	30.6
1,3,5-Trimethylbenzene	0.125	ND	0.128	0.123	102	98.5	1	37.1-138			3.69	30.6
Vinyl chloride	0.125	ND	0.129	0.128	103	102	1	32.0-146			1.08	26.3
m&p-Xylenes	0.250	ND	0.274	0.263	110	105	1	42.2-134			3.97	27.1
o-Xylene	0.125	ND	0.141	0.134	112	107	1	43.2-136			5.06	26.2
(S) Toluene-d8					112	107		80.0-120				
(S) Dibromofluoromethane					86.8	82.1		74.0-131				
(S) 4-Bromofluorobenzene					96.7	97.3		64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3333425-2 08/14/18 10:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
(S) Toluene-d8	114			80.0-120
(S) Dibromofluoromethane	86.9			74.0-131
(S) 4-Bromofluorobenzene	92.6			64.0-132

Laboratory Control Sample (LCS)

(LCS) R3333425-1 08/14/18 09:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.579	92.6	25.3-178	
(S) Toluene-d8			107	80.0-120	
(S) Dibromofluoromethane			95.3	74.0-131	
(S) 4-Bromofluorobenzene			95.1	64.0-132	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3332871-1 08/11/18 14:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	65.3			18.0-148

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

(LCS) R3332871-2 08/11/18 14:25 • (LCSD) R3332871-3 08/11/18 14:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	15.3	15.2	61.1	61.0	50.0-150			0.293	20
Residual Range Organics (RRO)	25.0	15.0	15.5	60.1	62.2	50.0-150			3.40	20
(S) o-Terphenyl				60.2	64.0	18.0-148				

L1015598-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1015598-01 08/11/18 18:29 • (MS) R3332871-4 08/11/18 18:42 • (MSD) R3332871-5 08/11/18 18:56

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	26.0	ND	10.3	13.0	37.5	48.1	1	50.0-150	J6	J3 J6	23.8	20
Residual Range Organics (RRO)	26.0	ND	22.5	16.3	79.3	55.1	1	50.0-150		J3	32.4	20
(S) o-Terphenyl					40.8	53.8		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3332575-1 08/09/18 14:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	78.7			14.0-149
(S) 2-Fluorobiphenyl	103			34.0-125
(S) p-Terphenyl-d14	99.9			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3332575-2 08/09/18 14:27 • (LCSD) R3332575-3 08/09/18 14:49

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 %
Anthracene	0.0800	0.0894	0.0931	112	116	50.0-125			4.05	20
Acenaphthene	0.0800	0.0851	0.0859	106	107	52.0-120			0.936	20
Acenaphthylene	0.0800	0.0851	0.0866	106	108	51.0-120			1.75	20
Benzo(a)anthracene	0.0800	0.0918	0.0920	115	115	46.0-121			0.218	20
Benzo(a)pyrene	0.0800	0.0733	0.0731	91.6	91.4	42.0-121			0.273	20
Benzo(b)fluoranthene	0.0800	0.0842	0.0826	105	103	42.0-123			1.92	20
Benzo(g,h,i)perylene	0.0800	0.0863	0.0871	108	109	43.0-128			0.923	20
Benzo(k)fluoranthene	0.0800	0.0932	0.0967	117	121	45.0-128			3.69	20
Chrysene	0.0800	0.100	0.100	125	125	48.0-127			0.000	20
Dibenz(a,h)anthracene	0.0800	0.0913	0.0907	114	113	43.0-132			0.659	20
Fluoranthene	0.0800	0.0966	0.0999	121	125	49.0-129			3.36	20



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

(LCS) R3332575-2 08/09/18 14:27 • (LCSD) R3332575-3 08/09/18 14:49

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 %
Fluorene	0.0800	0.0898	0.0907	112	113	50.0-120			0.997	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0887	0.0897	111	112	44.0-131			1.12	20
Naphthalene	0.0800	0.0735	0.0732	91.9	91.5	50.0-120			0.409	20
Phenanthrene	0.0800	0.0875	0.0891	109	111	48.0-120			1.81	20
Pyrene	0.0800	0.0900	0.0909	113	114	48.0-135			0.995	20
1-Methylnaphthalene	0.0800	0.0797	0.0797	99.6	99.6	52.0-122			0.000	20
2-Methylnaphthalene	0.0800	0.0753	0.0759	94.1	94.9	52.0-120			0.794	20
2-Chloronaphthalene	0.0800	0.0904	0.0944	113	118	50.0-120			4.33	20
(S) Nitrobenzene-d5				81.1	83.1	14.0-149				
(S) 2-Fluorobiphenyl				107	109	34.0-125				
(S) p-Terphenyl-d14				102	103	23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1015598-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1015598-01 08/09/18 17:44 • (MS) R3332575-4 08/09/18 18:06 • (MSD) R3332575-5 08/09/18 18:28

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 %
Anthracene	0.0832	ND	0.0632	0.0836	75.9	101	1	20.0-136		J3	27.9	24
Acenaphthene	0.0832	ND	0.0623	0.0790	74.9	94.9	1	29.0-124		J3	23.6	20
Acenaphthylene	0.0832	ND	0.0634	0.0794	76.1	95.4	1	35.0-120		J3	22.4	20
Benzo(a)anthracene	0.0832	ND	0.0531	0.0706	62.0	83.1	1	13.0-132		J3	28.4	27
Benzo(a)pyrene	0.0832	ND	0.0505	0.0671	59.4	79.4	1	14.0-138		J3	28.3	27
Benzo(b)fluoranthene	0.0832	ND	0.0464	0.0615	54.0	72.1	1	10.0-129			28.0	31
Benzo(g,h,i)perylene	0.0832	ND	0.0476	0.0636	56.1	75.2	1	10.0-133			28.6	30
Benzo(k)fluoranthene	0.0832	ND	0.0524	0.0727	63.0	87.4	1	15.0-131		J3	32.4	27
Chrysene	0.0832	ND	0.0591	0.0785	69.5	92.8	1	15.0-137		J3	28.3	25
Dibenz(a,h)anthracene	0.0832	ND	0.0513	0.0684	61.6	82.1	1	15.0-132		J3	28.5	27
Fluoranthene	0.0832	ND	0.0583	0.0802	67.7	94.0	1	13.0-139		J3	31.7	28
Fluorene	0.0832	ND	0.0602	0.0807	72.4	97.0	1	27.0-122		J3	29.1	22
Indeno(1,2,3-cd)pyrene	0.0832	ND	0.0492	0.0662	58.3	78.7	1	11.0-133		J3	29.4	29
Naphthalene	0.0832	ND	0.0610	0.0691	73.3	83.0	1	18.0-136			12.5	21
Phenanthrene	0.0832	ND	0.0574	0.0761	67.9	90.3	1	15.0-133		J3	27.9	25
Pyrene	0.0832	ND	0.0547	0.0746	63.5	87.4	1	11.0-146		J3	30.7	29
1-Methylnaphthalene	0.0832	ND	0.0624	0.0747	75.0	89.8	1	24.0-137			17.9	22
2-Methylnaphthalene	0.0832	ND	0.0587	0.0707	70.5	85.0	1	23.0-136			18.6	22
2-Chloronaphthalene	0.0832	ND	0.0705	0.0867	84.8	104	1	36.0-120		J3	20.5	20
(S) Nitrobenzene-d5					72.9	77.2		14.0-149				
(S) 2-Fluorobiphenyl					90.6	100		34.0-125				
(S) p-Terphenyl-d14					75.9	86.0		23.0-120				



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
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
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.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

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

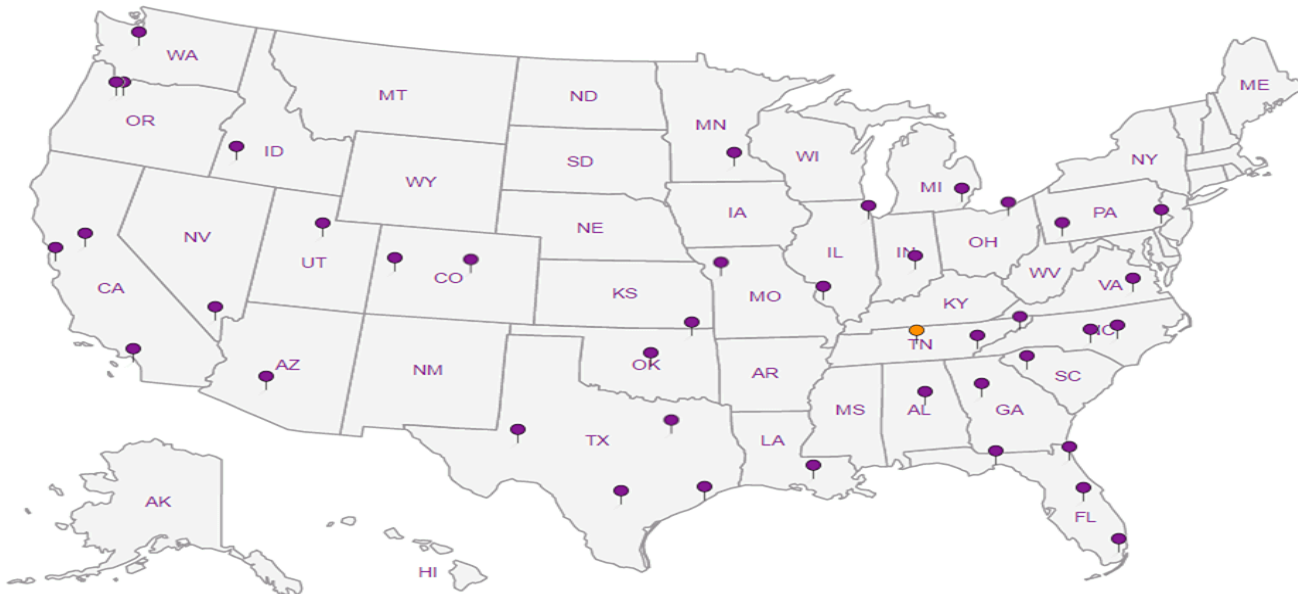
Third Party Federal Accreditations

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

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

Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

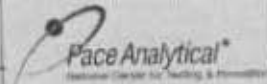
Billing Information

Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



12085 Lebanon Rd
Akron, OH 44322
Phone: 419-756-0818
Phone: 800-367-5818
Fax: 419-756-5818



Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
KatieTeague@kennedyjenks.com

Project Description: BNSF - Wishram Railyard, WA

City/State Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
189412004

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.G. #

Collected by (signature):
Katie Teague

Rush? (Lab MUST Be Notified)

Quote #

Same Day ___ Five Day ___
Next Day ___ 5 Day (Rad Only) ___
Two Day ___ 10 Day (Rad Only) ___
Three Day ___

Date Results Needed

No. of
Ents

Immediately
Packed on ice: N ___ Y

Sample ID

Comp/Grab

Matrix *

Depth

Date

Time

No. of
Ents

MRCRAB, TS 4ozClr-NoPres

NWTPHGX 40ml/NaHSO4/Syr/MeOH

TPHDx no SGT, PAHs 4ozClr-NoPres

TPHDx with SGT 4ozClr-NoPres

V8260C 40mlAmb/MeOH5ml/Syr

L# 61015598

Table #

Acctnum: BNSF1KEN

Template: T138670

Prelogin: P663876

TSR: 134 - Mark W. Beasley

PO: 7-23-186

Shipped Via: FedEx Ground

Remarks

Sample # (Lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Ents	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	Remarks	Sample # (Lab only)
WMW-23(2.0-2.5)	Grab	SS	2-2.5	8/6/18	1330	3	X	X	X				-01
WMW-23(2.0-2.5)MS		SS	↓	↓	↓	3	X	X	X				01
WMW-23(2.0-2.5)MSD		SS	↓	↓	↓	3	X	X	X				01
WMW-22(1.5-2.0)		SS	1.5-2	↓	1505	3	X	X	X				02
WMW-21(2.0-2.5)		SS	2-2.5	↓	1555	3	X	X	X				03
WMW-21(9.5-10.0)		SS	9.5-10	8/7/18	0825	3	X	X	X				04
WMW-22(13.0-13.5)		SS	13-13.5	8/7/18	1130	3	X	X	X				05
WMW-23(5.5-6.0)	Grab	SS	5.5-6	8/7/18	1310	3	X	X	X				06
TB-04-20180807	--	SS	--	8/7/18	--	1					X		07
		SS											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: include Dx and Gx chromatograms

No spurs in sample names

pH ___ Temp ___

Flow ___ Other ___

Samples returned via:

UPS ___ FedEx ___ Courier ___

Tracking #

Sample Receipt Checklist

COC Seal: Present/Intact: Y ___ N ___
COC Signed/Accurate: Y ___ N ___
Bottles arrive intact: Y ___ N ___
Correct bottles used: Y ___ N ___
Sufficient volume sent: Y ___ N ___
If Applicable
VDA Zero Headpace: Y ___ N ___
Preservation Correct/Checked: Y ___ N ___

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received: Yes/No

Temp: MeOH/MeOH

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 4.9°C

Bottles Received: 24

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date:

Time:

Hold:

Condition: NCF / OK

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
KatieTeague@kennedyjenks.com,

Project Description: BNSF - Wishram Railyard, WA

City/State Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
189612004

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
Katie Teague

Rush? (Lab MUST Be Notified)

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Quote #

Date Results Needed

Immediately
Packed on Ice N Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	Analysis / Container / Preservative	Chain of Custody Page ___ of ___
WMW-23(2.0-2.5)	Grab	SS	2-2.5	8/6/18	1330	3	X	X	X				 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 L# L1615548 E005 Acctnum: BNSF1KEN Template: T138670 Prelogin: P663876 TSR: 134 - Mark W. Beasley PB: 7-23-186 Shipped Via: FedEx Ground
WMW-23(2.0-2.5)MS		SS	↓	↓	↓	3	X						
WMW-23(2.0-2.5)MSD		SS	↓	↓	↓	3	X						
WMW-22(1.5-2.0)		SS	1.5-2	↓	1505	3	X	X	X				
WMW-21(2.0-2.5)		SS	2-2.5	↓	1555	3	X	X	X				
WMW-21(9.5-10.0)		SS	9.5-10	8/7/18	0825	3	X	X	X				
WMW-22(3.0-13.5)		SS	13-13.5	8/7/18	1130	3	X	X	X				
WMW-23(5.5-6.0)		SS	5.5-6	8/7/18	1310	3	X	X	X				

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: Include Dx and Gx chromatograms
No spurs in sample names

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
UPS FedEx Courier

Tracking # 4492 6218 1837

Sample Receipt Check
COC Seal Present/Intact:
COC Signed/Accurate:
Bottles arrive intact:
Correct bottles used:
Sufficient volume sent:
If Applicable
VQA Zero Headpace:
Preservation Correct/Checked:
20.5 MR1HR

Relinquished by: (Signature)
Katie Teague

Date: 8/7/18
Time: 1400

Received by: (Signature)
FedEx

Trip Blank Received: Yes/No
2 HCl/MeOH
TBR

Relinquished by: (Signature)

Date: _____
Time: _____

Received by: (Signature)

Temp: 4.9 °C
Bottles Received: 24

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: _____
Time: _____

Received for Lab by: (Signature)
OCI

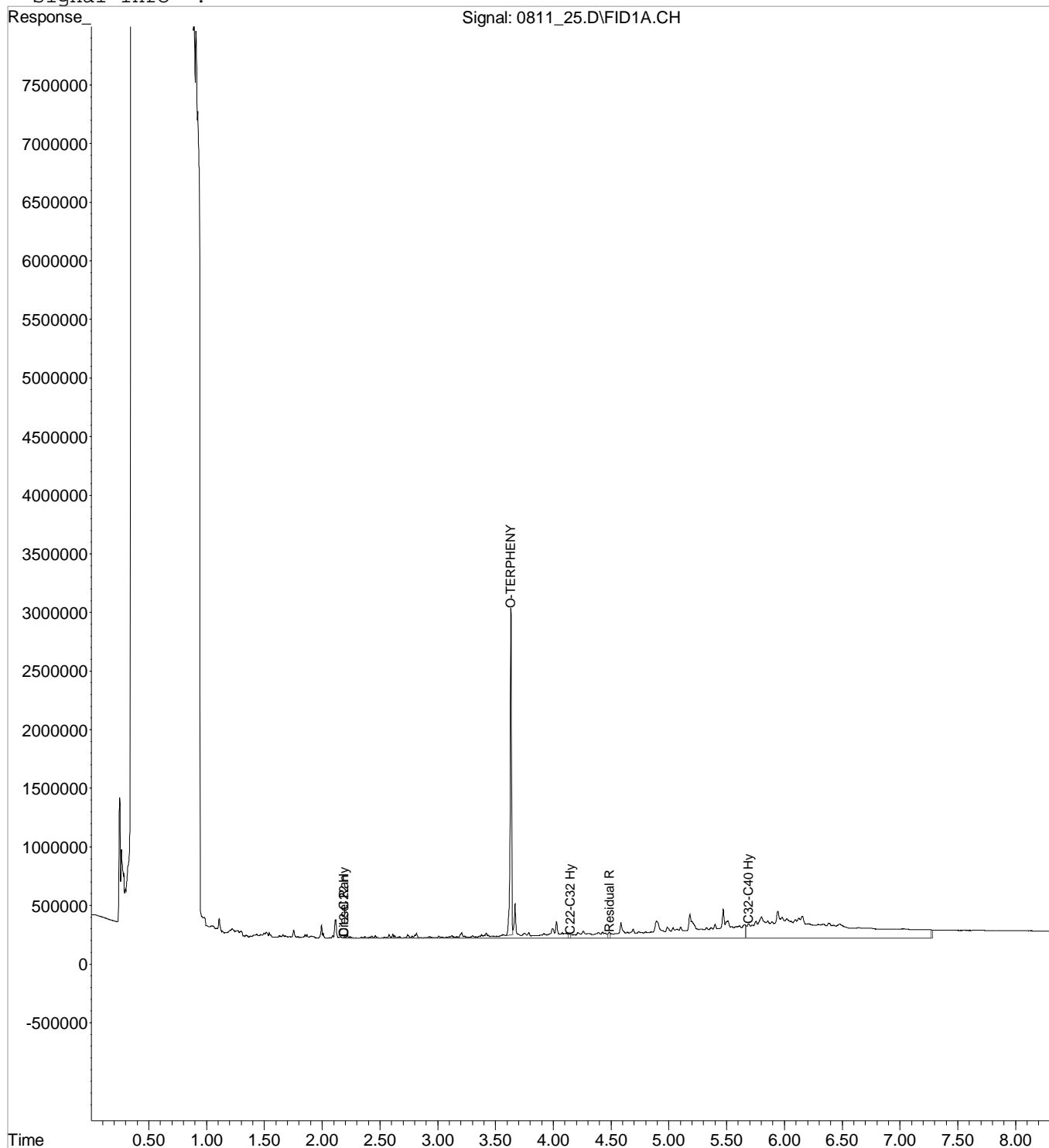
Date: 8/8/18
Time: 8:45

Hold: _____
Condition: NCF / OK

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Acq On : 11 Aug 2018 6:29 pm Operator: 815
Sample : L1015598-01 1x WG1150118 15-0.5 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 0.03
IntFile : EVENTS.E
Quant Time: Aug 12 14:46 2018 Quant Results File: EP02H08R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H08R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 09 17:46:34 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

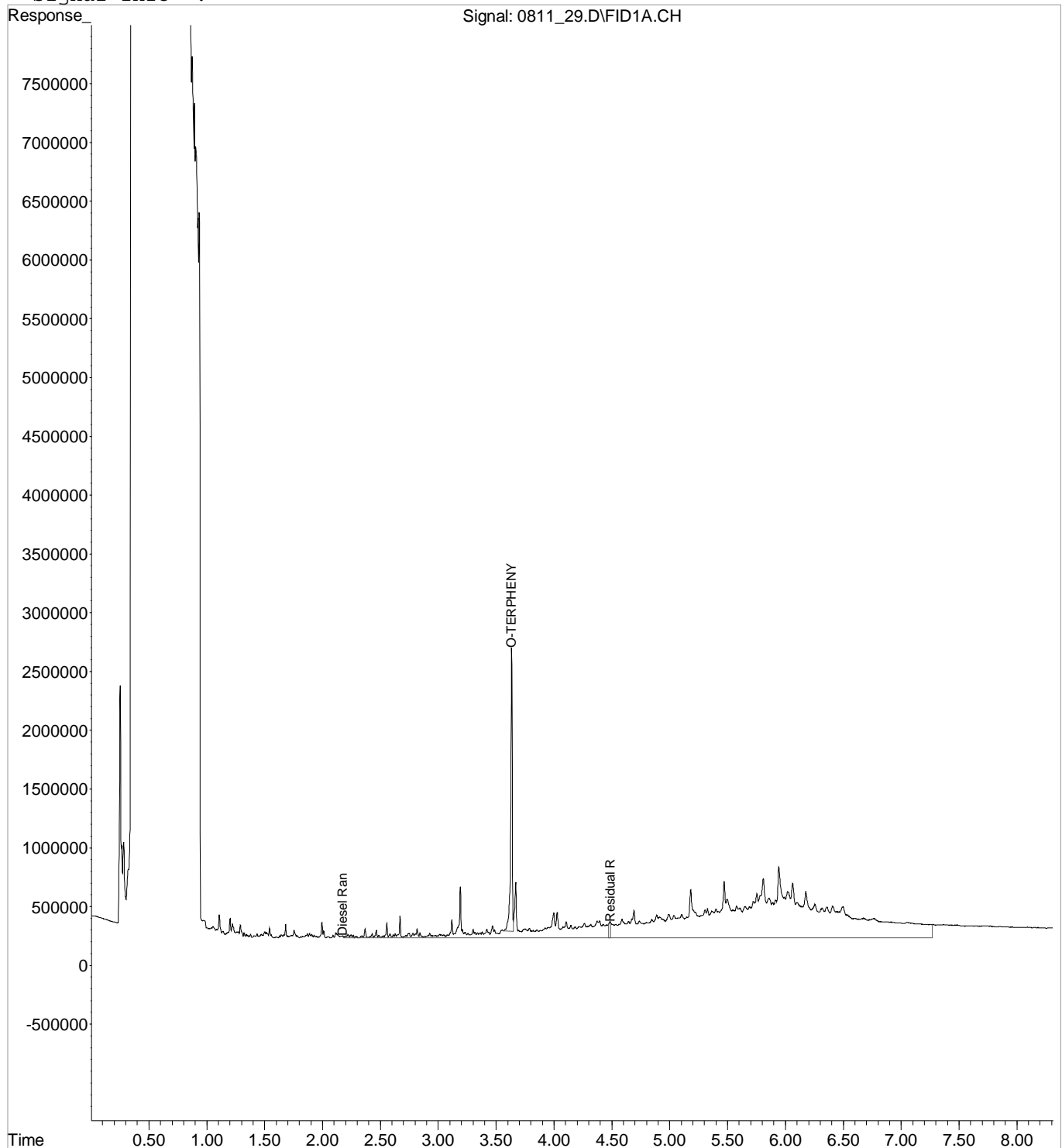
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081118\0811 29.D Vial: 25
Acq On : 11 Aug 2018 7:23 pm Operator: 815
Sample : L1015598-02 1x WG1150118 15-0.5 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 0.03
IntFile : EVENTS.E
Quant Time: Aug 12 14:49 2018 Quant Results File: EP02H08R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H08R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 09 17:46:34 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

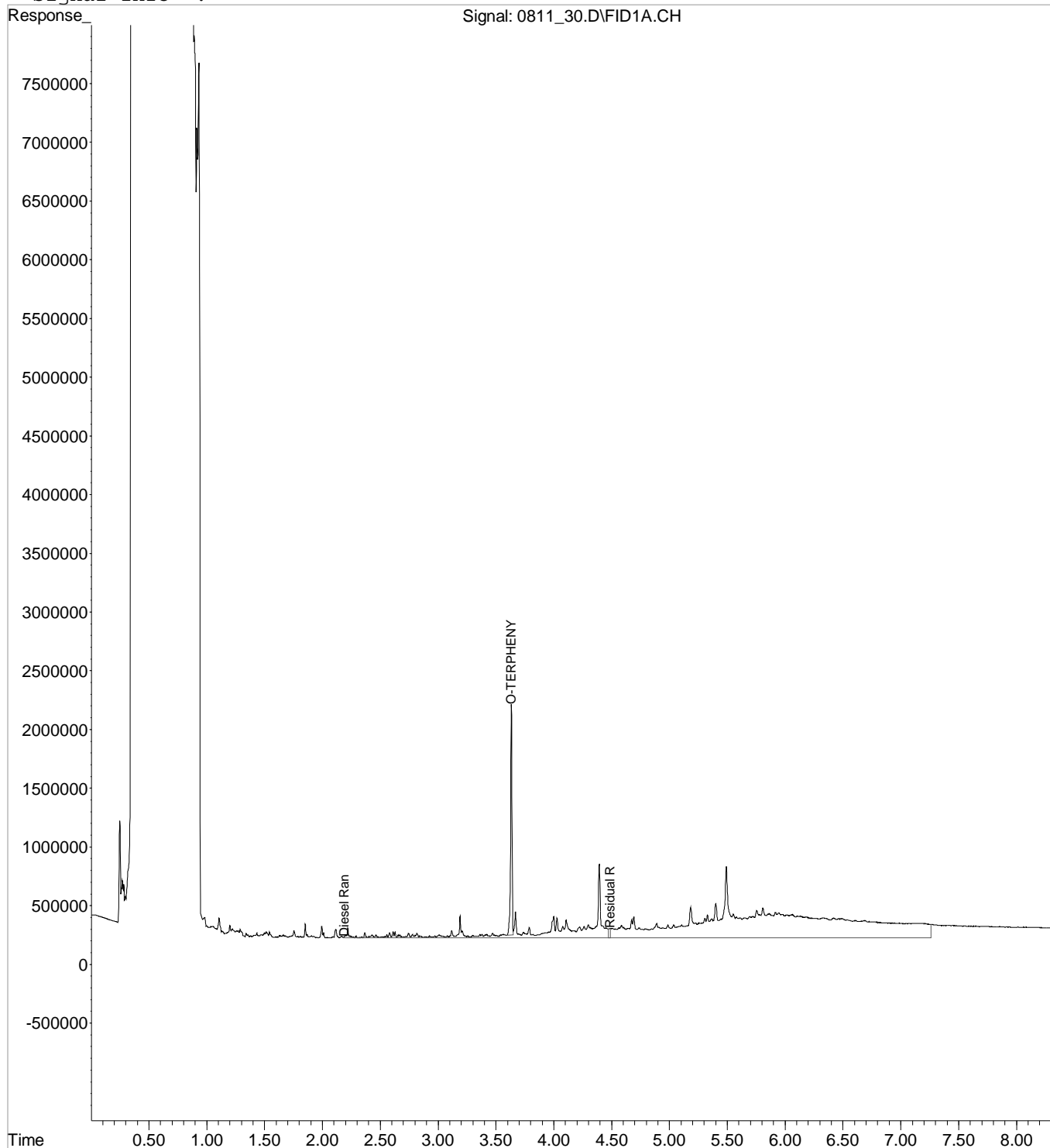
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081118\0811 30.D Vial: 26
Acq On : 11 Aug 2018 7:36 pm Operator: 815
Sample : L1015598-03 1x WG1150118 15-0.5 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 0.03
IntFile : EVENTS.E
Quant Time: Aug 12 14:49 2018 Quant Results File: EP02H08R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H08R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 09 17:46:34 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

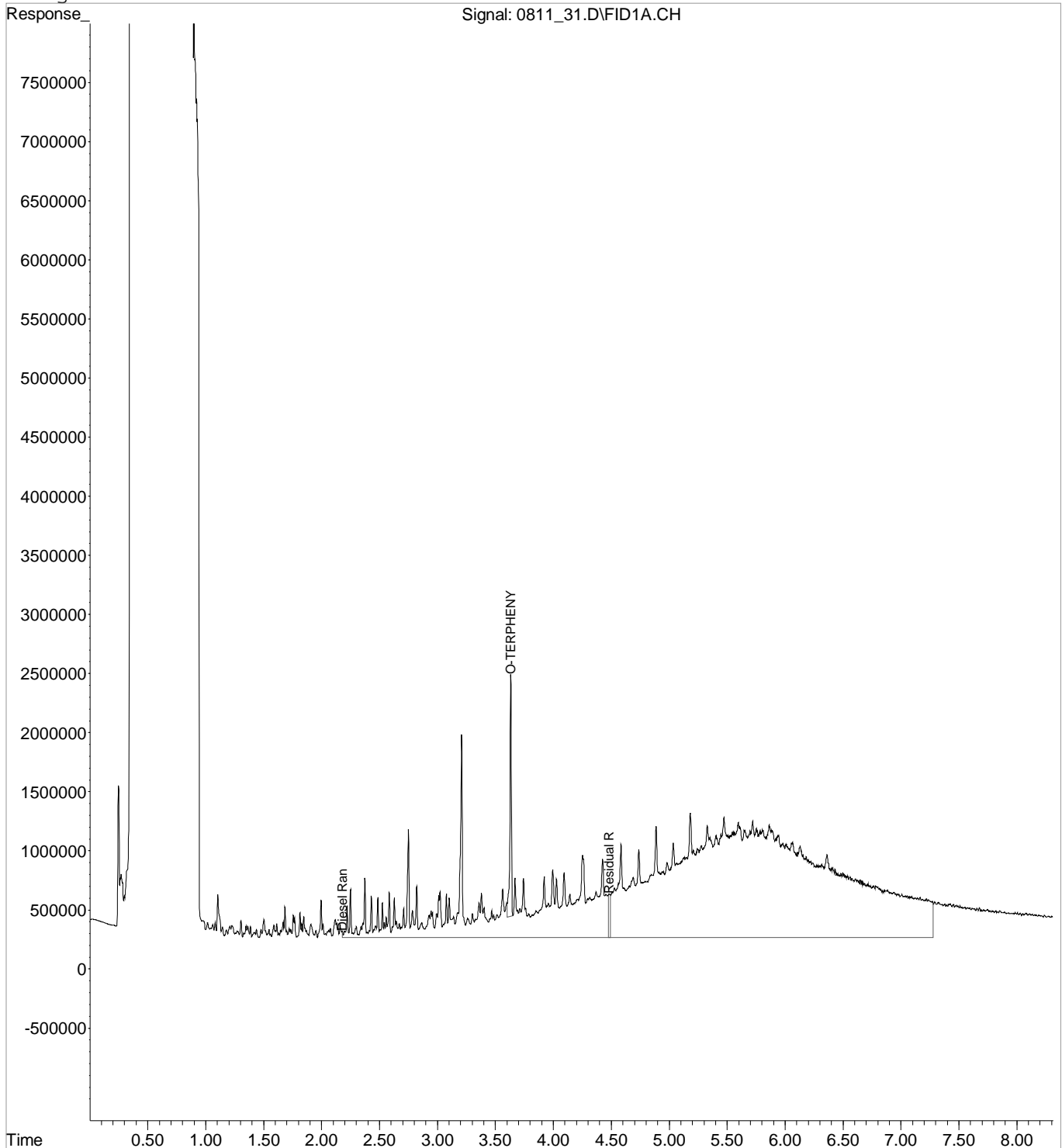
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081118\0811 31.D Vial: 27
 Acq On : 11 Aug 2018 7:50 pm Operator: 815
 Sample : L1015598-04 1x WG1150118 15-0.5 Inst : SVGC2
 Misc : SOIL all M.I.s on ranges are corrections Multiplr: 0.03
 IntFile : EVENTS.E
 Quant Time: Aug 12 14:58 2018 Quant Results File: EP02H08R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H08R.M (Chemstation Integrator)
 Title :
 Last Update : Thu Aug 09 17:46:34 2018
 Response via : Single Level Calibration
 DataAcq Meth : RACER10.M

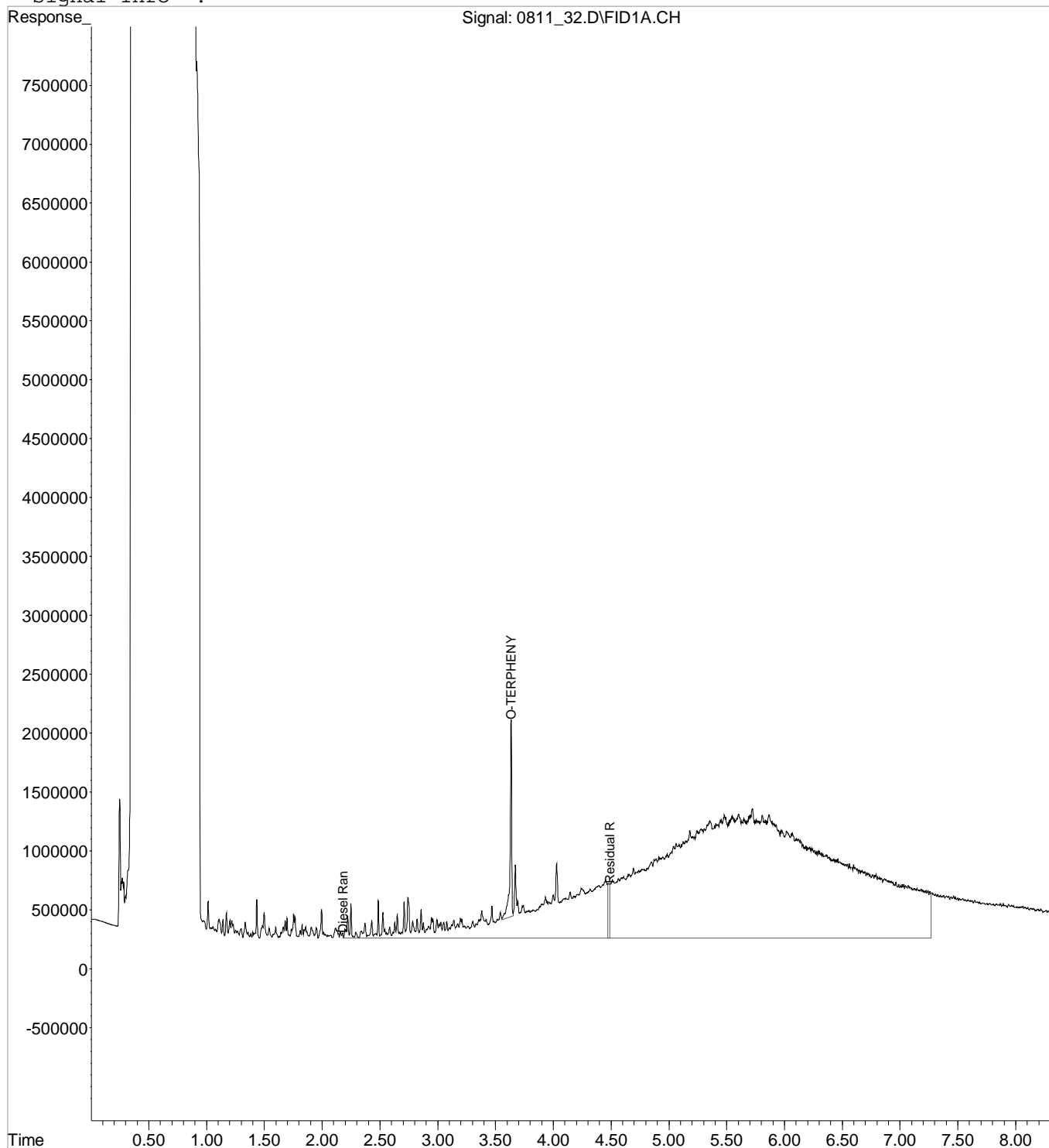
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\081118\0811 32.D Vial: 28
Acq On : 11 Aug 2018 8:03 pm Operator: 815
Sample : L1015598-05 1x WG1150118 15-0.5 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 0.03
IntFile : EVENTS.E
Quant Time: Aug 12 14:58 2018 Quant Results File: EP02H08R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H08R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 09 17:46:34 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

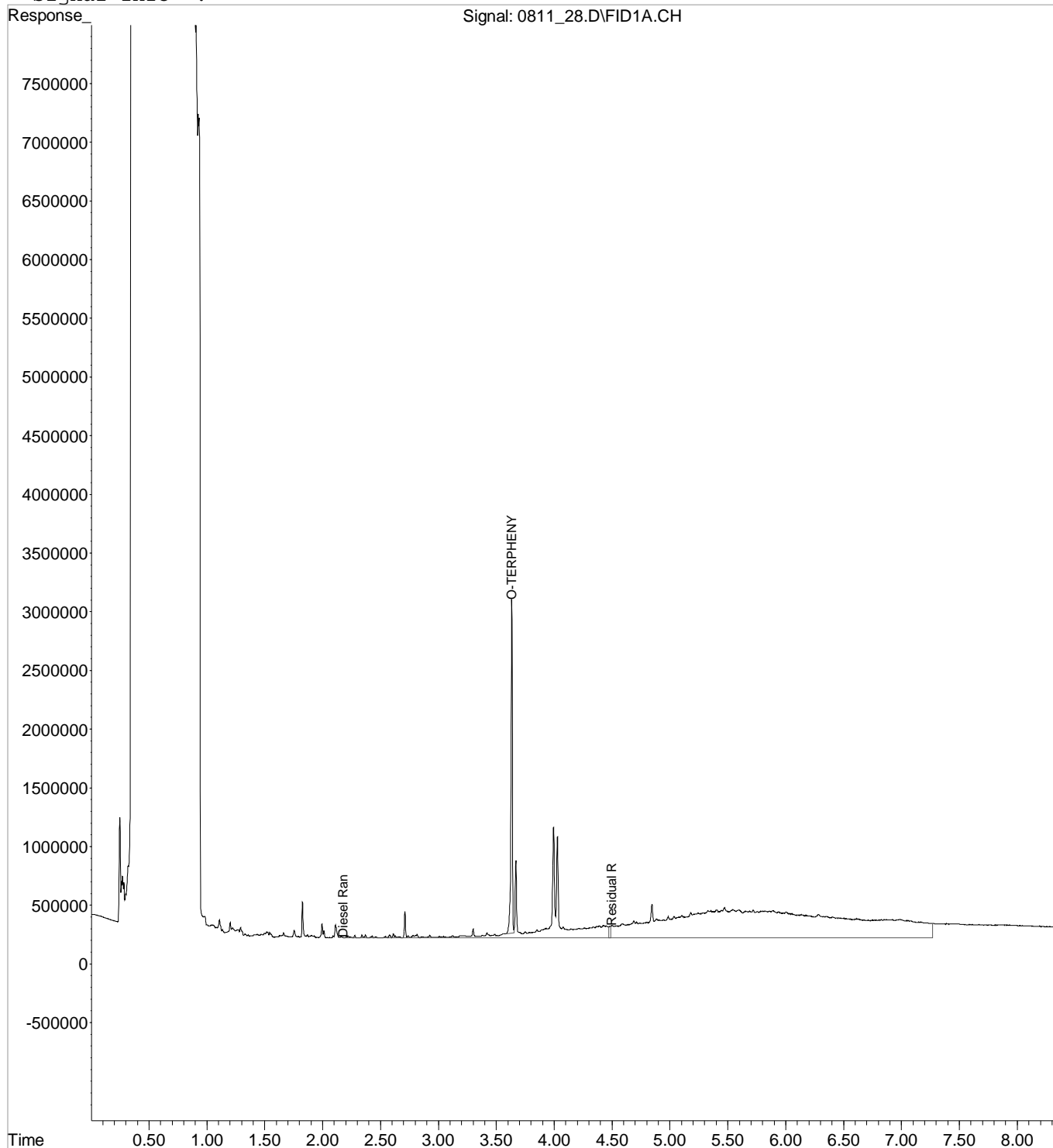
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081118\0811 28.D Vial: 24
Acq On : 11 Aug 2018 7:09 pm Operator: 815
Sample : L1015598-06 1x WG1150118 15-0.5 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 0.03
IntFile : EVENTS.E
Quant Time: Aug 12 14:49 2018 Quant Results File: EP02H08R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H08R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 09 17:46:34 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

Volume Inj. :
Signal Phase :
Signal Info :



August 20, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1016055
Samples Received: 08/09/2018
Project Number: 1896120.04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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



WMW-31(2.0-2.5) L1016055-01 Solid

Collected by
K. Teague
Collected date/time
08/07/18 15:40
Received date/time
08/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151706	1	08/14/18 10:49	08/14/18 10:59	JD
Mercury by Method 7471B	WG1150486	1	08/10/18 10:04	08/10/18 13:23	ABL
Metals (ICP) by Method 6010C	WG1150766	1	08/11/18 07:21	08/14/18 12:58	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152050	1.04	08/07/18 15:40	08/14/18 15:22	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152679	1.04	08/07/18 15:40	08/15/18 16:29	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150754	1	08/11/18 14:27	08/13/18 19:28	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1151308	1	08/12/18 21:18	08/13/18 04:53	KM

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

WMW-32(2.0-2.5) L1016055-02 Solid

Collected by
K. Teague
Collected date/time
08/08/18 07:50
Received date/time
08/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151707	1	08/14/18 10:29	08/14/18 10:44	JD
Mercury by Method 7471B	WG1150486	1	08/10/18 10:04	08/10/18 13:32	ABL
Metals (ICP) by Method 6010C	WG1150766	1	08/11/18 07:21	08/14/18 13:00	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152050	1.06	08/08/18 07:50	08/14/18 15:43	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152679	1.06	08/08/18 07:50	08/15/18 16:47	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150754	1	08/11/18 14:27	08/13/18 19:16	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1151090	1	08/11/18 17:14	08/12/18 14:13	KM

6
Qc

7
Gl

8
Al

9
Sc

WMW-32(9.5-10.0) L1016055-03 Solid

Collected by
K. Teague
Collected date/time
08/08/18 08:45
Received date/time
08/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151707	1	08/14/18 10:29	08/14/18 10:44	JD
Mercury by Method 7471B	WG1150486	1	08/10/18 10:04	08/10/18 13:34	ABL
Metals (ICP) by Method 6010C	WG1150766	1	08/11/18 07:21	08/14/18 13:08	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152050	1	08/08/18 08:45	08/14/18 16:03	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152679	1	08/08/18 08:45	08/15/18 17:06	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150754	1	08/11/18 14:27	08/13/18 18:40	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1151308	1	08/12/18 21:18	08/13/18 05:55	KM

TB-05-20180808 L1016055-04 GW

Collected by
K. Teague
Collected date/time
08/08/18 00:00
Received date/time
08/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150516	1	08/10/18 16:45	08/10/18 16:45	TJJ

WMW-31(9.0-9.5) L1016055-05 Solid

Collected by
K. Teague
Collected date/time
08/08/18 11:00
Received date/time
08/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151707	1	08/14/18 10:29	08/14/18 10:44	JD
Mercury by Method 7471B	WG1150486	1	08/10/18 10:04	08/10/18 13:36	ABL
Metals (ICP) by Method 6010C	WG1150766	1	08/11/18 07:21	08/14/18 13:10	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152050	1	08/08/18 11:00	08/14/18 16:24	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152679	1	08/08/18 11:00	08/15/18 17:25	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150754	1	08/11/18 14:27	08/13/18 18:52	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1151308	1	08/12/18 21:18	08/13/18 06:16	KM

SAMPLE SUMMARY



DUP-02-20180808 L1016055-06 Solid

Collected by: K. Teague
 Collected date/time: 08/08/18 00:00
 Received date/time: 08/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151707	1	08/14/18 10:29	08/14/18 10:44	JD
Mercury by Method 7471B	WG1150486	1	08/10/18 10:04	08/10/18 14:12	ABL
Metals (ICP) by Method 6010C	WG1150766	1	08/11/18 07:21	08/14/18 13:13	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152050	1	08/08/18 00:00	08/14/18 16:44	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152679	1	08/08/18 00:00	08/15/18 17:44	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1150754	1	08/11/18 14:27	08/13/18 19:04	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1151308	1	08/12/18 21:18	08/13/18 06:37	KM

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

B-18-18(1.5-2.0) L1016055-07 Solid

Collected by: K. Teague
 Collected date/time: 08/08/18 13:25
 Received date/time: 08/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151707	1	08/14/18 10:29	08/14/18 10:44	JD
Mercury by Method 7471B	WG1150486	1	08/10/18 10:04	08/10/18 14:15	ABL
Metals (ICP) by Method 6010C	WG1150766	1	08/11/18 07:21	08/14/18 13:15	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152050	1.25	08/08/18 13:25	08/14/18 17:04	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152679	1.25	08/08/18 13:25	08/15/18 18:02	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1151286	50	08/14/18 14:53	08/16/18 05:55	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1151308	1	08/12/18 21:18	08/13/18 12:08	KM
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1151308	20	08/12/18 21:18	08/13/18 18:13	DMG

6 Qc

7 Gl

8 Al

9 Sc



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

Mark W. Beasley
Project Manager

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.4		1	08/14/2018 10:59	WG1151706

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0259	B J3 J6	0.0252	1	08/10/2018 13:23	WG1150486

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.52	1	08/14/2018 12:58	WG1150766
Barium	104		0.630	1	08/14/2018 12:58	WG1150766
Cadmium	ND		0.630	1	08/14/2018 12:58	WG1150766
Chromium	13.7		1.26	1	08/14/2018 12:58	WG1150766
Lead	50.9		0.630	1	08/14/2018 12:58	WG1150766
Selenium	ND		2.52	1	08/14/2018 12:58	WG1150766
Silver	ND		1.26	1	08/14/2018 12:58	WG1150766

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	J0 J3	0.0328	1.04	08/14/2018 15:22	WG1152050
Acrylonitrile	ND		0.0164	1.04	08/14/2018 15:22	WG1152050
Benzene	ND		0.00131	1.04	08/14/2018 15:22	WG1152050
Bromobenzene	ND		0.0164	1.04	08/14/2018 15:22	WG1152050
Bromodichloromethane	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
Bromoform	ND		0.0328	1.04	08/14/2018 15:22	WG1152050
Bromomethane	ND		0.0164	1.04	08/14/2018 15:22	WG1152050
n-Butylbenzene	ND		0.0164	1.04	08/14/2018 15:22	WG1152050
sec-Butylbenzene	ND		0.0164	1.04	08/14/2018 15:22	WG1152050
tert-Butylbenzene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
Carbon tetrachloride	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
Chlorobenzene	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
Chlorodibromomethane	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
Chloroethane	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
Chloroform	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
Chloromethane	ND		0.0164	1.04	08/14/2018 15:22	WG1152050
2-Chlorotoluene	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
4-Chlorotoluene	ND	J3	0.00655	1.04	08/14/2018 15:22	WG1152050
1,2-Dibromo-3-Chloropropane	ND		0.0328	1.04	08/14/2018 15:22	WG1152050
1,2-Dibromoethane	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
Dibromomethane	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
1,2-Dichlorobenzene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
1,3-Dichlorobenzene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
1,4-Dichlorobenzene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
Dichlorodifluoromethane	ND	J0 J3	0.00328	1.04	08/15/2018 16:29	WG1152679
1,1-Dichloroethane	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
1,2-Dichloroethane	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
1,1-Dichloroethene	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
cis-1,2-Dichloroethene	ND	J4	0.00328	1.04	08/14/2018 15:22	WG1152050
trans-1,2-Dichloroethene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
1,2-Dichloropropane	ND		0.00655	1.04	08/15/2018 16:29	WG1152679
1,1-Dichloropropene	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
1,3-Dichloropropane	ND		0.00655	1.04	08/14/2018 15:22	WG1152050

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
trans-1,3-Dichloropropene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
2,2-Dichloropropane	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
Di-isopropyl ether	ND		0.00131	1.04	08/14/2018 15:22	WG1152050
Ethylbenzene	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
Hexachloro-1,3-butadiene	ND		0.0328	1.04	08/15/2018 16:29	WG1152679
Isopropylbenzene	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
p-Isopropyltoluene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
2-Butanone (MEK)	ND	J3	0.0328	1.04	08/15/2018 16:29	WG1152679
Methylene Chloride	ND		0.0328	1.04	08/14/2018 15:22	WG1152050
4-Methyl-2-pentanone (MIBK)	ND		0.0328	1.04	08/14/2018 15:22	WG1152050
Methyl tert-butyl ether	ND		0.00131	1.04	08/14/2018 15:22	WG1152050
Naphthalene	ND		0.0164	1.04	08/14/2018 15:22	WG1152050
n-Propylbenzene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
Styrene	ND		0.0164	1.04	08/14/2018 15:22	WG1152050
1,1,1-Tetrachloroethane	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
1,1,2-Tetrachloroethane	ND	J4	0.00328	1.04	08/14/2018 15:22	WG1152050
1,1,2-Trichlorotrifluoroethane	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
Tetrachloroethene	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
Toluene	0.00910		0.00655	1.04	08/14/2018 15:22	WG1152050
1,2,3-Trichlorobenzene	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
1,2,4-Trichlorobenzene	ND		0.0164	1.04	08/14/2018 15:22	WG1152050
1,1,1-Trichloroethane	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
1,1,2-Trichloroethane	ND	J4	0.00328	1.04	08/14/2018 15:22	WG1152050
Trichloroethene	ND		0.00131	1.04	08/14/2018 15:22	WG1152050
Trichlorofluoromethane	ND		0.00328	1.04	08/14/2018 15:22	WG1152050
1,2,3-Trichloropropane	ND		0.0164	1.04	08/14/2018 15:22	WG1152050
1,2,4-Trimethylbenzene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
1,2,3-Trimethylbenzene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
Vinyl chloride	ND		0.00328	1.04	08/15/2018 16:29	WG1152679
1,3,5-Trimethylbenzene	ND		0.00655	1.04	08/14/2018 15:22	WG1152050
o-Xylene	0.00508		0.00328	1.04	08/14/2018 15:22	WG1152050
m&p-Xylene	0.0130		0.00524	1.04	08/14/2018 15:22	WG1152050
(S) Toluene-d8	106		80.0-120		08/14/2018 15:22	WG1152050
(S) Toluene-d8	108		80.0-120		08/15/2018 16:29	WG1152679
(S) Dibromofluoromethane	102		74.0-131		08/14/2018 15:22	WG1152050
(S) Dibromofluoromethane	93.9		74.0-131		08/15/2018 16:29	WG1152679
(S) 4-Bromofluorobenzene	102		64.0-132		08/14/2018 15:22	WG1152050
(S) 4-Bromofluorobenzene	92.6		64.0-132		08/15/2018 16:29	WG1152679

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.04	1	08/13/2018 19:28	WG1150754
Residual Range Organics (RRO)	15.2		12.6	1	08/13/2018 19:28	WG1150754
(S) o-Terphenyl	69.0		18.0-148		08/13/2018 19:28	WG1150754

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Acenaphthene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Acenaphthylene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Benzo(a)anthracene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Benzo(a)pyrene	ND		0.00756	1	08/13/2018 04:53	WG1151308



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Benzo(g,h,i)perylene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Benzo(k)fluoranthene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Chrysene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Dibenz(a,h)anthracene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Fluoranthene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Fluorene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Indeno(1,2,3-cd)pyrene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Naphthalene	ND		0.0252	1	08/13/2018 04:53	WG1151308
Phenanthrene	ND		0.00756	1	08/13/2018 04:53	WG1151308
Pyrene	ND		0.00756	1	08/13/2018 04:53	WG1151308
1-Methylnaphthalene	ND		0.0252	1	08/13/2018 04:53	WG1151308
2-Methylnaphthalene	ND		0.0252	1	08/13/2018 04:53	WG1151308
2-Chloronaphthalene	ND		0.0252	1	08/13/2018 04:53	WG1151308
<i>(S)</i> Nitrobenzene-d5	62.9		14.0-149		08/13/2018 04:53	WG1151308
<i>(S)</i> 2-Fluorobiphenyl	57.9		34.0-125		08/13/2018 04:53	WG1151308
<i>(S)</i> p-Terphenyl-d14	56.5		23.0-120		08/13/2018 04:53	WG1151308

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
Total Solids	93.0		1	08/14/2018 10:44	WG1151707

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0215	1	08/10/2018 13:32	WG1150486

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.15	1	08/14/2018 13:00	WG1150766
Barium	99.4		0.537	1	08/14/2018 13:00	WG1150766
Cadmium	ND		0.537	1	08/14/2018 13:00	WG1150766
Chromium	14.0		1.07	1	08/14/2018 13:00	WG1150766
Lead	18.2		0.537	1	08/14/2018 13:00	WG1150766
Selenium	ND		2.15	1	08/14/2018 13:00	WG1150766
Silver	ND		1.07	1	08/14/2018 13:00	WG1150766

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND	J3	0.0285	1.06	08/14/2018 15:43	WG1152050
Acrylonitrile	ND		0.0142	1.06	08/14/2018 15:43	WG1152050
Benzene	ND		0.00114	1.06	08/14/2018 15:43	WG1152050
Bromobenzene	ND		0.0142	1.06	08/14/2018 15:43	WG1152050
Bromodichloromethane	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
Bromoform	ND		0.0285	1.06	08/14/2018 15:43	WG1152050
Bromomethane	ND		0.0142	1.06	08/14/2018 15:43	WG1152050
n-Butylbenzene	ND		0.0142	1.06	08/14/2018 15:43	WG1152050
sec-Butylbenzene	ND		0.0142	1.06	08/14/2018 15:43	WG1152050
tert-Butylbenzene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
Carbon tetrachloride	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
Chlorobenzene	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
Chlorodibromomethane	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
Chloroethane	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
Chloroform	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
Chloromethane	ND		0.0142	1.06	08/14/2018 15:43	WG1152050
2-Chlorotoluene	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
4-Chlorotoluene	ND	J3	0.00570	1.06	08/14/2018 15:43	WG1152050
1,2-Dibromo-3-Chloropropane	ND		0.0285	1.06	08/14/2018 15:43	WG1152050
1,2-Dibromoethane	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
Dibromomethane	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
1,2-Dichlorobenzene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
1,3-Dichlorobenzene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
1,4-Dichlorobenzene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
Dichlorodifluoromethane	ND	J0 J3	0.00285	1.06	08/15/2018 16:47	WG1152679
1,1-Dichloroethane	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
1,2-Dichloroethane	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
1,1-Dichloroethene	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
cis-1,2-Dichloroethene	ND	J4	0.00285	1.06	08/14/2018 15:43	WG1152050
trans-1,2-Dichloroethene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
1,2-Dichloropropane	ND		0.00570	1.06	08/15/2018 16:47	WG1152679
1,1-Dichloropropene	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
1,3-Dichloropropane	ND		0.00570	1.06	08/14/2018 15:43	WG1152050

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
trans-1,3-Dichloropropene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
2,2-Dichloropropane	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
Di-isopropyl ether	ND		0.00114	1.06	08/14/2018 15:43	WG1152050
Ethylbenzene	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
Hexachloro-1,3-butadiene	ND		0.0285	1.06	08/15/2018 16:47	WG1152679
Isopropylbenzene	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
p-Isopropyltoluene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
2-Butanone (MEK)	ND	J3	0.0285	1.06	08/15/2018 16:47	WG1152679
Methylene Chloride	ND		0.0285	1.06	08/14/2018 15:43	WG1152050
4-Methyl-2-pentanone (MIBK)	ND		0.0285	1.06	08/14/2018 15:43	WG1152050
Methyl tert-butyl ether	ND		0.00114	1.06	08/14/2018 15:43	WG1152050
Naphthalene	ND		0.0142	1.06	08/14/2018 15:43	WG1152050
n-Propylbenzene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
Styrene	ND		0.0142	1.06	08/14/2018 15:43	WG1152050
1,1,1,2-Tetrachloroethane	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
1,1,2,2-Tetrachloroethane	ND	J4	0.00285	1.06	08/14/2018 15:43	WG1152050
1,1,2-Trichlorotrifluoroethane	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
Tetrachloroethene	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
Toluene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
1,2,3-Trichlorobenzene	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
1,2,4-Trichlorobenzene	ND		0.0142	1.06	08/14/2018 15:43	WG1152050
1,1,1-Trichloroethane	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
1,1,2-Trichloroethane	ND	J4	0.00285	1.06	08/14/2018 15:43	WG1152050
Trichloroethene	ND		0.00114	1.06	08/14/2018 15:43	WG1152050
Trichlorofluoromethane	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
1,2,3-Trichloropropane	ND		0.0142	1.06	08/14/2018 15:43	WG1152050
1,2,4-Trimethylbenzene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
1,2,3-Trimethylbenzene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
Vinyl chloride	ND		0.00285	1.06	08/15/2018 16:47	WG1152679
1,3,5-Trimethylbenzene	ND		0.00570	1.06	08/14/2018 15:43	WG1152050
o-Xylene	ND		0.00285	1.06	08/14/2018 15:43	WG1152050
m&p-Xylene	ND		0.00456	1.06	08/14/2018 15:43	WG1152050
(S) Toluene-d8	108		80.0-120		08/14/2018 15:43	WG1152050
(S) Toluene-d8	110		80.0-120		08/15/2018 16:47	WG1152679
(S) Dibromofluoromethane	97.6		74.0-131		08/14/2018 15:43	WG1152050
(S) Dibromofluoromethane	94.1		74.0-131		08/15/2018 16:47	WG1152679
(S) 4-Bromofluorobenzene	105		64.0-132		08/14/2018 15:43	WG1152050
(S) 4-Bromofluorobenzene	98.0		64.0-132		08/15/2018 16:47	WG1152679

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5.35		4.30	1	08/13/2018 19:16	WG1150754
Residual Range Organics (RRO)	30.2		10.7	1	08/13/2018 19:16	WG1150754
(S) o-Terphenyl	91.0		18.0-148		08/13/2018 19:16	WG1150754

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Acenaphthene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Acenaphthylene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Benzo(a)anthracene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Benzo(a)pyrene	ND		0.00645	1	08/12/2018 14:13	WG1151090



Collected date/time: 08/08/18 07:50

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Benzo(g,h,i)perylene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Benzo(k)fluoranthene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Chrysene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Dibenz(a,h)anthracene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Fluoranthene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Fluorene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Indeno(1,2,3-cd)pyrene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Naphthalene	ND		0.0215	1	08/12/2018 14:13	WG1151090
Phenanthrene	ND		0.00645	1	08/12/2018 14:13	WG1151090
Pyrene	ND		0.00645	1	08/12/2018 14:13	WG1151090
1-Methylnaphthalene	ND		0.0215	1	08/12/2018 14:13	WG1151090
2-Methylnaphthalene	ND		0.0215	1	08/12/2018 14:13	WG1151090
2-Chloronaphthalene	ND		0.0215	1	08/12/2018 14:13	WG1151090
<i>(S)</i> Nitrobenzene-d5	58.1		14.0-149		08/12/2018 14:13	WG1151090
<i>(S)</i> 2-Fluorobiphenyl	78.5		34.0-125		08/12/2018 14:13	WG1151090
<i>(S)</i> p-Terphenyl-d14	78.1		23.0-120		08/12/2018 14:13	WG1151090

- 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
Total Solids	81.5		1	08/14/2018 10:44	WG1151707

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0245	1	08/10/2018 13:34	WG1150486

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.45	1	08/14/2018 13:08	WG1150766
Barium	83.8		0.614	1	08/14/2018 13:08	WG1150766
Cadmium	ND		0.614	1	08/14/2018 13:08	WG1150766
Chromium	12.4		1.23	1	08/14/2018 13:08	WG1150766
Lead	0.969		0.614	1	08/14/2018 13:08	WG1150766
Selenium	ND		2.45	1	08/14/2018 13:08	WG1150766
Silver	ND		1.23	1	08/14/2018 13:08	WG1150766

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND	J3	0.0307	1	08/14/2018 16:03	WG1152050
Acrylonitrile	ND		0.0153	1	08/14/2018 16:03	WG1152050
Benzene	ND		0.00123	1	08/14/2018 16:03	WG1152050
Bromobenzene	ND		0.0153	1	08/14/2018 16:03	WG1152050
Bromodichloromethane	ND		0.00307	1	08/14/2018 16:03	WG1152050
Bromoform	ND		0.0307	1	08/14/2018 16:03	WG1152050
Bromomethane	ND		0.0153	1	08/14/2018 16:03	WG1152050
n-Butylbenzene	ND		0.0153	1	08/14/2018 16:03	WG1152050
sec-Butylbenzene	ND		0.0153	1	08/14/2018 16:03	WG1152050
tert-Butylbenzene	ND		0.00614	1	08/14/2018 16:03	WG1152050
Carbon tetrachloride	ND		0.00614	1	08/14/2018 16:03	WG1152050
Chlorobenzene	ND		0.00307	1	08/14/2018 16:03	WG1152050
Chlorodibromomethane	ND		0.00307	1	08/14/2018 16:03	WG1152050
Chloroethane	ND		0.00614	1	08/14/2018 16:03	WG1152050
Chloroform	ND		0.00307	1	08/14/2018 16:03	WG1152050
Chloromethane	ND		0.0153	1	08/14/2018 16:03	WG1152050
2-Chlorotoluene	ND		0.00307	1	08/14/2018 16:03	WG1152050
4-Chlorotoluene	ND	J3	0.00614	1	08/14/2018 16:03	WG1152050
1,2-Dibromo-3-Chloropropane	ND		0.0307	1	08/14/2018 16:03	WG1152050
1,2-Dibromoethane	ND		0.00307	1	08/14/2018 16:03	WG1152050
Dibromomethane	ND		0.00614	1	08/14/2018 16:03	WG1152050
1,2-Dichlorobenzene	ND		0.00614	1	08/14/2018 16:03	WG1152050
1,3-Dichlorobenzene	ND		0.00614	1	08/14/2018 16:03	WG1152050
1,4-Dichlorobenzene	ND		0.00614	1	08/14/2018 16:03	WG1152050
Dichlorodifluoromethane	ND	J0 J3	0.00307	1	08/15/2018 17:06	WG1152679
1,1-Dichloroethane	ND		0.00307	1	08/14/2018 16:03	WG1152050
1,2-Dichloroethane	ND		0.00307	1	08/14/2018 16:03	WG1152050
1,1-Dichloroethene	ND		0.00307	1	08/14/2018 16:03	WG1152050
cis-1,2-Dichloroethene	ND	J4	0.00307	1	08/14/2018 16:03	WG1152050
trans-1,2-Dichloroethene	ND		0.00614	1	08/14/2018 16:03	WG1152050
1,2-Dichloropropane	ND		0.00614	1	08/15/2018 17:06	WG1152679
1,1-Dichloropropene	ND		0.00307	1	08/14/2018 16:03	WG1152050
1,3-Dichloropropane	ND		0.00614	1	08/14/2018 16:03	WG1152050

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00307	1	08/14/2018 16:03	WG1152050
trans-1,3-Dichloropropene	ND		0.00614	1	08/14/2018 16:03	WG1152050
2,2-Dichloropropane	ND		0.00307	1	08/14/2018 16:03	WG1152050
Di-isopropyl ether	ND		0.00123	1	08/14/2018 16:03	WG1152050
Ethylbenzene	ND		0.00307	1	08/14/2018 16:03	WG1152050
Hexachloro-1,3-butadiene	ND		0.0307	1	08/14/2018 16:03	WG1152050
Isopropylbenzene	ND		0.00307	1	08/14/2018 16:03	WG1152050
p-Isopropyltoluene	ND		0.00614	1	08/14/2018 16:03	WG1152050
2-Butanone (MEK)	ND	J3	0.0307	1	08/15/2018 17:06	WG1152679
Methylene Chloride	ND		0.0307	1	08/14/2018 16:03	WG1152050
4-Methyl-2-pentanone (MIBK)	ND		0.0307	1	08/14/2018 16:03	WG1152050
Methyl tert-butyl ether	ND		0.00123	1	08/14/2018 16:03	WG1152050
Naphthalene	ND		0.0153	1	08/14/2018 16:03	WG1152050
n-Propylbenzene	ND		0.00614	1	08/14/2018 16:03	WG1152050
Styrene	ND		0.0153	1	08/14/2018 16:03	WG1152050
1,1,1-Tetrachloroethane	ND		0.00307	1	08/14/2018 16:03	WG1152050
1,1,2,2-Tetrachloroethane	ND	J4	0.00307	1	08/14/2018 16:03	WG1152050
1,1,2-Trichlorotrifluoroethane	ND		0.00307	1	08/14/2018 16:03	WG1152050
Tetrachloroethene	ND		0.00307	1	08/14/2018 16:03	WG1152050
Toluene	ND		0.00614	1	08/14/2018 16:03	WG1152050
1,2,3-Trichlorobenzene	ND		0.00307	1	08/14/2018 16:03	WG1152050
1,2,4-Trichlorobenzene	ND		0.0153	1	08/14/2018 16:03	WG1152050
1,1,1-Trichloroethane	ND		0.00307	1	08/14/2018 16:03	WG1152050
1,1,2-Trichloroethane	ND	J4	0.00307	1	08/14/2018 16:03	WG1152050
Trichloroethene	ND		0.00123	1	08/14/2018 16:03	WG1152050
Trichlorofluoromethane	ND		0.00307	1	08/14/2018 16:03	WG1152050
1,2,3-Trichloropropane	ND		0.0153	1	08/14/2018 16:03	WG1152050
1,2,4-Trimethylbenzene	ND		0.00614	1	08/14/2018 16:03	WG1152050
1,2,3-Trimethylbenzene	ND		0.00614	1	08/14/2018 16:03	WG1152050
Vinyl chloride	ND		0.00307	1	08/15/2018 17:06	WG1152679
1,3,5-Trimethylbenzene	ND		0.00614	1	08/14/2018 16:03	WG1152050
o-Xylene	ND		0.00307	1	08/14/2018 16:03	WG1152050
m&p-Xylene	ND		0.00491	1	08/14/2018 16:03	WG1152050
(S) Toluene-d8	107		80.0-120		08/14/2018 16:03	WG1152050
(S) Toluene-d8	112		80.0-120		08/15/2018 17:06	WG1152679
(S) Dibromofluoromethane	101		74.0-131		08/14/2018 16:03	WG1152050
(S) Dibromofluoromethane	95.8		74.0-131		08/15/2018 17:06	WG1152679
(S) 4-Bromofluorobenzene	108		64.0-132		08/14/2018 16:03	WG1152050
(S) 4-Bromofluorobenzene	97.3		64.0-132		08/15/2018 17:06	WG1152679

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.91	1	08/13/2018 18:40	WG1150754
Residual Range Organics (RRO)	ND		12.3	1	08/13/2018 18:40	WG1150754
(S) o-Terphenyl	74.5		18.0-148		08/13/2018 18:40	WG1150754

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Acenaphthene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Acenaphthylene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Benzo(a)anthracene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Benzo(a)pyrene	ND		0.00736	1	08/13/2018 05:55	WG1151308



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Benzo(g,h,i)perylene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Benzo(k)fluoranthene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Chrysene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Dibenz(a,h)anthracene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Fluoranthene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Fluorene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Indeno(1,2,3-cd)pyrene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Naphthalene	ND		0.0245	1	08/13/2018 05:55	WG1151308
Phenanthrene	ND		0.00736	1	08/13/2018 05:55	WG1151308
Pyrene	ND		0.00736	1	08/13/2018 05:55	WG1151308
1-Methylnaphthalene	ND		0.0245	1	08/13/2018 05:55	WG1151308
2-Methylnaphthalene	ND		0.0245	1	08/13/2018 05:55	WG1151308
2-Chloronaphthalene	ND		0.0245	1	08/13/2018 05:55	WG1151308
<i>(S)</i> Nitrobenzene-d5	67.1		14.0-149		08/13/2018 05:55	WG1151308
<i>(S)</i> 2-Fluorobiphenyl	69.5		34.0-125		08/13/2018 05:55	WG1151308
<i>(S)</i> p-Terphenyl-d14	65.6		23.0-120		08/13/2018 05:55	WG1151308

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/10/2018 16:45	WG1150516
Acrolein	ND		50.0	1	08/10/2018 16:45	WG1150516
Acrylonitrile	ND		10.0	1	08/10/2018 16:45	WG1150516
Benzene	ND		1.00	1	08/10/2018 16:45	WG1150516
Bromobenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
Bromodichloromethane	ND		1.00	1	08/10/2018 16:45	WG1150516
Bromoform	ND		1.00	1	08/10/2018 16:45	WG1150516
Bromomethane	ND		5.00	1	08/10/2018 16:45	WG1150516
n-Butylbenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
sec-Butylbenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
tert-Butylbenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
Carbon tetrachloride	ND		1.00	1	08/10/2018 16:45	WG1150516
Chlorobenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
Chlorodibromomethane	ND		1.00	1	08/10/2018 16:45	WG1150516
Chloroethane	ND		5.00	1	08/10/2018 16:45	WG1150516
Chloroform	ND		5.00	1	08/10/2018 16:45	WG1150516
Chloromethane	ND		2.50	1	08/10/2018 16:45	WG1150516
2-Chlorotoluene	ND		1.00	1	08/10/2018 16:45	WG1150516
4-Chlorotoluene	ND		1.00	1	08/10/2018 16:45	WG1150516
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/10/2018 16:45	WG1150516
1,2-Dibromoethane	ND		1.00	1	08/10/2018 16:45	WG1150516
Dibromomethane	ND		1.00	1	08/10/2018 16:45	WG1150516
1,2-Dichlorobenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
1,3-Dichlorobenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
1,4-Dichlorobenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
Dichlorodifluoromethane	ND		5.00	1	08/10/2018 16:45	WG1150516
1,1-Dichloroethane	ND		1.00	1	08/10/2018 16:45	WG1150516
1,2-Dichloroethane	ND		1.00	1	08/10/2018 16:45	WG1150516
1,1-Dichloroethene	ND		1.00	1	08/10/2018 16:45	WG1150516
cis-1,2-Dichloroethene	ND		1.00	1	08/10/2018 16:45	WG1150516
trans-1,2-Dichloroethene	ND		1.00	1	08/10/2018 16:45	WG1150516
1,2-Dichloropropane	ND		1.00	1	08/10/2018 16:45	WG1150516
1,1-Dichloropropene	ND		1.00	1	08/10/2018 16:45	WG1150516
1,3-Dichloropropane	ND		1.00	1	08/10/2018 16:45	WG1150516
cis-1,3-Dichloropropene	ND		1.00	1	08/10/2018 16:45	WG1150516
trans-1,3-Dichloropropene	ND		1.00	1	08/10/2018 16:45	WG1150516
2,2-Dichloropropane	ND		1.00	1	08/10/2018 16:45	WG1150516
Di-isopropyl ether	ND		1.00	1	08/10/2018 16:45	WG1150516
Ethylbenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
Hexachloro-1,3-butadiene	ND		1.00	1	08/10/2018 16:45	WG1150516
Isopropylbenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
p-Isopropyltoluene	ND		1.00	1	08/10/2018 16:45	WG1150516
2-Butanone (MEK)	ND		10.0	1	08/10/2018 16:45	WG1150516
Methylene Chloride	ND		5.00	1	08/10/2018 16:45	WG1150516
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/10/2018 16:45	WG1150516
Methyl tert-butyl ether	ND		1.00	1	08/10/2018 16:45	WG1150516
Naphthalene	ND		5.00	1	08/10/2018 16:45	WG1150516
n-Propylbenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
Styrene	ND		1.00	1	08/10/2018 16:45	WG1150516
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/10/2018 16:45	WG1150516
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/10/2018 16:45	WG1150516
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/10/2018 16:45	WG1150516
Tetrachloroethene	ND		1.00	1	08/10/2018 16:45	WG1150516
Toluene	ND		1.00	1	08/10/2018 16:45	WG1150516
1,2,3-Trichlorobenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
1,2,4-Trichlorobenzene	ND		1.00	1	08/10/2018 16:45	WG1150516

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/10/2018 16:45	WG1150516
1,1,2-Trichloroethane	ND		1.00	1	08/10/2018 16:45	WG1150516
Trichloroethene	ND		1.00	1	08/10/2018 16:45	WG1150516
Trichlorofluoromethane	ND		5.00	1	08/10/2018 16:45	WG1150516
1,2,3-Trichloropropane	ND		2.50	1	08/10/2018 16:45	WG1150516
1,2,4-Trimethylbenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
1,2,3-Trimethylbenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
1,3,5-Trimethylbenzene	ND		1.00	1	08/10/2018 16:45	WG1150516
Vinyl chloride	ND		1.00	1	08/10/2018 16:45	WG1150516
o-Xylene	ND		1.00	1	08/10/2018 16:45	WG1150516
m&p-Xylene	ND		2.00	1	08/10/2018 16:45	WG1150516
(S) Toluene-d8	109		80.0-120		08/10/2018 16:45	WG1150516
(S) Dibromofluoromethane	100		76.0-123		08/10/2018 16:45	WG1150516
(S) 4-Bromofluorobenzene	86.5		80.0-120		08/10/2018 16:45	WG1150516

- 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	81.2		1	08/14/2018 10:44	WG1151707

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0246	1	08/10/2018 13:36	WG1150486

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.46	1	08/14/2018 13:10	WG1150766
Barium	90.7		0.616	1	08/14/2018 13:10	WG1150766
Cadmium	ND		0.616	1	08/14/2018 13:10	WG1150766
Chromium	13.6		1.23	1	08/14/2018 13:10	WG1150766
Lead	1.70		0.616	1	08/14/2018 13:10	WG1150766
Selenium	ND		2.46	1	08/14/2018 13:10	WG1150766
Silver	ND		1.23	1	08/14/2018 13:10	WG1150766

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	J3	0.0308	1	08/14/2018 16:24	WG1152050
Acrylonitrile	ND		0.0154	1	08/14/2018 16:24	WG1152050
Benzene	ND		0.00123	1	08/14/2018 16:24	WG1152050
Bromobenzene	ND		0.0154	1	08/14/2018 16:24	WG1152050
Bromodichloromethane	ND		0.00308	1	08/14/2018 16:24	WG1152050
Bromoform	ND		0.0308	1	08/14/2018 16:24	WG1152050
Bromomethane	ND		0.0154	1	08/14/2018 16:24	WG1152050
n-Butylbenzene	ND		0.0154	1	08/14/2018 16:24	WG1152050
sec-Butylbenzene	ND		0.0154	1	08/14/2018 16:24	WG1152050
tert-Butylbenzene	ND		0.00616	1	08/14/2018 16:24	WG1152050
Carbon tetrachloride	ND		0.00616	1	08/14/2018 16:24	WG1152050
Chlorobenzene	ND		0.00308	1	08/14/2018 16:24	WG1152050
Chlorodibromomethane	ND		0.00308	1	08/14/2018 16:24	WG1152050
Chloroethane	ND		0.00616	1	08/14/2018 16:24	WG1152050
Chloroform	ND		0.00308	1	08/14/2018 16:24	WG1152050
Chloromethane	ND		0.0154	1	08/14/2018 16:24	WG1152050
2-Chlorotoluene	ND		0.00308	1	08/14/2018 16:24	WG1152050
4-Chlorotoluene	ND	J3	0.00616	1	08/14/2018 16:24	WG1152050
1,2-Dibromo-3-Chloropropane	ND		0.0308	1	08/14/2018 16:24	WG1152050
1,2-Dibromoethane	ND		0.00308	1	08/14/2018 16:24	WG1152050
Dibromomethane	ND		0.00616	1	08/14/2018 16:24	WG1152050
1,2-Dichlorobenzene	ND		0.00616	1	08/14/2018 16:24	WG1152050
1,3-Dichlorobenzene	ND		0.00616	1	08/14/2018 16:24	WG1152050
1,4-Dichlorobenzene	ND		0.00616	1	08/14/2018 16:24	WG1152050
Dichlorodifluoromethane	ND	J0 J3	0.00308	1	08/15/2018 17:25	WG1152679
1,1-Dichloroethane	ND		0.00308	1	08/14/2018 16:24	WG1152050
1,2-Dichloroethane	ND		0.00308	1	08/14/2018 16:24	WG1152050
1,1-Dichloroethene	ND		0.00308	1	08/14/2018 16:24	WG1152050
cis-1,2-Dichloroethene	ND	J4	0.00308	1	08/14/2018 16:24	WG1152050
trans-1,2-Dichloroethene	ND		0.00616	1	08/14/2018 16:24	WG1152050
1,2-Dichloropropane	ND		0.00616	1	08/15/2018 17:25	WG1152679
1,1-Dichloropropene	ND		0.00308	1	08/14/2018 16:24	WG1152050
1,3-Dichloropropane	ND		0.00616	1	08/14/2018 16:24	WG1152050

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00308	1	08/14/2018 16:24	WG1152050
trans-1,3-Dichloropropene	ND		0.00616	1	08/14/2018 16:24	WG1152050
2,2-Dichloropropane	ND		0.00308	1	08/14/2018 16:24	WG1152050
Di-isopropyl ether	ND		0.00123	1	08/14/2018 16:24	WG1152050
Ethylbenzene	ND		0.00308	1	08/14/2018 16:24	WG1152050
Hexachloro-1,3-butadiene	ND		0.0308	1	08/14/2018 16:24	WG1152050
Isopropylbenzene	ND		0.00308	1	08/14/2018 16:24	WG1152050
p-Isopropyltoluene	ND		0.00616	1	08/14/2018 16:24	WG1152050
2-Butanone (MEK)	ND	J3	0.0308	1	08/15/2018 17:25	WG1152679
Methylene Chloride	ND		0.0308	1	08/14/2018 16:24	WG1152050
4-Methyl-2-pentanone (MIBK)	ND		0.0308	1	08/14/2018 16:24	WG1152050
Methyl tert-butyl ether	ND		0.00123	1	08/14/2018 16:24	WG1152050
Naphthalene	ND		0.0154	1	08/14/2018 16:24	WG1152050
n-Propylbenzene	ND		0.00616	1	08/14/2018 16:24	WG1152050
Styrene	ND		0.0154	1	08/14/2018 16:24	WG1152050
1,1,1-Tetrachloroethane	ND		0.00308	1	08/14/2018 16:24	WG1152050
1,1,2,2-Tetrachloroethane	ND	J4	0.00308	1	08/14/2018 16:24	WG1152050
1,1,2-Trichlorotrifluoroethane	ND		0.00308	1	08/14/2018 16:24	WG1152050
Tetrachloroethene	ND		0.00308	1	08/14/2018 16:24	WG1152050
Toluene	ND		0.00616	1	08/14/2018 16:24	WG1152050
1,2,3-Trichlorobenzene	ND		0.00308	1	08/14/2018 16:24	WG1152050
1,2,4-Trichlorobenzene	ND		0.0154	1	08/14/2018 16:24	WG1152050
1,1,1-Trichloroethane	ND		0.00308	1	08/14/2018 16:24	WG1152050
1,1,2-Trichloroethane	ND	J4	0.00308	1	08/14/2018 16:24	WG1152050
Trichloroethene	ND		0.00123	1	08/14/2018 16:24	WG1152050
Trichlorofluoromethane	ND		0.00308	1	08/14/2018 16:24	WG1152050
1,2,3-Trichloropropane	ND		0.0154	1	08/14/2018 16:24	WG1152050
1,2,4-Trimethylbenzene	ND		0.00616	1	08/14/2018 16:24	WG1152050
1,2,3-Trimethylbenzene	ND		0.00616	1	08/14/2018 16:24	WG1152050
Vinyl chloride	ND		0.00308	1	08/15/2018 17:25	WG1152679
1,3,5-Trimethylbenzene	ND		0.00616	1	08/14/2018 16:24	WG1152050
o-Xylene	ND		0.00308	1	08/14/2018 16:24	WG1152050
m&p-Xylene	ND		0.00493	1	08/14/2018 16:24	WG1152050
(S) Toluene-d8	107		80.0-120		08/14/2018 16:24	WG1152050
(S) Toluene-d8	111		80.0-120		08/15/2018 17:25	WG1152679
(S) Dibromofluoromethane	99.1		74.0-131		08/14/2018 16:24	WG1152050
(S) Dibromofluoromethane	94.7		74.0-131		08/15/2018 17:25	WG1152679
(S) 4-Bromofluorobenzene	105		64.0-132		08/14/2018 16:24	WG1152050
(S) 4-Bromofluorobenzene	96.8		64.0-132		08/15/2018 17:25	WG1152679

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.93	1	08/13/2018 18:52	WG1150754
Residual Range Organics (RRO)	ND		12.3	1	08/13/2018 18:52	WG1150754
(S) o-Terphenyl	80.5		18.0-148		08/13/2018 18:52	WG1150754

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Acenaphthene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Acenaphthylene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Benzo(a)anthracene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Benzo(a)pyrene	ND		0.00739	1	08/13/2018 06:16	WG1151308



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Benzo(g,h,i)perylene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Benzo(k)fluoranthene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Chrysene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Dibenz(a,h)anthracene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Fluoranthene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Fluorene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Indeno(1,2,3-cd)pyrene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Naphthalene	ND		0.0246	1	08/13/2018 06:16	WG1151308
Phenanthrene	ND		0.00739	1	08/13/2018 06:16	WG1151308
Pyrene	ND		0.00739	1	08/13/2018 06:16	WG1151308
1-Methylnaphthalene	ND		0.0246	1	08/13/2018 06:16	WG1151308
2-Methylnaphthalene	ND		0.0246	1	08/13/2018 06:16	WG1151308
2-Chloronaphthalene	ND		0.0246	1	08/13/2018 06:16	WG1151308
<i>(S)</i> Nitrobenzene-d5	59.4		14.0-149		08/13/2018 06:16	WG1151308
<i>(S)</i> 2-Fluorobiphenyl	69.1		34.0-125		08/13/2018 06:16	WG1151308
<i>(S)</i> p-Terphenyl-d14	64.9		23.0-120		08/13/2018 06:16	WG1151308

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	81.9		1	08/14/2018 10:44	WG1151707

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0244	1	08/10/2018 14:12	WG1150486

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.44	1	08/14/2018 13:13	WG1150766
Barium	124		0.610	1	08/14/2018 13:13	WG1150766
Cadmium	ND		0.610	1	08/14/2018 13:13	WG1150766
Chromium	14.0		1.22	1	08/14/2018 13:13	WG1150766
Lead	1.48		0.610	1	08/14/2018 13:13	WG1150766
Selenium	ND		2.44	1	08/14/2018 13:13	WG1150766
Silver	ND		1.22	1	08/14/2018 13:13	WG1150766

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	J3	0.0305	1	08/14/2018 16:44	WG1152050
Acrylonitrile	ND		0.0153	1	08/14/2018 16:44	WG1152050
Benzene	ND		0.00122	1	08/14/2018 16:44	WG1152050
Bromobenzene	ND		0.0153	1	08/14/2018 16:44	WG1152050
Bromodichloromethane	ND		0.00305	1	08/14/2018 16:44	WG1152050
Bromoform	ND		0.0305	1	08/14/2018 16:44	WG1152050
Bromomethane	ND		0.0153	1	08/14/2018 16:44	WG1152050
n-Butylbenzene	ND		0.0153	1	08/14/2018 16:44	WG1152050
sec-Butylbenzene	ND		0.0153	1	08/14/2018 16:44	WG1152050
tert-Butylbenzene	ND		0.00610	1	08/14/2018 16:44	WG1152050
Carbon tetrachloride	ND		0.00610	1	08/14/2018 16:44	WG1152050
Chlorobenzene	ND		0.00305	1	08/14/2018 16:44	WG1152050
Chlorodibromomethane	ND		0.00305	1	08/14/2018 16:44	WG1152050
Chloroethane	ND		0.00610	1	08/14/2018 16:44	WG1152050
Chloroform	ND		0.00305	1	08/14/2018 16:44	WG1152050
Chloromethane	ND		0.0153	1	08/14/2018 16:44	WG1152050
2-Chlorotoluene	ND		0.00305	1	08/14/2018 16:44	WG1152050
4-Chlorotoluene	ND	J3	0.00610	1	08/14/2018 16:44	WG1152050
1,2-Dibromo-3-Chloropropane	ND		0.0305	1	08/14/2018 16:44	WG1152050
1,2-Dibromoethane	ND		0.00305	1	08/14/2018 16:44	WG1152050
Dibromomethane	ND		0.00610	1	08/14/2018 16:44	WG1152050
1,2-Dichlorobenzene	ND		0.00610	1	08/14/2018 16:44	WG1152050
1,3-Dichlorobenzene	ND		0.00610	1	08/14/2018 16:44	WG1152050
1,4-Dichlorobenzene	ND		0.00610	1	08/14/2018 16:44	WG1152050
Dichlorodifluoromethane	ND	J0 J3	0.00305	1	08/15/2018 17:44	WG1152679
1,1-Dichloroethane	ND		0.00305	1	08/14/2018 16:44	WG1152050
1,2-Dichloroethane	ND		0.00305	1	08/14/2018 16:44	WG1152050
1,1-Dichloroethene	ND		0.00305	1	08/14/2018 16:44	WG1152050
cis-1,2-Dichloroethene	ND	J4	0.00305	1	08/14/2018 16:44	WG1152050
trans-1,2-Dichloroethene	ND		0.00610	1	08/14/2018 16:44	WG1152050
1,2-Dichloropropane	ND		0.00610	1	08/15/2018 17:44	WG1152679
1,1-Dichloropropene	ND		0.00305	1	08/14/2018 16:44	WG1152050
1,3-Dichloropropane	ND		0.00610	1	08/14/2018 16:44	WG1152050

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00305	1	08/14/2018 16:44	WG1152050
trans-1,3-Dichloropropene	ND		0.00610	1	08/14/2018 16:44	WG1152050
2,2-Dichloropropane	ND		0.00305	1	08/14/2018 16:44	WG1152050
Di-isopropyl ether	ND		0.00122	1	08/14/2018 16:44	WG1152050
Ethylbenzene	ND		0.00305	1	08/14/2018 16:44	WG1152050
Hexachloro-1,3-butadiene	ND		0.0305	1	08/14/2018 16:44	WG1152050
Isopropylbenzene	ND		0.00305	1	08/14/2018 16:44	WG1152050
p-Isopropyltoluene	ND		0.00610	1	08/14/2018 16:44	WG1152050
2-Butanone (MEK)	ND	J3	0.0305	1	08/15/2018 17:44	WG1152679
Methylene Chloride	ND		0.0305	1	08/14/2018 16:44	WG1152050
4-Methyl-2-pentanone (MIBK)	ND		0.0305	1	08/14/2018 16:44	WG1152050
Methyl tert-butyl ether	ND		0.00122	1	08/14/2018 16:44	WG1152050
Naphthalene	ND		0.0153	1	08/14/2018 16:44	WG1152050
n-Propylbenzene	ND		0.00610	1	08/14/2018 16:44	WG1152050
Styrene	ND		0.0153	1	08/14/2018 16:44	WG1152050
1,1,1,2-Tetrachloroethane	ND		0.00305	1	08/14/2018 16:44	WG1152050
1,1,2,2-Tetrachloroethane	ND	J4	0.00305	1	08/14/2018 16:44	WG1152050
1,1,2-Trichlorotrifluoroethane	ND		0.00305	1	08/14/2018 16:44	WG1152050
Tetrachloroethene	ND		0.00305	1	08/14/2018 16:44	WG1152050
Toluene	ND		0.00610	1	08/14/2018 16:44	WG1152050
1,2,3-Trichlorobenzene	ND		0.00305	1	08/14/2018 16:44	WG1152050
1,2,4-Trichlorobenzene	ND		0.0153	1	08/14/2018 16:44	WG1152050
1,1,1-Trichloroethane	ND		0.00305	1	08/14/2018 16:44	WG1152050
1,1,2-Trichloroethane	ND	J4	0.00305	1	08/14/2018 16:44	WG1152050
Trichloroethene	ND		0.00122	1	08/14/2018 16:44	WG1152050
Trichlorofluoromethane	ND		0.00305	1	08/14/2018 16:44	WG1152050
1,2,3-Trichloropropane	ND		0.0153	1	08/14/2018 16:44	WG1152050
1,2,4-Trimethylbenzene	ND		0.00610	1	08/14/2018 16:44	WG1152050
1,2,3-Trimethylbenzene	ND		0.00610	1	08/14/2018 16:44	WG1152050
Vinyl chloride	ND		0.00305	1	08/15/2018 17:44	WG1152679
1,3,5-Trimethylbenzene	ND		0.00610	1	08/14/2018 16:44	WG1152050
o-Xylene	ND		0.00305	1	08/14/2018 16:44	WG1152050
m&p-Xylene	ND		0.00488	1	08/14/2018 16:44	WG1152050
(S) Toluene-d8	110		80.0-120		08/14/2018 16:44	WG1152050
(S) Toluene-d8	108		80.0-120		08/15/2018 17:44	WG1152679
(S) Dibromofluoromethane	101		74.0-131		08/14/2018 16:44	WG1152050
(S) Dibromofluoromethane	95.1		74.0-131		08/15/2018 17:44	WG1152679
(S) 4-Bromofluorobenzene	104		64.0-132		08/14/2018 16:44	WG1152050
(S) 4-Bromofluorobenzene	97.9		64.0-132		08/15/2018 17:44	WG1152679

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.88	1	08/13/2018 19:04	WG1150754
Residual Range Organics (RRO)	ND		12.2	1	08/13/2018 19:04	WG1150754
(S) o-Terphenyl	87.0		18.0-148		08/13/2018 19:04	WG1150754

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Acenaphthene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Acenaphthylene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Benzo(a)anthracene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Benzo(a)pyrene	ND		0.00732	1	08/13/2018 06:37	WG1151308



Collected date/time: 08/08/18 00:00

L1016055

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Benzo(g,h,i)perylene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Benzo(k)fluoranthene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Chrysene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Dibenz(a,h)anthracene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Fluoranthene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Fluorene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Indeno(1,2,3-cd)pyrene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Naphthalene	ND		0.0244	1	08/13/2018 06:37	WG1151308
Phenanthrene	ND		0.00732	1	08/13/2018 06:37	WG1151308
Pyrene	ND		0.00732	1	08/13/2018 06:37	WG1151308
1-Methylnaphthalene	ND		0.0244	1	08/13/2018 06:37	WG1151308
2-Methylnaphthalene	ND		0.0244	1	08/13/2018 06:37	WG1151308
2-Chloronaphthalene	ND		0.0244	1	08/13/2018 06:37	WG1151308
<i>(S)</i> Nitrobenzene-d5	64.8		14.0-149		08/13/2018 06:37	WG1151308
<i>(S)</i> 2-Fluorobiphenyl	71.9		34.0-125		08/13/2018 06:37	WG1151308
<i>(S)</i> p-Terphenyl-d14	76.6		23.0-120		08/13/2018 06:37	WG1151308

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.2		1	08/14/2018 10:44	WG1151707

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0682		0.0219	1	08/10/2018 14:15	WG1150486

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	9.65		2.19	1	08/14/2018 13:15	WG1150766
Barium	78.9		0.548	1	08/14/2018 13:15	WG1150766
Cadmium	ND		0.548	1	08/14/2018 13:15	WG1150766
Chromium	22.8		1.10	1	08/14/2018 13:15	WG1150766
Lead	135		0.548	1	08/14/2018 13:15	WG1150766
Selenium	ND		2.19	1	08/14/2018 13:15	WG1150766
Silver	ND		1.10	1	08/14/2018 13:15	WG1150766

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	J3	0.0343	1.25	08/14/2018 17:04	WG1152050
Acrylonitrile	ND		0.0171	1.25	08/14/2018 17:04	WG1152050
Benzene	ND		0.00137	1.25	08/14/2018 17:04	WG1152050
Bromobenzene	ND		0.0171	1.25	08/14/2018 17:04	WG1152050
Bromodichloromethane	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
Bromoform	ND		0.0343	1.25	08/14/2018 17:04	WG1152050
Bromomethane	ND		0.0171	1.25	08/14/2018 17:04	WG1152050
n-Butylbenzene	ND		0.0171	1.25	08/14/2018 17:04	WG1152050
sec-Butylbenzene	ND		0.0171	1.25	08/14/2018 17:04	WG1152050
tert-Butylbenzene	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
Carbon tetrachloride	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
Chlorobenzene	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
Chlorodibromomethane	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
Chloroethane	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
Chloroform	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
Chloromethane	ND		0.0171	1.25	08/14/2018 17:04	WG1152050
2-Chlorotoluene	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
4-Chlorotoluene	ND	J3	0.00685	1.25	08/14/2018 17:04	WG1152050
1,2-Dibromo-3-Chloropropane	ND		0.0343	1.25	08/14/2018 17:04	WG1152050
1,2-Dibromoethane	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
Dibromomethane	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
1,2-Dichlorobenzene	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
1,3-Dichlorobenzene	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
1,4-Dichlorobenzene	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
Dichlorodifluoromethane	ND	J0 J3	0.00343	1.25	08/15/2018 18:02	WG1152679
1,1-Dichloroethane	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
1,2-Dichloroethane	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
1,1-Dichloroethene	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
cis-1,2-Dichloroethene	ND	J4	0.00343	1.25	08/14/2018 17:04	WG1152050
trans-1,2-Dichloroethene	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
1,2-Dichloropropane	ND		0.00685	1.25	08/15/2018 18:02	WG1152679
1,1-Dichloropropene	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
1,3-Dichloropropane	ND		0.00685	1.25	08/14/2018 17:04	WG1152050

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
trans-1,3-Dichloropropene	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
2,2-Dichloropropane	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
Di-isopropyl ether	ND		0.00137	1.25	08/14/2018 17:04	WG1152050
Ethylbenzene	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
Hexachloro-1,3-butadiene	ND		0.0343	1.25	08/14/2018 17:04	WG1152050
Isopropylbenzene	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
p-Isopropyltoluene	0.0110		0.00685	1.25	08/14/2018 17:04	WG1152050
2-Butanone (MEK)	ND	J3	0.0343	1.25	08/15/2018 18:02	WG1152679
Methylene Chloride	ND		0.0343	1.25	08/14/2018 17:04	WG1152050
4-Methyl-2-pentanone (MIBK)	ND		0.0343	1.25	08/14/2018 17:04	WG1152050
Methyl tert-butyl ether	ND		0.00137	1.25	08/14/2018 17:04	WG1152050
Naphthalene	0.0551		0.0171	1.25	08/14/2018 17:04	WG1152050
n-Propylbenzene	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
Styrene	ND		0.0171	1.25	08/14/2018 17:04	WG1152050
1,1,1,2-Tetrachloroethane	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
1,1,2,2-Tetrachloroethane	ND	J4	0.00343	1.25	08/14/2018 17:04	WG1152050
1,1,2-Trichlorotrifluoroethane	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
Tetrachloroethene	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
Toluene	0.0108		0.00685	1.25	08/14/2018 17:04	WG1152050
1,2,3-Trichlorobenzene	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
1,2,4-Trichlorobenzene	ND		0.0171	1.25	08/14/2018 17:04	WG1152050
1,1,1-Trichloroethane	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
1,1,2-Trichloroethane	ND	J4	0.00343	1.25	08/14/2018 17:04	WG1152050
Trichloroethene	ND		0.00137	1.25	08/14/2018 17:04	WG1152050
Trichlorofluoromethane	ND		0.00343	1.25	08/14/2018 17:04	WG1152050
1,2,3-Trichloropropane	ND		0.0171	1.25	08/14/2018 17:04	WG1152050
1,2,4-Trimethylbenzene	0.0210		0.00685	1.25	08/14/2018 17:04	WG1152050
1,2,3-Trimethylbenzene	0.0192		0.00685	1.25	08/14/2018 17:04	WG1152050
Vinyl chloride	ND		0.00343	1.25	08/15/2018 18:02	WG1152679
1,3,5-Trimethylbenzene	ND		0.00685	1.25	08/14/2018 17:04	WG1152050
o-Xylene	0.0171		0.00343	1.25	08/14/2018 17:04	WG1152050
m&p-Xylene	0.0186		0.00548	1.25	08/14/2018 17:04	WG1152050
(S) Toluene-d8	105		80.0-120		08/14/2018 17:04	WG1152050
(S) Toluene-d8	108		80.0-120		08/15/2018 18:02	WG1152679
(S) Dibromofluoromethane	101		74.0-131		08/14/2018 17:04	WG1152050
(S) Dibromofluoromethane	96.8		74.0-131		08/15/2018 18:02	WG1152679
(S) 4-Bromofluorobenzene	101		64.0-132		08/14/2018 17:04	WG1152050
(S) 4-Bromofluorobenzene	99.7		64.0-132		08/15/2018 18:02	WG1152679

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND	U	73.1	50	08/16/2018 05:55	WG1151286
Residual Range Organics (RRO)	341	Z1	183	50	08/16/2018 05:55	WG1151286
(S) o-Terphenyl	89.9	J7	18.0-148		08/16/2018 05:55	WG1151286

Sample Narrative:

L1016055-07 WG1151286: Cannot run at lower dilution due to viscosity of extract



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.798		0.00658	1	08/13/2018 12:08	WG1151308
Acenaphthene	0.508		0.00658	1	08/13/2018 12:08	WG1151308
Acenaphthylene	ND		0.00658	1	08/13/2018 12:08	WG1151308
Benzo(a)anthracene	3.65		0.00658	1	08/13/2018 12:08	WG1151308
Benzo(a)pyrene	3.07		0.00658	1	08/13/2018 12:08	WG1151308
Benzo(b)fluoranthene	4.24		0.00658	1	08/13/2018 12:08	WG1151308
Benzo(g,h,i)perylene	1.90		0.00658	1	08/13/2018 12:08	WG1151308
Benzo(k)fluoranthene	1.17		0.00658	1	08/13/2018 12:08	WG1151308
Chrysene	4.01		0.132	20	08/13/2018 18:13	WG1151308
Dibenz(a,h)anthracene	0.582		0.00658	1	08/13/2018 12:08	WG1151308
Fluoranthene	6.61		0.132	20	08/13/2018 18:13	WG1151308
Fluorene	0.214		0.00658	1	08/13/2018 12:08	WG1151308
Indeno(1,2,3-cd)pyrene	1.72		0.00658	1	08/13/2018 12:08	WG1151308
Naphthalene	0.215		0.0219	1	08/13/2018 12:08	WG1151308
Phenanthrene	2.61		0.00658	1	08/13/2018 12:08	WG1151308
Pyrene	6.44		0.132	20	08/13/2018 18:13	WG1151308
1-Methylnaphthalene	0.0949		0.0219	1	08/13/2018 12:08	WG1151308
2-Methylnaphthalene	0.138		0.0219	1	08/13/2018 12:08	WG1151308
2-Chloronaphthalene	ND		0.0219	1	08/13/2018 12:08	WG1151308
(S) Nitrobenzene-d5	98.3	J7	14.0-149		08/13/2018 18:13	WG1151308
(S) Nitrobenzene-d5	78.8		14.0-149		08/13/2018 12:08	WG1151308
(S) 2-Fluorobiphenyl	89.7		34.0-125		08/13/2018 12:08	WG1151308
(S) 2-Fluorobiphenyl	111	J7	34.0-125		08/13/2018 18:13	WG1151308
(S) p-Terphenyl-d14	106		23.0-120		08/13/2018 12:08	WG1151308
(S) p-Terphenyl-d14	93.6	J7	23.0-120		08/13/2018 18:13	WG1151308

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3333751-1 08/14/18 10:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

L1016051-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1016051-10 08/14/18 10:59 • (DUP) R3333751-3 08/14/18 10:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	72.1	73.5	1	1.90		10

⁴Cn

⁵Sr

Laboratory Control Sample (LCS)

(LCS) R3333751-2 08/14/18 10:59

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

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3333748-1 08/14/18 10:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

L1016063-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1016063-01 08/14/18 10:44 • (DUP) R3333748-3 08/14/18 10:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	82.6	83.5	1	1.02		10

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS)

(LCS) R3333748-2 08/14/18 10:44

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

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3332740-1 08/10/18 13:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	0.00477	J	0.00280	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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

(LCS) R3332740-2 08/10/18 13:19 • (LCSD) R3332740-3 08/10/18 13:21

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 %
Mercury	0.300	0.294	0.292	98.1	97.5	80.0-120			0.625	20

L1016055-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1016055-01 08/10/18 13:23 • (MS) R3332740-4 08/10/18 13:25 • (MSD) R3332740-5 08/10/18 13:27

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 %
Mercury	0.378	0.0259	0.372	0.301	91.5	72.9	1	75.0-125		J3 J6	20.9	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3333488-1 08/14/18 12:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.740	2.00
Silver	U		0.280	1.00

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

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

(LCS) R3333488-2 08/14/18 12:39 • (LCSD) R3333488-3 08/14/18 12:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	96.3	97.7	96.3	97.7	80.0-120			1.48	20
Barium	100	105	106	105	106	80.0-120			1.01	20
Cadmium	100	101	102	101	102	80.0-120			1.02	20
Chromium	100	99.8	101	99.8	101	80.0-120			1.13	20
Lead	100	99.1	100	99.1	100	80.0-120			1.21	20
Selenium	100	97.9	98.5	97.9	98.5	80.0-120			0.610	20
Silver	20.0	18.9	19.3	94.7	96.4	80.0-120			1.76	20

L1016218-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1016218-01 08/14/18 12:44 • (MS) R3333488-6 08/14/18 12:52 • (MSD) R3333488-7 08/14/18 12:55

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	115	4.23	120	119	101	99.8	1	75.0-125			1.36	20
Barium	115	52.7	185	165	115	98.3	1	75.0-125			11.1	20
Cadmium	115	ND	125	123	109	107	1	75.0-125			1.64	20
Chromium	115	11.6	127	121	101	95.7	1	75.0-125			4.86	20
Lead	115	16.4	132	135	101	103	1	75.0-125			2.06	20
Selenium	115	ND	119	117	104	102	1	75.0-125			1.60	20
Silver	22.9	1.84	24.8	25.8	100	105	1	75.0-125			3.85	20



Method Blank (MB)

(MB) R3333820-2 08/10/18 15:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	U		0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3333820-2 08/10/18 15:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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		0.412	1.00
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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	113			80.0-120
(S) Dibromofluoromethane	96.7			76.0-123
(S) 4-Bromofluorobenzene	86.4			80.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3333820-1 08/10/18 14:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	122	97.8	10.0-160	
Acrolein	125	111	88.7	10.0-160	
Acrylonitrile	125	107	85.3	60.0-142	



Laboratory Control Sample (LCS)

(LCS) R3333820-1 08/10/18 14:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	25.0	20.9	83.7	69.0-123	
Bromobenzene	25.0	20.6	82.2	79.0-120	
Bromodichloromethane	25.0	24.8	99.1	76.0-120	
Bromoform	25.0	23.4	93.6	67.0-132	
Bromomethane	25.0	24.3	97.2	18.0-160	
n-Butylbenzene	25.0	22.4	89.7	72.0-126	
sec-Butylbenzene	25.0	23.4	93.6	74.0-121	
tert-Butylbenzene	25.0	23.3	93.3	75.0-122	
Carbon tetrachloride	25.0	25.4	102	63.0-122	
Chlorobenzene	25.0	27.2	109	79.0-121	
Chlorodibromomethane	25.0	29.0	116	75.0-125	
Chloroethane	25.0	21.0	83.9	47.0-152	
Chloroform	25.0	23.1	92.4	72.0-121	
Chloromethane	25.0	22.7	90.9	48.0-139	
2-Chlorotoluene	25.0	22.8	91.1	74.0-122	
4-Chlorotoluene	25.0	21.8	87.3	79.0-120	
1,2-Dibromo-3-Chloropropane	25.0	24.0	96.1	64.0-127	
1,2-Dibromoethane	25.0	25.9	104	77.0-123	
Dibromomethane	25.0	23.0	92.0	78.0-120	
1,2-Dichlorobenzene	25.0	23.7	94.7	80.0-120	
1,3-Dichlorobenzene	25.0	25.5	102	72.0-123	
1,4-Dichlorobenzene	25.0	23.1	92.5	77.0-120	
Dichlorodifluoromethane	25.0	34.3	137	49.0-155	
1,1-Dichloroethane	25.0	21.3	85.1	70.0-126	
1,2-Dichloroethane	25.0	27.6	110	67.0-126	
1,1-Dichloroethene	25.0	21.8	87.3	64.0-129	
cis-1,2-Dichloroethene	25.0	20.7	82.7	73.0-120	
trans-1,2-Dichloroethene	25.0	21.1	84.5	71.0-121	
1,2-Dichloropropane	25.0	22.2	89.0	75.0-125	
1,1-Dichloropropene	25.0	22.9	91.8	71.0-129	
1,3-Dichloropropane	25.0	25.3	101	80.0-121	
cis-1,3-Dichloropropene	25.0	26.1	104	79.0-123	
trans-1,3-Dichloropropene	25.0	27.0	108	74.0-127	
2,2-Dichloropropane	25.0	25.9	104	60.0-125	
Di-isopropyl ether	25.0	21.3	85.3	59.0-133	
Ethylbenzene	25.0	27.8	111	77.0-120	
Hexachloro-1,3-butadiene	25.0	24.2	96.7	64.0-131	
Isopropylbenzene	25.0	21.0	84.0	75.0-120	
p-Isopropyltoluene	25.0	23.9	95.4	74.0-126	
2-Butanone (MEK)	125	106	84.5	37.0-158	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3333820-1 08/10/18 14:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methylene Chloride	25.0	19.9	79.7	66.0-121	
4-Methyl-2-pentanone (MIBK)	125	126	101	59.0-143	
Methyl tert-butyl ether	25.0	23.2	92.8	64.0-123	
Naphthalene	25.0	24.1	96.4	62.0-128	
n-Propylbenzene	25.0	22.0	88.1	79.0-120	
Styrene	25.0	20.4	81.6	78.0-124	
1,1,1,2-Tetrachloroethane	25.0	28.7	115	75.0-122	
1,1,2,2-Tetrachloroethane	25.0	20.2	80.7	71.0-122	
Tetrachloroethene	25.0	28.4	114	70.0-127	
Toluene	25.0	25.3	101	77.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	24.8	99.3	61.0-136	
1,2,3-Trichlorobenzene	25.0	24.2	96.9	61.0-133	
1,2,4-Trichlorobenzene	25.0	24.6	98.5	69.0-129	
1,1,1-Trichloroethane	25.0	26.3	105	68.0-122	
1,1,2-Trichloroethane	25.0	26.5	106	78.0-120	
Trichloroethene	25.0	24.2	96.8	78.0-120	
Trichlorofluoromethane	25.0	30.1	120	56.0-137	
1,2,3-Trichloropropane	25.0	24.8	99.4	72.0-124	
1,2,3-Trimethylbenzene	25.0	23.5	93.9	75.0-120	
1,2,4-Trimethylbenzene	25.0	23.5	94.1	75.0-120	
1,3,5-Trimethylbenzene	25.0	21.6	86.3	75.0-120	
Vinyl chloride	25.0	24.0	96.1	64.0-133	
o-Xylene	25.0	28.4	113	78.0-120	
m&p-Xylenes	50.0	52.7	105	77.0-120	
(S) Toluene-d8			106	80.0-120	
(S) Dibromofluoromethane			95.5	76.0-123	
(S) 4-Bromofluorobenzene			88.9	80.0-120	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3333821-3 08/14/18 14:34

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	0.00501	U	0.00384	0.0125
sec-Butylbenzene	U		0.00253	0.0125
tert-Butylbenzene	0.00223	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
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloroethane	U		0.000475	0.00250
1,1-Dichloroethene	U		0.000500	0.00250
cis-1,2-Dichloroethene	U		0.000690	0.00250
trans-1,2-Dichloroethene	U		0.00143	0.00500
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	0.0298		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250
p-Isopropyltoluene	U		0.00233	0.00500
Methylene Chloride	U		0.00664	0.0250

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3333821-3 08/14/18 14:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
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	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	0.00116	J	0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	109			80.0-120
(S) Dibromofluoromethane	98.2			74.0-131
(S) 4-Bromofluorobenzene	106			64.0-132

- 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) R3333821-1 08/14/18 13:13 • (LCSD) R3333821-2 08/14/18 13:34

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	%	%	%			%	%
Acetone	0.625	0.816	0.604	131	96.7	25.3-178		J3	29.9	22.9
Acrylonitrile	0.625	0.648	0.591	104	94.6	57.8-143			9.06	20
Benzene	0.125	0.109	0.114	87.5	91.3	72.6-120			4.22	20
Bromobenzene	0.125	0.109	0.114	87.5	90.9	80.3-115			3.82	20
Bromodichloromethane	0.125	0.115	0.117	92.3	93.7	75.3-119			1.58	20
Bromoform	0.125	0.113	0.112	90.3	89.7	69.1-135			0.671	20
Bromomethane	0.125	0.119	0.124	94.8	99.1	23.0-191			4.37	20
n-Butylbenzene	0.125	0.125	0.138	100	110	74.2-134			9.63	20



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

(LCS) R3333821-1 08/14/18 13:13 • (LCSD) R3333821-2 08/14/18 13:34

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 %
sec-Butylbenzene	0.125	0.117	0.124	93.5	99.5	77.8-129			6.13	20
tert-Butylbenzene	0.125	0.113	0.122	90.4	98.0	77.2-129			8.07	20
Carbon tetrachloride	0.125	0.115	0.122	91.8	97.7	69.4-129			6.24	20
Chlorobenzene	0.125	0.109	0.115	87.5	91.9	78.9-122			4.83	20
Chlorodibromomethane	0.125	0.102	0.109	81.6	87.2	76.4-126			6.58	20
Chloroethane	0.125	0.119	0.117	95.0	93.3	47.2-147			1.84	20
Chloroform	0.125	0.113	0.119	90.5	95.1	73.3-122			4.90	20
Chloromethane	0.125	0.126	0.133	101	107	53.1-135			5.42	20
2-Chlorotoluene	0.125	0.125	0.129	99.9	104	74.6-127			3.53	20
4-Chlorotoluene	0.125	0.100	0.124	80.4	98.9	79.5-123		J3	20.6	20
1,2-Dibromo-3-Chloropropane	0.125	0.113	0.118	90.7	94.3	64.9-131			3.80	20
1,2-Dibromoethane	0.125	0.107	0.113	85.3	90.5	78.7-123			6.01	20
Dibromomethane	0.125	0.113	0.118	90.6	94.1	78.5-117			3.76	20
1,2-Dichlorobenzene	0.125	0.112	0.115	89.4	92.3	83.6-119			3.24	20
1,3-Dichlorobenzene	0.125	0.109	0.115	87.0	91.7	75.9-129			5.29	20
1,4-Dichlorobenzene	0.125	0.108	0.114	86.8	91.0	81.0-115			4.73	20
1,1-Dichloroethane	0.125	0.119	0.126	95.3	101	71.7-125			5.93	20
1,2-Dichloroethane	0.125	0.119	0.123	95.0	98.6	67.2-121			3.69	20
1,1-Dichloroethene	0.125	0.116	0.125	92.8	100	60.6-133			7.81	20
cis-1,2-Dichloroethene	0.125	0.0932	0.0983	74.6	78.7	76.1-121	J4		5.35	20
trans-1,2-Dichloroethene	0.125	0.111	0.113	88.8	90.0	70.7-124			1.37	20
1,1-Dichloropropene	0.125	0.125	0.130	100	104	71.2-126			3.88	20
1,3-Dichloropropene	0.125	0.115	0.122	91.8	98.0	80.3-114			6.57	20
cis-1,3-Dichloropropene	0.125	0.0977	0.106	78.2	85.0	77.3-123			8.31	20
trans-1,3-Dichloropropene	0.125	0.109	0.115	86.9	91.6	73.0-127			5.28	20
2,2-Dichloropropane	0.125	0.110	0.116	87.7	93.0	61.9-132			5.91	20
Di-isopropyl ether	0.125	0.114	0.119	91.4	95.0	67.2-131			3.82	20
Ethylbenzene	0.125	0.124	0.129	98.9	103	78.6-124			4.03	20
Hexachloro-1,3-butadiene	0.125	0.159	0.152	127	122	69.2-136			4.38	20
Isopropylbenzene	0.125	0.108	0.115	86.7	92.3	79.4-126			6.32	20
p-Isopropyltoluene	0.125	0.119	0.129	95.5	103	75.4-132			7.83	20
Methylene Chloride	0.125	0.126	0.134	101	107	68.2-119			5.92	20
4-Methyl-2-pentanone (MIBK)	0.625	0.597	0.591	95.6	94.5	61.1-138			1.13	20
Methyl tert-butyl ether	0.125	0.120	0.128	96.4	103	70.2-122			6.45	20
Naphthalene	0.125	0.124	0.122	99.4	97.4	69.9-132			2.00	20
n-Propylbenzene	0.125	0.112	0.120	89.4	95.6	80.2-124			6.66	20
Styrene	0.125	0.118	0.124	94.7	99.5	79.4-124			5.00	20
1,1,1,2-Tetrachloroethane	0.125	0.0974	0.105	77.9	83.8	76.7-127			7.22	20
1,1,2,2-Tetrachloroethane	0.125	0.0931	0.0954	74.5	76.3	78.8-124	J4	J4	2.42	20
Tetrachloroethene	0.125	0.117	0.127	93.7	101	71.1-133			7.72	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) R3333821-1 08/14/18 13:13 • (LCSD) R3333821-2 08/14/18 13:34

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 %
Toluene	0.125	0.112	0.119	89.6	94.9	76.7-116			5.79	20
1,1,2-Trichlorotrifluoroethane	0.125	0.122	0.128	97.5	102	62.6-138			4.76	20
1,2,3-Trichlorobenzene	0.125	0.139	0.143	111	115	72.5-137			2.81	20
1,2,4-Trichlorobenzene	0.125	0.120	0.119	96.3	94.8	74.0-137			1.52	20
1,1,1-Trichloroethane	0.125	0.117	0.121	93.4	96.8	69.9-127			3.52	20
1,1,2-Trichloroethane	0.125	0.0973	0.102	77.8	81.8	81.9-119	J4	J4	4.93	20
Trichloroethene	0.125	0.125	0.133	99.7	107	77.2-122			6.61	20
Trichlorofluoromethane	0.125	0.123	0.126	98.4	101	51.5-151			2.30	20
1,2,3-Trichloropropane	0.125	0.121	0.119	96.8	95.3	74.0-124			1.61	20
1,2,3-Trimethylbenzene	0.125	0.119	0.122	95.5	97.6	79.4-118			2.19	20
1,2,4-Trimethylbenzene	0.125	0.113	0.121	90.1	96.9	77.1-124			7.26	20
1,3,5-Trimethylbenzene	0.125	0.115	0.115	92.1	92.1	79.0-125			0.0313	20
o-Xylene	0.125	0.116	0.123	92.8	98.6	78.5-124			6.00	20
m&p-Xylenes	0.250	0.217	0.226	86.8	90.5	77.3-124			4.20	20
(S) Toluene-d8				102	104	80.0-120				
(S) Dibromofluoromethane				105	106	74.0-131				
(S) 4-Bromofluorobenzene				103	103	64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1016105-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1016105-07 08/14/18 19:06 • (MS) R3333821-4 08/14/18 22:06 • (MSD) R3333821-5 08/14/18 22:26

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	0.625	ND	1.97	0.396	315	63.3	1	10.0-130	J5	J3	133	31.5
Acrylonitrile	0.625	ND	0.404	0.484	64.7	77.4	1	39.3-152			17.9	27.2
Benzene	0.125	ND	0.0788	0.0580	63.1	46.4	1	47.8-131		J3 J6	30.5	22.8
Bromobenzene	0.125	ND	0.100	0.0807	80.2	64.6	1	40.0-130			21.5	27.4
Bromodichloromethane	0.125	ND	0.0942	0.0803	75.3	64.2	1	50.6-128			15.9	22.8
Bromoform	0.125	ND	0.0974	0.0988	77.9	79.0	1	43.3-139			1.37	25.9
Bromomethane	0.125	ND	0.0488	0.0279	39.0	22.3	1	5.00-189		J3	54.5	26.7
n-Butylbenzene	0.125	ND	0.112	0.0960	89.7	76.8	1	23.6-146			15.6	39.2
sec-Butylbenzene	0.125	ND	0.0999	0.0754	79.9	60.3	1	31.0-142			27.9	34.7
tert-Butylbenzene	0.125	ND	0.0952	0.0720	76.2	57.6	1	36.9-142			27.8	31.7
Carbon tetrachloride	0.125	ND	0.0775	0.0480	62.0	38.4	1	46.0-140		J3 J6	46.9	27.2
Chlorobenzene	0.125	ND	0.0954	0.0685	76.3	54.8	1	44.1-134		J3	32.9	25.7
Chlorodibromomethane	0.125	ND	0.0946	0.0850	75.6	68.0	1	49.7-134			10.6	24
Chloroethane	0.125	ND	0.0473	0.0334	37.9	26.7	1	5.00-164		J3	34.6	28.4
Chloroform	0.125	ND	0.0843	0.0665	67.5	53.2	1	51.2-133		J3	23.7	22.8
Chloromethane	0.125	ND	0.0516	0.0433	41.3	34.7	1	31.4-141			17.3	24.6



L1016105-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1016105-07 08/14/18 19:06 • (MS) R3333821-4 08/14/18 22:06 • (MSD) R3333821-5 08/14/18 22:26

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 %
2-Chlorotoluene	0.125	ND	0.104	0.0840	83.5	67.2	1	36.1-137			21.7	28.9
4-Chlorotoluene	0.125	ND	0.0848	0.0726	67.8	58.1	1	35.4-137			15.5	29.8
1,2-Dibromo-3-Chloropropane	0.125	ND	0.0857	0.0999	68.6	79.9	1	40.4-138			15.3	30.8
1,2-Dibromoethane	0.125	ND	0.0929	0.0917	74.4	73.4	1	50.2-133			1.30	23.6
Dibromomethane	0.125	ND	0.0910	0.0846	72.8	67.7	1	52.4-128			7.29	23
1,2-Dichlorobenzene	0.125	ND	0.0965	0.0895	77.2	71.6	1	34.6-139			7.56	29.9
1,3-Dichlorobenzene	0.125	ND	0.0973	0.0803	77.8	64.2	1	28.4-142			19.2	31.2
1,4-Dichlorobenzene	0.125	ND	0.100	0.0874	80.0	69.9	1	35.0-133			13.5	31.1
1,1-Dichloroethane	0.125	ND	0.0874	0.0633	69.9	50.7	1	49.1-136		J3	31.9	22.9
1,2-Dichloroethane	0.125	ND	0.0936	0.0847	74.9	67.8	1	47.1-129			9.94	22.7
1,1-Dichloroethene	0.125	ND	0.0689	0.0423	55.1	33.9	1	36.1-142		J3 J6	47.7	25.6
cis-1,2-Dichloroethene	0.125	ND	0.0659	0.0490	52.7	39.2	1	50.6-133		J3 J6	29.3	23
trans-1,2-Dichloroethene	0.125	ND	0.0581	0.0393	46.5	31.4	1	43.8-135		J3 J6	38.6	24.8
1,1-Dichloropropene	0.125	ND	0.0746	0.0467	59.7	37.3	1	43.0-137		J3 J6	46.1	26.4
1,3-Dichloropropane	0.125	ND	0.106	0.0979	85.1	78.3	1	51.4-127			8.28	23.1
cis-1,3-Dichloropropene	0.125	ND	0.0834	0.0699	66.7	55.9	1	48.4-134			17.6	23.6
trans-1,3-Dichloropropene	0.125	ND	0.111	0.0861	88.7	68.9	1	46.6-135			25.2	25.3
2,2-Dichloropropane	0.125	ND	0.0603	0.0360	48.2	28.8	1	45.2-141		J3 J6	50.3	26.6
Di-isopropyl ether	0.125	ND	0.0924	0.0817	73.9	65.4	1	46.7-140			12.3	23.5
Ethylbenzene	0.125	ND	0.102	0.0707	81.5	56.6	1	44.8-135		J3	36.0	26.9
Hexachloro-1,3-butadiene	0.125	ND	0.0993	0.0968	79.4	77.5	1	10.0-149			2.49	40
Isopropylbenzene	0.125	ND	0.0899	0.0634	71.9	50.7	1	41.9-139		J3	34.5	29.3
p-Isopropyltoluene	0.125	ND	0.103	0.0821	82.6	65.7	1	27.3-146			22.8	35.1
Methylene Chloride	0.125	ND	0.0935	0.0794	74.8	63.6	1	46.7-125			16.3	22.2
4-Methyl-2-pentanone (MIBK)	0.625	ND	0.481	0.535	77.0	85.6	1	42.4-146			10.5	26.7
Methyl tert-butyl ether	0.125	ND	0.0843	0.101	67.5	81.1	1	50.4-131			18.4	24.8
Naphthalene	0.125	ND	0.139	0.151	112	121	1	18.4-145			7.99	34
n-Propylbenzene	0.125	ND	0.100	0.0703	80.1	56.2	1	35.2-139		J3	35.0	31.9
Styrene	0.125	ND	0.102	0.0810	81.5	64.8	1	39.7-137			22.9	28.2
1,1,1,2-Tetrachloroethane	0.125	ND	0.0827	0.0626	66.2	50.1	1	48.8-136		J3	27.7	25.5
1,1,2,2-Tetrachloroethane	0.125	ND	0.0830	0.0852	66.4	68.2	1	45.7-140			2.64	26.4
Tetrachloroethene	0.125	ND	0.0805	0.0520	64.4	41.6	1	37.7-140		J3	43.0	29.2
Toluene	0.125	ND	0.133	0.103	106	82.4	1	47.8-127		J3	25.1	24.3
1,1,2-Trichlorotrifluoroethane	0.125	ND	0.0792	0.0465	63.4	37.2	1	35.7-146		J3	52.1	28.8
1,2,3-Trichlorobenzene	0.125	ND	0.119	0.130	94.8	104	1	10.0-150			9.38	38.5
1,2,4-Trichlorobenzene	0.125	ND	0.104	0.105	82.8	83.9	1	10.0-153			1.27	39.3
1,1,1-Trichloroethane	0.125	ND	0.0808	0.0513	64.6	41.0	1	49.0-138		J3 J6	44.6	25.3
1,1,2-Trichloroethane	0.125	ND	0.0966	0.0888	77.3	71.1	1	52.3-132			8.40	23.4
Trichloroethene	0.125	ND	0.0861	0.0583	68.9	46.6	1	48.0-132		J3 J6	38.5	24.8
Trichlorofluoromethane	0.125	ND	0.0496	0.0291	39.7	23.2	1	12.8-169		J3	52.3	29.7

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1016105-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1016105-07 08/14/18 19:06 • (MS) R3333821-4 08/14/18 22:06 • (MSD) R3333821-5 08/14/18 22:26

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 %
1,2,3-Trichloropropane	0.125	ND	0.106	0.112	85.1	89.9	1	44.4-138			5.44	26.3
1,2,3-Trimethylbenzene	0.125	ND	0.114	0.0965	91.2	77.2	1	41.0-133			16.6	27.6
1,2,4-Trimethylbenzene	0.125	ND	0.118	0.102	94.6	81.4	1	32.9-139			15.0	30.6
1,3,5-Trimethylbenzene	0.125	ND	0.104	0.0793	83.5	63.4	1	37.1-138			27.3	30.6
o-Xylene	0.125	ND	0.124	0.0983	99.0	78.7	1	43.2-136			22.9	26.2
m&p-Xylenes	0.250	ND	0.232	0.176	92.6	70.6	1	42.2-134			27.0	27.1
(S) Toluene-d8					109	105		80.0-120				
(S) Dibromofluoromethane					98.7	100		74.0-131				
(S) 4-Bromofluorobenzene					106	106		64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334009-3 08/15/18 14:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Dichlorodifluoromethane	U		0.000818	0.00250
1,2-Dichloropropane	U		0.00127	0.00500
Hexachloro-1,3-butadiene	U		0.0127	0.0250
2-Butanone (MEK)	U		0.0125	0.0250
Vinyl chloride	U		0.000683	0.00250
(S) Toluene-d8	108			80.0-120
(S) Dibromofluoromethane	93.7			74.0-131
(S) 4-Bromofluorobenzene	96.7			64.0-132

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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

(LCS) R3334009-1 08/15/18 12:45 • (LCSD) R3334009-2 08/15/18 13:04

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 %
Dichlorodifluoromethane	0.125	0.0994	0.0715	79.5	57.2	50.9-139		J3	32.6	20
1,2-Dichloropropane	0.125	0.135	0.133	108	106	76.9-123			1.64	20
Hexachloro-1,3-butadiene	0.125	0.132	0.138	106	110	69.2-136			4.02	20
2-Butanone (MEK)	0.625	0.558	0.441	89.3	70.6	44.5-154		J3	23.4	21.3
Vinyl chloride	0.125	0.107	0.0878	85.9	70.2	58.4-134			20.0	20
(S) Toluene-d8				109	112	80.0-120				
(S) Dibromofluoromethane				97.5	89.7	74.0-131				
(S) 4-Bromofluorobenzene				97.4	97.9	64.0-132				

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3333175-1 08/13/18 12:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	98.7			18.0-148

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

(LCS) R3333175-2 08/13/18 12:28 • (LCSD) R3333175-3 08/13/18 12:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	22.3	20.0	89.1	80.0	50.0-150			10.8	20
Residual Range Organics (RRO)	25.0	17.9	16.4	71.6	65.7	50.0-150			8.61	20
(S) o-Terphenyl				109	98.4	18.0-148				

L1016476-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1016476-08 08/13/18 13:28 • (MS) R3333175-4 08/13/18 13:40 • (MSD) R3333175-5 08/13/18 13:52

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.1	18.3	34.3	35.6	64.0	69.1	10	50.0-150			3.67	20
Residual Range Organics (RRO)	25.1	101	108	128	30.5	108	10	50.0-150	J6		16.5	20
(S) o-Terphenyl					112	108		18.0-148	J2			

Sample Narrative:

OS: Diluted due to high levels of target analytes.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334158-1 08/16/18 04:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	85.7			18.0-148

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3334158-2 08/16/18 05:05 • (LCSD) R3334158-3 08/16/18 05:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	20.2	20.7	80.8	82.8	50.0-150			2.44	20
Residual Range Organics (RRO)	25.0	20.2	20.6	80.8	82.4	50.0-150			1.96	20
(S) o-Terphenyl				68.5	70.4	18.0-148				

5 Sr

6 Qc

7 Gl

L1016935-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1016935-01 08/16/18 06:58 • (MS) R3334158-4 08/16/18 07:11 • (MSD) R3334158-5 08/16/18 07:24

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 %
Diesel Range Organics (DRO)	25.0	ND	18.3	20.1	73.2	80.4	1	50.0-150			9.38	20
Residual Range Organics (RRO)	25.0	ND	19.1	21.5	76.4	86.0	1	50.0-150			11.8	20
(S) o-Terphenyl					62.5	66.2		18.0-148				

8 Al

9 Sc



Method Blank (MB)

(MB) R3333077-3 08/12/18 11:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	79.4			14.0-149
(S) 2-Fluorobiphenyl	84.5			34.0-125
(S) p-Terphenyl-d14	88.5			23.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R3333077-1 08/12/18 10:21 • (LCSD) R3333077-2 08/12/18 10:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0725	0.0755	90.6	94.4	50.0-125			4.05	20
Acenaphthene	0.0800	0.0691	0.0728	86.4	91.0	52.0-120			5.21	20
Acenaphthylene	0.0800	0.0709	0.0745	88.6	93.1	51.0-120			4.95	20
Benzo(a)anthracene	0.0800	0.0714	0.0744	89.3	93.0	46.0-121			4.12	20
Benzo(a)pyrene	0.0800	0.0626	0.0669	78.3	83.6	42.0-121			6.64	20
Benzo(b)fluoranthene	0.0800	0.0674	0.0709	84.3	88.6	42.0-123			5.06	20
Benzo(g,h,i)perylene	0.0800	0.0716	0.0752	89.5	94.0	43.0-128			4.90	20
Benzo(k)fluoranthene	0.0800	0.0721	0.0751	90.1	93.9	45.0-128			4.08	20
Chrysene	0.0800	0.0699	0.0736	87.4	92.0	48.0-127			5.16	20
Dibenz(a,h)anthracene	0.0800	0.0742	0.0776	92.8	97.0	43.0-132			4.48	20
Fluoranthene	0.0800	0.0784	0.0810	98.0	101	49.0-129			3.26	20



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

(LCS) R3333077-1 08/12/18 10:21 • (LCSD) R3333077-2 08/12/18 10:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	0.0800	0.0720	0.0767	90.0	95.9	50.0-120			6.32	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0732	0.0766	91.5	95.8	44.0-131			4.54	20
Naphthalene	0.0800	0.0661	0.0692	82.6	86.5	50.0-120			4.58	20
Phenanthrene	0.0800	0.0705	0.0738	88.1	92.3	48.0-120			4.57	20
Pyrene	0.0800	0.0680	0.0717	85.0	89.6	48.0-135			5.30	20
1-Methylnaphthalene	0.0800	0.0741	0.0780	92.6	97.5	52.0-122			5.13	20
2-Methylnaphthalene	0.0800	0.0708	0.0743	88.5	92.9	52.0-120			4.82	20
2-Chloronaphthalene	0.0800	0.0708	0.0747	88.5	93.4	50.0-120			5.36	20
(S) Nitrobenzene-d5				83.1	86.9	14.0-149				
(S) 2-Fluorobiphenyl				88.5	93.2	34.0-125				
(S) p-Terphenyl-d14				85.7	89.6	23.0-120				

L1016854-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1016854-01 08/12/18 17:44 • (MS) R3333077-4 08/12/18 18:05 • (MSD) R3333077-5 08/12/18 18:26

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.106	0.950	9.10	0.880	7690	0.000	5	20.0-136	V	J3 V	165	24
Acenaphthene	0.106	3.79	4.85	2.99	1000	0.000	5	29.0-124	V	J3 V	47.3	20
Acenaphthylene	0.106	U	0.970	0.612	915	578	5	35.0-120	J5	J3 J5	45.2	20
Benzo(a)anthracene	0.106	0.0289	0.146	0.103	110	70.3	5	13.0-132		J3	34.0	27
Benzo(a)pyrene	0.106	0.229	0.399	0.299	160	66.3	5	14.0-138	J5	J3	28.5	27
Benzo(b)fluoranthene	0.106	0.0567	0.168	0.116	105	56.1	5	10.0-129		J3	36.6	31
Benzo(g,h,i)perylene	0.106	0.0213	0.100	0.0783	74.6	53.7	5	10.0-133			24.8	30
Benzo(k)fluoranthene	0.106	0.0482	0.0795	0.0570	29.5	8.25	5	15.0-131		J3 J6	33.0	27
Chrysene	0.106	0.123	0.244	0.168	114	42.5	5	15.0-137		J3	36.7	25
Dibenz(a,h)anthracene	0.106	U	0.0939	0.0874	88.6	82.5	5	15.0-132			7.16	27
Fluoranthene	0.106	0.152	0.274	0.204	115	48.8	5	13.0-139		J3	29.4	28
Fluorene	0.106	6.24	7.96	4.87	1630	0.000	5	27.0-122	V	J3 V	48.1	22
Indeno(1,2,3-cd)pyrene	0.106	U	0.0930	0.0701	87.8	66.1	5	11.0-133			28.1	29
Naphthalene	0.106	4.54	5.50	4.37	900	0.000	5	18.0-136	V	J3 V	22.8	21
Phenanthrene	0.106	7.58	9.07	6.00	1410	0.000	5	15.0-133	V	J3 V	40.8	25
Pyrene	0.106	0.971	1.29	0.781	304	0.000	5	11.0-146	V	J3 V	49.3	29
1-Methylnaphthalene	0.106	13.4	15.8	11.9	2250	0.000	5	24.0-137	V	J3 V	27.9	22
2-Methylnaphthalene	0.106	18.9	22.4	17.1	3250	0.000	5	23.0-136	V	J3 V	26.8	22
2-Chloronaphthalene	0.106	U	0.258	0.188	244	178	5	36.0-120	J5	J3 J5	31.5	20
(S) Nitrobenzene-d5					4350	1400		14.0-149	J1	J1		
(S) 2-Fluorobiphenyl					168	124		34.0-125	J1			
(S) p-Terphenyl-d14					93.2	67.4		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3333186-3 08/13/18 04:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	0.00318	U	0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	0.00258	U	0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	0.000729	U	0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	67.1			14.0-149
(S) 2-Fluorobiphenyl	85.5			34.0-125
(S) p-Terphenyl-d14	86.0			23.0-120

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

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

(LCS) R3333186-1 08/13/18 03:50 • (LCSD) R3333186-2 08/13/18 04:11

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 %
Anthracene	0.0800	0.0687	0.0676	85.9	84.5	50.0-125			1.61	20
Acenaphthene	0.0800	0.0662	0.0660	82.8	82.5	52.0-120			0.303	20
Acenaphthylene	0.0800	0.0663	0.0654	82.9	81.8	51.0-120			1.37	20
Benzo(a)anthracene	0.0800	0.0667	0.0662	83.4	82.8	46.0-121			0.752	20
Benzo(a)pyrene	0.0800	0.0549	0.0552	68.6	69.0	42.0-121			0.545	20
Benzo(b)fluoranthene	0.0800	0.0696	0.0666	87.0	83.3	42.0-123			4.41	20
Benzo(g,h,i)perylene	0.0800	0.0727	0.0723	90.9	90.4	43.0-128			0.552	20
Benzo(k)fluoranthene	0.0800	0.0693	0.0701	86.6	87.6	45.0-128			1.15	20
Chrysene	0.0800	0.0721	0.0711	90.1	88.9	48.0-127			1.40	20
Dibenz(a,h)anthracene	0.0800	0.0746	0.0735	93.3	91.9	43.0-132			1.49	20
Fluoranthene	0.0800	0.0738	0.0734	92.3	91.8	49.0-129			0.543	20



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

(LCS) R3333186-1 08/13/18 03:50 • (LCSD) R3333186-2 08/13/18 04:11

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 %
Fluorene	0.0800	0.0700	0.0700	87.5	87.5	50.0-120			0.000	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0738	0.0730	92.3	91.3	44.0-131			1.09	20
Naphthalene	0.0800	0.0609	0.0597	76.1	74.6	50.0-120			1.99	20
Phenanthrene	0.0800	0.0724	0.0724	90.5	90.5	48.0-120			0.000	20
Pyrene	0.0800	0.0676	0.0666	84.5	83.3	48.0-135			1.49	20
1-Methylnaphthalene	0.0800	0.0670	0.0663	83.8	82.9	52.0-122			1.05	20
2-Methylnaphthalene	0.0800	0.0645	0.0643	80.6	80.4	52.0-120			0.311	20
2-Chloronaphthalene	0.0800	0.0689	0.0683	86.1	85.4	50.0-120			0.875	20
<i>(S) Nitrobenzene-d5</i>				78.8	75.1	14.0-149				
<i>(S) 2-Fluorobiphenyl</i>				89.9	86.6	34.0-125				
<i>(S) p-Terphenyl-d14</i>				85.4	82.9	23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1016055-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1016055-01 08/13/18 04:53 • (MS) R3333186-4 08/13/18 05:13 • (MSD) R3333186-5 08/13/18 05:34

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 %
Anthracene	0.0983	ND	0.0772	0.0806	78.6	82.5	1	20.0-136			4.31	24
Acenaphthene	0.0983	ND	0.0737	0.0745	75.0	76.2	1	29.0-124			1.02	20
Acenaphthylene	0.0983	ND	0.0750	0.0740	76.3	75.6	1	35.0-120			1.35	20
Benzo(a)anthracene	0.0983	ND	0.0800	0.0925	78.6	91.8	1	13.0-132			14.5	27
Benzo(a)pyrene	0.0983	ND	0.0814	0.0990	79.2	97.6	1	14.0-138			19.6	27
Benzo(b)fluoranthene	0.0983	ND	0.0832	0.101	80.1	99.1	1	10.0-129			19.7	31
Benzo(g,h,i)perylene	0.0983	ND	0.0897	0.103	87.1	102	1	10.0-133			14.2	30
Benzo(k)fluoranthene	0.0983	ND	0.0771	0.0874	76.9	87.8	1	15.0-131			12.6	27
Chrysene	0.0983	ND	0.0837	0.0940	81.8	92.8	1	15.0-137			11.6	25
Dibenz(a,h)anthracene	0.0983	ND	0.0845	0.0911	86.0	93.2	1	15.0-132			7.46	27
Fluoranthene	0.0983	ND	0.0931	0.0965	89.9	93.9	1	13.0-139			3.59	28
Fluorene	0.0983	ND	0.0774	0.0794	78.7	81.2	1	27.0-122			2.57	22
Indeno(1,2,3-cd)pyrene	0.0983	ND	0.0863	0.0974	85.0	96.8	1	11.0-133			12.1	29
Naphthalene	0.0983	ND	0.0761	0.0738	77.4	75.5	1	18.0-136			3.03	21
Phenanthrene	0.0983	ND	0.0842	0.0843	83.2	83.7	1	15.0-133			0.150	25
Pyrene	0.0983	ND	0.0850	0.0892	81.7	86.3	1	11.0-146			4.77	29
1-Methylnaphthalene	0.0983	ND	0.0850	0.0809	86.5	82.7	1	24.0-137			5.01	22
2-Methylnaphthalene	0.0983	ND	0.0829	0.0799	84.4	81.7	1	23.0-136			3.72	22
2-Chloronaphthalene	0.0983	ND	0.0776	0.0779	79.0	79.6	1	36.0-120			0.324	20
<i>(S) Nitrobenzene-d5</i>					69.5	71.8		14.0-149				
<i>(S) 2-Fluorobiphenyl</i>					79.5	81.2		34.0-125				
<i>(S) p-Terphenyl-d14</i>					79.3	77.3		23.0-120				



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.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.
V	The sample concentration is too high to evaluate accurate spike recoveries.
Z1	The identification of the analyte is acceptable; the reported value is an estimate.



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

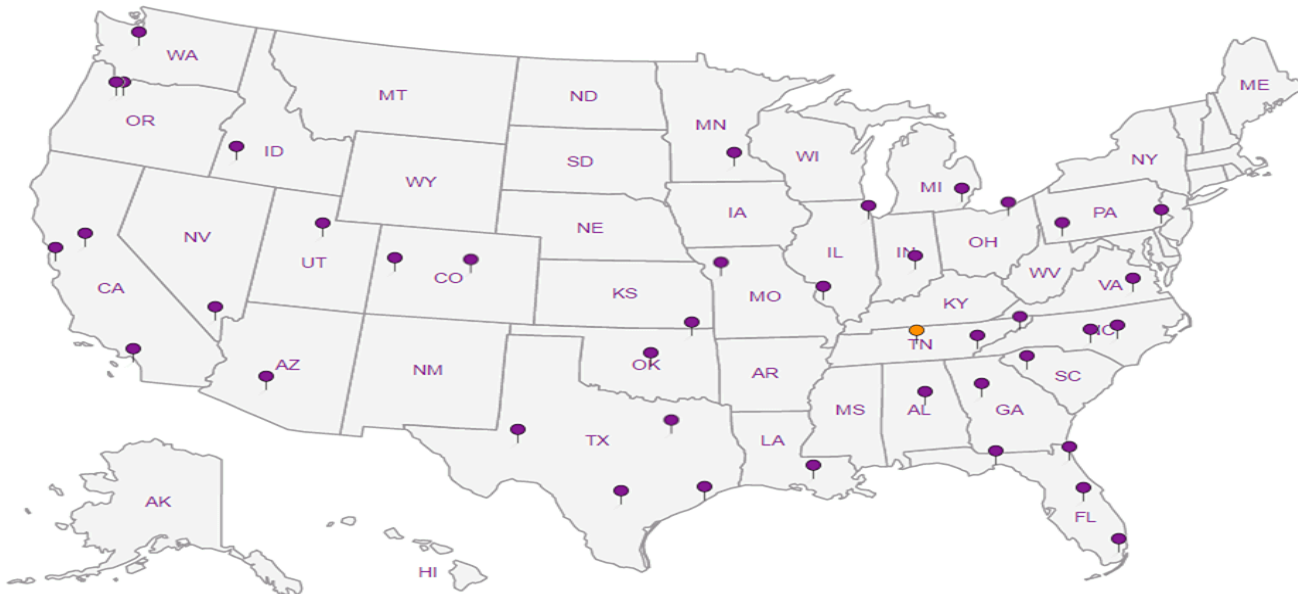
Third Party Federal Accreditations

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.



1 Cp

2 Tc

3 Ss

4 Cn


5 Sr

6 Qc

7 Gl

8 Al

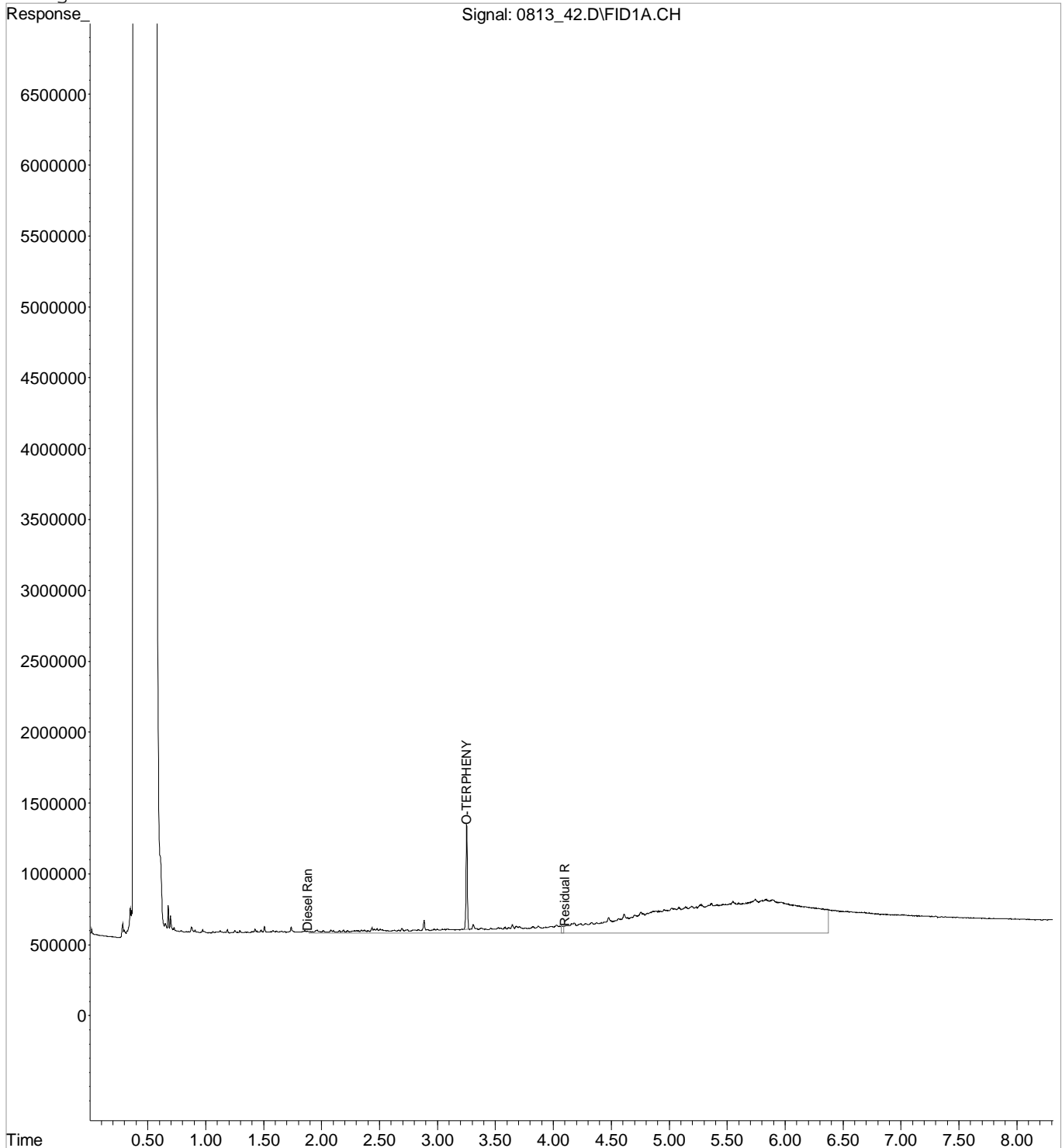
9 Sc

Kennedy/Jenks Con-BNSF Region 1		Billing Information:		Analysis / Container / Preservative										Chain of Custody Page ___ of ___					
32001 32nd Avenue South, Ste 100 Federal Way, WA 98001		Accounts Payable 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001		MRCRAB, TS 4ozClr-NoPres NWTPHGX 40ml/NaHSO4/Syr/MeOH TPHDX no SGT, PAHs 4ozClr-NoPres TPHDX with SGT 4ozClr-NoPres V8260C 40mlAmb/MeOH5ml/Syr										 National Center for Testing & Innovation 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-757-5859 Fax: 615-758-5859					
Report to: Ryan Hultgren		Email To: RyanHultgren@kennedyjenks.com, KatieTeague@kennedyjenks.com,												12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-757-5859 Fax: 615-758-5859					
Project Description: BNSF - Wishram Railyard, WA		City/State Collected: Wishram, WA												L# L1016055 F051					
Phone: 253-835-6400		Client Project # 1896120 04												Acctnum: BNSF1KEN Template: T138670 Prelogin: P663876 TSR: 134 - Mark W. Beasley PB: 7-03-186					
Fax:		Lab Project # BNSF1KEN-WISHRAM												Shipped Via: FedEX Ground					
Collected by (print): K. Teague		Site/Facility ID #												Remarks Sample # (lab only)					
Collected by (signature): <i>K. Teague</i>		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day																	
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>		Quote #																	
		Date Results Needed																	
		No. of Cntrs																	
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time													
WMW-31(2.0-2.5)		Grab	SS	2-2.5	8/7/18	1540	3	X	X	X								-01	
WMW-32(2.0-2.5)		↓	SS	2-2.5	8/8/18	0750	3	X	X	X								02	
WMW-32(9.5-10.0)		↓	SS	9.5-10	8/8/18	0845	3	X	X	X								03	
TB-05-20180808		—	SS	—	8/8/18	—	1			X								04	
WMW-31(9.0-9.5)		Grab	SS	9-9.5	8/8/18	1100	3	X	X	X								05	
DVP-02-20180808		Grab	SS	—	8/8/18	—	3	X	X	X								06	
B-18-18(1.5-2.0)		Grab	SS	1.5-2	8/8/18	1325	3	X	X	X								07	
			SS																
			SS																
			SS																
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Remarks: Include Dx and Gx chromatograms												pH _____ Temp _____ Flow _____ Other _____					
Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier		Tracking # 4361 6931 8924												Sample Receipt Checklist COC Seal Present/Intact: <input type="checkbox"/> NP <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input type="checkbox"/> Y <input type="checkbox"/> N 465 MRL/HR					
Relinquished by: (Signature) <i>Katie Teague</i>		Date: 8/8/18	Time: 1430	Received by: (Signature) FedEx		Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No HCL/MeOH TBR												If preservation required by Login: Date/Time	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Temp: 44.3 °C Bottles Received: 18													
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature) CSM		Date: 8/9/18 Time: 845												Hold: Condition: NCF 10K	

Data File : C:\MSDCHEM\1\DATA\081318\0813 42.D Vial: 23
Acq On : 8-13-2018 07:28:02 PM Operator: 851
Sample : L1016055-01 1x WG1150754 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 14 8:48 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

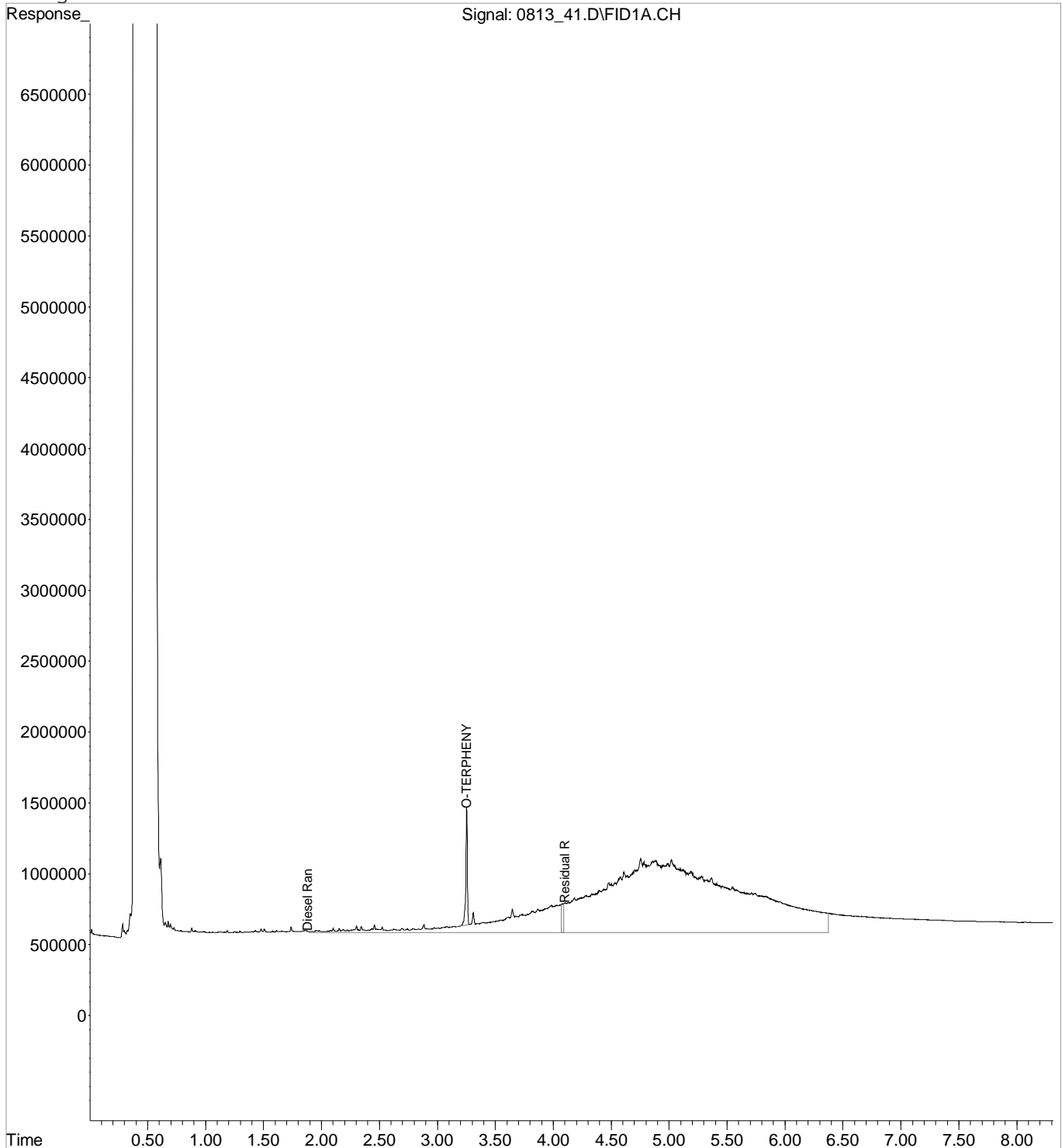
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081318\0813 41.D Vial: 20
Acq On : 8-13-2018 07:16:05 PM Operator: 851
Sample : L1016055-02 1x WG1150754 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 14 8:48 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

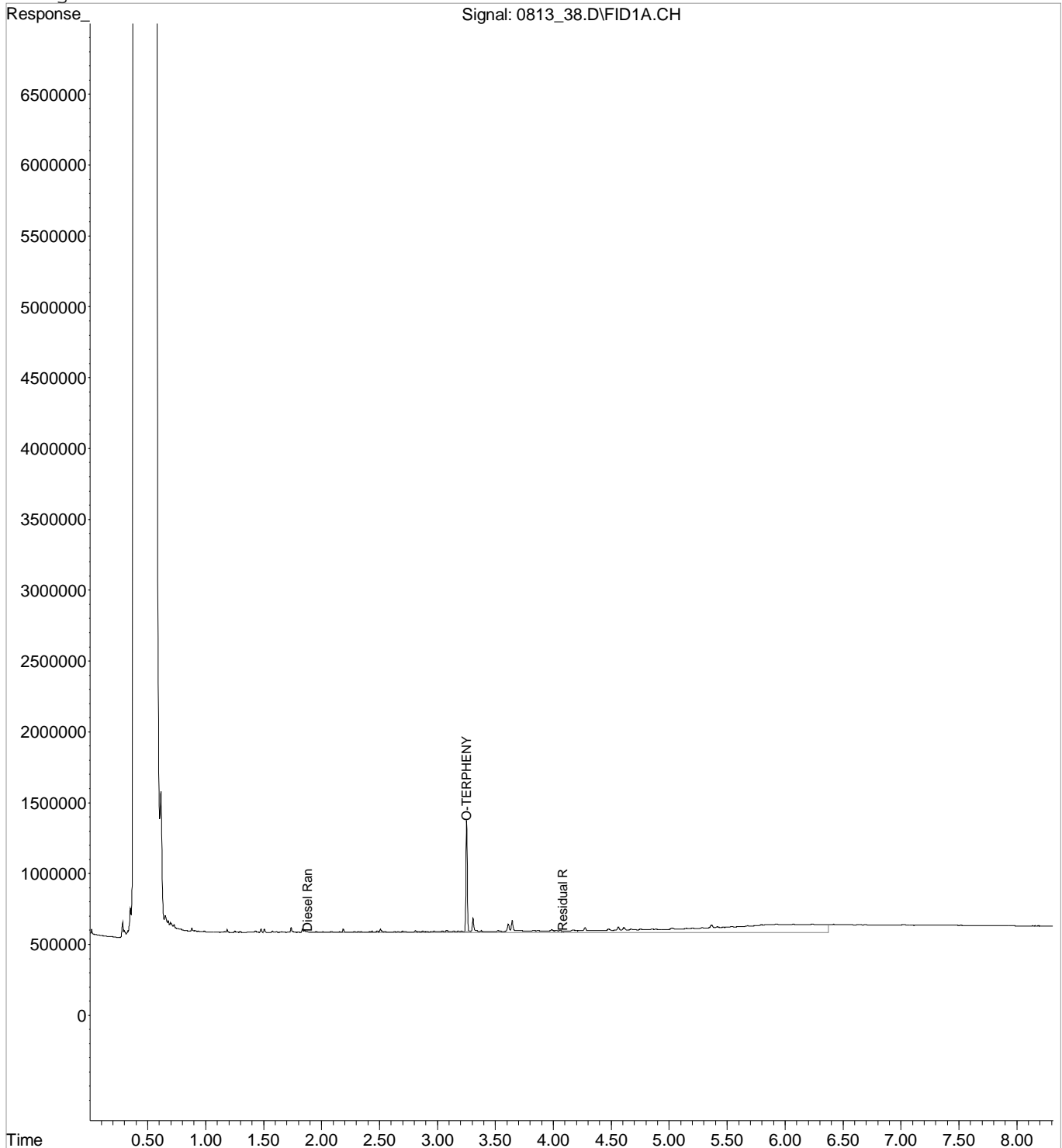
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081318\0813 38.D Vial: 17
Acq On : 8-13-2018 06:40:21 PM Operator: 851
Sample : L1016055-03 1x WG1150754 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 14 8:47 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

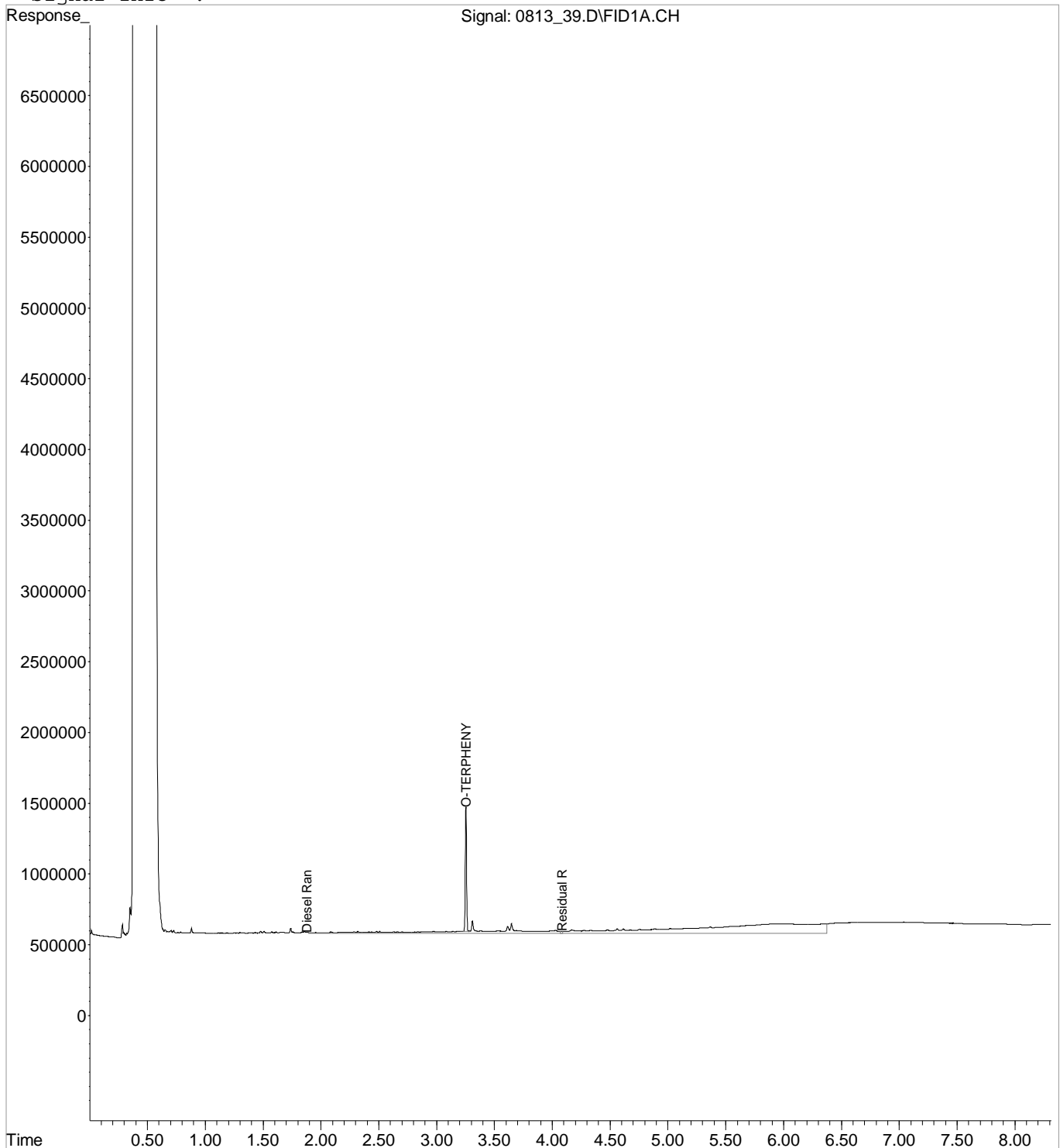
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081318\0813 39.D Vial: 18
Acq On : 8-13-2018 06:52:19 PM Operator: 851
Sample : L1016055-05 1x WG1150754 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 14 8:47 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

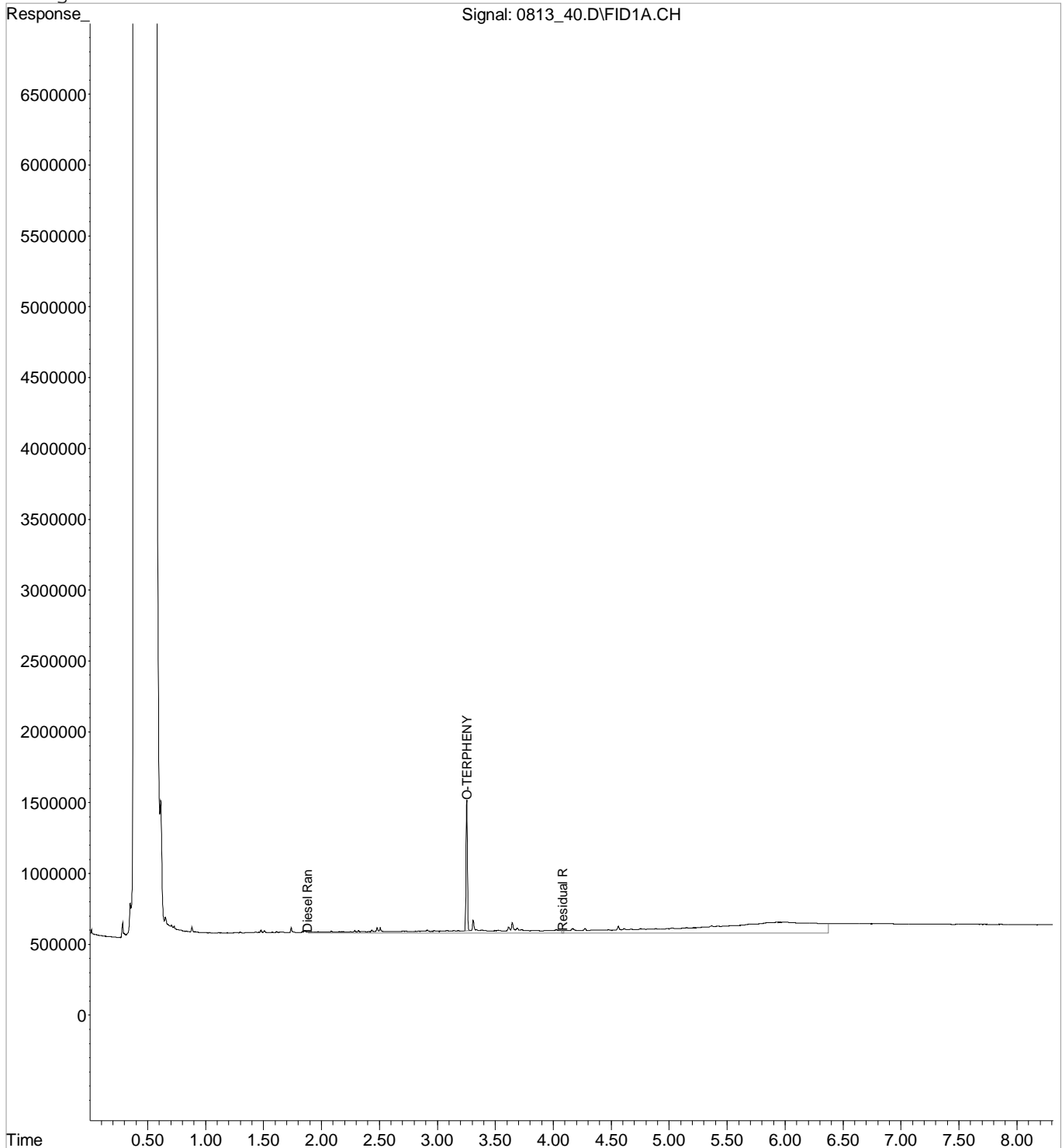
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081318\0813 40.D Vial: 19
Acq On : 8-13-2018 07:04:12 PM Operator: 851
Sample : L1016055-06 1x WG1150754 15-0.5 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 0.03
IntFile : events.e
Quant Time: Aug 14 8:47 2018 Quant Results File: EP16F22R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16F22R.M (Chemstation Integrator)
Title :
Last Update : Fri Jun 22 19:37:34 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

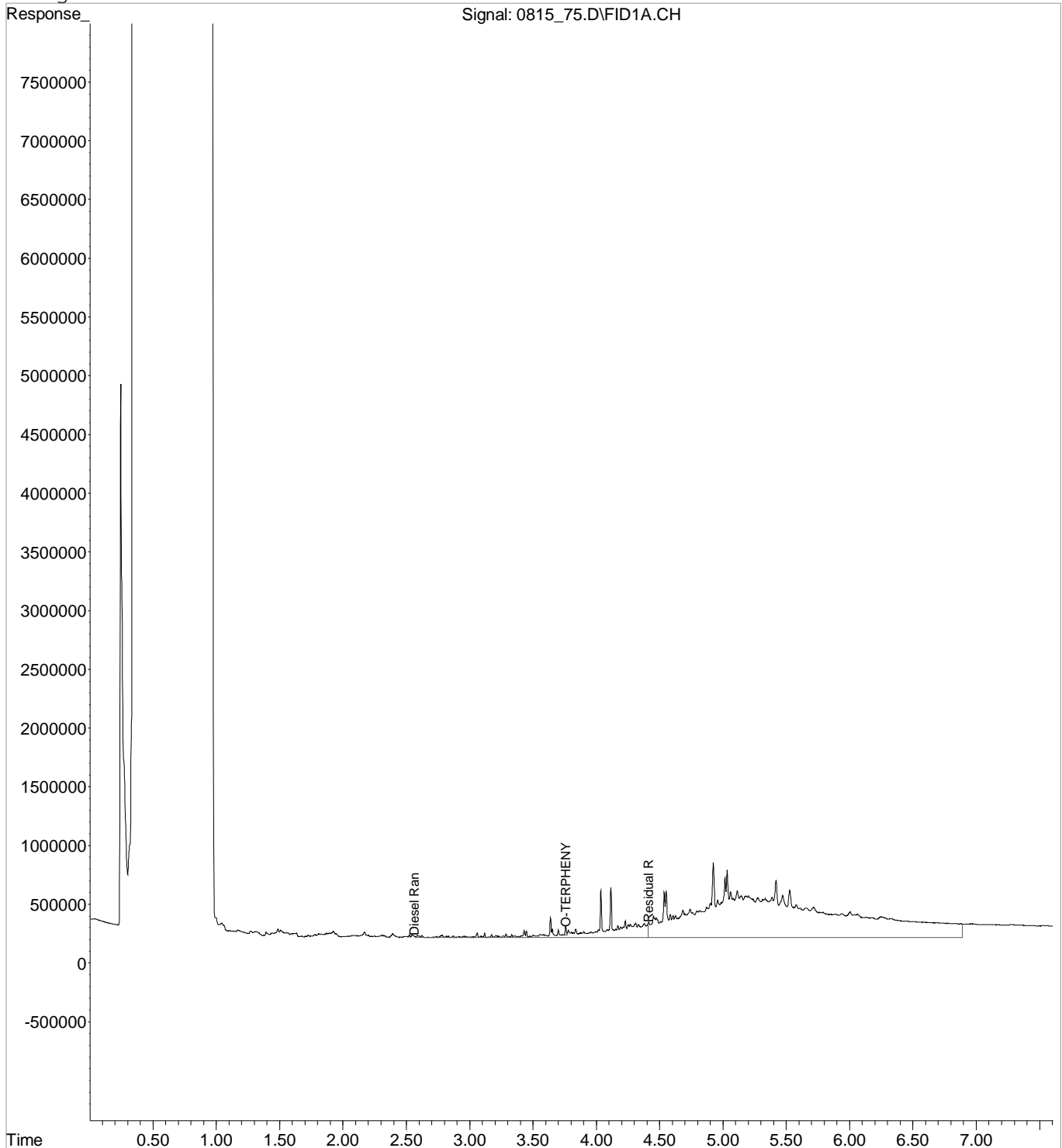
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081518\0815 75.D Vial: 42
 Acq On : 16 Aug 2018 5:55 am Operator: 647
 Sample : L1016055-07 5X WG1151286 Inst : SVGC13
 Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Aug 16 11:41 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
 Title :
 Last Update : Mon Aug 13 23:06:30 2018
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

Volume Inj. :
 Signal Phase :
 Signal Info :



August 16, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1016263
Samples Received: 08/09/2018
Project Number: 1896120.04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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



RIVERSHEEN-20180807 L1016263-01 GW

Collected by K. Teague	Collected date/time 08/07/18 09:40	Received date/time 08/09/18 08:45
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Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1150516	1	08/10/18 22:05	08/10/18 22:05	TJJ
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1152115	1	08/14/18 16:54	08/15/18 08:03	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1150325	1	08/09/18 23:31	08/10/18 19:09	JNJ

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



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.

Mark W. Beasley
Project Manager

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/10/2018 22:05	WG1150516
Acrolein	ND		50.0	1	08/10/2018 22:05	WG1150516
Acrylonitrile	ND		10.0	1	08/10/2018 22:05	WG1150516
Benzene	ND		1.00	1	08/10/2018 22:05	WG1150516
Bromobenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
Bromodichloromethane	ND		1.00	1	08/10/2018 22:05	WG1150516
Bromoform	ND		1.00	1	08/10/2018 22:05	WG1150516
Bromomethane	ND		5.00	1	08/10/2018 22:05	WG1150516
n-Butylbenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
sec-Butylbenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
tert-Butylbenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
Carbon tetrachloride	ND		1.00	1	08/10/2018 22:05	WG1150516
Chlorobenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
Chlorodibromomethane	ND		1.00	1	08/10/2018 22:05	WG1150516
Chloroethane	ND		5.00	1	08/10/2018 22:05	WG1150516
Chloroform	ND		5.00	1	08/10/2018 22:05	WG1150516
Chloromethane	ND		2.50	1	08/10/2018 22:05	WG1150516
2-Chlorotoluene	ND		1.00	1	08/10/2018 22:05	WG1150516
4-Chlorotoluene	ND		1.00	1	08/10/2018 22:05	WG1150516
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/10/2018 22:05	WG1150516
1,2-Dibromoethane	ND		1.00	1	08/10/2018 22:05	WG1150516
Dibromomethane	ND		1.00	1	08/10/2018 22:05	WG1150516
1,2-Dichlorobenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
1,3-Dichlorobenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
1,4-Dichlorobenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
Dichlorodifluoromethane	ND		5.00	1	08/10/2018 22:05	WG1150516
1,1-Dichloroethane	ND		1.00	1	08/10/2018 22:05	WG1150516
1,2-Dichloroethane	ND		1.00	1	08/10/2018 22:05	WG1150516
1,1-Dichloroethene	ND		1.00	1	08/10/2018 22:05	WG1150516
cis-1,2-Dichloroethene	ND		1.00	1	08/10/2018 22:05	WG1150516
trans-1,2-Dichloroethene	ND		1.00	1	08/10/2018 22:05	WG1150516
1,2-Dichloropropane	ND		1.00	1	08/10/2018 22:05	WG1150516
1,1-Dichloropropene	ND		1.00	1	08/10/2018 22:05	WG1150516
1,3-Dichloropropane	ND		1.00	1	08/10/2018 22:05	WG1150516
cis-1,3-Dichloropropene	ND		1.00	1	08/10/2018 22:05	WG1150516
trans-1,3-Dichloropropene	ND		1.00	1	08/10/2018 22:05	WG1150516
2,2-Dichloropropane	ND		1.00	1	08/10/2018 22:05	WG1150516
Di-isopropyl ether	ND		1.00	1	08/10/2018 22:05	WG1150516
Ethylbenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
Hexachloro-1,3-butadiene	ND		1.00	1	08/10/2018 22:05	WG1150516
Isopropylbenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
p-Isopropyltoluene	ND		1.00	1	08/10/2018 22:05	WG1150516
2-Butanone (MEK)	ND		10.0	1	08/10/2018 22:05	WG1150516
Methylene Chloride	ND		5.00	1	08/10/2018 22:05	WG1150516
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/10/2018 22:05	WG1150516
Methyl tert-butyl ether	ND		1.00	1	08/10/2018 22:05	WG1150516
Naphthalene	ND		5.00	1	08/10/2018 22:05	WG1150516
n-Propylbenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
Styrene	ND		1.00	1	08/10/2018 22:05	WG1150516
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/10/2018 22:05	WG1150516
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/10/2018 22:05	WG1150516
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/10/2018 22:05	WG1150516
Tetrachloroethene	ND		1.00	1	08/10/2018 22:05	WG1150516
Toluene	ND		1.00	1	08/10/2018 22:05	WG1150516
1,2,3-Trichlorobenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
1,2,4-Trichlorobenzene	ND		1.00	1	08/10/2018 22:05	WG1150516

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/07/18 09:40

L1016263

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,1,1-Trichloroethane	ND		1.00	1	08/10/2018 22:05	WG1150516
1,1,2-Trichloroethane	ND		1.00	1	08/10/2018 22:05	WG1150516
Trichloroethene	ND		1.00	1	08/10/2018 22:05	WG1150516
Trichlorofluoromethane	ND		5.00	1	08/10/2018 22:05	WG1150516
1,2,3-Trichloropropane	ND		2.50	1	08/10/2018 22:05	WG1150516
1,2,4-Trimethylbenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
1,2,3-Trimethylbenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
1,3,5-Trimethylbenzene	ND		1.00	1	08/10/2018 22:05	WG1150516
Vinyl chloride	ND		1.00	1	08/10/2018 22:05	WG1150516
o-Xylene	ND		1.00	1	08/10/2018 22:05	WG1150516
m&p-Xylene	ND		2.00	1	08/10/2018 22:05	WG1150516
(S) Toluene-d8	104		80.0-120		08/10/2018 22:05	WG1150516
(S) Dibromofluoromethane	99.1		76.0-123		08/10/2018 22:05	WG1150516
(S) 4-Bromofluorobenzene	89.6		80.0-120		08/10/2018 22:05	WG1150516

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/15/2018 08:03	WG1152115
Residual Range Organics (RRO)	ND		250	1	08/15/2018 08:03	WG1152115
(S) o-Terphenyl	95.8		52.0-156		08/15/2018 08:03	WG1152115

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Acenaphthene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Acenaphthylene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Benzo(a)anthracene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Benzo(a)pyrene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Benzo(b)fluoranthene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Benzo(g,h,i)perylene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Benzo(k)fluoranthene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Chrysene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Dibenz(a,h)anthracene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Fluoranthene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Fluorene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Naphthalene	ND		0.250	1	08/10/2018 19:09	WG1150325
Phenanthrene	ND		0.0500	1	08/10/2018 19:09	WG1150325
Pyrene	ND		0.0500	1	08/10/2018 19:09	WG1150325
1-Methylnaphthalene	ND		0.250	1	08/10/2018 19:09	WG1150325
2-Methylnaphthalene	ND		0.250	1	08/10/2018 19:09	WG1150325
2-Chloronaphthalene	ND		0.250	1	08/10/2018 19:09	WG1150325
(S) Nitrobenzene-d5	92.6		31.0-160		08/10/2018 19:09	WG1150325
(S) 2-Fluorobiphenyl	111		48.0-148		08/10/2018 19:09	WG1150325
(S) p-Terphenyl-d14	115		37.0-146		08/10/2018 19:09	WG1150325



Method Blank (MB)

(MB) R3333820-2 08/10/18 15:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	U		0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3333820-2 08/10/18 15:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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		0.412	1.00
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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	113			80.0-120
(S) Dibromofluoromethane	96.7			76.0-123
(S) 4-Bromofluorobenzene	86.4			80.0-120

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

Laboratory Control Sample (LCS)

(LCS) R3333820-1 08/10/18 14:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	122	97.8	10.0-160	
Acrolein	125	111	88.7	10.0-160	
Acrylonitrile	125	107	85.3	60.0-142	



Laboratory Control Sample (LCS)

(LCS) R3333820-1 08/10/18 14:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	25.0	20.9	83.7	69.0-123	
Bromobenzene	25.0	20.6	82.2	79.0-120	
Bromodichloromethane	25.0	24.8	99.1	76.0-120	
Bromoform	25.0	23.4	93.6	67.0-132	
Bromomethane	25.0	24.3	97.2	18.0-160	
n-Butylbenzene	25.0	22.4	89.7	72.0-126	
sec-Butylbenzene	25.0	23.4	93.6	74.0-121	
tert-Butylbenzene	25.0	23.3	93.3	75.0-122	
Carbon tetrachloride	25.0	25.4	102	63.0-122	
Chlorobenzene	25.0	27.2	109	79.0-121	
Chlorodibromomethane	25.0	29.0	116	75.0-125	
Chloroethane	25.0	21.0	83.9	47.0-152	
Chloroform	25.0	23.1	92.4	72.0-121	
Chloromethane	25.0	22.7	90.9	48.0-139	
2-Chlorotoluene	25.0	22.8	91.1	74.0-122	
4-Chlorotoluene	25.0	21.8	87.3	79.0-120	
1,2-Dibromo-3-Chloropropane	25.0	24.0	96.1	64.0-127	
1,2-Dibromoethane	25.0	25.9	104	77.0-123	
Dibromomethane	25.0	23.0	92.0	78.0-120	
1,2-Dichlorobenzene	25.0	23.7	94.7	80.0-120	
1,3-Dichlorobenzene	25.0	25.5	102	72.0-123	
1,4-Dichlorobenzene	25.0	23.1	92.5	77.0-120	
Dichlorodifluoromethane	25.0	34.3	137	49.0-155	
1,1-Dichloroethane	25.0	21.3	85.1	70.0-126	
1,2-Dichloroethane	25.0	27.6	110	67.0-126	
1,1-Dichloroethene	25.0	21.8	87.3	64.0-129	
cis-1,2-Dichloroethene	25.0	20.7	82.7	73.0-120	
trans-1,2-Dichloroethene	25.0	21.1	84.5	71.0-121	
1,2-Dichloropropane	25.0	22.2	89.0	75.0-125	
1,1-Dichloropropene	25.0	22.9	91.8	71.0-129	
1,3-Dichloropropane	25.0	25.3	101	80.0-121	
cis-1,3-Dichloropropene	25.0	26.1	104	79.0-123	
trans-1,3-Dichloropropene	25.0	27.0	108	74.0-127	
2,2-Dichloropropane	25.0	25.9	104	60.0-125	
Di-isopropyl ether	25.0	21.3	85.3	59.0-133	
Ethylbenzene	25.0	27.8	111	77.0-120	
Hexachloro-1,3-butadiene	25.0	24.2	96.7	64.0-131	
Isopropylbenzene	25.0	21.0	84.0	75.0-120	
p-Isopropyltoluene	25.0	23.9	95.4	74.0-126	
2-Butanone (MEK)	125	106	84.5	37.0-158	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3333820-1 08/10/18 14:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methylene Chloride	25.0	19.9	79.7	66.0-121	
4-Methyl-2-pentanone (MIBK)	125	126	101	59.0-143	
Methyl tert-butyl ether	25.0	23.2	92.8	64.0-123	
Naphthalene	25.0	24.1	96.4	62.0-128	
n-Propylbenzene	25.0	22.0	88.1	79.0-120	
Styrene	25.0	20.4	81.6	78.0-124	
1,1,1,2-Tetrachloroethane	25.0	28.7	115	75.0-122	
1,1,2,2-Tetrachloroethane	25.0	20.2	80.7	71.0-122	
Tetrachloroethene	25.0	28.4	114	70.0-127	
Toluene	25.0	25.3	101	77.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	24.8	99.3	61.0-136	
1,2,3-Trichlorobenzene	25.0	24.2	96.9	61.0-133	
1,2,4-Trichlorobenzene	25.0	24.6	98.5	69.0-129	
1,1,1-Trichloroethane	25.0	26.3	105	68.0-122	
1,1,2-Trichloroethane	25.0	26.5	106	78.0-120	
Trichloroethene	25.0	24.2	96.8	78.0-120	
Trichlorofluoromethane	25.0	30.1	120	56.0-137	
1,2,3-Trichloropropane	25.0	24.8	99.4	72.0-124	
1,2,3-Trimethylbenzene	25.0	23.5	93.9	75.0-120	
1,2,4-Trimethylbenzene	25.0	23.5	94.1	75.0-120	
1,3,5-Trimethylbenzene	25.0	21.6	86.3	75.0-120	
Vinyl chloride	25.0	24.0	96.1	64.0-133	
o-Xylene	25.0	28.4	113	78.0-120	
m&p-Xylenes	50.0	52.7	105	77.0-120	
(S) Toluene-d8			106	80.0-120	
(S) Dibromofluoromethane			95.5	76.0-123	
(S) 4-Bromofluorobenzene			88.9	80.0-120	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3333776-1 08/15/18 04:30

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	95.0			52.0-156

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

(LCS) R3333776-2 08/15/18 04:48 • (LCSD) R3333776-3 08/15/18 05:06

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 %
Diesel Range Organics (DRO)	750	769	771	103	103	50.0-150			0.260	20
Residual Range Organics (RRO)	750	832	838	111	112	50.0-150			0.719	20
<i>(S) o-Terphenyl</i>				113	112	52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3332840-3 08/10/18 11:53

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	0.00218	↓	0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	0.0337	↓	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	112			31.0-160
(S) 2-Fluorobiphenyl	132			48.0-148
(S) p-Terphenyl-d14	134			37.0-146

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) R3332840-1 08/10/18 11:09 • (LCSD) R3332840-2 08/10/18 11:31

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 %
Anthracene	2.00	2.27	2.32	114	116	64.0-142			2.18	20
Acenaphthene	2.00	2.11	2.14	105	107	66.0-132			1.41	20
Acenaphthylene	2.00	2.17	2.21	108	111	65.0-132			1.83	20
Benzo(a)anthracene	2.00	2.14	2.18	107	109	59.0-134			1.85	20
Benzo(a)pyrene	2.00	2.26	2.26	113	113	61.0-145			0.000	20
Benzo(b)fluoranthene	2.00	2.33	2.31	117	115	57.0-136			0.862	20
Benzo(g,h,i)perylene	2.00	2.38	2.27	119	114	54.0-140			4.73	20
Benzo(k)fluoranthene	2.00	2.26	2.11	113	105	57.0-141			6.86	20
Chrysene	2.00	2.16	2.19	108	109	63.0-140			1.38	20
Dibenz(a,h)anthracene	2.00	2.55	2.43	128	122	49.0-141			4.82	20
Fluoranthene	2.00	2.29	2.32	114	116	65.0-143			1.30	20



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

(LCS) R3332840-1 08/10/18 11:09 • (LCSD) R3332840-2 08/10/18 11:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	2.20	2.25	110	112	64.0-129			2.25	20
Indeno(1,2,3-cd)pyrene	2.00	2.41	2.35	120	117	53.0-141			2.52	20
Naphthalene	2.00	2.22	2.21	111	111	68.0-129			0.451	20
Phenanthrene	2.00	2.16	2.19	108	109	62.0-132			1.38	20
Pyrene	2.00	2.10	2.13	105	106	58.0-156			1.42	20
1-Methylnaphthalene	2.00	2.32	2.33	116	117	68.0-137			0.430	20
2-Methylnaphthalene	2.00	2.21	2.24	111	112	68.0-134			1.35	20
2-Chloronaphthalene	2.00	2.20	2.22	110	111	65.0-129			0.905	20
<i>(S) Nitrobenzene-d5</i>				95.0	94.5	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				112	111	48.0-148				
<i>(S) p-Terphenyl-d14</i>				112	110	37.0-146				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
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.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
---	---



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

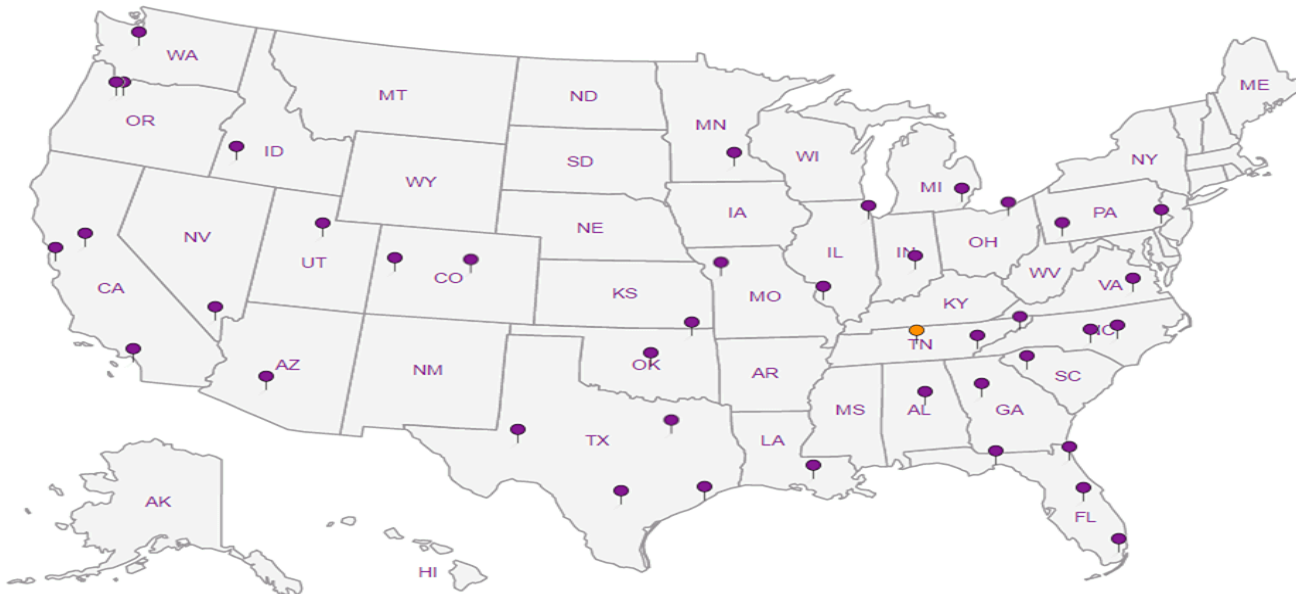
Third Party Federal Accreditations

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.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Accounts Payable
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Pres
 Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



Report to:
 Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
 KatieTeague@kennedyjenks.com,

Project
 Description: BNSF - Wishram Railyard, WA

City/State
 Collected: Wishram, WA

Phone: 253-835-6400
 Fax:

Client Project #
 1890120 04

Lab Project #
 BNSF1KEN-WISHRAM

Collected by (print):
 K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
 [Signature]
 Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
 Date Results Needed

No. of
 Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss M6020RCRAB-D 250mlHDPE-NoPres	MRCRAB, TS 4ozClr-NoPres	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	PAHSIMLVID 40mlAmb-NoPres-WT	TPHDx no SGT, PAHs 4ozClr-NoPres	V8260C 40mlAmb-HCl	V8260C 40mlAmb/MeOH5ml/Syr	Remarks	Sample # (lab only)
RIVERSHEEN-20180807	Grab	GW	-	8/7/18	0940	1	X		X	X		X			-01
		GW				1	X		X	X		X			

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:
 Samples returned via:
 UPS FedEx Courier
 Tracking # 4361 6931 8924

Sample Receipt Checklist
 COC Seal Present/Intact: 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)
 [Signature]

Date: 8/8/18
 Time: 1430

Received by: (Signature)
 FedEx

Trip Blank Received: Yes/No
 HCL/MeOH
 TBR

If preservation required by Login: Date/Time
 8/5 MR/HR

Relinquished by: (Signature)

Date:
 Time:
 Temp: 4.43 °C
 Bottles Received: 6

Received by: (Signature)

Date: 8/9/18
 Time: 845

Hold:
 Condition: NCF / OK

Relinquished by: (Signature)

Date:
 Time:
 Received for lab by: (Signature)
 [Signature]

Date: 8/9/18
 Time: 845

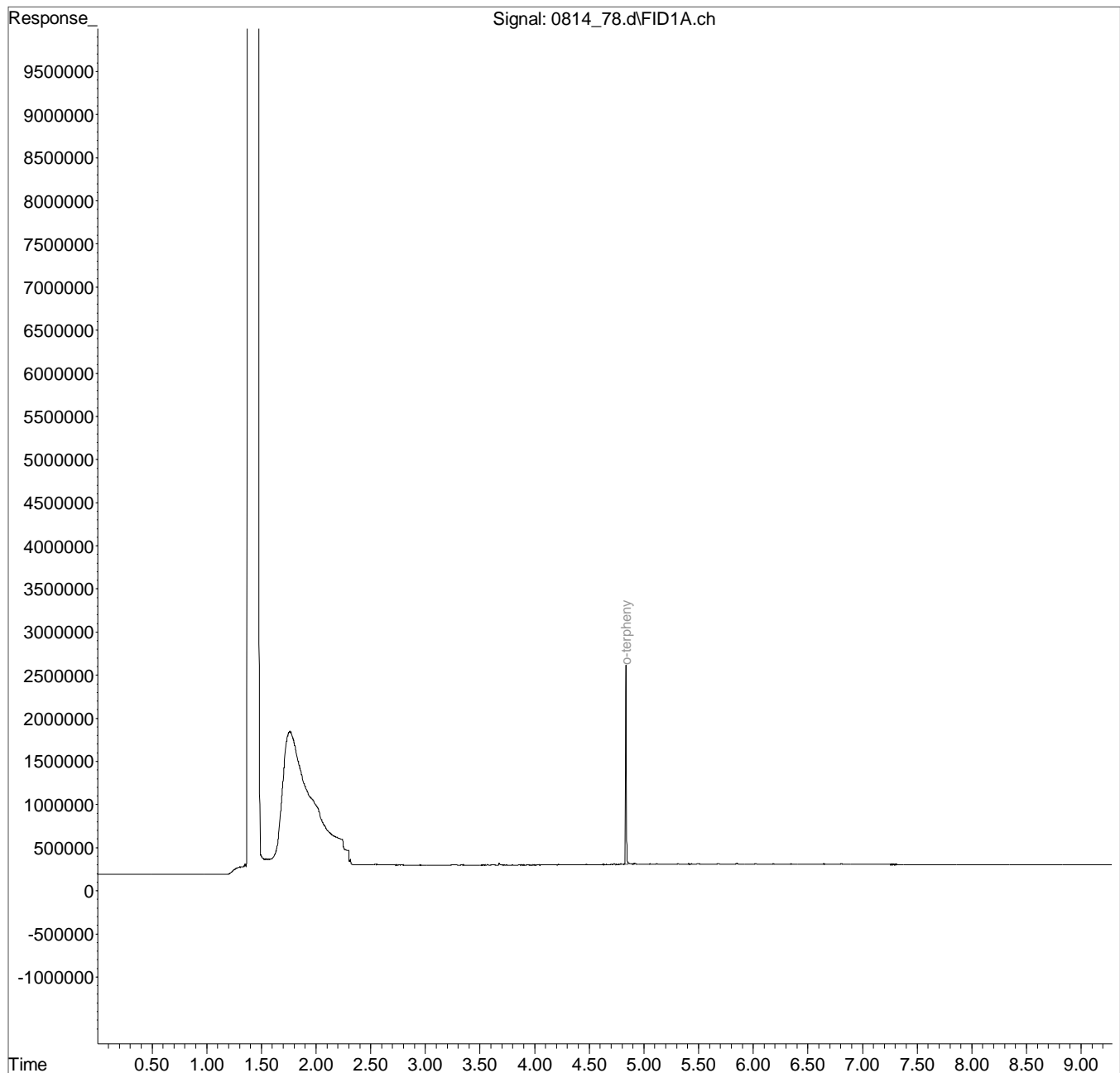
Hold:
 Condition: NCF / OK

Condition: NCF / OK

Data Path : C:\msdchem\1\data\081418\
Data File : 0814_78.d
Signal(s) : FID1A.ch
Acq On : 15 Aug 2018 8:03 am
Operator : 773
Sample : L1016263-01 1x WG1152115
Misc : water M.I.s on ranges are corrections
ALS Vial : 58 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 15 13:29:15 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



August 22, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1017457
Samples Received: 08/14/2018
Project Number: 1896120.04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

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



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

SAMPLE SUMMARY



B-18-14(2.0-2.5) L1017457-01 Solid

Collected by
K. Teague
Collected date/time
08/08/18 15:10
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153925	1	08/18/18 11:46	08/18/18 11:55	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 17:43	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 08:17	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1	08/08/18 15:10	08/16/18 13:00	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1	08/08/18 15:10	08/18/18 01:22	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	10.1	08/17/18 20:53	08/18/18 04:54	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153144	1	08/18/18 13:39	08/20/18 05:10	DMG

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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

B-18-15(2.0-2.5) L1017457-02 Solid

Collected by
K. Teague
Collected date/time
08/08/18 16:00
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153925	1	08/18/18 11:46	08/18/18 11:55	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 17:51	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 08:39	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152559	1	08/08/18 16:00	08/16/18 06:57	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153114	1	08/08/18 16:00	08/16/18 12:59	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	10	08/17/18 20:53	08/18/18 05:07	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153144	1	08/18/18 13:39	08/20/18 05:32	DMG

B-18-16(2.0-2.5) L1017457-03 Solid

Collected by
K. Teague
Collected date/time
08/08/18 16:15
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153925	1	08/18/18 11:46	08/18/18 11:55	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 17:54	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 08:42	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1.01	08/08/18 16:15	08/16/18 13:18	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1.01	08/08/18 16:15	08/18/18 01:41	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	10	08/17/18 20:53	08/18/18 05:20	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153144	1	08/18/18 13:39	08/20/18 06:38	DMG

B-18-18(14.0-14.5) L1017457-04 Solid

Collected by
K. Teague
Collected date/time
08/09/18 07:45
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153925	1	08/18/18 11:46	08/18/18 11:55	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 17:56	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 08:44	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1	08/09/18 07:45	08/16/18 13:37	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1	08/09/18 07:45	08/18/18 02:01	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	10	08/17/18 20:53	08/18/18 05:32	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153144	1	08/18/18 13:39	08/20/18 07:00	DMG

TB-06-20180810 L1017457-05 Solid

Collected by
K. Teague
Collected date/time
08/10/18 00:00
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1	08/10/18 00:00	08/16/18 13:55	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1	08/10/18 00:00	08/18/18 02:20	ACG

SAMPLE SUMMARY

B-18-14(9.5-10.0) L1017457-06 Solid

Collected by
K. Teague
Collected date/time
08/09/18 13:10
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153925	1	08/18/18 11:46	08/18/18 11:55	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 17:28	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 08:47	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1.06	08/09/18 13:10	08/16/18 14:14	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1.06	08/09/18 13:10	08/18/18 02:39	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	1	08/17/18 20:53	08/18/18 01:31	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153144	1	08/18/18 13:39	08/20/18 03:43	DMG

1
Cp

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Tc

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Ss

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Cn

B-18-16(9.0-9.5) L1017457-07 Solid

Collected by
K. Teague
Collected date/time
08/09/18 15:30
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153925	1	08/18/18 11:46	08/18/18 11:55	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 17:59	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 08:49	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1	08/09/18 15:30	08/16/18 14:33	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1	08/09/18 15:30	08/18/18 02:58	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	1	08/17/18 20:53	08/18/18 02:47	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153144	1	08/18/18 13:39	08/20/18 04:04	DMG

5
Sr

6
Qc

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Gl

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Al

B-18-14(26.0-26.5) L1017457-08 Solid

Collected by
K. Teague
Collected date/time
08/09/18 14:35
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153925	1	08/18/18 11:46	08/18/18 11:55	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 18:01	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 08:52	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1	08/09/18 14:35	08/16/18 14:51	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1	08/09/18 14:35	08/18/18 03:18	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	1	08/17/18 20:53	08/18/18 03:50	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153144	1	08/18/18 13:39	08/20/18 04:26	DMG

B-18-18(47.0-47.5) L1017457-09 Solid

Collected by
K. Teague
Collected date/time
08/09/18 11:05
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153925	1	08/18/18 11:46	08/18/18 11:55	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 18:04	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 08:54	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1	08/09/18 11:05	08/16/18 15:10	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1	08/09/18 11:05	08/18/18 03:37	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	1	08/17/18 20:53	08/18/18 03:00	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153144	1	08/18/18 13:39	08/20/18 04:48	DMG

TB-07-20180810 L1017457-10 GW

Collected by
K. Teague
Collected date/time
08/10/18 00:00
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/15/18 23:39	08/15/18 23:39	RAS

SAMPLE SUMMARY



B-18-17(2.0-2.5) L1017457-11 Solid

Collected by
K. Teague
Collected date/time
08/10/18 08:35
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153925	1	08/18/18 11:46	08/18/18 11:55	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 18:06	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 08:57	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1	08/10/18 08:35	08/16/18 15:29	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1	08/10/18 08:35	08/18/18 03:56	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	10	08/17/18 20:53	08/18/18 05:45	MG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1154190	1	08/21/18 07:04	08/21/18 13:30	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153296	1	08/16/18 21:57	08/17/18 11:59	DMG

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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

B-18-13(2.0-2.5) L1017457-13 Solid

Collected by
K. Teague
Collected date/time
08/10/18 09:10
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153925	1	08/18/18 11:46	08/18/18 11:55	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 18:09	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 08:59	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1.04	08/10/18 09:10	08/16/18 15:47	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1.04	08/10/18 09:10	08/18/18 04:16	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	1	08/17/18 20:53	08/18/18 03:13	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153296	1	08/16/18 21:57	08/17/18 12:20	DMG

7
Gl

8
Al

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Sc

B-18-12(2.0-2.5) L1017457-14 Solid

Collected by
K. Teague
Collected date/time
08/10/18 09:20
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153926	1	08/18/18 11:30	08/18/18 11:42	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 18:11	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 09:02	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1.08	08/10/18 09:20	08/16/18 16:06	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1.08	08/10/18 09:20	08/18/18 04:35	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	1	08/17/18 20:53	08/18/18 03:25	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153296	1	08/16/18 21:57	08/17/18 12:41	DMG

B-18-06(2.0-2.5) L1017457-15 Solid

Collected by
K. Teague
Collected date/time
08/10/18 10:10
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153926	1	08/18/18 11:30	08/18/18 11:42	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 18:14	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 09:09	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1	08/10/18 10:10	08/16/18 16:25	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1	08/10/18 10:10	08/18/18 04:54	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	10	08/17/18 20:53	08/18/18 05:57	MG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1154190	5	08/21/18 07:04	08/21/18 17:07	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153296	1	08/16/18 21:57	08/17/18 13:03	DMG

SAMPLE SUMMARY



B-18-07(2.0-2.5) L1017457-17 Solid

Collected by
K. Teague
Collected date/time
08/10/18 10:25
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153926	1	08/18/18 11:30	08/18/18 11:42	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 18:24	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 09:12	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153128	1	08/10/18 10:25	08/16/18 16:43	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153873	1	08/10/18 10:25	08/18/18 05:14	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	10	08/17/18 20:53	08/18/18 06:10	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153296	1	08/16/18 21:57	08/17/18 13:24	DMG

1
Cp

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Tc

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Ss

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Cn

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Sr

B-18-08(2.0-2.5) L1017457-18 Solid

Collected by
K. Teague
Collected date/time
08/10/18 11:15
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1153926	1	08/18/18 11:30	08/18/18 11:42	KDW
Mercury by Method 7471B	WG1153222	1	08/16/18 11:17	08/16/18 18:27	EL
Metals (ICP) by Method 6010C	WG1153202	1	08/16/18 18:32	08/18/18 09:14	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153795	1	08/10/18 11:15	08/17/18 13:43	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154430	1	08/10/18 11:15	08/19/18 13:16	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153402	2	08/17/18 20:53	08/18/18 03:38	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153296	1	08/16/18 21:57	08/17/18 13:45	DMG

6
Qc

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Gl

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Al

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Sc

WMW-32(2.0-2.5) L1017457-19 Solid

Collected by
K. Teague
Collected date/time
08/10/18 11:45
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1151707	1	08/14/18 10:29	08/14/18 10:44	JWW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1153101	1.09	08/10/18 11:45	08/16/18 21:12	LRL



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.

Mark W. Beasley
Project Manager

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.7		1	08/18/2018 11:55	WG1153925

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0236	1	08/16/2018 17:43	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.36	1	08/18/2018 08:17	WG1153202
Barium	75.6	<u>O1</u>	0.590	1	08/18/2018 08:17	WG1153202
Cadmium	ND		0.590	1	08/18/2018 08:17	WG1153202
Chromium	10.3	<u>O1</u>	1.18	1	08/18/2018 08:17	WG1153202
Lead	66.5	<u>O1</u>	0.590	1	08/18/2018 08:17	WG1153202
Selenium	ND		2.36	1	08/18/2018 08:17	WG1153202
Silver	ND		1.18	1	08/18/2018 08:17	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0295	1	08/18/2018 01:22	WG1153873
Acrylonitrile	ND	<u>J3 J4</u>	0.0148	1	08/16/2018 13:00	WG1153128
Benzene	ND		0.00118	1	08/16/2018 13:00	WG1153128
Bromobenzene	ND		0.0148	1	08/16/2018 13:00	WG1153128
Bromodichloromethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
Bromoform	ND		0.0295	1	08/16/2018 13:00	WG1153128
Bromomethane	ND		0.0148	1	08/18/2018 01:22	WG1153873
n-Butylbenzene	ND		0.0148	1	08/16/2018 13:00	WG1153128
sec-Butylbenzene	ND		0.0148	1	08/16/2018 13:00	WG1153128
tert-Butylbenzene	ND		0.00590	1	08/16/2018 13:00	WG1153128
Carbon tetrachloride	ND		0.00590	1	08/16/2018 13:00	WG1153128
Chlorobenzene	ND		0.00295	1	08/16/2018 13:00	WG1153128
Chlorodibromomethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
Chloroethane	ND		0.00590	1	08/16/2018 13:00	WG1153128
Chloroform	ND		0.00295	1	08/16/2018 13:00	WG1153128
Chloromethane	ND	<u>J3</u>	0.0148	1	08/16/2018 13:00	WG1153128
2-Chlorotoluene	ND		0.00295	1	08/16/2018 13:00	WG1153128
4-Chlorotoluene	ND		0.00590	1	08/16/2018 13:00	WG1153128
1,2-Dibromo-3-Chloropropane	ND	<u>J4</u>	0.0295	1	08/16/2018 13:00	WG1153128
1,2-Dibromoethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
Dibromomethane	ND		0.00590	1	08/16/2018 13:00	WG1153128
1,2-Dichlorobenzene	ND		0.00590	1	08/16/2018 13:00	WG1153128
1,3-Dichlorobenzene	ND		0.00590	1	08/16/2018 13:00	WG1153128
1,4-Dichlorobenzene	ND		0.00590	1	08/16/2018 13:00	WG1153128
Dichlorodifluoromethane	ND	<u>J3</u>	0.00295	1	08/16/2018 13:00	WG1153128
1,1-Dichloroethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
1,2-Dichloroethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
1,1-Dichloroethene	ND		0.00295	1	08/16/2018 13:00	WG1153128
cis-1,2-Dichloroethene	ND		0.00295	1	08/16/2018 13:00	WG1153128
trans-1,2-Dichloroethene	ND		0.00590	1	08/16/2018 13:00	WG1153128
1,2-Dichloropropane	ND		0.00590	1	08/16/2018 13:00	WG1153128
1,1-Dichloropropene	ND		0.00295	1	08/16/2018 13:00	WG1153128
1,3-Dichloropropane	ND		0.00590	1	08/16/2018 13:00	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/08/18 15:10

L1017457

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00295	1	08/16/2018 13:00	WG1153128
trans-1,3-Dichloropropene	ND		0.00590	1	08/16/2018 13:00	WG1153128
2,2-Dichloropropane	ND		0.00295	1	08/16/2018 13:00	WG1153128
Di-isopropyl ether	ND		0.00118	1	08/16/2018 13:00	WG1153128
Ethylbenzene	ND		0.00295	1	08/16/2018 13:00	WG1153128
Hexachloro-1,3-butadiene	ND		0.0295	1	08/16/2018 13:00	WG1153128
Isopropylbenzene	ND		0.00295	1	08/16/2018 13:00	WG1153128
p-Isopropyltoluene	ND		0.00590	1	08/16/2018 13:00	WG1153128
2-Butanone (MEK)	ND	J3	0.0295	1	08/16/2018 13:00	WG1153128
Methylene Chloride	ND		0.0295	1	08/16/2018 13:00	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0295	1	08/16/2018 13:00	WG1153128
Methyl tert-butyl ether	ND		0.00118	1	08/16/2018 13:00	WG1153128
Naphthalene	ND		0.0148	1	08/16/2018 13:00	WG1153128
n-Propylbenzene	ND		0.00590	1	08/16/2018 13:00	WG1153128
Styrene	ND		0.0148	1	08/16/2018 13:00	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
Tetrachloroethene	ND		0.00295	1	08/16/2018 13:00	WG1153128
Toluene	ND		0.00590	1	08/16/2018 13:00	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00295	1	08/16/2018 13:00	WG1153128
1,2,4-Trichlorobenzene	ND		0.0148	1	08/16/2018 13:00	WG1153128
1,1,1-Trichloroethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
1,1,2-Trichloroethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
Trichloroethene	ND		0.00118	1	08/16/2018 13:00	WG1153128
Trichlorofluoromethane	ND		0.00295	1	08/16/2018 13:00	WG1153128
1,2,3-Trichloropropane	ND		0.0148	1	08/16/2018 13:00	WG1153128
1,2,4-Trimethylbenzene	ND		0.00590	1	08/16/2018 13:00	WG1153128
1,2,3-Trimethylbenzene	ND		0.00590	1	08/16/2018 13:00	WG1153128
Vinyl chloride	ND		0.00295	1	08/16/2018 13:00	WG1153128
1,3,5-Trimethylbenzene	ND		0.00590	1	08/16/2018 13:00	WG1153128
o-Xylene	ND		0.00295	1	08/16/2018 13:00	WG1153128
m&p-Xylene	0.00579		0.00472	1	08/16/2018 13:00	WG1153128
(S) Toluene-d8	110		80.0-120		08/16/2018 13:00	WG1153128
(S) Toluene-d8	116		80.0-120		08/18/2018 01:22	WG1153873
(S) Dibromofluoromethane	92.4		74.0-131		08/16/2018 13:00	WG1153128
(S) Dibromofluoromethane	87.8		74.0-131		08/18/2018 01:22	WG1153873
(S) 4-Bromofluorobenzene	101		64.0-132		08/16/2018 13:00	WG1153128
(S) 4-Bromofluorobenzene	98.6		64.0-132		08/18/2018 01:22	WG1153873

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		47.7	10.1	08/18/2018 04:54	WG1153402
Residual Range Organics (RRO)	ND		119	10.1	08/18/2018 04:54	WG1153402
(S) o-Terphenyl	76.6		18.0-148		08/18/2018 04:54	WG1153402

Sample Narrative:

L1017457-01 WG1153402: Dilution due to matrix impact during extract concentration procedure



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00708	1	08/20/2018 05:10	WG1153144
Acenaphthene	ND		0.00708	1	08/20/2018 05:10	WG1153144
Acenaphthylene	ND		0.00708	1	08/20/2018 05:10	WG1153144
Benzo(a)anthracene	0.00791		0.00708	1	08/20/2018 05:10	WG1153144
Benzo(a)pyrene	0.00868		0.00708	1	08/20/2018 05:10	WG1153144
Benzo(b)fluoranthene	0.00948		0.00708	1	08/20/2018 05:10	WG1153144
Benzo(g,h,i)perylene	0.00774		0.00708	1	08/20/2018 05:10	WG1153144
Benzo(k)fluoranthene	ND		0.00708	1	08/20/2018 05:10	WG1153144
Chrysene	0.00746		0.00708	1	08/20/2018 05:10	WG1153144
Dibenz(a,h)anthracene	ND		0.00708	1	08/20/2018 05:10	WG1153144
Fluoranthene	0.0110		0.00708	1	08/20/2018 05:10	WG1153144
Fluorene	ND		0.00708	1	08/20/2018 05:10	WG1153144
Indeno(1,2,3-cd)pyrene	ND		0.00708	1	08/20/2018 05:10	WG1153144
Naphthalene	ND		0.0236	1	08/20/2018 05:10	WG1153144
Phenanthrene	ND		0.00708	1	08/20/2018 05:10	WG1153144
Pyrene	0.0130		0.00708	1	08/20/2018 05:10	WG1153144
1-Methylnaphthalene	ND		0.0236	1	08/20/2018 05:10	WG1153144
2-Methylnaphthalene	ND		0.0236	1	08/20/2018 05:10	WG1153144
2-Chloronaphthalene	ND		0.0236	1	08/20/2018 05:10	WG1153144
(S) Nitrobenzene-d5	66.1		14.0-149		08/20/2018 05:10	WG1153144
(S) 2-Fluorobiphenyl	75.5		34.0-125		08/20/2018 05:10	WG1153144
(S) p-Terphenyl-d14	72.9		23.0-120		08/20/2018 05:10	WG1153144

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.7		1	08/18/2018 11:55	WG1153925

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0250		0.0218	1	08/16/2018 17:51	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.18	1	08/18/2018 08:39	WG1153202
Barium	84.8		0.545	1	08/18/2018 08:39	WG1153202
Cadmium	ND		0.545	1	08/18/2018 08:39	WG1153202
Chromium	9.68		1.09	1	08/18/2018 08:39	WG1153202
Lead	73.7		0.545	1	08/18/2018 08:39	WG1153202
Selenium	ND		2.18	1	08/18/2018 08:39	WG1153202
Silver	ND		1.09	1	08/18/2018 08:39	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0273	1	08/16/2018 12:59	WG1153114
Acrylonitrile	ND		0.0136	1	08/16/2018 06:57	WG1152559
Benzene	ND		0.00109	1	08/16/2018 06:57	WG1152559
Bromobenzene	ND		0.0136	1	08/16/2018 06:57	WG1152559
Bromodichloromethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
Bromoform	ND		0.0273	1	08/16/2018 06:57	WG1152559
Bromomethane	ND	<u>JO</u>	0.0136	1	08/16/2018 06:57	WG1152559
n-Butylbenzene	ND		0.0136	1	08/16/2018 06:57	WG1152559
sec-Butylbenzene	ND		0.0136	1	08/16/2018 06:57	WG1152559
tert-Butylbenzene	ND		0.00545	1	08/16/2018 06:57	WG1152559
Carbon tetrachloride	ND		0.00545	1	08/16/2018 06:57	WG1152559
Chlorobenzene	ND		0.00273	1	08/16/2018 06:57	WG1152559
Chlorodibromomethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
Chloroethane	ND		0.00545	1	08/16/2018 06:57	WG1152559
Chloroform	ND		0.00273	1	08/16/2018 06:57	WG1152559
Chloromethane	ND		0.0136	1	08/16/2018 06:57	WG1152559
2-Chlorotoluene	ND		0.00273	1	08/16/2018 06:57	WG1152559
4-Chlorotoluene	ND		0.00545	1	08/16/2018 06:57	WG1152559
1,2-Dibromo-3-Chloropropane	ND		0.0273	1	08/16/2018 06:57	WG1152559
1,2-Dibromoethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
Dibromomethane	ND		0.00545	1	08/16/2018 06:57	WG1152559
1,2-Dichlorobenzene	ND		0.00545	1	08/16/2018 06:57	WG1152559
1,3-Dichlorobenzene	ND		0.00545	1	08/16/2018 06:57	WG1152559
1,4-Dichlorobenzene	ND		0.00545	1	08/16/2018 06:57	WG1152559
Dichlorodifluoromethane	ND	<u>JO</u>	0.00273	1	08/16/2018 06:57	WG1152559
1,1-Dichloroethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
1,2-Dichloroethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
1,1-Dichloroethene	ND		0.00273	1	08/16/2018 06:57	WG1152559
cis-1,2-Dichloroethene	ND		0.00273	1	08/16/2018 06:57	WG1152559
trans-1,2-Dichloroethene	ND		0.00545	1	08/16/2018 06:57	WG1152559
1,2-Dichloropropane	ND		0.00545	1	08/16/2018 06:57	WG1152559
1,1-Dichloropropene	ND		0.00273	1	08/16/2018 06:57	WG1152559
1,3-Dichloropropane	ND		0.00545	1	08/16/2018 06:57	WG1152559

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/08/18 16:00

L1017457

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00273	1	08/16/2018 06:57	WG1152559
trans-1,3-Dichloropropene	ND		0.00545	1	08/16/2018 06:57	WG1152559
2,2-Dichloropropane	ND		0.00273	1	08/16/2018 06:57	WG1152559
Di-isopropyl ether	ND		0.00109	1	08/16/2018 06:57	WG1152559
Ethylbenzene	ND		0.00273	1	08/16/2018 06:57	WG1152559
Hexachloro-1,3-butadiene	ND		0.0273	1	08/16/2018 06:57	WG1152559
Isopropylbenzene	ND		0.00273	1	08/16/2018 06:57	WG1152559
p-Isopropyltoluene	ND		0.00545	1	08/16/2018 06:57	WG1152559
2-Butanone (MEK)	ND	JO	0.0273	1	08/16/2018 06:57	WG1152559
Methylene Chloride	ND		0.0273	1	08/16/2018 06:57	WG1152559
4-Methyl-2-pentanone (MIBK)	ND		0.0273	1	08/16/2018 06:57	WG1152559
Methyl tert-butyl ether	ND		0.00109	1	08/16/2018 06:57	WG1152559
Naphthalene	ND		0.0136	1	08/16/2018 06:57	WG1152559
n-Propylbenzene	ND		0.00545	1	08/16/2018 06:57	WG1152559
Styrene	ND		0.0136	1	08/16/2018 06:57	WG1152559
1,1,1,2-Tetrachloroethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
1,1,2,2-Tetrachloroethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
1,1,2-Trichlorotrifluoroethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
Tetrachloroethene	ND		0.00273	1	08/16/2018 06:57	WG1152559
Toluene	0.0126		0.00545	1	08/16/2018 06:57	WG1152559
1,2,3-Trichlorobenzene	ND		0.00273	1	08/16/2018 06:57	WG1152559
1,2,4-Trichlorobenzene	ND		0.0136	1	08/16/2018 06:57	WG1152559
1,1,1-Trichloroethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
1,1,2-Trichloroethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
Trichloroethene	ND		0.00109	1	08/16/2018 06:57	WG1152559
Trichlorofluoromethane	ND		0.00273	1	08/16/2018 06:57	WG1152559
1,2,3-Trichloropropane	ND		0.0136	1	08/16/2018 06:57	WG1152559
1,2,4-Trimethylbenzene	0.00813		0.00545	1	08/16/2018 06:57	WG1152559
1,2,3-Trimethylbenzene	ND		0.00545	1	08/16/2018 06:57	WG1152559
Vinyl chloride	ND		0.00273	1	08/16/2018 06:57	WG1152559
1,3,5-Trimethylbenzene	ND		0.00545	1	08/16/2018 06:57	WG1152559
o-Xylene	0.00853		0.00273	1	08/16/2018 06:57	WG1152559
m&p-Xylene	0.0131		0.00436	1	08/16/2018 06:57	WG1152559
(S) Toluene-d8	108		80.0-120		08/16/2018 06:57	WG1152559
(S) Toluene-d8	107		80.0-120		08/16/2018 12:59	WG1153114
(S) Dibromofluoromethane	98.5		74.0-131		08/16/2018 06:57	WG1152559
(S) Dibromofluoromethane	96.7		74.0-131		08/16/2018 12:59	WG1153114
(S) 4-Bromofluorobenzene	96.9		64.0-132		08/16/2018 06:57	WG1152559
(S) 4-Bromofluorobenzene	106		64.0-132		08/16/2018 12:59	WG1153114

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		43.6	10	08/18/2018 05:07	WG1153402
Residual Range Organics (RRO)	ND		109	10	08/18/2018 05:07	WG1153402
(S) o-Terphenyl	94.6		18.0-148		08/18/2018 05:07	WG1153402

Sample Narrative:

L1017457-02 WG1153402: Dilution due to matrix impact during extract concentration procedure



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00654	1	08/20/2018 05:32	WG1153144
Acenaphthene	ND		0.00654	1	08/20/2018 05:32	WG1153144
Acenaphthylene	ND		0.00654	1	08/20/2018 05:32	WG1153144
Benzo(a)anthracene	0.0200		0.00654	1	08/20/2018 05:32	WG1153144
Benzo(a)pyrene	0.0239		0.00654	1	08/20/2018 05:32	WG1153144
Benzo(b)fluoranthene	0.0294		0.00654	1	08/20/2018 05:32	WG1153144
Benzo(g,h,i)perylene	0.0180		0.00654	1	08/20/2018 05:32	WG1153144
Benzo(k)fluoranthene	0.0109		0.00654	1	08/20/2018 05:32	WG1153144
Chrysene	0.0194		0.00654	1	08/20/2018 05:32	WG1153144
Dibenz(a,h)anthracene	ND		0.00654	1	08/20/2018 05:32	WG1153144
Fluoranthene	0.0327		0.00654	1	08/20/2018 05:32	WG1153144
Fluorene	ND		0.00654	1	08/20/2018 05:32	WG1153144
Indeno(1,2,3-cd)pyrene	0.0141		0.00654	1	08/20/2018 05:32	WG1153144
Naphthalene	ND		0.0218	1	08/20/2018 05:32	WG1153144
Phenanthrene	0.0124		0.00654	1	08/20/2018 05:32	WG1153144
Pyrene	0.0323		0.00654	1	08/20/2018 05:32	WG1153144
1-Methylnaphthalene	ND		0.0218	1	08/20/2018 05:32	WG1153144
2-Methylnaphthalene	ND		0.0218	1	08/20/2018 05:32	WG1153144
2-Chloronaphthalene	ND		0.0218	1	08/20/2018 05:32	WG1153144
(S) Nitrobenzene-d5	75.5		14.0-149		08/20/2018 05:32	WG1153144
(S) 2-Fluorobiphenyl	81.8		34.0-125		08/20/2018 05:32	WG1153144
(S) p-Terphenyl-d14	80.8		23.0-120		08/20/2018 05:32	WG1153144

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	80.8		1	08/18/2018 11:55	WG1153925

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0326		0.0247	1	08/16/2018 17:54	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.47	1	08/18/2018 08:42	WG1153202
Barium	98.5		0.619	1	08/18/2018 08:42	WG1153202
Cadmium	ND		0.619	1	08/18/2018 08:42	WG1153202
Chromium	10.9		1.24	1	08/18/2018 08:42	WG1153202
Lead	23.5		0.619	1	08/18/2018 08:42	WG1153202
Selenium	ND		2.47	1	08/18/2018 08:42	WG1153202
Silver	ND		1.24	1	08/18/2018 08:42	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0312	1.01	08/18/2018 01:41	WG1153873
Acrylonitrile	ND	J3 J4	0.0156	1.01	08/16/2018 13:18	WG1153128
Benzene	ND		0.00125	1.01	08/16/2018 13:18	WG1153128
Bromobenzene	ND		0.0156	1.01	08/16/2018 13:18	WG1153128
Bromodichloromethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
Bromoform	ND		0.0312	1.01	08/16/2018 13:18	WG1153128
Bromomethane	ND		0.0156	1.01	08/18/2018 01:41	WG1153873
n-Butylbenzene	ND		0.0156	1.01	08/16/2018 13:18	WG1153128
sec-Butylbenzene	ND		0.0156	1.01	08/16/2018 13:18	WG1153128
tert-Butylbenzene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
Carbon tetrachloride	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
Chlorobenzene	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
Chlorodibromomethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
Chloroethane	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
Chloroform	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
Chloromethane	ND	J3	0.0156	1.01	08/16/2018 13:18	WG1153128
2-Chlorotoluene	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
4-Chlorotoluene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0312	1.01	08/16/2018 13:18	WG1153128
1,2-Dibromoethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
Dibromomethane	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
1,2-Dichlorobenzene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
1,3-Dichlorobenzene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
1,4-Dichlorobenzene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
Dichlorodifluoromethane	ND	J3	0.00312	1.01	08/16/2018 13:18	WG1153128
1,1-Dichloroethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
1,2-Dichloroethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
1,1-Dichloroethene	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
cis-1,2-Dichloroethene	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
trans-1,2-Dichloroethene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
1,2-Dichloropropane	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
1,1-Dichloropropene	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
1,3-Dichloropropane	ND		0.00625	1.01	08/16/2018 13:18	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
trans-1,3-Dichloropropene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
2,2-Dichloropropane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
Di-isopropyl ether	ND		0.00125	1.01	08/16/2018 13:18	WG1153128
Ethylbenzene	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
Hexachloro-1,3-butadiene	ND		0.0312	1.01	08/16/2018 13:18	WG1153128
Isopropylbenzene	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
p-Isopropyltoluene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
2-Butanone (MEK)	ND	J3	0.0312	1.01	08/16/2018 13:18	WG1153128
Methylene Chloride	ND		0.0312	1.01	08/16/2018 13:18	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0312	1.01	08/16/2018 13:18	WG1153128
Methyl tert-butyl ether	ND		0.00125	1.01	08/16/2018 13:18	WG1153128
Naphthalene	ND		0.0156	1.01	08/16/2018 13:18	WG1153128
n-Propylbenzene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
Styrene	ND		0.0156	1.01	08/16/2018 13:18	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
Tetrachloroethene	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
Toluene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00312	1.01	08/16/2018 13:18	WG1153128
1,2,4-Trichlorobenzene	ND		0.0156	1.01	08/16/2018 13:18	WG1153128
1,1,1-Trichloroethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
1,1,2-Trichloroethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
Trichloroethene	ND		0.00125	1.01	08/16/2018 13:18	WG1153128
Trichlorofluoromethane	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
1,2,3-Trichloropropane	ND		0.0156	1.01	08/16/2018 13:18	WG1153128
1,2,4-Trimethylbenzene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
1,2,3-Trimethylbenzene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
Vinyl chloride	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
1,3,5-Trimethylbenzene	ND		0.00625	1.01	08/16/2018 13:18	WG1153128
o-Xylene	ND		0.00312	1.01	08/16/2018 13:18	WG1153128
m&p-Xylene	ND		0.00500	1.01	08/16/2018 13:18	WG1153128
(S) Toluene-d8	111		80.0-120		08/16/2018 13:18	WG1153128
(S) Toluene-d8	118		80.0-120		08/18/2018 01:41	WG1153873
(S) Dibromofluoromethane	91.7		74.0-131		08/16/2018 13:18	WG1153128
(S) Dibromofluoromethane	87.2		74.0-131		08/18/2018 01:41	WG1153873
(S) 4-Bromofluorobenzene	102		64.0-132		08/16/2018 13:18	WG1153128
(S) 4-Bromofluorobenzene	104		64.0-132		08/18/2018 01:41	WG1153873

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		49.5	10	08/18/2018 05:20	WG1153402
Residual Range Organics (RRO)	ND		124	10	08/18/2018 05:20	WG1153402
(S) o-Terphenyl	89.0		18.0-148		08/18/2018 05:20	WG1153402

Sample Narrative:

L1017457-03 WG1153402: Dilution due to matrix impact during extract concentration procedure



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Acenaphthene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Acenaphthylene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Benzo(a)anthracene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Benzo(a)pyrene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Benzo(b)fluoranthene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Benzo(g,h,i)perylene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Benzo(k)fluoranthene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Chrysene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Dibenz(a,h)anthracene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Fluoranthene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Fluorene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Indeno(1,2,3-cd)pyrene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Naphthalene	ND		0.0247	1	08/20/2018 06:38	WG1153144
Phenanthrene	ND		0.00742	1	08/20/2018 06:38	WG1153144
Pyrene	ND		0.00742	1	08/20/2018 06:38	WG1153144
1-Methylnaphthalene	ND		0.0247	1	08/20/2018 06:38	WG1153144
2-Methylnaphthalene	ND		0.0247	1	08/20/2018 06:38	WG1153144
2-Chloronaphthalene	ND		0.0247	1	08/20/2018 06:38	WG1153144
(S) Nitrobenzene-d5	66.6		14.0-149		08/20/2018 06:38	WG1153144
(S) 2-Fluorobiphenyl	71.4		34.0-125		08/20/2018 06:38	WG1153144
(S) p-Terphenyl-d14	70.9		23.0-120		08/20/2018 06:38	WG1153144

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	84.2		1	08/18/2018 11:55	WG1153925

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0237	1	08/16/2018 17:56	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.37	1	08/18/2018 08:44	WG1153202
Barium	78.6		0.594	1	08/18/2018 08:44	WG1153202
Cadmium	ND		0.594	1	08/18/2018 08:44	WG1153202
Chromium	13.7		1.19	1	08/18/2018 08:44	WG1153202
Lead	19.6		0.594	1	08/18/2018 08:44	WG1153202
Selenium	ND		2.37	1	08/18/2018 08:44	WG1153202
Silver	ND		1.19	1	08/18/2018 08:44	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0297	1	08/18/2018 02:01	WG1153873
Acrylonitrile	ND	J3 J4	0.0148	1	08/16/2018 13:37	WG1153128
Benzene	ND		0.00119	1	08/16/2018 13:37	WG1153128
Bromobenzene	ND		0.0148	1	08/16/2018 13:37	WG1153128
Bromodichloromethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
Bromoform	ND		0.0297	1	08/16/2018 13:37	WG1153128
Bromomethane	ND		0.0148	1	08/18/2018 02:01	WG1153873
n-Butylbenzene	ND		0.0148	1	08/16/2018 13:37	WG1153128
sec-Butylbenzene	ND		0.0148	1	08/16/2018 13:37	WG1153128
tert-Butylbenzene	ND		0.00594	1	08/16/2018 13:37	WG1153128
Carbon tetrachloride	ND		0.00594	1	08/16/2018 13:37	WG1153128
Chlorobenzene	ND		0.00297	1	08/16/2018 13:37	WG1153128
Chlorodibromomethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
Chloroethane	ND		0.00594	1	08/16/2018 13:37	WG1153128
Chloroform	ND		0.00297	1	08/16/2018 13:37	WG1153128
Chloromethane	ND	J3	0.0148	1	08/16/2018 13:37	WG1153128
2-Chlorotoluene	ND		0.00297	1	08/16/2018 13:37	WG1153128
4-Chlorotoluene	ND		0.00594	1	08/16/2018 13:37	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0297	1	08/16/2018 13:37	WG1153128
1,2-Dibromoethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
Dibromomethane	ND		0.00594	1	08/16/2018 13:37	WG1153128
1,2-Dichlorobenzene	ND		0.00594	1	08/16/2018 13:37	WG1153128
1,3-Dichlorobenzene	ND		0.00594	1	08/16/2018 13:37	WG1153128
1,4-Dichlorobenzene	ND		0.00594	1	08/16/2018 13:37	WG1153128
Dichlorodifluoromethane	ND	J3	0.00297	1	08/16/2018 13:37	WG1153128
1,1-Dichloroethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
1,2-Dichloroethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
1,1-Dichloroethene	ND		0.00297	1	08/16/2018 13:37	WG1153128
cis-1,2-Dichloroethene	ND		0.00297	1	08/16/2018 13:37	WG1153128
trans-1,2-Dichloroethene	ND		0.00594	1	08/16/2018 13:37	WG1153128
1,2-Dichloropropane	ND		0.00594	1	08/16/2018 13:37	WG1153128
1,1-Dichloropropene	ND		0.00297	1	08/16/2018 13:37	WG1153128
1,3-Dichloropropane	ND		0.00594	1	08/16/2018 13:37	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00297	1	08/16/2018 13:37	WG1153128
trans-1,3-Dichloropropene	ND		0.00594	1	08/16/2018 13:37	WG1153128
2,2-Dichloropropane	ND		0.00297	1	08/16/2018 13:37	WG1153128
Di-isopropyl ether	ND		0.00119	1	08/16/2018 13:37	WG1153128
Ethylbenzene	ND		0.00297	1	08/16/2018 13:37	WG1153128
Hexachloro-1,3-butadiene	ND		0.0297	1	08/16/2018 13:37	WG1153128
Isopropylbenzene	ND		0.00297	1	08/16/2018 13:37	WG1153128
p-Isopropyltoluene	ND		0.00594	1	08/16/2018 13:37	WG1153128
2-Butanone (MEK)	ND	J3	0.0297	1	08/16/2018 13:37	WG1153128
Methylene Chloride	ND		0.0297	1	08/16/2018 13:37	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0297	1	08/16/2018 13:37	WG1153128
Methyl tert-butyl ether	ND		0.00119	1	08/16/2018 13:37	WG1153128
Naphthalene	ND		0.0148	1	08/16/2018 13:37	WG1153128
n-Propylbenzene	ND		0.00594	1	08/16/2018 13:37	WG1153128
Styrene	ND		0.0148	1	08/16/2018 13:37	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
Tetrachloroethene	ND		0.00297	1	08/16/2018 13:37	WG1153128
Toluene	ND		0.00594	1	08/16/2018 13:37	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00297	1	08/16/2018 13:37	WG1153128
1,2,4-Trichlorobenzene	ND		0.0148	1	08/16/2018 13:37	WG1153128
1,1,1-Trichloroethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
1,1,2-Trichloroethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
Trichloroethene	ND		0.00119	1	08/16/2018 13:37	WG1153128
Trichlorofluoromethane	ND		0.00297	1	08/16/2018 13:37	WG1153128
1,2,3-Trichloropropane	ND		0.0148	1	08/16/2018 13:37	WG1153128
1,2,4-Trimethylbenzene	ND		0.00594	1	08/16/2018 13:37	WG1153128
1,2,3-Trimethylbenzene	ND		0.00594	1	08/16/2018 13:37	WG1153128
Vinyl chloride	ND		0.00297	1	08/16/2018 13:37	WG1153128
1,3,5-Trimethylbenzene	ND		0.00594	1	08/16/2018 13:37	WG1153128
o-Xylene	ND		0.00297	1	08/16/2018 13:37	WG1153128
m&p-Xylene	ND		0.00475	1	08/16/2018 13:37	WG1153128
(S) Toluene-d8	111		80.0-120		08/16/2018 13:37	WG1153128
(S) Toluene-d8	117		80.0-120		08/18/2018 02:01	WG1153873
(S) Dibromofluoromethane	92.2		74.0-131		08/16/2018 13:37	WG1153128
(S) Dibromofluoromethane	88.4		74.0-131		08/18/2018 02:01	WG1153873
(S) 4-Bromofluorobenzene	99.4		64.0-132		08/16/2018 13:37	WG1153128
(S) 4-Bromofluorobenzene	107		64.0-132		08/18/2018 02:01	WG1153873

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		47.5	10	08/18/2018 05:32	WG1153402
Residual Range Organics (RRO)	ND		119	10	08/18/2018 05:32	WG1153402
(S) o-Terphenyl	87.7		18.0-148		08/18/2018 05:32	WG1153402

Sample Narrative:

L1017457-04 WG1153402: Dilution due to matrix impact during extract concentration procedure



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0161		0.00712	1	08/20/2018 07:00	WG1153144
Acenaphthene	ND		0.00712	1	08/20/2018 07:00	WG1153144
Acenaphthylene	ND		0.00712	1	08/20/2018 07:00	WG1153144
Benzo(a)anthracene	0.0718		0.00712	1	08/20/2018 07:00	WG1153144
Benzo(a)pyrene	0.0962		0.00712	1	08/20/2018 07:00	WG1153144
Benzo(b)fluoranthene	0.139		0.00712	1	08/20/2018 07:00	WG1153144
Benzo(g,h,i)perylene	0.0695		0.00712	1	08/20/2018 07:00	WG1153144
Benzo(k)fluoranthene	0.0312		0.00712	1	08/20/2018 07:00	WG1153144
Chrysene	0.0704		0.00712	1	08/20/2018 07:00	WG1153144
Dibenz(a,h)anthracene	0.0179		0.00712	1	08/20/2018 07:00	WG1153144
Fluoranthene	0.0990		0.00712	1	08/20/2018 07:00	WG1153144
Fluorene	ND		0.00712	1	08/20/2018 07:00	WG1153144
Indeno(1,2,3-cd)pyrene	0.0559		0.00712	1	08/20/2018 07:00	WG1153144
Naphthalene	ND		0.0237	1	08/20/2018 07:00	WG1153144
Phenanthrene	0.0469		0.00712	1	08/20/2018 07:00	WG1153144
Pyrene	0.107		0.00712	1	08/20/2018 07:00	WG1153144
1-Methylnaphthalene	ND		0.0237	1	08/20/2018 07:00	WG1153144
2-Methylnaphthalene	ND		0.0237	1	08/20/2018 07:00	WG1153144
2-Chloronaphthalene	ND		0.0237	1	08/20/2018 07:00	WG1153144
(S) Nitrobenzene-d5	73.4		14.0-149		08/20/2018 07:00	WG1153144
(S) 2-Fluorobiphenyl	76.5		34.0-125		08/20/2018 07:00	WG1153144
(S) p-Terphenyl-d14	79.9		23.0-120		08/20/2018 07:00	WG1153144

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0250	1	08/18/2018 02:20	WG1153873
Acrylonitrile	ND	<u>J3 J4</u>	0.0125	1	08/16/2018 13:55	WG1153128
Benzene	ND		0.00100	1	08/16/2018 13:55	WG1153128
Bromobenzene	ND		0.0125	1	08/16/2018 13:55	WG1153128
Bromodichloromethane	ND		0.00250	1	08/16/2018 13:55	WG1153128
Bromoform	ND		0.0250	1	08/16/2018 13:55	WG1153128
Bromomethane	ND		0.0125	1	08/18/2018 02:20	WG1153873
n-Butylbenzene	ND		0.0125	1	08/16/2018 13:55	WG1153128
sec-Butylbenzene	ND		0.0125	1	08/16/2018 13:55	WG1153128
tert-Butylbenzene	ND		0.00500	1	08/16/2018 13:55	WG1153128
Carbon tetrachloride	ND		0.00500	1	08/16/2018 13:55	WG1153128
Chlorobenzene	ND		0.00250	1	08/16/2018 13:55	WG1153128
Chlorodibromomethane	ND		0.00250	1	08/16/2018 13:55	WG1153128
Chloroethane	ND		0.00500	1	08/16/2018 13:55	WG1153128
Chloroform	ND		0.00250	1	08/16/2018 13:55	WG1153128
Chloromethane	ND	<u>J3</u>	0.0125	1	08/16/2018 13:55	WG1153128
2-Chlorotoluene	ND		0.00250	1	08/16/2018 13:55	WG1153128
4-Chlorotoluene	ND		0.00500	1	08/16/2018 13:55	WG1153128
1,2-Dibromo-3-Chloropropane	ND	<u>J4</u>	0.0250	1	08/16/2018 13:55	WG1153128
1,2-Dibromoethane	ND		0.00250	1	08/16/2018 13:55	WG1153128
Dibromomethane	ND		0.00500	1	08/16/2018 13:55	WG1153128
1,2-Dichlorobenzene	ND		0.00500	1	08/16/2018 13:55	WG1153128
1,3-Dichlorobenzene	ND		0.00500	1	08/16/2018 13:55	WG1153128
1,4-Dichlorobenzene	ND		0.00500	1	08/16/2018 13:55	WG1153128
Dichlorodifluoromethane	ND	<u>J3</u>	0.00250	1	08/16/2018 13:55	WG1153128
1,1-Dichloroethane	ND		0.00250	1	08/16/2018 13:55	WG1153128
1,2-Dichloroethane	ND		0.00250	1	08/16/2018 13:55	WG1153128
1,1-Dichloroethene	ND		0.00250	1	08/16/2018 13:55	WG1153128
cis-1,2-Dichloroethene	ND		0.00250	1	08/16/2018 13:55	WG1153128
trans-1,2-Dichloroethene	ND		0.00500	1	08/16/2018 13:55	WG1153128
1,2-Dichloropropane	ND		0.00500	1	08/16/2018 13:55	WG1153128
1,1-Dichloropropene	ND		0.00250	1	08/16/2018 13:55	WG1153128
1,3-Dichloropropane	ND		0.00500	1	08/16/2018 13:55	WG1153128
cis-1,3-Dichloropropene	ND		0.00250	1	08/16/2018 13:55	WG1153128
trans-1,3-Dichloropropene	ND		0.00500	1	08/16/2018 13:55	WG1153128
2,2-Dichloropropane	ND		0.00250	1	08/16/2018 13:55	WG1153128
Di-isopropyl ether	ND		0.00100	1	08/16/2018 13:55	WG1153128
Ethylbenzene	ND		0.00250	1	08/16/2018 13:55	WG1153128
Hexachloro-1,3-butadiene	ND		0.0250	1	08/16/2018 13:55	WG1153128
Isopropylbenzene	ND		0.00250	1	08/16/2018 13:55	WG1153128
p-Isopropyltoluene	ND		0.00500	1	08/16/2018 13:55	WG1153128
2-Butanone (MEK)	ND	<u>J3</u>	0.0250	1	08/16/2018 13:55	WG1153128
Methylene Chloride	ND		0.0250	1	08/16/2018 13:55	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	<u>J4</u>	0.0250	1	08/16/2018 13:55	WG1153128
Methyl tert-butyl ether	ND		0.00100	1	08/16/2018 13:55	WG1153128
Naphthalene	ND		0.0125	1	08/16/2018 13:55	WG1153128
n-Propylbenzene	ND		0.00500	1	08/16/2018 13:55	WG1153128
Styrene	ND		0.0125	1	08/16/2018 13:55	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00250	1	08/16/2018 13:55	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00250	1	08/16/2018 13:55	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	08/16/2018 13:55	WG1153128
Tetrachloroethene	ND		0.00250	1	08/16/2018 13:55	WG1153128
Toluene	ND		0.00500	1	08/16/2018 13:55	WG1153128
1,2,3-Trichlorobenzene	ND	<u>J4</u>	0.00250	1	08/16/2018 13:55	WG1153128
1,2,4-Trichlorobenzene	ND		0.0125	1	08/16/2018 13:55	WG1153128
1,1,1-Trichloroethane	ND		0.00250	1	08/16/2018 13:55	WG1153128

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



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichloroethane	ND		0.00250	1	08/16/2018 13:55	WG1153128
Trichloroethene	ND		0.00100	1	08/16/2018 13:55	WG1153128
Trichlorofluoromethane	ND		0.00250	1	08/16/2018 13:55	WG1153128
1,2,3-Trichloropropane	ND		0.0125	1	08/16/2018 13:55	WG1153128
1,2,4-Trimethylbenzene	ND		0.00500	1	08/16/2018 13:55	WG1153128
1,2,3-Trimethylbenzene	ND		0.00500	1	08/16/2018 13:55	WG1153128
Vinyl chloride	ND		0.00250	1	08/16/2018 13:55	WG1153128
1,3,5-Trimethylbenzene	ND		0.00500	1	08/16/2018 13:55	WG1153128
o-Xylene	ND		0.00250	1	08/16/2018 13:55	WG1153128
m&p-Xylene	ND		0.00400	1	08/16/2018 13:55	WG1153128
(S) Toluene-d8	111		80.0-120		08/16/2018 13:55	WG1153128
(S) Toluene-d8	117		80.0-120		08/18/2018 02:20	WG1153873
(S) Dibromofluoromethane	91.1		74.0-131		08/16/2018 13:55	WG1153128
(S) Dibromofluoromethane	87.7		74.0-131		08/18/2018 02:20	WG1153873
(S) 4-Bromofluorobenzene	101		64.0-132		08/16/2018 13:55	WG1153128
(S) 4-Bromofluorobenzene	103		64.0-132		08/18/2018 02:20	WG1153873

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	93.4		1	08/18/2018 11:55	WG1153925

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0214	1	08/16/2018 17:28	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.14	1	08/18/2018 08:47	WG1153202
Barium	87.4		0.535	1	08/18/2018 08:47	WG1153202
Cadmium	ND		0.535	1	08/18/2018 08:47	WG1153202
Chromium	12.4		1.07	1	08/18/2018 08:47	WG1153202
Lead	2.70		0.535	1	08/18/2018 08:47	WG1153202
Selenium	ND		2.14	1	08/18/2018 08:47	WG1153202
Silver	ND		1.07	1	08/18/2018 08:47	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0284	1.06	08/18/2018 02:39	WG1153873
Acrylonitrile	ND	J3 J4	0.0142	1.06	08/16/2018 14:14	WG1153128
Benzene	ND		0.00114	1.06	08/16/2018 14:14	WG1153128
Bromobenzene	ND		0.0142	1.06	08/16/2018 14:14	WG1153128
Bromodichloromethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
Bromoform	ND		0.0284	1.06	08/16/2018 14:14	WG1153128
Bromomethane	ND		0.0142	1.06	08/18/2018 02:39	WG1153873
n-Butylbenzene	ND		0.0142	1.06	08/16/2018 14:14	WG1153128
sec-Butylbenzene	ND		0.0142	1.06	08/16/2018 14:14	WG1153128
tert-Butylbenzene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
Carbon tetrachloride	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
Chlorobenzene	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
Chlorodibromomethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
Chloroethane	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
Chloroform	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
Chloromethane	ND	J3	0.0142	1.06	08/16/2018 14:14	WG1153128
2-Chlorotoluene	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
4-Chlorotoluene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0284	1.06	08/16/2018 14:14	WG1153128
1,2-Dibromoethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
Dibromomethane	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
1,2-Dichlorobenzene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
1,3-Dichlorobenzene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
1,4-Dichlorobenzene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
Dichlorodifluoromethane	ND	J3	0.00284	1.06	08/16/2018 14:14	WG1153128
1,1-Dichloroethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
1,2-Dichloroethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
1,1-Dichloroethene	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
cis-1,2-Dichloroethene	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
trans-1,2-Dichloroethene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
1,2-Dichloropropane	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
1,1-Dichloropropene	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
1,3-Dichloropropane	ND		0.00568	1.06	08/16/2018 14:14	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
trans-1,3-Dichloropropene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
2,2-Dichloropropane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
Di-isopropyl ether	ND		0.00114	1.06	08/16/2018 14:14	WG1153128
Ethylbenzene	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
Hexachloro-1,3-butadiene	ND		0.0284	1.06	08/16/2018 14:14	WG1153128
Isopropylbenzene	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
p-Isopropyltoluene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
2-Butanone (MEK)	ND	J3	0.0284	1.06	08/16/2018 14:14	WG1153128
Methylene Chloride	ND		0.0284	1.06	08/16/2018 14:14	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0284	1.06	08/16/2018 14:14	WG1153128
Methyl tert-butyl ether	ND		0.00114	1.06	08/16/2018 14:14	WG1153128
Naphthalene	ND		0.0142	1.06	08/16/2018 14:14	WG1153128
n-Propylbenzene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
Styrene	ND		0.0142	1.06	08/16/2018 14:14	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
Tetrachloroethene	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
Toluene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00284	1.06	08/16/2018 14:14	WG1153128
1,2,4-Trichlorobenzene	ND		0.0142	1.06	08/16/2018 14:14	WG1153128
1,1,1-Trichloroethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
1,1,2-Trichloroethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
Trichloroethene	ND		0.00114	1.06	08/16/2018 14:14	WG1153128
Trichlorofluoromethane	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
1,2,3-Trichloropropane	ND		0.0142	1.06	08/16/2018 14:14	WG1153128
1,2,4-Trimethylbenzene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
1,2,3-Trimethylbenzene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
Vinyl chloride	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
1,3,5-Trimethylbenzene	ND		0.00568	1.06	08/16/2018 14:14	WG1153128
o-Xylene	ND		0.00284	1.06	08/16/2018 14:14	WG1153128
m&p-Xylene	ND		0.00454	1.06	08/16/2018 14:14	WG1153128
(S) Toluene-d8	111		80.0-120		08/16/2018 14:14	WG1153128
(S) Toluene-d8	118		80.0-120		08/18/2018 02:39	WG1153873
(S) Dibromofluoromethane	95.3		74.0-131		08/16/2018 14:14	WG1153128
(S) Dibromofluoromethane	87.3		74.0-131		08/18/2018 02:39	WG1153873
(S) 4-Bromofluorobenzene	97.8		64.0-132		08/16/2018 14:14	WG1153128
(S) 4-Bromofluorobenzene	97.0		64.0-132		08/18/2018 02:39	WG1153873

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.28	1	08/18/2018 01:31	WG1153402
Residual Range Organics (RRO)	ND		10.7	1	08/18/2018 01:31	WG1153402
(S) o-Terphenyl	71.1		18.0-148		08/18/2018 01:31	WG1153402

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Acenaphthene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Acenaphthylene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Benzo(a)anthracene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Benzo(a)pyrene	ND		0.00643	1	08/20/2018 03:43	WG1153144



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Benzo(g,h,i)perylene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Benzo(k)fluoranthene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Chrysene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Dibenz(a,h)anthracene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Fluoranthene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Fluorene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Indeno(1,2,3-cd)pyrene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Naphthalene	ND		0.0214	1	08/20/2018 03:43	WG1153144
Phenanthrene	ND		0.00643	1	08/20/2018 03:43	WG1153144
Pyrene	ND		0.00643	1	08/20/2018 03:43	WG1153144
1-Methylnaphthalene	ND		0.0214	1	08/20/2018 03:43	WG1153144
2-Methylnaphthalene	ND		0.0214	1	08/20/2018 03:43	WG1153144
2-Chloronaphthalene	ND		0.0214	1	08/20/2018 03:43	WG1153144
<i>(S)</i> Nitrobenzene-d5	63.2		14.0-149		08/20/2018 03:43	WG1153144
<i>(S)</i> 2-Fluorobiphenyl	72.8		34.0-125		08/20/2018 03:43	WG1153144
<i>(S)</i> p-Terphenyl-d14	72.1		23.0-120		08/20/2018 03:43	WG1153144

- 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
Total Solids	77.7		1	08/18/2018 11:55	WG1153925

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0258	1	08/16/2018 17:59	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.58	1	08/18/2018 08:49	WG1153202
Barium	93.7		0.644	1	08/18/2018 08:49	WG1153202
Cadmium	ND		0.644	1	08/18/2018 08:49	WG1153202
Chromium	13.2		1.29	1	08/18/2018 08:49	WG1153202
Lead	3.12		0.644	1	08/18/2018 08:49	WG1153202
Selenium	ND		2.58	1	08/18/2018 08:49	WG1153202
Silver	ND		1.29	1	08/18/2018 08:49	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0322	1	08/18/2018 02:58	WG1153873
Acrylonitrile	ND	J3 J4	0.0161	1	08/16/2018 14:33	WG1153128
Benzene	ND		0.00129	1	08/16/2018 14:33	WG1153128
Bromobenzene	ND		0.0161	1	08/16/2018 14:33	WG1153128
Bromodichloromethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
Bromoform	ND		0.0322	1	08/16/2018 14:33	WG1153128
Bromomethane	ND		0.0161	1	08/18/2018 02:58	WG1153873
n-Butylbenzene	ND		0.0161	1	08/16/2018 14:33	WG1153128
sec-Butylbenzene	ND		0.0161	1	08/16/2018 14:33	WG1153128
tert-Butylbenzene	ND		0.00644	1	08/16/2018 14:33	WG1153128
Carbon tetrachloride	ND		0.00644	1	08/16/2018 14:33	WG1153128
Chlorobenzene	ND		0.00322	1	08/16/2018 14:33	WG1153128
Chlorodibromomethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
Chloroethane	ND		0.00644	1	08/16/2018 14:33	WG1153128
Chloroform	ND		0.00322	1	08/16/2018 14:33	WG1153128
Chloromethane	ND	J3	0.0161	1	08/16/2018 14:33	WG1153128
2-Chlorotoluene	ND		0.00322	1	08/16/2018 14:33	WG1153128
4-Chlorotoluene	ND		0.00644	1	08/16/2018 14:33	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0322	1	08/16/2018 14:33	WG1153128
1,2-Dibromoethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
Dibromomethane	ND		0.00644	1	08/16/2018 14:33	WG1153128
1,2-Dichlorobenzene	ND		0.00644	1	08/16/2018 14:33	WG1153128
1,3-Dichlorobenzene	ND		0.00644	1	08/16/2018 14:33	WG1153128
1,4-Dichlorobenzene	ND		0.00644	1	08/16/2018 14:33	WG1153128
Dichlorodifluoromethane	ND	J3	0.00322	1	08/16/2018 14:33	WG1153128
1,1-Dichloroethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
1,2-Dichloroethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
1,1-Dichloroethene	ND		0.00322	1	08/16/2018 14:33	WG1153128
cis-1,2-Dichloroethene	ND		0.00322	1	08/16/2018 14:33	WG1153128
trans-1,2-Dichloroethene	ND		0.00644	1	08/16/2018 14:33	WG1153128
1,2-Dichloropropane	ND		0.00644	1	08/16/2018 14:33	WG1153128
1,1-Dichloropropene	ND		0.00322	1	08/16/2018 14:33	WG1153128
1,3-Dichloropropane	ND		0.00644	1	08/16/2018 14:33	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/09/18 15:30

L1017457

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00322	1	08/16/2018 14:33	WG1153128
trans-1,3-Dichloropropene	ND		0.00644	1	08/16/2018 14:33	WG1153128
2,2-Dichloropropane	ND		0.00322	1	08/16/2018 14:33	WG1153128
Di-isopropyl ether	ND		0.00129	1	08/16/2018 14:33	WG1153128
Ethylbenzene	ND		0.00322	1	08/16/2018 14:33	WG1153128
Hexachloro-1,3-butadiene	ND		0.0322	1	08/16/2018 14:33	WG1153128
Isopropylbenzene	ND		0.00322	1	08/16/2018 14:33	WG1153128
p-Isopropyltoluene	ND		0.00644	1	08/16/2018 14:33	WG1153128
2-Butanone (MEK)	ND	J3	0.0322	1	08/16/2018 14:33	WG1153128
Methylene Chloride	ND		0.0322	1	08/16/2018 14:33	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0322	1	08/16/2018 14:33	WG1153128
Methyl tert-butyl ether	ND		0.00129	1	08/16/2018 14:33	WG1153128
Naphthalene	ND		0.0161	1	08/16/2018 14:33	WG1153128
n-Propylbenzene	ND		0.00644	1	08/16/2018 14:33	WG1153128
Styrene	ND		0.0161	1	08/16/2018 14:33	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
Tetrachloroethene	ND		0.00322	1	08/16/2018 14:33	WG1153128
Toluene	ND		0.00644	1	08/16/2018 14:33	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00322	1	08/16/2018 14:33	WG1153128
1,2,4-Trichlorobenzene	ND		0.0161	1	08/16/2018 14:33	WG1153128
1,1,1-Trichloroethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
1,1,2-Trichloroethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
Trichloroethene	ND		0.00129	1	08/16/2018 14:33	WG1153128
Trichlorofluoromethane	ND		0.00322	1	08/16/2018 14:33	WG1153128
1,2,3-Trichloropropane	ND		0.0161	1	08/16/2018 14:33	WG1153128
1,2,4-Trimethylbenzene	ND		0.00644	1	08/16/2018 14:33	WG1153128
1,2,3-Trimethylbenzene	ND		0.00644	1	08/16/2018 14:33	WG1153128
Vinyl chloride	ND		0.00322	1	08/16/2018 14:33	WG1153128
1,3,5-Trimethylbenzene	ND		0.00644	1	08/16/2018 14:33	WG1153128
o-Xylene	ND		0.00322	1	08/16/2018 14:33	WG1153128
m&p-Xylene	ND		0.00515	1	08/16/2018 14:33	WG1153128
(S) Toluene-d8	110		80.0-120		08/16/2018 14:33	WG1153128
(S) Toluene-d8	118		80.0-120		08/18/2018 02:58	WG1153873
(S) Dibromofluoromethane	95.2		74.0-131		08/16/2018 14:33	WG1153128
(S) Dibromofluoromethane	87.0		74.0-131		08/18/2018 02:58	WG1153873
(S) 4-Bromofluorobenzene	99.8		64.0-132		08/16/2018 14:33	WG1153128
(S) 4-Bromofluorobenzene	109		64.0-132		08/18/2018 02:58	WG1153873

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.15	1	08/18/2018 02:47	WG1153402
Residual Range Organics (RRO)	ND		12.9	1	08/18/2018 02:47	WG1153402
(S) o-Terphenyl	69.7		18.0-148		08/18/2018 02:47	WG1153402

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Acenaphthene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Acenaphthylene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Benzo(a)anthracene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Benzo(a)pyrene	ND		0.00773	1	08/20/2018 04:04	WG1153144



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Benzo(g,h,i)perylene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Benzo(k)fluoranthene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Chrysene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Dibenz(a,h)anthracene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Fluoranthene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Fluorene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Indeno(1,2,3-cd)pyrene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Naphthalene	ND		0.0258	1	08/20/2018 04:04	WG1153144
Phenanthrene	ND		0.00773	1	08/20/2018 04:04	WG1153144
Pyrene	ND		0.00773	1	08/20/2018 04:04	WG1153144
1-Methylnaphthalene	ND		0.0258	1	08/20/2018 04:04	WG1153144
2-Methylnaphthalene	ND		0.0258	1	08/20/2018 04:04	WG1153144
2-Chloronaphthalene	ND		0.0258	1	08/20/2018 04:04	WG1153144
<i>(S)</i> Nitrobenzene-d5	64.9		14.0-149		08/20/2018 04:04	WG1153144
<i>(S)</i> 2-Fluorobiphenyl	76.0		34.0-125		08/20/2018 04:04	WG1153144
<i>(S)</i> p-Terphenyl-d14	72.8		23.0-120		08/20/2018 04:04	WG1153144

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
Total Solids	82.1		1	08/18/2018 11:55	WG1153925

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0243	1	08/16/2018 18:01	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.43	1	08/18/2018 08:52	WG1153202
Barium	56.2		0.609	1	08/18/2018 08:52	WG1153202
Cadmium	ND		0.609	1	08/18/2018 08:52	WG1153202
Chromium	13.6		1.22	1	08/18/2018 08:52	WG1153202
Lead	4.31		0.609	1	08/18/2018 08:52	WG1153202
Selenium	ND		2.43	1	08/18/2018 08:52	WG1153202
Silver	ND		1.22	1	08/18/2018 08:52	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0304	1	08/18/2018 03:18	WG1153873
Acrylonitrile	ND	J3 J4	0.0152	1	08/16/2018 14:51	WG1153128
Benzene	ND		0.00122	1	08/16/2018 14:51	WG1153128
Bromobenzene	ND		0.0152	1	08/16/2018 14:51	WG1153128
Bromodichloromethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
Bromoform	ND		0.0304	1	08/16/2018 14:51	WG1153128
Bromomethane	ND		0.0152	1	08/18/2018 03:18	WG1153873
n-Butylbenzene	ND		0.0152	1	08/16/2018 14:51	WG1153128
sec-Butylbenzene	ND		0.0152	1	08/16/2018 14:51	WG1153128
tert-Butylbenzene	ND		0.00609	1	08/16/2018 14:51	WG1153128
Carbon tetrachloride	ND		0.00609	1	08/16/2018 14:51	WG1153128
Chlorobenzene	ND		0.00304	1	08/16/2018 14:51	WG1153128
Chlorodibromomethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
Chloroethane	ND		0.00609	1	08/16/2018 14:51	WG1153128
Chloroform	ND		0.00304	1	08/16/2018 14:51	WG1153128
Chloromethane	ND	J3	0.0152	1	08/16/2018 14:51	WG1153128
2-Chlorotoluene	ND		0.00304	1	08/16/2018 14:51	WG1153128
4-Chlorotoluene	ND		0.00609	1	08/16/2018 14:51	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0304	1	08/16/2018 14:51	WG1153128
1,2-Dibromoethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
Dibromomethane	ND		0.00609	1	08/16/2018 14:51	WG1153128
1,2-Dichlorobenzene	ND		0.00609	1	08/16/2018 14:51	WG1153128
1,3-Dichlorobenzene	ND		0.00609	1	08/16/2018 14:51	WG1153128
1,4-Dichlorobenzene	ND		0.00609	1	08/16/2018 14:51	WG1153128
Dichlorodifluoromethane	ND	J3	0.00304	1	08/16/2018 14:51	WG1153128
1,1-Dichloroethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
1,2-Dichloroethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
1,1-Dichloroethene	ND		0.00304	1	08/16/2018 14:51	WG1153128
cis-1,2-Dichloroethene	ND		0.00304	1	08/16/2018 14:51	WG1153128
trans-1,2-Dichloroethene	ND		0.00609	1	08/16/2018 14:51	WG1153128
1,2-Dichloropropane	ND		0.00609	1	08/16/2018 14:51	WG1153128
1,1-Dichloropropene	ND		0.00304	1	08/16/2018 14:51	WG1153128
1,3-Dichloropropane	ND		0.00609	1	08/16/2018 14:51	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00304	1	08/16/2018 14:51	WG1153128
trans-1,3-Dichloropropene	ND		0.00609	1	08/16/2018 14:51	WG1153128
2,2-Dichloropropane	ND		0.00304	1	08/16/2018 14:51	WG1153128
Di-isopropyl ether	ND		0.00122	1	08/16/2018 14:51	WG1153128
Ethylbenzene	ND		0.00304	1	08/16/2018 14:51	WG1153128
Hexachloro-1,3-butadiene	ND		0.0304	1	08/16/2018 14:51	WG1153128
Isopropylbenzene	ND		0.00304	1	08/16/2018 14:51	WG1153128
p-Isopropyltoluene	ND		0.00609	1	08/16/2018 14:51	WG1153128
2-Butanone (MEK)	ND	J3	0.0304	1	08/16/2018 14:51	WG1153128
Methylene Chloride	ND		0.0304	1	08/16/2018 14:51	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0304	1	08/16/2018 14:51	WG1153128
Methyl tert-butyl ether	ND		0.00122	1	08/16/2018 14:51	WG1153128
Naphthalene	ND		0.0152	1	08/16/2018 14:51	WG1153128
n-Propylbenzene	ND		0.00609	1	08/16/2018 14:51	WG1153128
Styrene	ND		0.0152	1	08/16/2018 14:51	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
Tetrachloroethene	ND		0.00304	1	08/16/2018 14:51	WG1153128
Toluene	ND		0.00609	1	08/16/2018 14:51	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00304	1	08/16/2018 14:51	WG1153128
1,2,4-Trichlorobenzene	ND		0.0152	1	08/16/2018 14:51	WG1153128
1,1,1-Trichloroethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
1,1,2-Trichloroethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
Trichloroethene	ND		0.00122	1	08/16/2018 14:51	WG1153128
Trichlorofluoromethane	ND		0.00304	1	08/16/2018 14:51	WG1153128
1,2,3-Trichloropropane	ND		0.0152	1	08/16/2018 14:51	WG1153128
1,2,4-Trimethylbenzene	ND		0.00609	1	08/16/2018 14:51	WG1153128
1,2,3-Trimethylbenzene	ND		0.00609	1	08/16/2018 14:51	WG1153128
Vinyl chloride	ND		0.00304	1	08/16/2018 14:51	WG1153128
1,3,5-Trimethylbenzene	ND		0.00609	1	08/16/2018 14:51	WG1153128
o-Xylene	ND		0.00304	1	08/16/2018 14:51	WG1153128
m&p-Xylene	ND		0.00487	1	08/16/2018 14:51	WG1153128
(S) Toluene-d8	108		80.0-120		08/16/2018 14:51	WG1153128
(S) Toluene-d8	117		80.0-120		08/18/2018 03:18	WG1153873
(S) Dibromofluoromethane	94.5		74.0-131		08/16/2018 14:51	WG1153128
(S) Dibromofluoromethane	89.1		74.0-131		08/18/2018 03:18	WG1153873
(S) 4-Bromofluorobenzene	100		64.0-132		08/16/2018 14:51	WG1153128
(S) 4-Bromofluorobenzene	105		64.0-132		08/18/2018 03:18	WG1153873

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.87	1	08/18/2018 03:50	WG1153402
Residual Range Organics (RRO)	ND		12.2	1	08/18/2018 03:50	WG1153402
(S) o-Terphenyl	83.3		18.0-148		08/18/2018 03:50	WG1153402

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Acenaphthene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Acenaphthylene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Benzo(a)anthracene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Benzo(a)pyrene	ND		0.00730	1	08/20/2018 04:26	WG1153144



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Benzo(g,h,i)perylene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Benzo(k)fluoranthene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Chrysene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Dibenz(a,h)anthracene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Fluoranthene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Fluorene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Indeno(1,2,3-cd)pyrene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Naphthalene	ND		0.0243	1	08/20/2018 04:26	WG1153144
Phenanthrene	ND		0.00730	1	08/20/2018 04:26	WG1153144
Pyrene	ND		0.00730	1	08/20/2018 04:26	WG1153144
1-Methylnaphthalene	ND		0.0243	1	08/20/2018 04:26	WG1153144
2-Methylnaphthalene	ND		0.0243	1	08/20/2018 04:26	WG1153144
2-Chloronaphthalene	ND		0.0243	1	08/20/2018 04:26	WG1153144
(S) Nitrobenzene-d5	58.3		14.0-149		08/20/2018 04:26	WG1153144
(S) 2-Fluorobiphenyl	69.3		34.0-125		08/20/2018 04:26	WG1153144
(S) p-Terphenyl-d14	66.4		23.0-120		08/20/2018 04:26	WG1153144

- 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	78.0		1	08/18/2018 11:55	WG1153925

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0257	1	08/16/2018 18:04	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.57	1	08/18/2018 08:54	WG1153202
Barium	69.8		0.641	1	08/18/2018 08:54	WG1153202
Cadmium	ND		0.641	1	08/18/2018 08:54	WG1153202
Chromium	12.4		1.28	1	08/18/2018 08:54	WG1153202
Lead	2.47		0.641	1	08/18/2018 08:54	WG1153202
Selenium	ND		2.57	1	08/18/2018 08:54	WG1153202
Silver	ND		1.28	1	08/18/2018 08:54	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0321	1	08/18/2018 03:37	WG1153873
Acrylonitrile	ND	J3 J4	0.0160	1	08/16/2018 15:10	WG1153128
Benzene	ND		0.00128	1	08/16/2018 15:10	WG1153128
Bromobenzene	ND		0.0160	1	08/16/2018 15:10	WG1153128
Bromodichloromethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
Bromoform	ND		0.0321	1	08/16/2018 15:10	WG1153128
Bromomethane	ND		0.0160	1	08/18/2018 03:37	WG1153873
n-Butylbenzene	ND		0.0160	1	08/16/2018 15:10	WG1153128
sec-Butylbenzene	ND		0.0160	1	08/16/2018 15:10	WG1153128
tert-Butylbenzene	ND		0.00641	1	08/16/2018 15:10	WG1153128
Carbon tetrachloride	ND		0.00641	1	08/16/2018 15:10	WG1153128
Chlorobenzene	ND		0.00321	1	08/16/2018 15:10	WG1153128
Chlorodibromomethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
Chloroethane	ND		0.00641	1	08/16/2018 15:10	WG1153128
Chloroform	ND		0.00321	1	08/16/2018 15:10	WG1153128
Chloromethane	ND	J3	0.0160	1	08/16/2018 15:10	WG1153128
2-Chlorotoluene	ND		0.00321	1	08/16/2018 15:10	WG1153128
4-Chlorotoluene	ND		0.00641	1	08/16/2018 15:10	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0321	1	08/16/2018 15:10	WG1153128
1,2-Dibromoethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
Dibromomethane	ND		0.00641	1	08/16/2018 15:10	WG1153128
1,2-Dichlorobenzene	ND		0.00641	1	08/16/2018 15:10	WG1153128
1,3-Dichlorobenzene	ND		0.00641	1	08/16/2018 15:10	WG1153128
1,4-Dichlorobenzene	ND		0.00641	1	08/16/2018 15:10	WG1153128
Dichlorodifluoromethane	ND	J3	0.00321	1	08/16/2018 15:10	WG1153128
1,1-Dichloroethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
1,2-Dichloroethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
1,1-Dichloroethene	ND		0.00321	1	08/16/2018 15:10	WG1153128
cis-1,2-Dichloroethene	ND		0.00321	1	08/16/2018 15:10	WG1153128
trans-1,2-Dichloroethene	ND		0.00641	1	08/16/2018 15:10	WG1153128
1,2-Dichloropropane	ND		0.00641	1	08/16/2018 15:10	WG1153128
1,1-Dichloropropene	ND		0.00321	1	08/16/2018 15:10	WG1153128
1,3-Dichloropropane	ND		0.00641	1	08/16/2018 15:10	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00321	1	08/16/2018 15:10	WG1153128
trans-1,3-Dichloropropene	ND		0.00641	1	08/16/2018 15:10	WG1153128
2,2-Dichloropropane	ND		0.00321	1	08/16/2018 15:10	WG1153128
Di-isopropyl ether	ND		0.00128	1	08/16/2018 15:10	WG1153128
Ethylbenzene	ND		0.00321	1	08/16/2018 15:10	WG1153128
Hexachloro-1,3-butadiene	ND		0.0321	1	08/16/2018 15:10	WG1153128
Isopropylbenzene	ND		0.00321	1	08/16/2018 15:10	WG1153128
p-Isopropyltoluene	ND		0.00641	1	08/16/2018 15:10	WG1153128
2-Butanone (MEK)	ND	J3	0.0321	1	08/16/2018 15:10	WG1153128
Methylene Chloride	ND		0.0321	1	08/16/2018 15:10	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0321	1	08/16/2018 15:10	WG1153128
Methyl tert-butyl ether	ND		0.00128	1	08/16/2018 15:10	WG1153128
Naphthalene	ND		0.0160	1	08/16/2018 15:10	WG1153128
n-Propylbenzene	ND		0.00641	1	08/16/2018 15:10	WG1153128
Styrene	ND		0.0160	1	08/16/2018 15:10	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
Tetrachloroethene	ND		0.00321	1	08/16/2018 15:10	WG1153128
Toluene	ND		0.00641	1	08/16/2018 15:10	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00321	1	08/16/2018 15:10	WG1153128
1,2,4-Trichlorobenzene	ND		0.0160	1	08/16/2018 15:10	WG1153128
1,1,1-Trichloroethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
1,1,2-Trichloroethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
Trichloroethene	ND		0.00128	1	08/16/2018 15:10	WG1153128
Trichlorofluoromethane	ND		0.00321	1	08/16/2018 15:10	WG1153128
1,2,3-Trichloropropane	ND		0.0160	1	08/16/2018 15:10	WG1153128
1,2,4-Trimethylbenzene	ND		0.00641	1	08/16/2018 15:10	WG1153128
1,2,3-Trimethylbenzene	ND		0.00641	1	08/16/2018 15:10	WG1153128
Vinyl chloride	ND		0.00321	1	08/16/2018 15:10	WG1153128
1,3,5-Trimethylbenzene	ND		0.00641	1	08/16/2018 15:10	WG1153128
o-Xylene	ND		0.00321	1	08/16/2018 15:10	WG1153128
m&p-Xylene	ND		0.00513	1	08/16/2018 15:10	WG1153128
(S) Toluene-d8	112		80.0-120		08/16/2018 15:10	WG1153128
(S) Toluene-d8	118		80.0-120		08/18/2018 03:37	WG1153873
(S) Dibromofluoromethane	91.2		74.0-131		08/16/2018 15:10	WG1153128
(S) Dibromofluoromethane	88.3		74.0-131		08/18/2018 03:37	WG1153873
(S) 4-Bromofluorobenzene	100		64.0-132		08/16/2018 15:10	WG1153128
(S) 4-Bromofluorobenzene	99.3		64.0-132		08/18/2018 03:37	WG1153873

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.13	1	08/18/2018 03:00	WG1153402
Residual Range Organics (RRO)	ND		12.8	1	08/18/2018 03:00	WG1153402
(S) o-Terphenyl	75.8		18.0-148		08/18/2018 03:00	WG1153402

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Acenaphthene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Acenaphthylene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Benzo(a)anthracene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Benzo(a)pyrene	ND		0.00770	1	08/20/2018 04:48	WG1153144



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Benzo(g,h,i)perylene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Benzo(k)fluoranthene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Chrysene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Dibenz(a,h)anthracene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Fluoranthene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Fluorene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Indeno(1,2,3-cd)pyrene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Naphthalene	ND		0.0257	1	08/20/2018 04:48	WG1153144
Phenanthrene	ND		0.00770	1	08/20/2018 04:48	WG1153144
Pyrene	ND		0.00770	1	08/20/2018 04:48	WG1153144
1-Methylnaphthalene	ND		0.0257	1	08/20/2018 04:48	WG1153144
2-Methylnaphthalene	ND		0.0257	1	08/20/2018 04:48	WG1153144
2-Chloronaphthalene	ND		0.0257	1	08/20/2018 04:48	WG1153144
(S) Nitrobenzene-d5	66.4		14.0-149		08/20/2018 04:48	WG1153144
(S) 2-Fluorobiphenyl	78.4		34.0-125		08/20/2018 04:48	WG1153144
(S) p-Terphenyl-d14	56.8		23.0-120		08/20/2018 04:48	WG1153144

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/15/2018 23:39	WG1152983
Acrolein	ND		50.0	1	08/15/2018 23:39	WG1152983
Acrylonitrile	ND		10.0	1	08/15/2018 23:39	WG1152983
Benzene	ND		1.00	1	08/15/2018 23:39	WG1152983
Bromobenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
Bromodichloromethane	ND		1.00	1	08/15/2018 23:39	WG1152983
Bromoform	ND		1.00	1	08/15/2018 23:39	WG1152983
Bromomethane	ND		5.00	1	08/15/2018 23:39	WG1152983
n-Butylbenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
sec-Butylbenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
tert-Butylbenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
Carbon tetrachloride	ND		1.00	1	08/15/2018 23:39	WG1152983
Chlorobenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
Chlorodibromomethane	ND		1.00	1	08/15/2018 23:39	WG1152983
Chloroethane	ND		5.00	1	08/15/2018 23:39	WG1152983
Chloroform	ND		5.00	1	08/15/2018 23:39	WG1152983
Chloromethane	ND		2.50	1	08/15/2018 23:39	WG1152983
2-Chlorotoluene	ND		1.00	1	08/15/2018 23:39	WG1152983
4-Chlorotoluene	ND		1.00	1	08/15/2018 23:39	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/15/2018 23:39	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/15/2018 23:39	WG1152983
Dibromomethane	ND		1.00	1	08/15/2018 23:39	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/15/2018 23:39	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/15/2018 23:39	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/15/2018 23:39	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/15/2018 23:39	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/15/2018 23:39	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/15/2018 23:39	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/15/2018 23:39	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/15/2018 23:39	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/15/2018 23:39	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/15/2018 23:39	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/15/2018 23:39	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/15/2018 23:39	WG1152983
Di-isopropyl ether	ND		1.00	1	08/15/2018 23:39	WG1152983
Ethylbenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
Hexachloro-1,3-butadiene	ND		1.00	1	08/15/2018 23:39	WG1152983
Isopropylbenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
p-Isopropyltoluene	ND		1.00	1	08/15/2018 23:39	WG1152983
2-Butanone (MEK)	ND		10.0	1	08/15/2018 23:39	WG1152983
Methylene Chloride	ND		5.00	1	08/15/2018 23:39	WG1152983
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/15/2018 23:39	WG1152983
Methyl tert-butyl ether	ND		1.00	1	08/15/2018 23:39	WG1152983
Naphthalene	ND		5.00	1	08/15/2018 23:39	WG1152983
n-Propylbenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
Styrene	ND		1.00	1	08/15/2018 23:39	WG1152983
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/15/2018 23:39	WG1152983
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/15/2018 23:39	WG1152983
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/15/2018 23:39	WG1152983
Tetrachloroethene	ND		1.00	1	08/15/2018 23:39	WG1152983
Toluene	ND		1.00	1	08/15/2018 23:39	WG1152983
1,2,3-Trichlorobenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
1,2,4-Trichlorobenzene	ND		1.00	1	08/15/2018 23:39	WG1152983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/15/2018 23:39	WG1152983
1,1,2-Trichloroethane	ND		1.00	1	08/15/2018 23:39	WG1152983
Trichloroethene	ND		1.00	1	08/15/2018 23:39	WG1152983
Trichlorofluoromethane	ND		5.00	1	08/15/2018 23:39	WG1152983
1,2,3-Trichloropropane	ND		2.50	1	08/15/2018 23:39	WG1152983
1,2,4-Trimethylbenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
1,2,3-Trimethylbenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
1,3,5-Trimethylbenzene	ND		1.00	1	08/15/2018 23:39	WG1152983
Vinyl chloride	ND		1.00	1	08/15/2018 23:39	WG1152983
o-Xylene	ND		1.00	1	08/15/2018 23:39	WG1152983
m&p-Xylene	ND		2.00	1	08/15/2018 23:39	WG1152983
(S) Toluene-d8	98.4		80.0-120		08/15/2018 23:39	WG1152983
(S) Dibromofluoromethane	95.0		76.0-123		08/15/2018 23:39	WG1152983
(S) 4-Bromofluorobenzene	99.0		80.0-120		08/15/2018 23:39	WG1152983

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
Total Solids	96.2		1	08/18/2018 11:55	WG1153925

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0208	1	08/16/2018 18:06	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.08	1	08/18/2018 08:57	WG1153202
Barium	81.4		0.520	1	08/18/2018 08:57	WG1153202
Cadmium	ND		0.520	1	08/18/2018 08:57	WG1153202
Chromium	12.0		1.04	1	08/18/2018 08:57	WG1153202
Lead	7.38		0.520	1	08/18/2018 08:57	WG1153202
Selenium	ND		2.08	1	08/18/2018 08:57	WG1153202
Silver	ND		1.04	1	08/18/2018 08:57	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0260	1	08/18/2018 03:56	WG1153873
Acrylonitrile	ND	J3 J4	0.0130	1	08/16/2018 15:29	WG1153128
Benzene	ND		0.00104	1	08/16/2018 15:29	WG1153128
Bromobenzene	ND		0.0130	1	08/16/2018 15:29	WG1153128
Bromodichloromethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
Bromoform	ND		0.0260	1	08/16/2018 15:29	WG1153128
Bromomethane	ND		0.0130	1	08/18/2018 03:56	WG1153873
n-Butylbenzene	ND		0.0130	1	08/16/2018 15:29	WG1153128
sec-Butylbenzene	ND		0.0130	1	08/16/2018 15:29	WG1153128
tert-Butylbenzene	ND		0.00520	1	08/16/2018 15:29	WG1153128
Carbon tetrachloride	ND		0.00520	1	08/16/2018 15:29	WG1153128
Chlorobenzene	ND		0.00260	1	08/16/2018 15:29	WG1153128
Chlorodibromomethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
Chloroethane	ND		0.00520	1	08/16/2018 15:29	WG1153128
Chloroform	ND		0.00260	1	08/16/2018 15:29	WG1153128
Chloromethane	ND	J3	0.0130	1	08/16/2018 15:29	WG1153128
2-Chlorotoluene	ND		0.00260	1	08/16/2018 15:29	WG1153128
4-Chlorotoluene	ND		0.00520	1	08/16/2018 15:29	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0260	1	08/16/2018 15:29	WG1153128
1,2-Dibromoethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
Dibromomethane	ND		0.00520	1	08/16/2018 15:29	WG1153128
1,2-Dichlorobenzene	ND		0.00520	1	08/16/2018 15:29	WG1153128
1,3-Dichlorobenzene	ND		0.00520	1	08/16/2018 15:29	WG1153128
1,4-Dichlorobenzene	ND		0.00520	1	08/16/2018 15:29	WG1153128
Dichlorodifluoromethane	ND	J3	0.00260	1	08/16/2018 15:29	WG1153128
1,1-Dichloroethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
1,2-Dichloroethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
1,1-Dichloroethene	ND		0.00260	1	08/16/2018 15:29	WG1153128
cis-1,2-Dichloroethene	ND		0.00260	1	08/16/2018 15:29	WG1153128
trans-1,2-Dichloroethene	ND		0.00520	1	08/16/2018 15:29	WG1153128
1,2-Dichloropropane	ND		0.00520	1	08/16/2018 15:29	WG1153128
1,1-Dichloropropene	ND		0.00260	1	08/16/2018 15:29	WG1153128
1,3-Dichloropropane	ND		0.00520	1	08/16/2018 15:29	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/10/18 08:35

L1017457

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00260	1	08/16/2018 15:29	WG1153128
trans-1,3-Dichloropropene	ND		0.00520	1	08/16/2018 15:29	WG1153128
2,2-Dichloropropane	ND		0.00260	1	08/16/2018 15:29	WG1153128
Di-isopropyl ether	ND		0.00104	1	08/16/2018 15:29	WG1153128
Ethylbenzene	ND		0.00260	1	08/16/2018 15:29	WG1153128
Hexachloro-1,3-butadiene	ND		0.0260	1	08/16/2018 15:29	WG1153128
Isopropylbenzene	ND		0.00260	1	08/16/2018 15:29	WG1153128
p-Isopropyltoluene	ND		0.00520	1	08/16/2018 15:29	WG1153128
2-Butanone (MEK)	ND	J3	0.0260	1	08/16/2018 15:29	WG1153128
Methylene Chloride	ND		0.0260	1	08/16/2018 15:29	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0260	1	08/16/2018 15:29	WG1153128
Methyl tert-butyl ether	ND		0.00104	1	08/16/2018 15:29	WG1153128
Naphthalene	ND		0.0130	1	08/16/2018 15:29	WG1153128
n-Propylbenzene	ND		0.00520	1	08/16/2018 15:29	WG1153128
Styrene	ND		0.0130	1	08/16/2018 15:29	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
Tetrachloroethene	ND		0.00260	1	08/16/2018 15:29	WG1153128
Toluene	ND		0.00520	1	08/16/2018 15:29	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00260	1	08/16/2018 15:29	WG1153128
1,2,4-Trichlorobenzene	ND		0.0130	1	08/16/2018 15:29	WG1153128
1,1,1-Trichloroethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
1,1,2-Trichloroethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
Trichloroethene	ND		0.00104	1	08/16/2018 15:29	WG1153128
Trichlorofluoromethane	ND		0.00260	1	08/16/2018 15:29	WG1153128
1,2,3-Trichloropropane	ND		0.0130	1	08/16/2018 15:29	WG1153128
1,2,4-Trimethylbenzene	ND		0.00520	1	08/16/2018 15:29	WG1153128
1,2,3-Trimethylbenzene	ND		0.00520	1	08/16/2018 15:29	WG1153128
Vinyl chloride	ND		0.00260	1	08/16/2018 15:29	WG1153128
1,3,5-Trimethylbenzene	ND		0.00520	1	08/16/2018 15:29	WG1153128
o-Xylene	ND		0.00260	1	08/16/2018 15:29	WG1153128
m&p-Xylene	ND		0.00416	1	08/16/2018 15:29	WG1153128
(S) Toluene-d8	109		80.0-120		08/16/2018 15:29	WG1153128
(S) Toluene-d8	118		80.0-120		08/18/2018 03:56	WG1153873
(S) Dibromofluoromethane	98.4		74.0-131		08/16/2018 15:29	WG1153128
(S) Dibromofluoromethane	87.0		74.0-131		08/18/2018 03:56	WG1153873
(S) 4-Bromofluorobenzene	98.5		64.0-132		08/16/2018 15:29	WG1153128
(S) 4-Bromofluorobenzene	109		64.0-132		08/18/2018 03:56	WG1153873

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		41.6	10	08/18/2018 05:45	WG1153402
Residual Range Organics (RRO)	ND		104	10	08/18/2018 05:45	WG1153402
(S) o-Terphenyl	100		18.0-148		08/18/2018 05:45	WG1153402

Sample Narrative:

L1017457-11 WG1153402: Dilution due to matrix impact during extract concentration procedure

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.16	1	08/21/2018 13:30	WG1154190
Residual Range Organics (RRO)	ND		10.4	1	08/21/2018 13:30	WG1154190



Collected date/time: 08/10/18 08:35

L1017457

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	105		18.0-148		08/21/2018 13:30	WG1154190

1 Cp

2 Tc

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Acenaphthene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Acenaphthylene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Benzo(a)anthracene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Benzo(a)pyrene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Benzo(b)fluoranthene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Benzo(g,h,i)perylene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Benzo(k)fluoranthene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Chrysene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Dibenz(a,h)anthracene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Fluoranthene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Fluorene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Indeno(1,2,3-cd)pyrene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Naphthalene	ND		0.0208	1	08/17/2018 11:59	WG1153296
Phenanthrene	ND		0.00624	1	08/17/2018 11:59	WG1153296
Pyrene	ND		0.00624	1	08/17/2018 11:59	WG1153296
1-Methylnaphthalene	ND		0.0208	1	08/17/2018 11:59	WG1153296
2-Methylnaphthalene	ND		0.0208	1	08/17/2018 11:59	WG1153296
2-Chloronaphthalene	ND		0.0208	1	08/17/2018 11:59	WG1153296
(S) Nitrobenzene-d5	105		14.0-149		08/17/2018 11:59	WG1153296
(S) 2-Fluorobiphenyl	98.9		34.0-125		08/17/2018 11:59	WG1153296
(S) p-Terphenyl-d14	89.4		23.0-120		08/17/2018 11:59	WG1153296

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
Total Solids	81.5		1	08/18/2018 11:55	WG1153925

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0246	1	08/16/2018 18:09	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.46	1	08/18/2018 08:59	WG1153202
Barium	89.0		0.614	1	08/18/2018 08:59	WG1153202
Cadmium	ND		0.614	1	08/18/2018 08:59	WG1153202
Chromium	13.0		1.23	1	08/18/2018 08:59	WG1153202
Lead	28.7		0.614	1	08/18/2018 08:59	WG1153202
Selenium	ND		2.46	1	08/18/2018 08:59	WG1153202
Silver	ND		1.23	1	08/18/2018 08:59	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0319	1.04	08/18/2018 04:16	WG1153873
Acrylonitrile	ND	J3 J4	0.0160	1.04	08/16/2018 15:47	WG1153128
Benzene	ND		0.00128	1.04	08/16/2018 15:47	WG1153128
Bromobenzene	ND		0.0160	1.04	08/16/2018 15:47	WG1153128
Bromodichloromethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
Bromoform	ND		0.0319	1.04	08/16/2018 15:47	WG1153128
Bromomethane	ND		0.0160	1.04	08/18/2018 04:16	WG1153873
n-Butylbenzene	ND		0.0160	1.04	08/16/2018 15:47	WG1153128
sec-Butylbenzene	ND		0.0160	1.04	08/16/2018 15:47	WG1153128
tert-Butylbenzene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
Carbon tetrachloride	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
Chlorobenzene	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
Chlorodibromomethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
Chloroethane	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
Chloroform	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
Chloromethane	ND	J3	0.0160	1.04	08/16/2018 15:47	WG1153128
2-Chlorotoluene	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
4-Chlorotoluene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0319	1.04	08/16/2018 15:47	WG1153128
1,2-Dibromoethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
Dibromomethane	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
1,2-Dichlorobenzene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
1,3-Dichlorobenzene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
1,4-Dichlorobenzene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
Dichlorodifluoromethane	ND	J3	0.00319	1.04	08/16/2018 15:47	WG1153128
1,1-Dichloroethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
1,2-Dichloroethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
1,1-Dichloroethene	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
cis-1,2-Dichloroethene	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
trans-1,2-Dichloroethene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
1,2-Dichloropropane	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
1,1-Dichloropropene	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
1,3-Dichloropropane	ND		0.00638	1.04	08/16/2018 15:47	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/10/18 09:10

L1017457

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
trans-1,3-Dichloropropene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
2,2-Dichloropropane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
Di-isopropyl ether	ND		0.00128	1.04	08/16/2018 15:47	WG1153128
Ethylbenzene	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
Hexachloro-1,3-butadiene	ND		0.0319	1.04	08/16/2018 15:47	WG1153128
Isopropylbenzene	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
p-Isopropyltoluene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
2-Butanone (MEK)	ND	J3	0.0319	1.04	08/16/2018 15:47	WG1153128
Methylene Chloride	ND		0.0319	1.04	08/16/2018 15:47	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0319	1.04	08/16/2018 15:47	WG1153128
Methyl tert-butyl ether	ND		0.00128	1.04	08/16/2018 15:47	WG1153128
Naphthalene	ND		0.0160	1.04	08/16/2018 15:47	WG1153128
n-Propylbenzene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
Styrene	ND		0.0160	1.04	08/16/2018 15:47	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
Tetrachloroethene	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
Toluene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00319	1.04	08/16/2018 15:47	WG1153128
1,2,4-Trichlorobenzene	ND		0.0160	1.04	08/16/2018 15:47	WG1153128
1,1,1-Trichloroethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
1,1,2-Trichloroethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
Trichloroethene	ND		0.00128	1.04	08/16/2018 15:47	WG1153128
Trichlorofluoromethane	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
1,2,3-Trichloropropane	ND		0.0160	1.04	08/16/2018 15:47	WG1153128
1,2,4-Trimethylbenzene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
1,2,3-Trimethylbenzene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
Vinyl chloride	ND		0.00319	1.04	08/16/2018 15:47	WG1153128
1,3,5-Trimethylbenzene	ND		0.00638	1.04	08/16/2018 15:47	WG1153128
o-Xylene	0.00546		0.00319	1.04	08/16/2018 15:47	WG1153128
m&p-Xylene	0.00870		0.00511	1.04	08/16/2018 15:47	WG1153128
(S) Toluene-d8	112		80.0-120		08/16/2018 15:47	WG1153128
(S) Toluene-d8	118		80.0-120		08/18/2018 04:16	WG1153873
(S) Dibromofluoromethane	92.9		74.0-131		08/16/2018 15:47	WG1153128
(S) Dibromofluoromethane	88.2		74.0-131		08/18/2018 04:16	WG1153873
(S) 4-Bromofluorobenzene	99.6		64.0-132		08/16/2018 15:47	WG1153128
(S) 4-Bromofluorobenzene	97.3		64.0-132		08/18/2018 04:16	WG1153873

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.91	1	08/18/2018 03:13	WG1153402
Residual Range Organics (RRO)	ND		12.3	1	08/18/2018 03:13	WG1153402
(S) o-Terphenyl	67.1		18.0-148		08/18/2018 03:13	WG1153402

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00781		0.00737	1	08/17/2018 12:20	WG1153296
Acenaphthene	ND		0.00737	1	08/17/2018 12:20	WG1153296
Acenaphthylene	ND		0.00737	1	08/17/2018 12:20	WG1153296
Benzo(a)anthracene	0.00915		0.00737	1	08/17/2018 12:20	WG1153296
Benzo(a)pyrene	0.00916		0.00737	1	08/17/2018 12:20	WG1153296



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	0.0257		0.00737	1	08/17/2018 12:20	WG1153296
Benzo(g,h,i)perylene	0.0161		0.00737	1	08/17/2018 12:20	WG1153296
Benzo(k)fluoranthene	0.00803		0.00737	1	08/17/2018 12:20	WG1153296
Chrysene	0.0131		0.00737	1	08/17/2018 12:20	WG1153296
Dibenz(a,h)anthracene	ND		0.00737	1	08/17/2018 12:20	WG1153296
Fluoranthene	0.0211		0.00737	1	08/17/2018 12:20	WG1153296
Fluorene	ND		0.00737	1	08/17/2018 12:20	WG1153296
Indeno(1,2,3-cd)pyrene	0.0121		0.00737	1	08/17/2018 12:20	WG1153296
Naphthalene	ND		0.0246	1	08/17/2018 12:20	WG1153296
Phenanthrene	0.0130		0.00737	1	08/17/2018 12:20	WG1153296
Pyrene	0.0158		0.00737	1	08/17/2018 12:20	WG1153296
1-Methylnaphthalene	ND		0.0246	1	08/17/2018 12:20	WG1153296
2-Methylnaphthalene	ND		0.0246	1	08/17/2018 12:20	WG1153296
2-Chloronaphthalene	ND		0.0246	1	08/17/2018 12:20	WG1153296
(S) Nitrobenzene-d5	98.5		14.0-149		08/17/2018 12:20	WG1153296
(S) 2-Fluorobiphenyl	87.1		34.0-125		08/17/2018 12:20	WG1153296
(S) p-Terphenyl-d14	81.8		23.0-120		08/17/2018 12:20	WG1153296

- 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
Total Solids	76.8		1	08/18/2018 11:42	WG1153926

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0261	1	08/16/2018 18:11	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.61	1	08/18/2018 09:02	WG1153202
Barium	71.9		0.651	1	08/18/2018 09:02	WG1153202
Cadmium	ND		0.651	1	08/18/2018 09:02	WG1153202
Chromium	10.6		1.30	1	08/18/2018 09:02	WG1153202
Lead	2.82		0.651	1	08/18/2018 09:02	WG1153202
Selenium	ND		2.61	1	08/18/2018 09:02	WG1153202
Silver	ND		1.30	1	08/18/2018 09:02	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0352	1.08	08/18/2018 04:35	WG1153873
Acrylonitrile	ND	J3 J4	0.0176	1.08	08/16/2018 16:06	WG1153128
Benzene	ND		0.00141	1.08	08/16/2018 16:06	WG1153128
Bromobenzene	ND		0.0176	1.08	08/16/2018 16:06	WG1153128
Bromodichloromethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
Bromoform	ND		0.0352	1.08	08/16/2018 16:06	WG1153128
Bromomethane	ND		0.0176	1.08	08/18/2018 04:35	WG1153873
n-Butylbenzene	ND		0.0176	1.08	08/16/2018 16:06	WG1153128
sec-Butylbenzene	ND		0.0176	1.08	08/16/2018 16:06	WG1153128
tert-Butylbenzene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
Carbon tetrachloride	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
Chlorobenzene	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
Chlorodibromomethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
Chloroethane	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
Chloroform	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
Chloromethane	ND	J3	0.0176	1.08	08/16/2018 16:06	WG1153128
2-Chlorotoluene	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
4-Chlorotoluene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0352	1.08	08/16/2018 16:06	WG1153128
1,2-Dibromoethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
Dibromomethane	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
1,2-Dichlorobenzene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
1,3-Dichlorobenzene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
1,4-Dichlorobenzene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
Dichlorodifluoromethane	ND	J3	0.00352	1.08	08/16/2018 16:06	WG1153128
1,1-Dichloroethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
1,2-Dichloroethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
1,1-Dichloroethene	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
cis-1,2-Dichloroethene	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
trans-1,2-Dichloroethene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
1,2-Dichloropropane	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
1,1-Dichloropropene	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
1,3-Dichloropropane	ND		0.00703	1.08	08/16/2018 16:06	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/10/18 09:20

L1017457

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
trans-1,3-Dichloropropene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
2,2-Dichloropropane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
Di-isopropyl ether	ND		0.00141	1.08	08/16/2018 16:06	WG1153128
Ethylbenzene	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
Hexachloro-1,3-butadiene	ND		0.0352	1.08	08/16/2018 16:06	WG1153128
Isopropylbenzene	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
p-Isopropyltoluene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
2-Butanone (MEK)	ND	J3	0.0352	1.08	08/16/2018 16:06	WG1153128
Methylene Chloride	ND		0.0352	1.08	08/16/2018 16:06	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0352	1.08	08/16/2018 16:06	WG1153128
Methyl tert-butyl ether	ND		0.00141	1.08	08/16/2018 16:06	WG1153128
Naphthalene	ND		0.0176	1.08	08/16/2018 16:06	WG1153128
n-Propylbenzene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
Styrene	ND		0.0176	1.08	08/16/2018 16:06	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
Tetrachloroethene	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
Toluene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00352	1.08	08/16/2018 16:06	WG1153128
1,2,4-Trichlorobenzene	ND		0.0176	1.08	08/16/2018 16:06	WG1153128
1,1,1-Trichloroethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
1,1,2-Trichloroethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
Trichloroethene	ND		0.00141	1.08	08/16/2018 16:06	WG1153128
Trichlorofluoromethane	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
1,2,3-Trichloropropane	ND		0.0176	1.08	08/16/2018 16:06	WG1153128
1,2,4-Trimethylbenzene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
1,2,3-Trimethylbenzene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
Vinyl chloride	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
1,3,5-Trimethylbenzene	ND		0.00703	1.08	08/16/2018 16:06	WG1153128
o-Xylene	ND		0.00352	1.08	08/16/2018 16:06	WG1153128
m&p-Xylene	ND		0.00563	1.08	08/16/2018 16:06	WG1153128
(S) Toluene-d8	111		80.0-120		08/16/2018 16:06	WG1153128
(S) Toluene-d8	117		80.0-120		08/18/2018 04:35	WG1153873
(S) Dibromofluoromethane	94.9		74.0-131		08/16/2018 16:06	WG1153128
(S) Dibromofluoromethane	87.4		74.0-131		08/18/2018 04:35	WG1153873
(S) 4-Bromofluorobenzene	98.6		64.0-132		08/16/2018 16:06	WG1153128
(S) 4-Bromofluorobenzene	97.5		64.0-132		08/18/2018 04:35	WG1153873

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.21	1	08/18/2018 03:25	WG1153402
Residual Range Organics (RRO)	ND		13.0	1	08/18/2018 03:25	WG1153402
(S) o-Terphenyl	78.9		18.0-148		08/18/2018 03:25	WG1153402

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Acenaphthene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Acenaphthylene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Benzo(a)anthracene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Benzo(a)pyrene	ND		0.00782	1	08/17/2018 12:41	WG1153296



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Benzo(g,h,i)perylene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Benzo(k)fluoranthene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Chrysene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Dibenz(a,h)anthracene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Fluoranthene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Fluorene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Indeno(1,2,3-cd)pyrene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Naphthalene	ND		0.0261	1	08/17/2018 12:41	WG1153296
Phenanthrene	ND		0.00782	1	08/17/2018 12:41	WG1153296
Pyrene	ND		0.00782	1	08/17/2018 12:41	WG1153296
1-Methylnaphthalene	ND		0.0261	1	08/17/2018 12:41	WG1153296
2-Methylnaphthalene	ND		0.0261	1	08/17/2018 12:41	WG1153296
2-Chloronaphthalene	ND		0.0261	1	08/17/2018 12:41	WG1153296
(S) Nitrobenzene-d5	94.0		14.0-149		08/17/2018 12:41	WG1153296
(S) 2-Fluorobiphenyl	86.8		34.0-125		08/17/2018 12:41	WG1153296
(S) p-Terphenyl-d14	72.8		23.0-120		08/17/2018 12:41	WG1153296

- 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	92.7		1	08/18/2018 11:42	WG1153926

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0216	1	08/16/2018 18:14	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.27		2.16	1	08/18/2018 09:09	WG1153202
Barium	94.4		0.539	1	08/18/2018 09:09	WG1153202
Cadmium	ND		0.539	1	08/18/2018 09:09	WG1153202
Chromium	10.9		1.08	1	08/18/2018 09:09	WG1153202
Lead	18.6		0.539	1	08/18/2018 09:09	WG1153202
Selenium	ND		2.16	1	08/18/2018 09:09	WG1153202
Silver	ND		1.08	1	08/18/2018 09:09	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0270	1	08/18/2018 04:54	WG1153873
Acrylonitrile	ND	J3 J4	0.0135	1	08/16/2018 16:25	WG1153128
Benzene	ND		0.00108	1	08/16/2018 16:25	WG1153128
Bromobenzene	ND		0.0135	1	08/16/2018 16:25	WG1153128
Bromodichloromethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
Bromoform	ND		0.0270	1	08/16/2018 16:25	WG1153128
Bromomethane	ND		0.0135	1	08/18/2018 04:54	WG1153873
n-Butylbenzene	ND		0.0135	1	08/16/2018 16:25	WG1153128
sec-Butylbenzene	ND		0.0135	1	08/16/2018 16:25	WG1153128
tert-Butylbenzene	ND		0.00539	1	08/16/2018 16:25	WG1153128
Carbon tetrachloride	ND		0.00539	1	08/16/2018 16:25	WG1153128
Chlorobenzene	ND		0.00270	1	08/16/2018 16:25	WG1153128
Chlorodibromomethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
Chloroethane	ND		0.00539	1	08/16/2018 16:25	WG1153128
Chloroform	ND		0.00270	1	08/16/2018 16:25	WG1153128
Chloromethane	ND	J3	0.0135	1	08/16/2018 16:25	WG1153128
2-Chlorotoluene	ND		0.00270	1	08/16/2018 16:25	WG1153128
4-Chlorotoluene	ND		0.00539	1	08/16/2018 16:25	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0270	1	08/16/2018 16:25	WG1153128
1,2-Dibromoethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
Dibromomethane	ND		0.00539	1	08/16/2018 16:25	WG1153128
1,2-Dichlorobenzene	ND		0.00539	1	08/16/2018 16:25	WG1153128
1,3-Dichlorobenzene	ND		0.00539	1	08/16/2018 16:25	WG1153128
1,4-Dichlorobenzene	ND		0.00539	1	08/16/2018 16:25	WG1153128
Dichlorodifluoromethane	ND	J3	0.00270	1	08/16/2018 16:25	WG1153128
1,1-Dichloroethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
1,2-Dichloroethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
1,1-Dichloroethene	ND		0.00270	1	08/16/2018 16:25	WG1153128
cis-1,2-Dichloroethene	ND		0.00270	1	08/16/2018 16:25	WG1153128
trans-1,2-Dichloroethene	ND		0.00539	1	08/16/2018 16:25	WG1153128
1,2-Dichloropropane	ND		0.00539	1	08/16/2018 16:25	WG1153128
1,1-Dichloropropene	ND		0.00270	1	08/16/2018 16:25	WG1153128
1,3-Dichloropropane	ND		0.00539	1	08/16/2018 16:25	WG1153128

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00270	1	08/16/2018 16:25	WG1153128
trans-1,3-Dichloropropene	ND		0.00539	1	08/16/2018 16:25	WG1153128
2,2-Dichloropropane	ND		0.00270	1	08/16/2018 16:25	WG1153128
Di-isopropyl ether	ND		0.00108	1	08/16/2018 16:25	WG1153128
Ethylbenzene	ND		0.00270	1	08/16/2018 16:25	WG1153128
Hexachloro-1,3-butadiene	ND		0.0270	1	08/16/2018 16:25	WG1153128
Isopropylbenzene	ND		0.00270	1	08/16/2018 16:25	WG1153128
p-Isopropyltoluene	ND		0.00539	1	08/16/2018 16:25	WG1153128
2-Butanone (MEK)	ND	J3	0.0270	1	08/16/2018 16:25	WG1153128
Methylene Chloride	ND		0.0270	1	08/16/2018 16:25	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0270	1	08/16/2018 16:25	WG1153128
Methyl tert-butyl ether	ND		0.00108	1	08/16/2018 16:25	WG1153128
Naphthalene	ND		0.0135	1	08/16/2018 16:25	WG1153128
n-Propylbenzene	ND		0.00539	1	08/16/2018 16:25	WG1153128
Styrene	ND		0.0135	1	08/16/2018 16:25	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
Tetrachloroethene	ND		0.00270	1	08/16/2018 16:25	WG1153128
Toluene	ND		0.00539	1	08/16/2018 16:25	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00270	1	08/16/2018 16:25	WG1153128
1,2,4-Trichlorobenzene	ND		0.0135	1	08/16/2018 16:25	WG1153128
1,1,1-Trichloroethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
1,1,2-Trichloroethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
Trichloroethene	ND		0.00108	1	08/16/2018 16:25	WG1153128
Trichlorofluoromethane	ND		0.00270	1	08/16/2018 16:25	WG1153128
1,2,3-Trichloropropane	ND		0.0135	1	08/16/2018 16:25	WG1153128
1,2,4-Trimethylbenzene	ND		0.00539	1	08/16/2018 16:25	WG1153128
1,2,3-Trimethylbenzene	ND		0.00539	1	08/16/2018 16:25	WG1153128
Vinyl chloride	ND		0.00270	1	08/16/2018 16:25	WG1153128
1,3,5-Trimethylbenzene	ND		0.00539	1	08/16/2018 16:25	WG1153128
o-Xylene	ND		0.00270	1	08/16/2018 16:25	WG1153128
m&p-Xylene	ND		0.00431	1	08/16/2018 16:25	WG1153128
(S) Toluene-d8	110		80.0-120		08/16/2018 16:25	WG1153128
(S) Toluene-d8	118		80.0-120		08/18/2018 04:54	WG1153873
(S) Dibromofluoromethane	93.8		74.0-131		08/16/2018 16:25	WG1153128
(S) Dibromofluoromethane	88.4		74.0-131		08/18/2018 04:54	WG1153873
(S) 4-Bromofluorobenzene	99.6		64.0-132		08/16/2018 16:25	WG1153128
(S) 4-Bromofluorobenzene	107		64.0-132		08/18/2018 04:54	WG1153873

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		43.1	10	08/18/2018 05:57	WG1153402
Residual Range Organics (RRO)	ND		108	10	08/18/2018 05:57	WG1153402
(S) o-Terphenyl	89.3		18.0-148		08/18/2018 05:57	WG1153402

Sample Narrative:

L1017457-15 WG1153402: Dilution due to matrix impact during extract concentration procedure



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		21.6	5	08/21/2018 17:07	WG1154190
Residual Range Organics (RRO)	84.3		53.9	5	08/21/2018 17:07	WG1154190
(S) o-Terphenyl	105		18.0-148		08/21/2018 17:07	WG1154190

Sample Narrative:

L1017457-15 WG1154190: Dilution due to matrix

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Acenaphthene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Acenaphthylene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Benzo(a)anthracene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Benzo(a)pyrene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Benzo(b)fluoranthene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Benzo(g,h,i)perylene	0.0164		0.00647	1	08/17/2018 13:03	WG1153296
Benzo(k)fluoranthene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Chrysene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Dibenz(a,h)anthracene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Fluoranthene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Fluorene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Indeno(1,2,3-cd)pyrene	0.00918		0.00647	1	08/17/2018 13:03	WG1153296
Naphthalene	ND		0.0216	1	08/17/2018 13:03	WG1153296
Phenanthrene	ND		0.00647	1	08/17/2018 13:03	WG1153296
Pyrene	ND		0.00647	1	08/17/2018 13:03	WG1153296
1-Methylnaphthalene	ND		0.0216	1	08/17/2018 13:03	WG1153296
2-Methylnaphthalene	ND		0.0216	1	08/17/2018 13:03	WG1153296
2-Chloronaphthalene	ND		0.0216	1	08/17/2018 13:03	WG1153296
(S) Nitrobenzene-d5	118		14.0-149		08/17/2018 13:03	WG1153296
(S) 2-Fluorobiphenyl	101		34.0-125		08/17/2018 13:03	WG1153296
(S) p-Terphenyl-d14	94.8		23.0-120		08/17/2018 13:03	WG1153296

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	95.9		1	08/18/2018 11:42	WG1153926

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0209	1	08/16/2018 18:24	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	7.60		2.09	1	08/18/2018 09:12	WG1153202
Barium	83.4		0.522	1	08/18/2018 09:12	WG1153202
Cadmium	ND		0.522	1	08/18/2018 09:12	WG1153202
Chromium	10.1		1.04	1	08/18/2018 09:12	WG1153202
Lead	6.66		0.522	1	08/18/2018 09:12	WG1153202
Selenium	ND		2.09	1	08/18/2018 09:12	WG1153202
Silver	ND		1.04	1	08/18/2018 09:12	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0261	1	08/18/2018 05:14	WG1153873
Acrylonitrile	ND	J3 J4	0.0130	1	08/16/2018 16:43	WG1153128
Benzene	ND		0.00104	1	08/16/2018 16:43	WG1153128
Bromobenzene	ND		0.0130	1	08/16/2018 16:43	WG1153128
Bromodichloromethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
Bromoform	ND		0.0261	1	08/16/2018 16:43	WG1153128
Bromomethane	ND		0.0130	1	08/18/2018 05:14	WG1153873
n-Butylbenzene	ND		0.0130	1	08/16/2018 16:43	WG1153128
sec-Butylbenzene	ND		0.0130	1	08/16/2018 16:43	WG1153128
tert-Butylbenzene	ND		0.00522	1	08/16/2018 16:43	WG1153128
Carbon tetrachloride	ND		0.00522	1	08/16/2018 16:43	WG1153128
Chlorobenzene	ND		0.00261	1	08/16/2018 16:43	WG1153128
Chlorodibromomethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
Chloroethane	ND		0.00522	1	08/16/2018 16:43	WG1153128
Chloroform	ND		0.00261	1	08/16/2018 16:43	WG1153128
Chloromethane	ND	J3	0.0130	1	08/16/2018 16:43	WG1153128
2-Chlorotoluene	ND		0.00261	1	08/16/2018 16:43	WG1153128
4-Chlorotoluene	ND		0.00522	1	08/16/2018 16:43	WG1153128
1,2-Dibromo-3-Chloropropane	ND	J4	0.0261	1	08/16/2018 16:43	WG1153128
1,2-Dibromoethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
Dibromomethane	ND		0.00522	1	08/16/2018 16:43	WG1153128
1,2-Dichlorobenzene	ND		0.00522	1	08/16/2018 16:43	WG1153128
1,3-Dichlorobenzene	ND		0.00522	1	08/16/2018 16:43	WG1153128
1,4-Dichlorobenzene	ND		0.00522	1	08/16/2018 16:43	WG1153128
Dichlorodifluoromethane	ND	J3	0.00261	1	08/16/2018 16:43	WG1153128
1,1-Dichloroethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
1,2-Dichloroethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
1,1-Dichloroethene	ND		0.00261	1	08/16/2018 16:43	WG1153128
cis-1,2-Dichloroethene	ND		0.00261	1	08/16/2018 16:43	WG1153128
trans-1,2-Dichloroethene	ND		0.00522	1	08/16/2018 16:43	WG1153128
1,2-Dichloropropane	ND		0.00522	1	08/16/2018 16:43	WG1153128
1,1-Dichloropropene	ND		0.00261	1	08/16/2018 16:43	WG1153128
1,3-Dichloropropane	ND		0.00522	1	08/16/2018 16:43	WG1153128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/10/18 10:25

L1017457

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00261	1	08/16/2018 16:43	WG1153128
trans-1,3-Dichloropropene	ND		0.00522	1	08/16/2018 16:43	WG1153128
2,2-Dichloropropane	ND		0.00261	1	08/16/2018 16:43	WG1153128
Di-isopropyl ether	ND		0.00104	1	08/16/2018 16:43	WG1153128
Ethylbenzene	ND		0.00261	1	08/16/2018 16:43	WG1153128
Hexachloro-1,3-butadiene	ND		0.0261	1	08/16/2018 16:43	WG1153128
Isopropylbenzene	ND		0.00261	1	08/16/2018 16:43	WG1153128
p-Isopropyltoluene	ND		0.00522	1	08/16/2018 16:43	WG1153128
2-Butanone (MEK)	ND	J3	0.0261	1	08/16/2018 16:43	WG1153128
Methylene Chloride	ND		0.0261	1	08/16/2018 16:43	WG1153128
4-Methyl-2-pentanone (MIBK)	ND	J4	0.0261	1	08/16/2018 16:43	WG1153128
Methyl tert-butyl ether	ND		0.00104	1	08/16/2018 16:43	WG1153128
Naphthalene	ND		0.0130	1	08/16/2018 16:43	WG1153128
n-Propylbenzene	ND		0.00522	1	08/16/2018 16:43	WG1153128
Styrene	ND		0.0130	1	08/16/2018 16:43	WG1153128
1,1,1,2-Tetrachloroethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
1,1,2,2-Tetrachloroethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
1,1,2-Trichlorotrifluoroethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
Tetrachloroethene	ND		0.00261	1	08/16/2018 16:43	WG1153128
Toluene	ND		0.00522	1	08/16/2018 16:43	WG1153128
1,2,3-Trichlorobenzene	ND	J4	0.00261	1	08/16/2018 16:43	WG1153128
1,2,4-Trichlorobenzene	ND		0.0130	1	08/16/2018 16:43	WG1153128
1,1,1-Trichloroethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
1,1,2-Trichloroethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
Trichloroethene	ND		0.00104	1	08/16/2018 16:43	WG1153128
Trichlorofluoromethane	ND		0.00261	1	08/16/2018 16:43	WG1153128
1,2,3-Trichloropropane	ND		0.0130	1	08/16/2018 16:43	WG1153128
1,2,4-Trimethylbenzene	ND		0.00522	1	08/16/2018 16:43	WG1153128
1,2,3-Trimethylbenzene	ND		0.00522	1	08/16/2018 16:43	WG1153128
Vinyl chloride	ND		0.00261	1	08/16/2018 16:43	WG1153128
1,3,5-Trimethylbenzene	ND		0.00522	1	08/16/2018 16:43	WG1153128
o-Xylene	ND		0.00261	1	08/16/2018 16:43	WG1153128
m&p-Xylene	ND		0.00417	1	08/16/2018 16:43	WG1153128
(S) Toluene-d8	110		80.0-120		08/16/2018 16:43	WG1153128
(S) Toluene-d8	118		80.0-120		08/18/2018 05:14	WG1153873
(S) Dibromofluoromethane	92.9		74.0-131		08/16/2018 16:43	WG1153128
(S) Dibromofluoromethane	87.6		74.0-131		08/18/2018 05:14	WG1153873
(S) 4-Bromofluorobenzene	100		64.0-132		08/16/2018 16:43	WG1153128
(S) 4-Bromofluorobenzene	102		64.0-132		08/18/2018 05:14	WG1153873

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		41.7	10	08/18/2018 06:10	WG1153402
Residual Range Organics (RRO)	ND		104	10	08/18/2018 06:10	WG1153402
(S) o-Terphenyl	90.7		18.0-148		08/18/2018 06:10	WG1153402

Sample Narrative:

L1017457-17 WG1153402: Dilution due to matrix impact during extract concentration procedure



Collected date/time: 08/10/18 10:25

L1017457

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00791		0.00626	1	08/17/2018 13:24	WG1153296
Acenaphthene	ND		0.00626	1	08/17/2018 13:24	WG1153296
Acenaphthylene	ND		0.00626	1	08/17/2018 13:24	WG1153296
Benzo(a)anthracene	ND		0.00626	1	08/17/2018 13:24	WG1153296
Benzo(a)pyrene	ND		0.00626	1	08/17/2018 13:24	WG1153296
Benzo(b)fluoranthene	0.00890		0.00626	1	08/17/2018 13:24	WG1153296
Benzo(g,h,i)perylene	0.00992		0.00626	1	08/17/2018 13:24	WG1153296
Benzo(k)fluoranthene	ND		0.00626	1	08/17/2018 13:24	WG1153296
Chrysene	ND		0.00626	1	08/17/2018 13:24	WG1153296
Dibenz(a,h)anthracene	ND		0.00626	1	08/17/2018 13:24	WG1153296
Fluoranthene	0.00770		0.00626	1	08/17/2018 13:24	WG1153296
Fluorene	ND		0.00626	1	08/17/2018 13:24	WG1153296
Indeno(1,2,3-cd)pyrene	ND		0.00626	1	08/17/2018 13:24	WG1153296
Naphthalene	ND		0.0209	1	08/17/2018 13:24	WG1153296
Phenanthrene	ND		0.00626	1	08/17/2018 13:24	WG1153296
Pyrene	0.00916		0.00626	1	08/17/2018 13:24	WG1153296
1-Methylnaphthalene	ND		0.0209	1	08/17/2018 13:24	WG1153296
2-Methylnaphthalene	ND		0.0209	1	08/17/2018 13:24	WG1153296
2-Chloronaphthalene	ND		0.0209	1	08/17/2018 13:24	WG1153296
(S) Nitrobenzene-d5	106		14.0-149		08/17/2018 13:24	WG1153296
(S) 2-Fluorobiphenyl	94.2		34.0-125		08/17/2018 13:24	WG1153296
(S) p-Terphenyl-d14	89.5		23.0-120		08/17/2018 13:24	WG1153296

- 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
Total Solids	94.7		1	08/18/2018 11:42	WG1153926

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0211	1	08/16/2018 18:27	WG1153222

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	8.56		2.11	1	08/18/2018 09:14	WG1153202
Barium	81.2		0.528	1	08/18/2018 09:14	WG1153202
Cadmium	ND		0.528	1	08/18/2018 09:14	WG1153202
Chromium	13.4		1.06	1	08/18/2018 09:14	WG1153202
Lead	3.10		0.528	1	08/18/2018 09:14	WG1153202
Selenium	ND		2.11	1	08/18/2018 09:14	WG1153202
Silver	ND		1.06	1	08/18/2018 09:14	WG1153202

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0264	1	08/19/2018 13:16	WG1154430
Acrylonitrile	ND		0.0132	1	08/17/2018 13:43	WG1153795
Benzene	ND		0.00106	1	08/17/2018 13:43	WG1153795
Bromobenzene	ND		0.0132	1	08/17/2018 13:43	WG1153795
Bromodichloromethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
Bromoform	ND		0.0264	1	08/17/2018 13:43	WG1153795
Bromomethane	ND		0.0132	1	08/17/2018 13:43	WG1153795
n-Butylbenzene	ND		0.0132	1	08/17/2018 13:43	WG1153795
sec-Butylbenzene	ND		0.0132	1	08/17/2018 13:43	WG1153795
tert-Butylbenzene	ND		0.00528	1	08/17/2018 13:43	WG1153795
Carbon tetrachloride	ND		0.00528	1	08/17/2018 13:43	WG1153795
Chlorobenzene	ND		0.00264	1	08/17/2018 13:43	WG1153795
Chlorodibromomethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
Chloroethane	ND		0.00528	1	08/17/2018 13:43	WG1153795
Chloroform	ND		0.00264	1	08/17/2018 13:43	WG1153795
Chloromethane	ND		0.0132	1	08/17/2018 13:43	WG1153795
2-Chlorotoluene	ND		0.00264	1	08/17/2018 13:43	WG1153795
4-Chlorotoluene	ND		0.00528	1	08/17/2018 13:43	WG1153795
1,2-Dibromo-3-Chloropropane	ND		0.0264	1	08/17/2018 13:43	WG1153795
1,2-Dibromoethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
Dibromomethane	ND		0.00528	1	08/17/2018 13:43	WG1153795
1,2-Dichlorobenzene	ND		0.00528	1	08/17/2018 13:43	WG1153795
1,3-Dichlorobenzene	ND		0.00528	1	08/17/2018 13:43	WG1153795
1,4-Dichlorobenzene	ND		0.00528	1	08/17/2018 13:43	WG1153795
Dichlorodifluoromethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
1,1-Dichloroethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
1,2-Dichloroethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
1,1-Dichloroethene	ND		0.00264	1	08/17/2018 13:43	WG1153795
cis-1,2-Dichloroethene	ND		0.00264	1	08/17/2018 13:43	WG1153795
trans-1,2-Dichloroethene	ND		0.00528	1	08/17/2018 13:43	WG1153795
1,2-Dichloropropane	ND		0.00528	1	08/17/2018 13:43	WG1153795
1,1-Dichloropropene	ND		0.00264	1	08/17/2018 13:43	WG1153795
1,3-Dichloropropane	ND	J4	0.00528	1	08/17/2018 13:43	WG1153795

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/10/18 11:15

L1017457

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00264	1	08/17/2018 13:43	WG1153795
trans-1,3-Dichloropropene	ND		0.00528	1	08/17/2018 13:43	WG1153795
2,2-Dichloropropane	ND	JO	0.00264	1	08/19/2018 13:16	WG1154430
Di-isopropyl ether	ND		0.00106	1	08/17/2018 13:43	WG1153795
Ethylbenzene	ND		0.00264	1	08/17/2018 13:43	WG1153795
Hexachloro-1,3-butadiene	ND		0.0264	1	08/17/2018 13:43	WG1153795
Isopropylbenzene	ND		0.00264	1	08/17/2018 13:43	WG1153795
p-Isopropyltoluene	ND		0.00528	1	08/17/2018 13:43	WG1153795
2-Butanone (MEK)	ND		0.0264	1	08/19/2018 13:16	WG1154430
Methylene Chloride	ND		0.0264	1	08/17/2018 13:43	WG1153795
4-Methyl-2-pentanone (MIBK)	ND		0.0264	1	08/17/2018 13:43	WG1153795
Methyl tert-butyl ether	ND		0.00106	1	08/17/2018 13:43	WG1153795
Naphthalene	ND		0.0132	1	08/17/2018 13:43	WG1153795
n-Propylbenzene	ND		0.00528	1	08/17/2018 13:43	WG1153795
Styrene	ND		0.0132	1	08/17/2018 13:43	WG1153795
1,1,1,2-Tetrachloroethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
1,1,2,2-Tetrachloroethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
1,1,2-Trichlorotrifluoroethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
Tetrachloroethene	ND		0.00264	1	08/17/2018 13:43	WG1153795
Toluene	ND		0.00528	1	08/17/2018 13:43	WG1153795
1,2,3-Trichlorobenzene	ND		0.00264	1	08/17/2018 13:43	WG1153795
1,2,4-Trichlorobenzene	ND		0.0132	1	08/17/2018 13:43	WG1153795
1,1,1-Trichloroethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
1,1,2-Trichloroethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
Trichloroethene	ND		0.00106	1	08/17/2018 13:43	WG1153795
Trichlorofluoromethane	ND		0.00264	1	08/17/2018 13:43	WG1153795
1,2,3-Trichloropropane	ND		0.0132	1	08/17/2018 13:43	WG1153795
1,2,4-Trimethylbenzene	ND		0.00528	1	08/17/2018 13:43	WG1153795
1,2,3-Trimethylbenzene	ND		0.00528	1	08/17/2018 13:43	WG1153795
Vinyl chloride	ND		0.00264	1	08/19/2018 13:16	WG1154430
1,3,5-Trimethylbenzene	ND		0.00528	1	08/17/2018 13:43	WG1153795
o-Xylene	ND		0.00264	1	08/17/2018 13:43	WG1153795
m&p-Xylene	ND		0.00423	1	08/17/2018 13:43	WG1153795
(S) Toluene-d8	112		80.0-120		08/17/2018 13:43	WG1153795
(S) Toluene-d8	113		80.0-120		08/19/2018 13:16	WG1154430
(S) Dibromofluoromethane	91.3		74.0-131		08/17/2018 13:43	WG1153795
(S) Dibromofluoromethane	92.4		74.0-131		08/19/2018 13:16	WG1154430
(S) 4-Bromofluorobenzene	106		64.0-132		08/17/2018 13:43	WG1153795
(S) 4-Bromofluorobenzene	93.4		64.0-132		08/19/2018 13:16	WG1154430

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		8.45	2	08/18/2018 03:38	WG1153402
Residual Range Organics (RRO)	ND		21.1	2	08/18/2018 03:38	WG1153402
(S) o-Terphenyl	83.8		18.0-148		08/18/2018 03:38	WG1153402

Sample Narrative:

L1017457-18 WG1153402: Dilution due to matrix impact during extract concentration procedure



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Acenaphthene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Acenaphthylene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Benzo(a)anthracene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Benzo(a)pyrene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Benzo(b)fluoranthene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Benzo(g,h,i)perylene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Benzo(k)fluoranthene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Chrysene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Dibenz(a,h)anthracene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Fluoranthene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Fluorene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Indeno(1,2,3-cd)pyrene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Naphthalene	ND		0.0211	1	08/17/2018 13:45	WG1153296
Phenanthrene	ND		0.00634	1	08/17/2018 13:45	WG1153296
Pyrene	ND		0.00634	1	08/17/2018 13:45	WG1153296
1-Methylnaphthalene	ND		0.0211	1	08/17/2018 13:45	WG1153296
2-Methylnaphthalene	ND		0.0211	1	08/17/2018 13:45	WG1153296
2-Chloronaphthalene	ND		0.0211	1	08/17/2018 13:45	WG1153296
(S) Nitrobenzene-d5	112		14.0-149		08/17/2018 13:45	WG1153296
(S) 2-Fluorobiphenyl	101		34.0-125		08/17/2018 13:45	WG1153296
(S) p-Terphenyl-d14	95.9		23.0-120		08/17/2018 13:45	WG1153296

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.0		1	08/14/2018 10:44	WG1151707

1 Cp

2 Tc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		0.117	1.09	08/16/2018 21:12	WG1153101
(S) a,a,a-Trifluorotoluene(FID)	95.5		77.0-120		08/16/2018 21:12	WG1153101

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3333748-1 08/14/18 10:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

L1016063-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1016063-01 08/14/18 10:44 • (DUP) R3333748-3 08/14/18 10:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	82.6	83.5	1	1.02		10

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS)

(LCS) R3333748-2 08/14/18 10:44

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

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334921-1 08/18/18 11:55

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L1017457-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1017457-07 08/18/18 11:55 • (DUP) R3334921-3 08/18/18 11:55

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	77.7	77.1	1	0.780		10

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3334921-2 08/18/18 11:55

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	49.9	99.9	85.0-115	

9 Sc



Method Blank (MB)

(MB) R3334859-1 08/18/18 11:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00200			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1017458-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1017458-01 08/18/18 11:42 • (DUP) R3334859-3 08/18/18 11:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	75.0	76.8	1	2.31		10

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3334859-2 08/18/18 11:42

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	99.9	85.0-115	



Method Blank (MB)

(MB) R3334439-1 08/16/18 17:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.00280	0.0200

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R3334439-2 08/16/18 17:23 • (LCSD) R3334439-3 08/16/18 17:26

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.263	0.261	87.6	87.2	80.0-120			0.481	20

L1017457-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017457-06 08/16/18 17:28 • (MS) R3334439-4 08/16/18 17:31 • (MSD) R3334439-5 08/16/18 17:33

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
Mercury	0.321	ND	0.303	0.280	94.3	87.2	1	75.0-125			7.81	20



Method Blank (MB)

(MB) R3334710-1 08/18/18 08:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.740	2.00
Silver	U		0.280	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3334710-2 08/18/18 08:12 • (LCSD) R3334710-3 08/18/18 08:14

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	98.6	97.1	98.6	97.1	80.0-120			1.47	20
Barium	100	103	101	103	101	80.0-120			1.49	20
Cadmium	100	98.5	97.0	98.5	97.0	80.0-120			1.53	20
Chromium	100	101	98.4	101	98.4	80.0-120			2.14	20
Lead	100	100	98.4	100	98.4	80.0-120			1.57	20
Selenium	100	97.4	96.2	97.4	96.2	80.0-120			1.24	20
Silver	20.0	18.5	18.1	92.4	90.4	80.0-120			2.23	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1017457-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017457-01 08/18/18 08:17 • (MS) R3334710-6 08/18/18 08:24 • (MSD) R3334710-7 08/18/18 08:26

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	118	ND	115	115	95.4	95.2	1	75.0-125			0.228	20
Barium	118	75.6	196	198	102	104	1	75.0-125			1.30	20
Cadmium	118	ND	113	114	95.7	96.2	1	75.0-125			0.466	20
Chromium	118	10.3	123	123	95.7	95.8	1	75.0-125			0.0876	20
Lead	118	66.5	157	165	76.4	83.2	1	75.0-125			5.01	20
Selenium	118	ND	110	109	92.8	92.6	1	75.0-125			0.238	20
Silver	23.6	ND	20.4	20.4	86.5	86.3	1	75.0-125			0.302	20



Method Blank (MB)

(MB) R3334671-5 08/16/18 12:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.0			77.0-120

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

(LCS) R3334671-3 08/16/18 11:25 • (LCSD) R3334671-4 08/16/18 11:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.68	5.74	103	104	70.0-133			1.11	20
(S) a,a,a-Trifluorotoluene(FID)				105	104	77.0-120				

L1017774-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017774-06 08/16/18 16:00 • (MS) R3334671-8 08/16/18 22:19 • (MSD) R3334671-9 08/16/18 22:41

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 %
Gasoline Range Organics-NWTPH	5.50	173	1150	1230	88.9	96.3	200	10.0-146			6.86	30
(S) a,a,a-Trifluorotoluene(FID)					105	104		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334069-2 08/15/18 23:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
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
p-Isopropyltoluene	U		0.00233	0.00500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334069-2 08/15/18 23:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	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
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	107			80.0-120
(S) Dibromofluoromethane	99.9			74.0-131
(S) 4-Bromofluorobenzene	96.8			64.0-132

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3334069-1 08/15/18 21:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acrylonitrile	0.625	0.545	87.1	57.8-143	
Benzene	0.125	0.110	87.8	72.6-120	
Bromobenzene	0.125	0.122	97.8	80.3-115	
Bromodichloromethane	0.125	0.112	89.7	75.3-119	
Bromoform	0.125	0.127	102	69.1-135	



Laboratory Control Sample (LCS)

(LCS) R3334069-1 08/15/18 21:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromomethane	0.125	0.0871	69.7	23.0-191	
n-Butylbenzene	0.125	0.121	96.5	74.2-134	
sec-Butylbenzene	0.125	0.115	92.4	77.8-129	
tert-Butylbenzene	0.125	0.115	92.4	77.2-129	
Carbon tetrachloride	0.125	0.111	89.0	69.4-129	
Chlorobenzene	0.125	0.132	106	78.9-122	
Chlorodibromomethane	0.125	0.136	109	76.4-126	
Chloroethane	0.125	0.116	92.7	47.2-147	
Chloroform	0.125	0.110	87.8	73.3-122	
Chloromethane	0.125	0.124	99.0	53.1-135	
2-Chlorotoluene	0.125	0.123	98.1	74.6-127	
4-Chlorotoluene	0.125	0.117	93.5	79.5-123	
1,2-Dibromo-3-Chloropropane	0.125	0.132	106	64.9-131	
1,2-Dibromoethane	0.125	0.136	109	78.7-123	
Dibromomethane	0.125	0.114	91.2	78.5-117	
1,2-Dichlorobenzene	0.125	0.128	102	83.6-119	
1,3-Dichlorobenzene	0.125	0.121	96.8	75.9-129	
1,4-Dichlorobenzene	0.125	0.123	98.5	81.0-115	
Dichlorodifluoromethane	0.125	0.0944	75.6	50.9-139	
1,1-Dichloroethane	0.125	0.127	101	71.7-125	
1,2-Dichloroethane	0.125	0.119	95.0	67.2-121	
1,1-Dichloroethene	0.125	0.130	104	60.6-133	
cis-1,2-Dichloroethene	0.125	0.113	90.7	76.1-121	
trans-1,2-Dichloroethene	0.125	0.112	89.9	70.7-124	
1,2-Dichloropropane	0.125	0.139	111	76.9-123	
1,1-Dichloropropene	0.125	0.114	91.3	71.2-126	
1,3-Dichloropropane	0.125	0.132	106	80.3-114	
cis-1,3-Dichloropropene	0.125	0.130	104	77.3-123	
trans-1,3-Dichloropropene	0.125	0.134	107	73.0-127	
2,2-Dichloropropane	0.125	0.102	81.9	61.9-132	
Di-isopropyl ether	0.125	0.145	116	67.2-131	
Ethylbenzene	0.125	0.129	103	78.6-124	
Hexachloro-1,3-butadiene	0.125	0.135	108	69.2-136	
Isopropylbenzene	0.125	0.117	93.2	79.4-126	
p-Isopropyltoluene	0.125	0.116	92.9	75.4-132	
2-Butanone (MEK)	0.625	0.385	61.6	44.5-154	
Methylene Chloride	0.125	0.115	92.1	68.2-119	
4-Methyl-2-pentanone (MIBK)	0.625	0.744	119	61.1-138	
Methyl tert-butyl ether	0.125	0.120	95.8	70.2-122	
Naphthalene	0.125	0.136	109	69.9-132	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3334069-1 08/15/18 21:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
n-Propylbenzene	0.125	0.113	90.6	80.2-124	
Styrene	0.125	0.120	96.1	79.4-124	
1,1,1,2-Tetrachloroethane	0.125	0.130	104	76.7-127	
1,1,2,2-Tetrachloroethane	0.125	0.121	96.5	78.8-124	
Tetrachloroethene	0.125	0.135	108	71.1-133	
Toluene	0.125	0.127	101	76.7-116	
1,1,2-Trichlorotrifluoroethane	0.125	0.116	93.1	62.6-138	
1,2,3-Trichlorobenzene	0.125	0.168	134	72.5-137	
1,2,4-Trichlorobenzene	0.125	0.142	113	74.0-137	
1,1,1-Trichloroethane	0.125	0.121	96.6	69.9-127	
1,1,2-Trichloroethane	0.125	0.133	106	81.9-119	
Trichloroethene	0.125	0.126	101	77.2-122	
Trichlorofluoromethane	0.125	0.109	86.9	51.5-151	
1,2,3-Trichloropropane	0.125	0.120	96.2	74.0-124	
1,2,3-Trimethylbenzene	0.125	0.115	92.0	79.4-118	
1,2,4-Trimethylbenzene	0.125	0.121	97.2	77.1-124	
1,3,5-Trimethylbenzene	0.125	0.117	93.8	79.0-125	
Vinyl chloride	0.125	0.114	91.0	58.4-134	
o-Xylene	0.125	0.132	105	78.5-124	
m&p-Xylenes	0.250	0.252	101	77.3-124	
(S) Toluene-d8			109	80.0-120	
(S) Dibromofluoromethane			94.7	74.0-131	
(S) 4-Bromofluorobenzene			96.9	64.0-132	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1017457-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017457-02 08/16/18 06:57 • (MS) R3334069-3 08/15/18 23:58 • (MSD) R3334069-4 08/16/18 00:25

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 %
Acrylonitrile	0.681	ND	0.900	0.966	132	142	1	39.3-152			7.05	27.2
Benzene	0.136	ND	0.112	0.110	82.0	80.7	1	47.8-131			1.54	22.8
Bromobenzene	0.136	ND	0.121	0.121	88.8	88.7	1	40.0-130			0.117	27.4
Bromodichloromethane	0.136	ND	0.112	0.112	81.8	82.1	1	50.6-128			0.358	22.8
Bromoform	0.136	ND	0.128	0.128	94.1	94.1	1	43.3-139			0.0111	25.9
Bromomethane	0.136	ND	0.0522	0.0489	38.3	35.9	1	5.00-189			6.55	26.7
n-Butylbenzene	0.136	ND	0.122	0.119	89.4	87.2	1	23.6-146			2.46	39.2
sec-Butylbenzene	0.136	ND	0.121	0.118	88.7	86.9	1	31.0-142			2.08	34.7
tert-Butylbenzene	0.136	ND	0.121	0.117	88.5	85.9	1	36.9-142			2.88	31.7
Carbon tetrachloride	0.136	ND	0.116	0.114	85.2	83.7	1	46.0-140			1.81	27.2



L1017457-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017457-02 08/16/18 06:57 • (MS) R3334069-3 08/15/18 23:58 • (MSD) R3334069-4 08/16/18 00:25

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 %
Chlorobenzene	0.136	ND	0.129	0.124	94.7	90.8	1	44.1-134			4.30	25.7
Chlorodibromomethane	0.136	ND	0.134	0.132	98.2	96.7	1	49.7-134			1.59	24
Chloroethane	0.136	ND	0.0608	0.0566	44.6	41.5	1	5.00-164			7.23	28.4
Chloroform	0.136	ND	0.118	0.121	86.4	88.9	1	51.2-133			2.89	22.8
Chloromethane	0.136	ND	0.121	0.115	88.7	84.7	1	31.4-141			4.70	24.6
2-Chlorotoluene	0.136	ND	0.116	0.113	84.8	83.2	1	36.1-137			1.93	28.9
4-Chlorotoluene	0.136	ND	0.116	0.114	85.4	83.3	1	35.4-137			2.46	29.8
1,2-Dibromo-3-Chloropropane	0.136	ND	0.147	0.147	108	108	1	40.4-138			0.262	30.8
1,2-Dibromoethane	0.136	ND	0.137	0.131	100	96.3	1	50.2-133			3.94	23.6
Dibromomethane	0.136	ND	0.118	0.121	86.9	88.9	1	52.4-128			2.31	23
1,2-Dichlorobenzene	0.136	ND	0.125	0.123	91.4	90.2	1	34.6-139			1.28	29.9
1,3-Dichlorobenzene	0.136	ND	0.118	0.119	86.3	87.3	1	28.4-142			1.14	31.2
1,4-Dichlorobenzene	0.136	ND	0.120	0.120	88.1	88.2	1	35.0-133			0.0744	31.1
Dichlorodifluoromethane	0.136	ND	0.108	0.109	79.2	79.8	1	31.2-144			0.849	30.2
1,1-Dichloroethane	0.136	ND	0.137	0.140	101	102	1	49.1-136			1.49	22.9
1,2-Dichloroethane	0.136	ND	0.132	0.134	96.6	98.0	1	47.1-129			1.35	22.7
1,1-Dichloroethene	0.136	ND	0.133	0.131	97.3	96.0	1	36.1-142			1.43	25.6
cis-1,2-Dichloroethene	0.136	ND	0.123	0.126	90.0	92.2	1	50.6-133			2.46	23
trans-1,2-Dichloroethene	0.136	ND	0.113	0.114	83.0	83.5	1	43.8-135			0.561	24.8
1,2-Dichloropropane	0.136	ND	0.139	0.137	102	100	1	50.3-134			1.71	22.7
1,1-Dichloropropene	0.136	ND	0.118	0.114	86.8	83.3	1	43.0-137			4.14	26.4
1,3-Dichloropropane	0.136	ND	0.128	0.122	93.7	89.2	1	51.4-127			4.90	23.1
cis-1,3-Dichloropropene	0.136	ND	0.126	0.120	92.7	87.8	1	48.4-134			5.37	23.6
trans-1,3-Dichloropropene	0.136	ND	0.121	0.123	88.9	90.6	1	46.6-135			1.93	25.3
2,2-Dichloropropane	0.136	ND	0.103	0.101	75.8	73.8	1	45.2-141			2.66	26.6
Di-isopropyl ether	0.136	ND	0.147	0.148	108	108	1	46.7-140			0.789	23.5
Ethylbenzene	0.136	ND	0.129	0.124	93.4	89.6	1	44.8-135			4.09	26.9
Hexachloro-1,3-butadiene	0.136	ND	0.149	0.146	109	107	1	10.0-149			1.74	40
Isopropylbenzene	0.136	ND	0.120	0.116	87.7	84.9	1	41.9-139			3.24	29.3
p-Isopropyltoluene	0.136	ND	0.120	0.119	88.4	87.2	1	27.3-146			1.39	35.1
2-Butanone (MEK)	0.681	ND	0.896	0.973	131	143	1	23.9-170			8.30	28.3
Methylene Chloride	0.136	ND	0.126	0.130	92.7	95.2	1	46.7-125			2.68	22.2
4-Methyl-2-pentanone (MIBK)	0.681	ND	0.778	0.757	114	111	1	42.4-146			2.79	26.7
Methyl tert-butyl ether	0.136	ND	0.116	0.112	84.8	82.2	1	50.4-131			3.19	24.8
Naphthalene	0.136	ND	0.143	0.142	96.8	96.0	1	18.4-145			0.818	34
n-Propylbenzene	0.136	ND	0.116	0.112	84.8	82.5	1	35.2-139			2.85	31.9
Styrene	0.136	ND	0.124	0.118	91.1	86.8	1	39.7-137			4.91	28.2
1,1,1,2-Tetrachloroethane	0.136	ND	0.124	0.122	91.1	89.6	1	48.8-136			1.66	25.5
1,1,2,2-Tetrachloroethane	0.136	ND	0.122	0.121	89.4	88.7	1	45.7-140			0.752	26.4

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1017457-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017457-02 08/16/18 06:57 • (MS) R3334069-3 08/15/18 23:58 • (MSD) R3334069-4 08/16/18 00:25

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 %
Tetrachloroethene	0.136	ND	0.134	0.125	98.0	91.8	1	37.7-140			6.58	29.2
Toluene	0.136	0.0126	0.136	0.130	90.6	86.2	1	47.8-127			4.52	24.3
1,1,2-Trichlorotrifluoroethane	0.136	ND	0.136	0.133	99.7	97.9	1	35.7-146			1.87	28.8
1,2,3-Trichlorobenzene	0.136	ND	0.164	0.160	120	118	1	10.0-150			2.16	38.5
1,2,4-Trichlorobenzene	0.136	ND	0.137	0.136	100	99.4	1	10.0-153			1.07	39.3
1,1,1-Trichloroethane	0.136	ND	0.125	0.125	91.9	91.4	1	49.0-138			0.579	25.3
1,1,2-Trichloroethane	0.136	ND	0.136	0.131	100	96.0	1	52.3-132			4.15	23.4
Trichloroethene	0.136	ND	0.126	0.125	92.6	91.7	1	48.0-132			1.02	24.8
Trichlorofluoromethane	0.136	ND	0.191	0.180	140	132	1	12.8-169			5.83	29.7
1,2,3-Trichloropropane	0.136	ND	0.132	0.133	96.5	97.7	1	44.4-138			1.28	26.3
1,2,3-Trimethylbenzene	0.136	ND	0.115	0.116	80.4	81.0	1	41.0-133			0.799	27.6
1,2,4-Trimethylbenzene	0.136	0.00813	0.128	0.124	87.7	85.0	1	32.9-139			2.95	30.6
1,3,5-Trimethylbenzene	0.136	ND	0.117	0.115	84.4	83.5	1	37.1-138			1.03	30.6
Vinyl chloride	0.136	ND	0.114	0.107	83.6	78.7	1	32.0-146			5.99	26.3
o-Xylene	0.136	0.00853	0.136	0.134	93.3	92.4	1	43.2-136			0.978	26.2
m&p-Xylenes	0.273	0.0131	0.258	0.248	89.9	86.0	1	42.2-134			4.23	27.1
(S) Toluene-d8					109	106		80.0-120				
(S) Dibromofluoromethane					100	105		74.0-131				
(S) 4-Bromofluorobenzene					98.3	99.3		64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334197-3 08/16/18 10:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
(S) Toluene-d8	112			80.0-120
(S) Dibromofluoromethane	96.7			74.0-131
(S) 4-Bromofluorobenzene	105			64.0-132

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

(LCS) R3334197-1 08/16/18 08:41 • (LCSD) R3334197-2 08/16/18 09:02

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	0.653	0.628	104	101	25.3-178			3.86	22.9
(S) Toluene-d8				104	103	80.0-120				
(S) Dibromofluoromethane				104	105	74.0-131				
(S) 4-Bromofluorobenzene				106	102	64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334154-3 08/16/18 09:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
Bromodichloromethane	U		0.000788	0.00250
Bromoform	U		0.00598	0.0250
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
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	U		0.0125	0.0250

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334154-3 08/16/18 09:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	0.00115	J	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
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	110			80.0-120
(S) Dibromofluoromethane	93.3			74.0-131
(S) 4-Bromofluorobenzene	96.9			64.0-132

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) R3334154-1 08/16/18 08:42 • (LCSD) R3334154-2 08/16/18 09:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.625	0.789	1.11	126	178	57.8-143		J3 J4	34.2	20
Benzene	0.125	0.120	0.112	95.7	89.8	72.6-120			6.35	20
Bromobenzene	0.125	0.126	0.120	101	96.1	80.3-115			4.59	20
Bromodichloromethane	0.125	0.119	0.118	94.8	94.4	75.3-119			0.433	20
Bromoform	0.125	0.133	0.138	106	111	69.1-135			4.21	20
n-Butylbenzene	0.125	0.129	0.119	103	95.2	74.2-134			7.75	20



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

(LCS) R3334154-1 08/16/18 08:42 • (LCSD) R3334154-2 08/16/18 09:01

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 %
sec-Butylbenzene	0.125	0.125	0.114	100	91.4	77.8-129			8.97	20
tert-Butylbenzene	0.125	0.121	0.109	97.1	87.0	77.2-129			11.0	20
Carbon tetrachloride	0.125	0.122	0.109	97.9	87.4	69.4-129			11.3	20
Chlorobenzene	0.125	0.136	0.126	109	101	78.9-122			7.91	20
Chlorodibromomethane	0.125	0.142	0.140	114	112	76.4-126			1.20	20
Chloroethane	0.125	0.120	0.111	95.8	88.7	47.2-147			7.72	20
Chloroform	0.125	0.119	0.122	95.5	97.3	73.3-122			1.87	20
Chloromethane	0.125	0.144	0.116	115	93.0	53.1-135		J3	21.4	20
2-Chlorotoluene	0.125	0.129	0.111	103	89.0	74.6-127			14.6	20
4-Chlorotoluene	0.125	0.122	0.111	97.5	89.1	79.5-123			8.95	20
1,2-Dibromo-3-Chloropropane	0.125	0.139	0.166	111	132	64.9-131		J4	17.8	20
1,2-Dibromoethane	0.125	0.138	0.142	111	113	78.7-123			2.55	20
Dibromomethane	0.125	0.128	0.138	102	111	78.5-117			8.06	20
1,2-Dichlorobenzene	0.125	0.130	0.134	104	107	83.6-119			2.54	20
1,3-Dichlorobenzene	0.125	0.127	0.122	101	97.5	75.9-129			3.85	20
1,4-Dichlorobenzene	0.125	0.126	0.122	101	97.9	81.0-115			2.88	20
Dichlorodifluoromethane	0.125	0.113	0.0874	90.4	70.0	50.9-139		J3	25.5	20
1,1-Dichloroethane	0.125	0.139	0.137	112	109	71.7-125			1.92	20
1,2-Dichloroethane	0.125	0.131	0.144	105	115	67.2-121			9.21	20
1,1-Dichloroethene	0.125	0.147	0.126	117	101	60.6-133			15.5	20
cis-1,2-Dichloroethene	0.125	0.124	0.129	99.1	103	76.1-121			3.76	20
trans-1,2-Dichloroethene	0.125	0.127	0.120	101	96.0	70.7-124			5.39	20
1,2-Dichloropropane	0.125	0.143	0.147	114	118	76.9-123			3.19	20
1,1-Dichloropropene	0.125	0.125	0.116	100	92.7	71.2-126			7.71	20
1,3-Dichloropropane	0.125	0.133	0.129	106	103	80.3-114			2.77	20
cis-1,3-Dichloropropene	0.125	0.136	0.128	109	103	77.3-123			5.82	20
trans-1,3-Dichloropropene	0.125	0.134	0.124	107	99.1	73.0-127			8.03	20
2,2-Dichloropropane	0.125	0.115	0.102	92.3	81.4	61.9-132			12.5	20
Di-isopropyl ether	0.125	0.150	0.146	120	117	67.2-131			2.14	20
Ethylbenzene	0.125	0.135	0.124	108	99.1	78.6-124			8.38	20
Hexachloro-1,3-butadiene	0.125	0.146	0.142	117	114	69.2-136			2.98	20
Isopropylbenzene	0.125	0.123	0.111	98.5	88.9	79.4-126			10.3	20
p-Isopropyltoluene	0.125	0.125	0.103	99.7	82.5	75.4-132			18.9	20
2-Butanone (MEK)	0.625	0.500	0.783	80.1	125	44.5-154		J3	44.0	21.3
Methylene Chloride	0.125	0.125	0.134	100	107	68.2-119			6.66	20
4-Methyl-2-pentanone (MIBK)	0.625	0.773	0.924	124	148	61.1-138		J4	17.8	20
Methyl tert-butyl ether	0.125	0.123	0.135	98.3	108	70.2-122			9.72	20
Naphthalene	0.125	0.135	0.154	108	123	69.9-132			13.3	20
n-Propylbenzene	0.125	0.120	0.108	96.4	86.6	80.2-124			10.7	20
Styrene	0.125	0.125	0.118	100	94.4	79.4-124			5.84	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) R3334154-1 08/16/18 08:42 • (LCSD) R3334154-2 08/16/18 09:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1,1,2-Tetrachloroethane	0.125	0.135	0.128	108	102	76.7-127			5.24	20
1,1,2,2-Tetrachloroethane	0.125	0.125	0.134	100	107	78.8-124			6.68	20
Tetrachloroethene	0.125	0.147	0.132	118	105	71.1-133			11.1	20
Toluene	0.125	0.132	0.121	106	96.7	76.7-116			8.86	20
1,1,2-Trichlorotrifluoroethane	0.125	0.139	0.117	111	93.3	62.6-138			17.6	20
1,2,3-Trichlorobenzene	0.125	0.164	0.183	131	146	72.5-137		J4	10.9	20
1,2,4-Trichlorobenzene	0.125	0.141	0.152	113	122	74.0-137			7.46	20
1,1,1-Trichloroethane	0.125	0.129	0.119	103	95.1	69.9-127			8.46	20
1,1,2-Trichloroethane	0.125	0.134	0.136	108	109	81.9-119			1.43	20
Trichloroethene	0.125	0.137	0.127	109	101	77.2-122			7.76	20
Trichlorofluoromethane	0.125	0.111	0.101	89.2	80.8	51.5-151			9.84	20
1,2,3-Trichloropropane	0.125	0.124	0.143	99.0	114	74.0-124			14.4	20
1,2,3-Trimethylbenzene	0.125	0.118	0.111	94.1	89.1	79.4-118			5.47	20
1,2,4-Trimethylbenzene	0.125	0.125	0.117	100	93.5	77.1-124			6.74	20
1,3,5-Trimethylbenzene	0.125	0.124	0.112	99.5	89.7	79.0-125			10.3	20
Vinyl chloride	0.125	0.126	0.105	101	84.1	58.4-134			17.7	20
o-Xylene	0.125	0.137	0.127	109	102	78.5-124			7.50	20
m&p-Xylenes	0.250	0.262	0.241	105	96.4	77.3-124			8.23	20
(S) Toluene-d8				108	104	80.0-120				
(S) Dibromofluoromethane				96.2	104	74.0-131				
(S) 4-Bromofluorobenzene				96.2	94.2	64.0-132				

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

L1017453-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017453-01 08/16/18 11:45 • (MS) R3334154-4 08/16/18 17:02 • (MSD) R3334154-5 08/16/18 17:21

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 %
Benzene	0.132	U	0.126	0.122	96.1	93.0	1	47.8-131			3.27	22.8
Acrylonitrile	0.658	U	0.913	0.841	139	128	1	39.3-152			8.11	27.2
Bromobenzene	0.132	U	0.149	0.140	113	107	1	40.0-130			5.70	27.4
Bromodichloromethane	0.132	U	0.132	0.127	100	96.6	1	50.6-128			3.70	22.8
Bromoform	0.132	U	0.146	0.144	111	110	1	43.3-139			1.45	25.9
n-Butylbenzene	0.132	U	0.148	0.139	112	105	1	23.6-146			6.51	39.2
sec-Butylbenzene	0.132	U	0.143	0.140	109	106	1	31.0-142			2.49	34.7
tert-Butylbenzene	0.132	U	0.142	0.138	108	105	1	36.9-142			2.86	31.7
Carbon tetrachloride	0.132	U	0.132	0.121	100	92.1	1	46.0-140			8.28	27.2
Chlorobenzene	0.132	U	0.154	0.147	117	112	1	44.1-134			4.77	25.7
Chlorodibromomethane	0.132	U	0.158	0.153	120	116	1	49.7-134			3.57	24
Chloroethane	0.132	U	0.0839	0.0728	63.7	55.3	1	5.00-164			14.1	28.4



L1017453-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017453-01 08/16/18 11:45 • (MS) R3334154-4 08/16/18 17:02 • (MSD) R3334154-5 08/16/18 17:21

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 %
Chloroform	0.132	U	0.130	0.124	98.9	94.3	1	51.2-133			4.70	22.8
Chloromethane	0.132	U	0.131	0.123	99.5	93.2	1	31.4-141			6.50	24.6
2-Chlorotoluene	0.132	U	0.136	0.132	103	100	1	36.1-137			2.83	28.9
4-Chlorotoluene	0.132	U	0.141	0.136	107	103	1	35.4-137			3.31	29.8
1,2-Dibromo-3-Chloropropane	0.132	U	0.133	0.131	101	99.3	1	40.4-138			1.78	30.8
1,2-Dibromoethane	0.132	U	0.157	0.149	119	113	1	50.2-133			4.88	23.6
Dibromomethane	0.132	U	0.135	0.128	102	97.3	1	52.4-128			5.10	23
1,2-Dichlorobenzene	0.132	U	0.152	0.140	116	107	1	34.6-139			8.14	29.9
1,3-Dichlorobenzene	0.132	U	0.145	0.137	110	104	1	28.4-142			5.63	31.2
1,4-Dichlorobenzene	0.132	U	0.147	0.140	112	106	1	35.0-133			4.80	31.1
Dichlorodifluoromethane	0.132	U	0.129	0.115	98.3	87.6	1	31.2-144			11.5	30.2
1,1-Dichloroethane	0.132	U	0.147	0.142	112	108	1	49.1-136			3.43	22.9
1,2-Dichloroethane	0.132	U	0.152	0.140	116	106	1	47.1-129			8.75	22.7
1,1-Dichloroethene	0.132	U	0.150	0.145	114	110	1	36.1-142			3.68	25.6
cis-1,2-Dichloroethene	0.132	U	0.130	0.128	99.0	97.2	1	50.6-133			1.89	23
trans-1,2-Dichloroethene	0.132	U	0.116	0.112	87.9	85.0	1	43.8-135			3.40	24.8
1,2-Dichloropropane	0.132	U	0.159	0.162	121	123	1	50.3-134			1.73	22.7
1,1-Dichloropropene	0.132	U	0.125	0.124	94.7	94.1	1	43.0-137			0.703	26.4
1,3-Dichloropropane	0.132	U	0.153	0.150	116	114	1	51.4-127			1.89	23.1
cis-1,3-Dichloropropene	0.132	U	0.149	0.144	113	110	1	48.4-134			3.29	23.6
trans-1,3-Dichloropropene	0.132	U	0.152	0.139	115	106	1	46.6-135			8.61	25.3
2,2-Dichloropropane	0.132	U	0.109	0.101	82.8	76.6	1	45.2-141			7.71	26.6
Ethylbenzene	0.132	U	0.147	0.144	112	109	1	44.8-135			2.67	26.9
Di-isopropyl ether	0.132	U	0.163	0.150	124	114	1	46.7-140			8.01	23.5
Hexachloro-1,3-butadiene	0.132	U	0.163	0.147	124	111	1	10.0-149			10.3	40
Isopropylbenzene	0.132	U	0.139	0.136	105	103	1	41.9-139			2.07	29.3
p-Isopropyltoluene	0.132	U	0.143	0.136	109	103	1	27.3-146			5.22	35.1
2-Butanone (MEK)	0.658	U	0.604	0.544	91.9	82.6	1	23.9-170			10.6	28.3
Methyl tert-butyl ether	0.132	U	0.126	0.120	96.0	91.3	1	50.4-131			4.93	24.8
Methylene Chloride	0.132	U	0.146	0.137	111	104	1	46.7-125			5.69	22.2
4-Methyl-2-pentanone (MIBK)	0.658	U	0.797	0.745	121	113	1	42.4-146			6.69	26.7
Naphthalene	0.132	U	0.144	0.134	110	102	1	18.4-145			7.75	34
n-Propylbenzene	0.132	U	0.137	0.133	104	101	1	35.2-139			2.66	31.9
Styrene	0.132	U	0.144	0.142	110	108	1	39.7-137			1.88	28.2
1,1,1,2-Tetrachloroethane	0.132	U	0.149	0.139	113	106	1	48.8-136			6.47	25.5
1,1,2,2-Tetrachloroethane	0.132	U	0.107	0.105	81.5	80.0	1	45.7-140			1.93	26.4
Tetrachloroethene	0.132	0.00337	0.156	0.154	116	114	1	37.7-140			1.42	29.2
Toluene	0.132	U	0.145	0.140	110	106	1	47.8-127			3.68	24.3
1,1,2-Trichlorotrifluoroethane	0.132	U	0.156	0.142	119	108	1	35.7-146			9.75	28.8

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1017453-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017453-01 08/16/18 11:45 • (MS) R3334154-4 08/16/18 17:02 • (MSD) R3334154-5 08/16/18 17:21

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 %
1,2,3-Trichlorobenzene	0.132	U	0.183	0.168	139	128	1	10.0-150			8.48	38.5
1,2,4-Trichlorobenzene	0.132	U	0.155	0.141	118	107	1	10.0-153			9.57	39.3
1,1,1-Trichloroethane	0.132	U	0.139	0.132	106	100	1	49.0-138			5.79	25.3
1,1,2-Trichloroethane	0.132	U	0.160	0.155	122	118	1	52.3-132			3.26	23.4
Trichloroethene	0.132	U	0.167	0.164	127	124	1	48.0-132			2.33	24.8
Trichlorofluoromethane	0.132	U	0.243	0.230	185	175	1	12.8-169	J5	J5	5.72	29.7
1,2,3-Trichloropropane	0.132	U	0.137	0.137	104	104	1	44.4-138			0.153	26.3
1,2,4-Trimethylbenzene	0.132	U	0.141	0.135	107	102	1	32.9-139			4.66	30.6
1,2,3-Trimethylbenzene	0.132	U	0.135	0.126	103	95.9	1	41.0-133			6.89	27.6
1,3,5-Trimethylbenzene	0.132	U	0.138	0.133	105	101	1	37.1-138			3.66	30.6
Vinyl chloride	0.132	U	0.121	0.114	91.9	86.8	1	32.0-146			5.79	26.3
o-Xylene	0.132	U	0.152	0.145	115	110	1	43.2-136			4.92	26.2
m&p-Xylenes	0.263	U	0.289	0.280	110	106	1	42.2-134			3.12	27.1
(S) Toluene-d8					110	110		80.0-120				
(S) Dibromofluoromethane					93.3	91.2		74.0-131				
(S) 4-Bromofluorobenzene					98.5	101		64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334767-2 08/17/18 12:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
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
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250
p-Isopropyltoluene	U		0.00233	0.00500
Methylene Chloride	U		0.00664	0.0250

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334767-2 08/17/18 12:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	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
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	117			80.0-120
(S) Dibromofluoromethane	92.9			74.0-131
(S) 4-Bromofluorobenzene	98.8			64.0-132

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3334767-1 08/17/18 10:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acrylonitrile	0.625	0.554	88.6	57.8-143	
Benzene	0.125	0.122	98.0	72.6-120	
Bromobenzene	0.125	0.122	97.4	80.3-115	
Bromodichloromethane	0.125	0.144	115	75.3-119	
Bromoform	0.125	0.126	101	69.1-135	
Bromomethane	0.125	0.117	93.5	23.0-191	
n-Butylbenzene	0.125	0.122	97.9	74.2-134	
sec-Butylbenzene	0.125	0.131	104	77.8-129	



Laboratory Control Sample (LCS)

(LCS) R3334767-1 08/17/18 10:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
tert-Butylbenzene	0.125	0.122	97.9	77.2-129	
Carbon tetrachloride	0.125	0.130	104	69.4-129	
Chlorobenzene	0.125	0.126	101	78.9-122	
Chlorodibromomethane	0.125	0.115	92.0	76.4-126	
Chloroethane	0.125	0.123	98.2	47.2-147	
Chloroform	0.125	0.129	103	73.3-122	
Chloromethane	0.125	0.126	101	53.1-135	
2-Chlorotoluene	0.125	0.129	103	74.6-127	
4-Chlorotoluene	0.125	0.123	98.7	79.5-123	
1,2-Dibromo-3-Chloropropane	0.125	0.126	101	64.9-131	
1,2-Dibromoethane	0.125	0.131	105	78.7-123	
Dibromomethane	0.125	0.137	109	78.5-117	
1,2-Dichlorobenzene	0.125	0.122	97.7	83.6-119	
1,3-Dichlorobenzene	0.125	0.127	101	75.9-129	
1,4-Dichlorobenzene	0.125	0.116	93.0	81.0-115	
Dichlorodifluoromethane	0.125	0.121	96.5	50.9-139	
1,1-Dichloroethane	0.125	0.128	103	71.7-125	
1,2-Dichloroethane	0.125	0.121	97.0	67.2-121	
1,1-Dichloroethene	0.125	0.121	97.2	60.6-133	
cis-1,2-Dichloroethene	0.125	0.121	96.9	76.1-121	
trans-1,2-Dichloroethene	0.125	0.135	108	70.7-124	
1,2-Dichloropropane	0.125	0.112	89.8	76.9-123	
1,1-Dichloropropene	0.125	0.125	99.9	71.2-126	
1,3-Dichloropropane	0.125	0.148	119	80.3-114	J4
cis-1,3-Dichloropropene	0.125	0.130	104	77.3-123	
trans-1,3-Dichloropropene	0.125	0.130	104	73.0-127	
Di-isopropyl ether	0.125	0.111	88.6	67.2-131	
Ethylbenzene	0.125	0.130	104	78.6-124	
Hexachloro-1,3-butadiene	0.125	0.126	101	69.2-136	
Isopropylbenzene	0.125	0.104	83.0	79.4-126	
p-Isopropyltoluene	0.125	0.124	99.1	75.4-132	
Methylene Chloride	0.125	0.117	93.7	68.2-119	
4-Methyl-2-pentanone (MIBK)	0.625	0.638	102	61.1-138	
Methyl tert-butyl ether	0.125	0.120	96.0	70.2-122	
Naphthalene	0.125	0.119	95.1	69.9-132	
n-Propylbenzene	0.125	0.119	94.9	80.2-124	
Styrene	0.125	0.131	104	79.4-124	
1,1,1,2-Tetrachloroethane	0.125	0.111	88.8	76.7-127	
1,1,2,2-Tetrachloroethane	0.125	0.136	109	78.8-124	
Tetrachloroethene	0.125	0.113	90.3	71.1-133	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Laboratory Control Sample (LCS)

(LCS) R3334767-1 08/17/18 10:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Toluene	0.125	0.127	101	76.7-116	
1,1,2-Trichlorotrifluoroethane	0.125	0.127	102	62.6-138	
1,2,3-Trichlorobenzene	0.125	0.120	96.2	72.5-137	
1,2,4-Trichlorobenzene	0.125	0.118	94.1	74.0-137	
1,1,1-Trichloroethane	0.125	0.132	105	69.9-127	
1,1,2-Trichloroethane	0.125	0.142	114	81.9-119	
Trichloroethene	0.125	0.128	102	77.2-122	
Trichlorofluoromethane	0.125	0.110	87.7	51.5-151	
1,2,3-Trichloropropane	0.125	0.126	101	74.0-124	
1,2,3-Trimethylbenzene	0.125	0.125	100	79.4-118	
1,2,4-Trimethylbenzene	0.125	0.126	100	77.1-124	
1,3,5-Trimethylbenzene	0.125	0.130	104	79.0-125	
o-Xylene	0.125	0.125	100	78.5-124	
m&p-Xylenes	0.250	0.248	99.1	77.3-124	
<i>(S) Toluene-d8</i>			105	80.0-120	
<i>(S) Dibromofluoromethane</i>			99.5	74.0-131	
<i>(S) 4-Bromofluorobenzene</i>			104	64.0-132	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1017857-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017857-02 08/17/18 14:25 • (MS) R3334767-3 08/17/18 20:57 • (MSD) R3334767-4 08/17/18 21:18

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acrylonitrile	0.625	ND	0.356	0.319	57.0	51.0	1	39.3-152			11.1	27.2
Benzene	0.125	ND	0.0582	0.0268	46.5	21.5	1	47.8-131	J6	J3 J6	73.7	22.8
Bromobenzene	0.125	ND	0.0803	0.0590	64.3	47.2	1	40.0-130		J3	30.6	27.4
Bromodichloromethane	0.125	ND	0.0879	0.0548	70.3	43.9	1	50.6-128		J3 J6	46.4	22.8
Bromoform	0.125	ND	0.0775	0.0630	62.0	50.4	1	43.3-139			20.7	25.9
Bromomethane	0.125	ND	0.0264	0.0140	21.1	11.2	1	5.00-189		J3	61.4	26.7
n-Butylbenzene	0.125	ND	0.0886	0.0385	70.9	30.8	1	23.6-146		J3	78.9	39.2
sec-Butylbenzene	0.125	ND	0.0912	0.0383	72.9	30.6	1	31.0-142		J3 J6	81.7	34.7
tert-Butylbenzene	0.125	ND	0.0861	0.0383	68.9	30.7	1	36.9-142		J3 J6	76.8	31.7
Carbon tetrachloride	0.125	ND	0.0602	0.0191	48.2	15.2	1	46.0-140		J3 J6	104	27.2
Chlorobenzene	0.125	ND	0.0862	0.0494	68.9	39.5	1	44.1-134		J3 J6	54.2	25.7
Chlorodibromomethane	0.125	ND	0.0739	0.0597	59.1	47.8	1	49.7-134		J6	21.2	24
Chloroethane	0.125	ND	0.0337	0.0161	27.0	12.9	1	5.00-164		J3	70.6	28.4
Chloroform	0.125	ND	0.0820	0.0436	65.6	34.9	1	51.2-133		J3 J6	61.1	22.8
Chloromethane	0.125	ND	0.0231	0.0108	18.5	8.62	1	31.4-141	J6	J3 J6	72.7	24.6
2-Chlorotoluene	0.125	ND	0.0821	0.0474	65.7	37.9	1	36.1-137		J3	53.7	28.9



L1017857-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017857-02 08/17/18 14:25 • (MS) R3334767-3 08/17/18 20:57 • (MSD) R3334767-4 08/17/18 21:18

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 %
4-Chlorotoluene	0.125	ND	0.0836	0.0490	66.8	39.2	1	35.4-137		J3	52.1	29.8
1,2-Dibromo-3-Chloropropane	0.125	ND	0.0817	0.0749	65.4	59.9	1	40.4-138			8.78	30.8
1,2-Dibromoethane	0.125	ND	0.0811	0.0651	64.9	52.1	1	50.2-133			21.8	23.6
Dibromomethane	0.125	ND	0.0784	0.0542	62.7	43.3	1	52.4-128		J3 J6	36.5	23
1,2-Dichlorobenzene	0.125	ND	0.0875	0.0625	70.0	50.0	1	34.6-139		J3	33.3	29.9
1,3-Dichlorobenzene	0.125	ND	0.0880	0.0558	70.4	44.7	1	28.4-142		J3	44.8	31.2
1,4-Dichlorobenzene	0.125	ND	0.0812	0.0586	65.0	46.9	1	35.0-133		J3	32.3	31.1
Dichlorodifluoromethane	0.125	ND	0.0411	0.00877	32.9	7.02	1	31.2-144		J3 J6	130	30.2
1,1-Dichloroethane	0.125	ND	0.0735	0.0333	58.8	26.7	1	49.1-136		J3 J6	75.2	22.9
1,2-Dichloroethane	0.125	ND	0.0698	0.0498	55.8	39.8	1	47.1-129		J3 J6	33.4	22.7
1,1-Dichloroethene	0.125	ND	0.0405	0.0137	32.4	11.0	1	36.1-142	J6	J3 J6	98.8	25.6
cis-1,2-Dichloroethene	0.125	ND	0.0639	0.0348	51.1	27.8	1	50.6-133		J3 J6	59.0	23
trans-1,2-Dichloroethene	0.125	ND	0.0393	0.0181	31.5	14.5	1	43.8-135	J6	J3 J6	73.9	24.8
1,2-Dichloropropane	0.125	ND	0.0708	0.0411	56.6	32.9	1	50.3-134		J3 J6	52.9	22.7
1,1-Dichloropropene	0.125	ND	0.0487	0.0171	38.9	13.7	1	43.0-137	J6	J3 J6	95.8	26.4
1,3-Dichloropropane	0.125	ND	0.0962	0.0722	76.9	57.7	1	51.4-127		J3	28.5	23.1
cis-1,3-Dichloropropene	0.125	ND	0.0873	0.0561	69.8	44.9	1	48.4-134		J3 J6	43.6	23.6
trans-1,3-Dichloropropene	0.125	ND	0.0742	0.0560	59.3	44.8	1	46.6-135		J3 J6	27.9	25.3
Di-isopropyl ether	0.125	ND	0.0696	0.0474	55.7	37.9	1	46.7-140		J3 J6	37.8	23.5
Ethylbenzene	0.125	ND	0.0808	0.0402	64.7	32.2	1	44.8-135		J3 J6	67.1	26.9
Hexachloro-1,3-butadiene	0.125	ND	0.0947	0.0480	75.8	38.4	1	10.0-149		J3	65.5	40
Isopropylbenzene	0.125	ND	0.0656	0.0307	52.5	24.5	1	41.9-139		J3 J6	72.6	29.3
p-Isopropyltoluene	0.125	ND	0.0833	0.0394	66.6	31.6	1	27.3-146		J3	71.4	35.1
Methylene Chloride	0.125	ND	0.0566	0.0340	45.3	27.2	1	46.7-125	J6	J3 J6	49.8	22.2
4-Methyl-2-pentanone (MIBK)	0.625	ND	0.451	0.410	72.2	65.6	1	42.4-146			9.48	26.7
Methyl tert-butyl ether	0.125	ND	0.0706	0.0573	56.5	45.8	1	50.4-131		J6	20.8	24.8
Naphthalene	0.125	ND	0.0808	0.0761	64.6	60.9	1	18.4-145			5.92	34
n-Propylbenzene	0.125	ND	0.0718	0.0326	57.5	26.1	1	35.2-139		J3 J6	75.0	31.9
Styrene	0.125	ND	0.0822	0.0515	65.7	41.2	1	39.7-137		J3	45.9	28.2
1,1,1,2-Tetrachloroethane	0.125	ND	0.0826	0.0519	66.1	41.6	1	48.8-136		J3 J6	45.6	25.5
1,1,2,2-Tetrachloroethane	0.125	ND	0.0781	0.0765	62.5	61.2	1	45.7-140			2.11	26.4
Tetrachloroethene	0.125	ND	0.0528	0.0240	42.2	19.2	1	37.7-140		J3 J6	74.9	29.2
Toluene	0.125	ND	0.0706	0.0354	54.6	26.5	1	47.8-127		J3 J6	66.4	24.3
1,2,3-Trichlorobenzene	0.125	ND	0.0911	0.0750	72.9	60.0	1	10.0-150			19.4	38.5
1,1,2-Trichlorotrifluoroethane	0.125	ND	0.0589	0.0151	47.1	12.1	1	35.7-146		J3 J6	118	28.8
1,2,4-Trichlorobenzene	0.125	ND	0.0853	0.0645	68.2	51.6	1	10.0-153			27.7	39.3
1,1,1-Trichloroethane	0.125	ND	0.0737	0.0254	58.9	20.3	1	49.0-138		J3 J6	97.6	25.3
1,1,2-Trichloroethane	0.125	ND	0.103	0.0735	82.5	58.8	1	52.3-132		J3	33.5	23.4
Trichloroethene	0.125	ND	0.0735	0.0324	58.8	25.9	1	48.0-132		J3 J6	77.6	24.8
Trichlorofluoromethane	0.125	ND	0.0465	0.0121	37.2	9.72	1	12.8-169		J3 J6	117	29.7

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1017857-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017857-02 08/17/18 14:25 • (MS) R3334767-3 08/17/18 20:57 • (MSD) R3334767-4 08/17/18 21:18

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 %
1,2,3-Trichloropropane	0.125	ND	0.0969	0.0796	77.5	63.6	1	44.4-138			19.7	26.3
1,2,4-Trimethylbenzene	0.125	ND	0.0823	0.0486	65.9	38.9	1	32.9-139		J3	51.5	30.6
1,2,3-Trimethylbenzene	0.125	ND	0.0866	0.0533	69.3	42.6	1	41.0-133		J3	47.7	27.6
1,3,5-Trimethylbenzene	0.125	ND	0.0839	0.0416	67.1	33.3	1	37.1-138		J3 J6	67.5	30.6
o-Xylene	0.125	ND	0.0839	0.0423	67.1	33.9	1	43.2-136		J3 J6	65.9	26.2
m&p-Xylenes	0.250	ND	0.151	0.0735	60.4	29.4	1	42.2-134		J3 J6	69.1	27.1
(S) Toluene-d8					112	113		80.0-120				
(S) Dibromofluoromethane					95.5	96.7		74.0-131				
(S) 4-Bromofluorobenzene					102	106		64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334797-2 08/17/18 22:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Bromomethane	U		0.00370	0.0125
(S) Toluene-d8	115			80.0-120
(S) Dibromofluoromethane	88.4			74.0-131
(S) 4-Bromofluorobenzene	105			64.0-132

Laboratory Control Sample (LCS)

(LCS) R3334797-1 08/17/18 21:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.643	103	25.3-178	
Bromomethane	0.125	0.111	88.6	23.0-191	
(S) Toluene-d8			106	80.0-120	
(S) Dibromofluoromethane			97.1	74.0-131	
(S) 4-Bromofluorobenzene			98.6	64.0-132	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335060-2 08/19/18 10:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
2,2-Dichloropropane	U		0.000793	0.00250
2-Butanone (MEK)	U		0.0125	0.0250
Vinyl chloride	U		0.000683	0.00250
(S) Toluene-d8	113			80.0-120
(S) Dibromofluoromethane	94.0			74.0-131
(S) 4-Bromofluorobenzene	97.7			64.0-132

Laboratory Control Sample (LCS)

(LCS) R3335060-1 08/19/18 09:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.659	105	25.3-178	
2,2-Dichloropropane	0.125	0.0971	77.7	61.9-132	
2-Butanone (MEK)	0.625	0.957	153	44.5-154	
Vinyl chloride	0.125	0.149	119	58.4-134	
(S) Toluene-d8			105	80.0-120	
(S) Dibromofluoromethane			103	74.0-131	
(S) 4-Bromofluorobenzene			93.3	64.0-132	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334655-3 08/15/18 22:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	U		0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334655-3 08/15/18 22:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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		0.412	1.00
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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	101			80.0-120
(S) Dibromofluoromethane	95.6			76.0-123
(S) 4-Bromofluorobenzene	98.5			80.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R3334655-1 08/15/18 21:24 • (LCSD) R3334655-2 08/15/18 21:43

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 %
Acetone	125	107	108	85.7	86.4	10.0-160			0.783	23
Acrolein	125	145	148	116	118	10.0-160			2.07	20
Acrylonitrile	125	120	121	95.7	96.9	60.0-142			1.16	20



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

(LCS) R3334655-1 08/15/18 21:24 • (LCSD) R3334655-2 08/15/18 21:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Benzene	25.0	25.2	25.5	101	102	69.0-123			1.32	20
Bromobenzene	25.0	25.1	25.5	100	102	79.0-120			1.65	20
Bromodichloromethane	25.0	25.7	25.4	103	102	76.0-120			1.05	20
Bromoform	25.0	28.3	28.5	113	114	67.0-132			0.703	20
Bromomethane	25.0	22.3	20.4	89.4	81.7	18.0-160			8.94	20
n-Butylbenzene	25.0	24.0	24.5	96.1	98.2	72.0-126			2.16	20
sec-Butylbenzene	25.0	25.9	26.5	103	106	74.0-121			2.30	20
tert-Butylbenzene	25.0	26.6	27.6	106	111	75.0-122			3.81	20
Carbon tetrachloride	25.0	26.3	26.8	105	107	63.0-122			2.04	20
Chlorobenzene	25.0	27.5	27.1	110	108	79.0-121			1.57	20
Chlorodibromomethane	25.0	27.5	27.6	110	111	75.0-125			0.420	20
Chloroethane	25.0	22.4	23.2	89.5	93.0	47.0-152			3.80	20
Chloroform	25.0	25.8	26.4	103	105	72.0-121			2.11	20
Chloromethane	25.0	21.0	21.2	84.0	84.8	48.0-139			0.961	20
2-Chlorotoluene	25.0	26.6	26.9	107	107	74.0-122			0.843	20
4-Chlorotoluene	25.0	26.1	26.4	104	106	79.0-120			1.33	20
1,2-Dibromo-3-Chloropropane	25.0	22.2	22.4	88.9	89.4	64.0-127			0.592	20
1,2-Dibromoethane	25.0	26.0	25.4	104	102	77.0-123			2.32	20
Dibromomethane	25.0	25.1	25.3	100	101	78.0-120			0.778	20
1,2-Dichlorobenzene	25.0	25.4	25.8	101	103	80.0-120			1.70	20
1,3-Dichlorobenzene	25.0	26.3	26.1	105	104	72.0-123			0.722	20
1,4-Dichlorobenzene	25.0	24.8	25.5	99.2	102	77.0-120			2.74	20
Dichlorodifluoromethane	25.0	19.7	19.5	78.9	77.9	49.0-155			1.20	20
1,1-Dichloroethane	25.0	25.5	26.4	102	106	70.0-126			3.49	20
1,2-Dichloroethane	25.0	24.2	24.6	96.7	98.3	67.0-126			1.59	20
1,1-Dichloroethene	25.0	26.6	28.0	106	112	64.0-129			5.05	20
cis-1,2-Dichloroethene	25.0	26.8	27.4	107	110	73.0-120			2.25	20
trans-1,2-Dichloroethene	25.0	25.3	26.4	101	105	71.0-121			4.22	20
1,2-Dichloropropane	25.0	26.0	26.5	104	106	75.0-125			1.67	20
1,1-Dichloropropene	25.0	25.1	26.2	101	105	71.0-129			4.34	20
1,3-Dichloropropane	25.0	26.2	25.4	105	101	80.0-121			3.12	20
cis-1,3-Dichloropropene	25.0	27.5	26.9	110	108	79.0-123			2.21	20
trans-1,3-Dichloropropene	25.0	27.4	26.4	109	106	74.0-127			3.61	20
2,2-Dichloropropane	25.0	23.9	24.4	95.6	97.7	60.0-125			2.18	20
Di-isopropyl ether	25.0	25.7	26.2	103	105	59.0-133			1.80	20
Ethylbenzene	25.0	27.1	26.7	108	107	77.0-120			1.47	20
Hexachloro-1,3-butadiene	25.0	24.9	27.2	99.5	109	64.0-131			8.81	20
Isopropylbenzene	25.0	26.4	27.0	106	108	75.0-120			2.34	20
p-Isopropyltoluene	25.0	26.3	26.9	105	107	74.0-126			2.21	20
2-Butanone (MEK)	125	113	114	90.5	91.4	37.0-158			1.03	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) R3334655-1 08/15/18 21:24 • (LCSD) R3334655-2 08/15/18 21:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Methylene Chloride	25.0	25.5	26.5	102	106	66.0-121			3.78	20
4-Methyl-2-pentanone (MIBK)	125	124	120	98.9	96.1	59.0-143			2.87	20
Methyl tert-butyl ether	25.0	24.5	25.5	98.1	102	64.0-123			3.85	20
Naphthalene	25.0	19.4	20.3	77.6	81.2	62.0-128			4.43	20
n-Propylbenzene	25.0	25.9	26.4	104	106	79.0-120			1.82	20
Styrene	25.0	27.4	27.5	110	110	78.0-124			0.308	20
1,1,1,2-Tetrachloroethane	25.0	28.3	28.6	113	114	75.0-122			1.08	20
1,1,2,2-Tetrachloroethane	25.0	24.0	24.1	96.0	96.5	71.0-122			0.484	20
Tetrachloroethene	25.0	28.4	27.6	113	110	70.0-127			2.68	20
Toluene	25.0	26.4	25.9	106	104	77.0-120			2.09	20
1,1,2-Trichlorotrifluoroethane	25.0	23.7	25.1	94.9	100	61.0-136			5.45	20
1,2,3-Trichlorobenzene	25.0	21.2	22.7	84.8	90.9	61.0-133			6.95	20
1,2,4-Trichlorobenzene	25.0	24.3	25.6	97.2	103	69.0-129			5.43	20
1,1,1-Trichloroethane	25.0	26.6	27.3	106	109	68.0-122			2.77	20
1,1,2-Trichloroethane	25.0	26.5	25.8	106	103	78.0-120			2.70	20
Trichloroethene	25.0	28.0	28.5	112	114	78.0-120			1.78	20
Trichlorofluoromethane	25.0	24.1	25.1	96.5	100	56.0-137			3.90	20
1,2,3-Trichloropropane	25.0	25.2	25.2	101	101	72.0-124			0.0843	20
1,2,3-Trimethylbenzene	25.0	24.6	25.3	98.3	101	75.0-120			3.00	20
1,2,4-Trimethylbenzene	25.0	26.1	27.0	105	108	75.0-120			3.24	20
1,3,5-Trimethylbenzene	25.0	26.8	27.3	107	109	75.0-120			1.89	20
Vinyl chloride	25.0	23.6	24.2	94.5	96.7	64.0-133			2.29	20
o-Xylene	25.0	26.8	26.8	107	107	78.0-120			0.0208	20
m&p-Xylenes	50.0	53.7	53.2	107	106	77.0-120			0.982	20
(S) Toluene-d8				101	98.3	80.0-120				
(S) Dibromofluoromethane				96.3	97.4	76.0-123				
(S) 4-Bromofluorobenzene				97.4	95.1	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334702-1 08/18/18 00:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	74.8			18.0-148

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3334702-2 08/18/18 00:28 • (LCSD) R3334702-3 08/18/18 00:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	20.3	20.4	81.2	81.6	50.0-150			0.491	20
Residual Range Organics (RRO)	25.0	19.0	18.7	76.0	74.8	50.0-150			1.59	20
(S) o-Terphenyl				77.9	70.3	18.0-148				

5 Sr

6 Qc

7 Gl

L1017457-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017457-08 08/18/18 03:50 • (MS) R3334702-4 08/18/18 04:03 • (MSD) R3334702-5 08/18/18 04:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	30.4	ND	23.9	25.1	78.4	82.4	1	50.0-150			4.98	20
Residual Range Organics (RRO)	30.4	ND	25.3	25.6	69.3	70.1	1	50.0-150			0.957	20
(S) o-Terphenyl					64.4	74.3		18.0-148				

8 Al

9 Sc



Method Blank (MB)

(MB) R3335432-1 08/21/18 12:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	94.1			18.0-148

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

(LCS) R3335432-2 08/21/18 13:03 • (LCSD) R3335432-3 08/21/18 13:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	25.7	24.1	103	96.4	50.0-150			6.43	20
Residual Range Organics (RRO)	25.0	21.4	21.2	85.6	84.8	50.0-150			0.939	20
<i>(S) o-Terphenyl</i>				94.3	87.4	18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335217-3 08/19/18 22:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	0.00285	J	0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	73.7			14.0-149
(S) 2-Fluorobiphenyl	89.6			34.0-125
(S) p-Terphenyl-d14	87.6			23.0-120

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

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

(LCS) R3335217-1 08/19/18 22:14 • (LCSD) R3335217-2 08/19/18 22:36

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 %
Anthracene	0.0800	0.0649	0.0649	81.1	81.1	50.0-125			0.000	20
Acenaphthene	0.0800	0.0664	0.0654	83.0	81.8	52.0-120			1.52	20
Acenaphthylene	0.0800	0.0707	0.0693	88.4	86.6	51.0-120			2.00	20
Benzo(a)anthracene	0.0800	0.0721	0.0703	90.1	87.9	46.0-121			2.53	20
Benzo(a)pyrene	0.0800	0.0572	0.0589	71.5	73.6	42.0-121			2.93	20
Benzo(b)fluoranthene	0.0800	0.0710	0.0702	88.8	87.8	42.0-123			1.13	20
Benzo(g,h,i)perylene	0.0800	0.0694	0.0687	86.8	85.9	43.0-128			1.01	20
Benzo(k)fluoranthene	0.0800	0.0809	0.0790	101	98.8	45.0-128			2.38	20
Chrysene	0.0800	0.0745	0.0738	93.1	92.3	48.0-127			0.944	20
Dibenz(a,h)anthracene	0.0800	0.0716	0.0701	89.5	87.6	43.0-132			2.12	20
Fluoranthene	0.0800	0.0740	0.0727	92.5	90.9	49.0-129			1.77	20



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

[L1017457-01,02,03,04,06,07,08,09](#)

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

(LCS) R3335217-1 08/19/18 22:14 • (LCSD) R3335217-2 08/19/18 22:36

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 %
Fluorene	0.0800	0.0726	0.0713	90.8	89.1	50.0-120			1.81	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0701	0.0690	87.6	86.3	44.0-131			1.58	20
Naphthalene	0.0800	0.0704	0.0695	88.0	86.9	50.0-120			1.29	20
Phenanthrene	0.0800	0.0670	0.0661	83.8	82.6	48.0-120			1.35	20
Pyrene	0.0800	0.0712	0.0705	89.0	88.1	48.0-135			0.988	20
1-Methylnaphthalene	0.0800	0.0702	0.0699	87.8	87.4	52.0-122			0.428	20
2-Methylnaphthalene	0.0800	0.0679	0.0673	84.9	84.1	52.0-120			0.888	20
2-Chloronaphthalene	0.0800	0.0680	0.0667	85.0	83.4	50.0-120			1.93	20
(S) Nitrobenzene-d5				78.3	74.1	14.0-149				
(S) 2-Fluorobiphenyl				89.4	86.5	34.0-125				
(S) p-Terphenyl-d14				86.2	84.2	23.0-120				

L1017457-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017457-02 08/20/18 05:32 • (MS) R3335217-4 08/20/18 05:54 • (MSD) R3335217-5 08/20/18 06:16

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 %
Anthracene	0.0872	ND	0.0743	0.0678	80.0	72.7	1	20.0-136			9.06	24
Acenaphthene	0.0872	ND	0.0611	0.0569	68.2	63.5	1	29.0-124			7.02	20
Acenaphthylene	0.0872	ND	0.0705	0.0667	79.1	74.7	1	35.0-120			5.56	20
Benzo(a)anthracene	0.0872	0.0200	0.110	0.0988	103	90.4	1	13.0-132			10.9	27
Benzo(a)pyrene	0.0872	0.0239	0.112	0.101	101	88.3	1	14.0-138			10.7	27
Benzo(b)fluoranthene	0.0872	0.0294	0.107	0.0936	88.9	73.5	1	10.0-129			13.4	31
Benzo(g,h,i)perylene	0.0872	0.0180	0.0884	0.0770	80.8	67.6	1	10.0-133			13.8	30
Benzo(k)fluoranthene	0.0872	0.0109	0.0815	0.0909	80.9	91.8	1	15.0-131			11.0	27
Chrysene	0.0872	0.0194	0.107	0.103	101	95.5	1	15.0-137			4.46	25
Dibenz(a,h)anthracene	0.0872	ND	0.0709	0.0650	76.1	69.3	1	15.0-132			8.67	27
Fluoranthene	0.0872	0.0327	0.128	0.114	109	93.7	1	13.0-139			10.8	28
Fluorene	0.0872	ND	0.0664	0.0612	75.0	69.0	1	27.0-122			8.21	22
Indeno(1,2,3-cd)pyrene	0.0872	0.0141	0.0833	0.0737	79.4	68.4	1	11.0-133			12.2	29
Naphthalene	0.0872	ND	0.0708	0.0687	76.4	74.0	1	18.0-136			2.97	21
Phenanthrene	0.0872	0.0124	0.0817	0.0761	79.4	73.0	1	15.0-133			7.05	25
Pyrene	0.0872	0.0323	0.121	0.116	102	95.5	1	11.0-146			4.61	29
1-Methylnaphthalene	0.0872	ND	0.0685	0.0643	75.7	71.0	1	24.0-137			6.24	22
2-Methylnaphthalene	0.0872	ND	0.0676	0.0639	73.8	69.6	1	23.0-136			5.64	22
2-Chloronaphthalene	0.0872	ND	0.0623	0.0576	71.4	66.0	1	36.0-120			7.83	20
(S) Nitrobenzene-d5					78.4	77.1		14.0-149				
(S) 2-Fluorobiphenyl					83.6	80.9		34.0-125				
(S) p-Terphenyl-d14					84.1	80.5		23.0-120				

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



Method Blank (MB)

(MB) R3334683-3 08/17/18 08:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	124			14.0-149
(S) 2-Fluorobiphenyl	110			34.0-125
(S) p-Terphenyl-d14	93.4			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3334683-1 08/17/18 07:46 • (LCSD) R3334683-2 08/17/18 08:07

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 %
Anthracene	0.0800	0.0801	0.0776	100	97.0	50.0-125			3.17	20
Acenaphthene	0.0800	0.0815	0.0811	102	101	52.0-120			0.492	20
Acenaphthylene	0.0800	0.0832	0.0825	104	103	51.0-120			0.845	20
Benzo(a)anthracene	0.0800	0.0776	0.0760	97.0	95.0	46.0-121			2.08	20
Benzo(a)pyrene	0.0800	0.0690	0.0677	86.3	84.6	42.0-121			1.90	20
Benzo(b)fluoranthene	0.0800	0.0812	0.0817	102	102	42.0-123			0.614	20
Benzo(g,h,i)perylene	0.0800	0.0792	0.0779	99.0	97.4	43.0-128			1.65	20
Benzo(k)fluoranthene	0.0800	0.0787	0.0772	98.4	96.5	45.0-128			1.92	20
Chrysene	0.0800	0.0812	0.0806	102	101	48.0-127			0.742	20
Dibenz(a,h)anthracene	0.0800	0.0829	0.0819	104	102	43.0-132			1.21	20
Fluoranthene	0.0800	0.0879	0.0846	110	106	49.0-129			3.83	20



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

(LCS) R3334683-1 08/17/18 07:46 • (LCSD) R3334683-2 08/17/18 08:07

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 %
Fluorene	0.0800	0.0829	0.0828	104	104	50.0-120			0.121	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0813	0.0799	102	99.9	44.0-131			1.74	20
Naphthalene	0.0800	0.0789	0.0782	98.6	97.8	50.0-120			0.891	20
Phenanthrene	0.0800	0.0771	0.0733	96.4	91.6	48.0-120			5.05	20
Pyrene	0.0800	0.0774	0.0753	96.8	94.1	48.0-135			2.75	20
1-Methylnaphthalene	0.0800	0.0863	0.0868	108	109	52.0-122			0.578	20
2-Methylnaphthalene	0.0800	0.0835	0.0830	104	104	52.0-120			0.601	20
2-Chloronaphthalene	0.0800	0.0824	0.0821	103	103	50.0-120			0.365	20
(S) Nitrobenzene-d5				101	122	14.0-149				
(S) 2-Fluorobiphenyl				107	110	34.0-125				
(S) p-Terphenyl-d14				93.2	94.4	23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1017456-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017456-06 08/17/18 10:56 • (MS) R3334683-4 08/17/18 11:17 • (MSD) R3334683-5 08/17/18 11:38

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 %
Anthracene	0.0804	U	0.0800	0.0747	99.5	93.4	1	20.0-136			6.80	24
Acenaphthene	0.0804	U	0.0785	0.0727	97.6	90.9	1	29.0-124			7.65	20
Acenaphthylene	0.0804	U	0.0799	0.0737	99.3	92.1	1	35.0-120			8.09	20
Benzo(a)anthracene	0.0804	U	0.0764	0.0707	95.0	88.4	1	13.0-132			7.73	27
Benzo(a)pyrene	0.0804	U	0.0788	0.0738	98.0	92.2	1	14.0-138			6.62	27
Benzo(b)fluoranthene	0.0804	U	0.0731	0.0686	91.0	85.8	1	10.0-129			6.38	31
Benzo(g,h,i)perylene	0.0804	U	0.0770	0.0719	95.8	89.9	1	10.0-133			6.93	30
Benzo(k)fluoranthene	0.0804	U	0.0804	0.0757	100	94.6	1	15.0-131			6.07	27
Chrysene	0.0804	U	0.0779	0.0722	96.9	90.3	1	15.0-137			7.57	25
Dibenz(a,h)anthracene	0.0804	U	0.0803	0.0751	99.9	93.9	1	15.0-132			6.64	27
Fluoranthene	0.0804	U	0.0872	0.0814	109	102	1	13.0-139			6.99	28
Fluorene	0.0804	U	0.0797	0.0740	99.1	92.5	1	27.0-122			7.40	22
Indeno(1,2,3-cd)pyrene	0.0804	U	0.0791	0.0743	98.4	92.9	1	11.0-133			6.31	29
Naphthalene	0.0804	U	0.0766	0.0706	95.3	88.3	1	18.0-136			8.15	21
Phenanthrene	0.0804	U	0.0725	0.0678	90.2	84.7	1	15.0-133			6.75	25
Pyrene	0.0804	U	0.0774	0.0715	96.2	89.3	1	11.0-146			7.92	29
1-Methylnaphthalene	0.0804	U	0.0847	0.0787	105	98.4	1	24.0-137			7.34	22
2-Methylnaphthalene	0.0804	U	0.0810	0.0749	101	93.7	1	23.0-136			7.83	22
2-Chloronaphthalene	0.0804	U	0.0795	0.0739	98.8	92.4	1	36.0-120			7.28	20
(S) Nitrobenzene-d5					101	91.4		14.0-149				
(S) 2-Fluorobiphenyl					105	101		34.0-125				
(S) p-Terphenyl-d14					96.2	91.7		23.0-120				



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.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
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.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

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

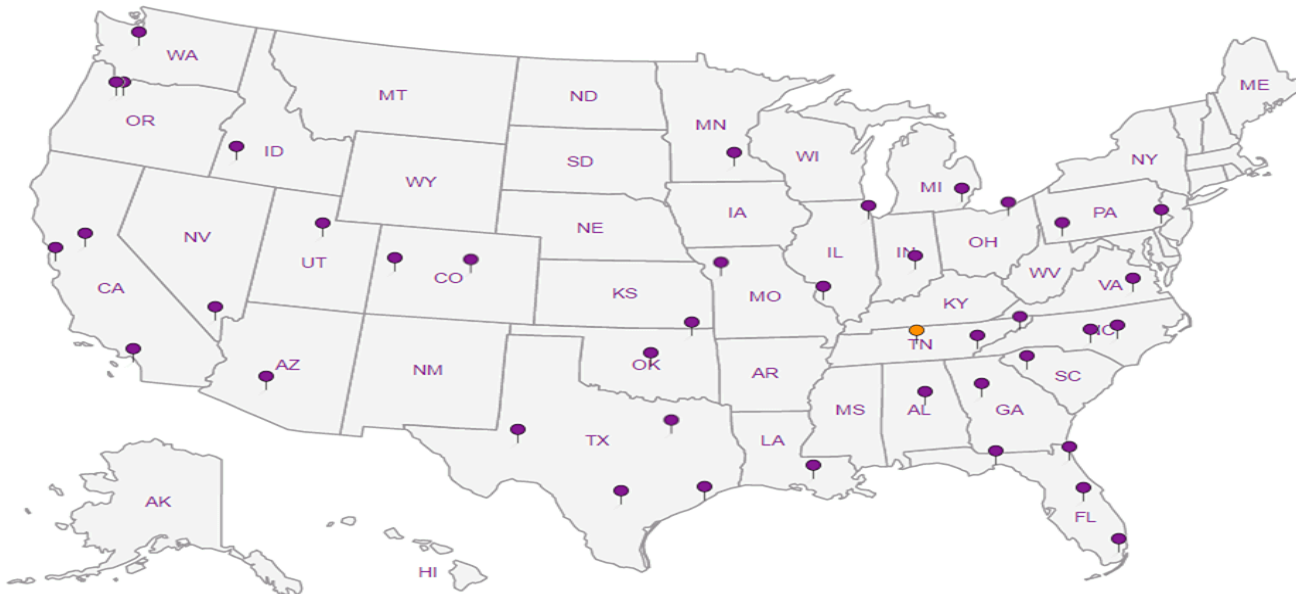
Third Party Federal Accreditations

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

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

Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Pres
Chk

Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
Katie.Teague@kennedyjenks.com

Project
Description: BNSF - Wishram Railyard, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1896120-04

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
Katie Teague

Rush? (Lab MUST Be Notified)

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Quote #

Date Results Needed

immediately
Packed on Ice N Y

No.
of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDX no SGT, PAHS 4ozClr-NoPres	TPHDX with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr							
B-18-18(15-2.0)	Grab	SS	15-2	8/8/18	1325	3	X	X	X	X								
B-18-14(2.0-2.5)	Grab	SS	2-2.5	8/8/18	1510	3	X	X	X	X								01
B-18-15(2.0-2.5)	Grab	SS	2-2.5	8/8/18	1600	3	X	X	X	X								02
B-18-16(2.0-2.5)	Grab	SS	2-2.5	8/8/18	1615	3	X	X	X	X								03
B-18-18(14.0-14.5)	Grab	SS	14-14.5	8/9/18	0745	3	X	X	X	X								04
TB-06-20180810	---	SS	---	8/10/18	---	1					X							05
B-18-14(9.5-10.0)	Grab	SS	9.5-10	8/9/18	1310	3	X	X	X	X								06
B-18-16(9.0-9.5)	Grab	SS	9-9.5	8/9/18	1530	3	X	X	X	X								07
B-18-14(26.0-26.5)	Grab	SS	26-26.5	8/9/18	1435	3	X	X	X	X								08
B-18-18(47.0-47.5)	Grab	SS	47-47.5	8/9/18	1105	3	X	X	X	X								09

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: Include Dx and Gx chromatograms

No spaces in sample names

Samples returned via:
 UPS FedEx Courier

Tracking # 4492 6218 1848, 4492 6218 1859

pH Temp

Flow Other

Sample Receipt Checklist

COC Seal Present/Intact: 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

4.5 ME/HR

Relinquished by: (Signature)

Date:

8/10/18

Time:

Received by: (Signature)

FedEx 1400 0930

Trip Blank Received: Yes No

2 (1 ml) HCL / MeOH
TBR

Temp: °C Bottles Received:

21.40 46

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date:

Time:

Hold:

8/14/18 8:45

Condition
NCF OK

MRCRAB, TS 4ozClr-NoPres

NWTPHGX 40ml/NaHSO4/Syr/MeOH

TPHDX no SGT, PAHS 4ozClr-NoPres

TPHDX with SGT 4ozClr-NoPres

V8260C 40mlAmb/MeOH5ml/Syr

Chain of Custody Page ___ of ___



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# 1617457
H091

Acctnum: BNSF1KEN

Template: T138670

Prelogin: P663876

T5R: 134 - Mark W. Beasley

PB: 7-23-18

Shipped Via: FedEX Ground

Remarks Sample # (lab only)

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Accounts Payable
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Pres
 Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
 KatieTeague@kennedyjenks.com,

Project
 Description: **BNSF - Wishram Railyard, WA**

City/State
 Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Client Project #
1896120.04

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]
 Immediately Packed on Ice N Y X

Rush? (Lab MUST Be Notified)
 ___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day

Quote #
 Date Results Needed

No.
 of
 Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	Remarks	Sample # (lab only)
TR-07-20180810	—	SS	—	8/10/18	—	1					X		-10
B-18-17(2.0-2.5)	Grab	SS	2-2.5	8/10/18	0835	4	X	X	X	X			11-12
B-18-13(2.0-2.5)		SS	2-2.5	8/10/18	0910	3	X	X		X			12-13
B-18-12(2.0-2.5)		SS	2-2.5		0920	3	X	X		X			13-14
B-18-06(2.0-2.5)		SS	2-2.5		1010	4	X	X	X	X			14-15, 16
B-18-07(2.0-2.5)		SS	2-2.5		1025	3	X	X		X			15-17
B-18-08(2.0-2.5)		SS	2-2.5		1115	3	X	X		X			16-18
WMW-32(2.0-2.5)	↓	SS	2-2.5	↓	1145	2		X					17-17
		SS											
		SS											

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: Include Dx and Gx chromatograms
No spaces in sample names
 pH _____ Temp _____
 Flow _____ Other _____
 Samples returned via:
 ___ UPS ___ FedEx ___ Courier _____
 Tracking # **4492 624 1848, 4492 628 1859**

Sample Receipt Checklist
 COC Seal Present/Intact: 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)
[Signature]
 Date: **8/10/18**
 Time: **1400**

Date: **8/10/18**
 Time: **1400**

Received by: (Signature)
FedEx
 Received by: (Signature)
[Signature]
 Received for lab by: (Signature)
[Signature]

Trip Blank Received: (Yes) No
2 (1 MeOH/HCL/MeOH
 1 MeOH/TBR)
 Temp: **2.10** °C
 Bottles Received: **46**
 Date: **8/14/18** Time: **8:45**

if preservation required by Login: Date/Time
 Hold:
 Condition:
 NCF OK



Login #:1017457	Client:BNSF1KEN	Date:08/14/18	Evaluated by:Matthew Lockhart
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Non-Conformance (check applicable items)

Sample Integrity	Chain of Custody Clarification	
Parameter(s) past holding time	Login Clarification Needed	If Broken Container:
Improper temperature	Chain of custody is incomplete	Insufficient packing material around container
Improper container type	Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation	Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courier)
X Insufficient sample volume.	Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.	Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.	Trip Blank not received.	If no Chain of Custody:
Broken container	Client did not "X" analysis.	Received by:
Broken container:	Chain of Custody is missing	Date/Time:
Sufficient sample remains		Temp./Cont. Rec./pH:
		Carrier:
		Tracking#

Login Comments:Client did not send bulk container WMW-32 (2.0-2.5)

Client informed by:	Call	Email	Voice Mail	Date: 8/15/18	Time: 0830
TSR Initials: MB	Client Contact: Katie Teague				

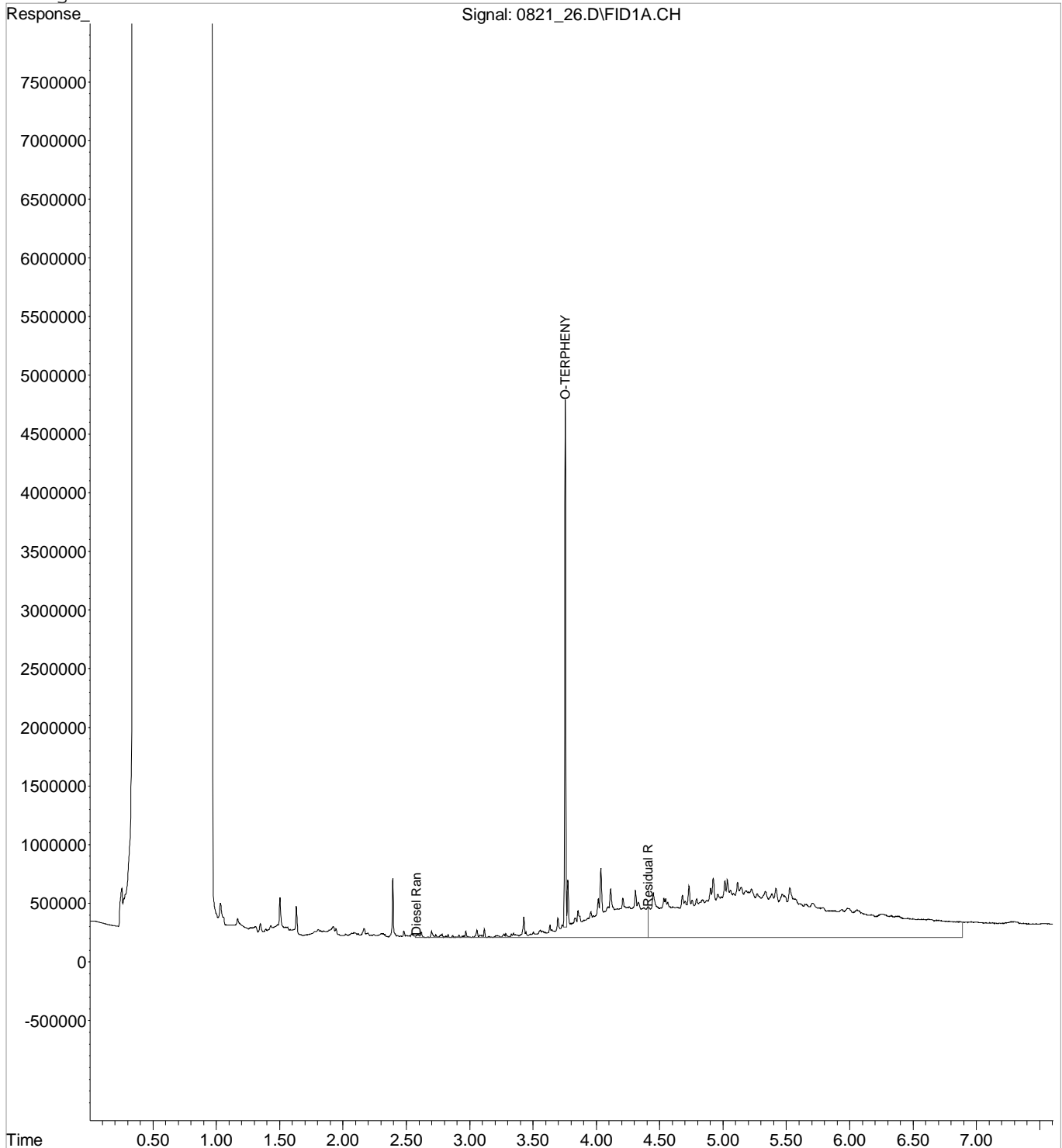
Login Instructions:

Client notified, proceed with NWTPHGX analysis. We will report this sample in wet weight.

Data File : C:\MSDCHEM\1\DATA\082118\0821 26.D Vial: 17
 Acq On : 21 Aug 2018 1:30 pm Operator: 851
 Sample : L1017457-11 1X WG1154190 Inst : SVG13
 Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Aug 21 13:46 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
 Title :
 Last Update : Mon Aug 13 23:06:30 2018
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

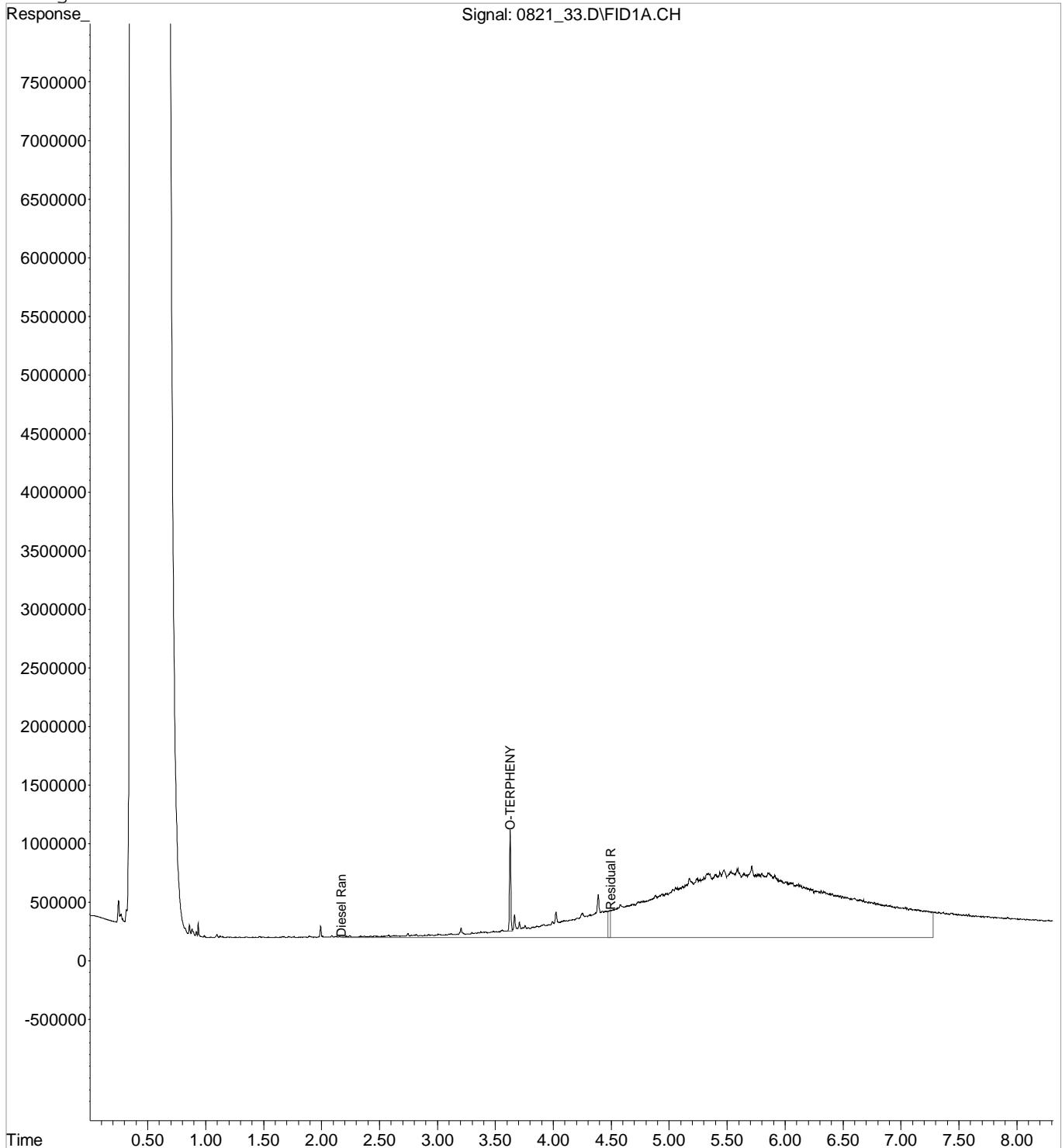
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\082118\0821 33.D Vial: 5
Acq On : 21 Aug 2018 5:07 pm Operator: 647
Sample : L1017457-15 5X WG1154190 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 21 17:45 2018 Quant Results File: EP02H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 16:39:51 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

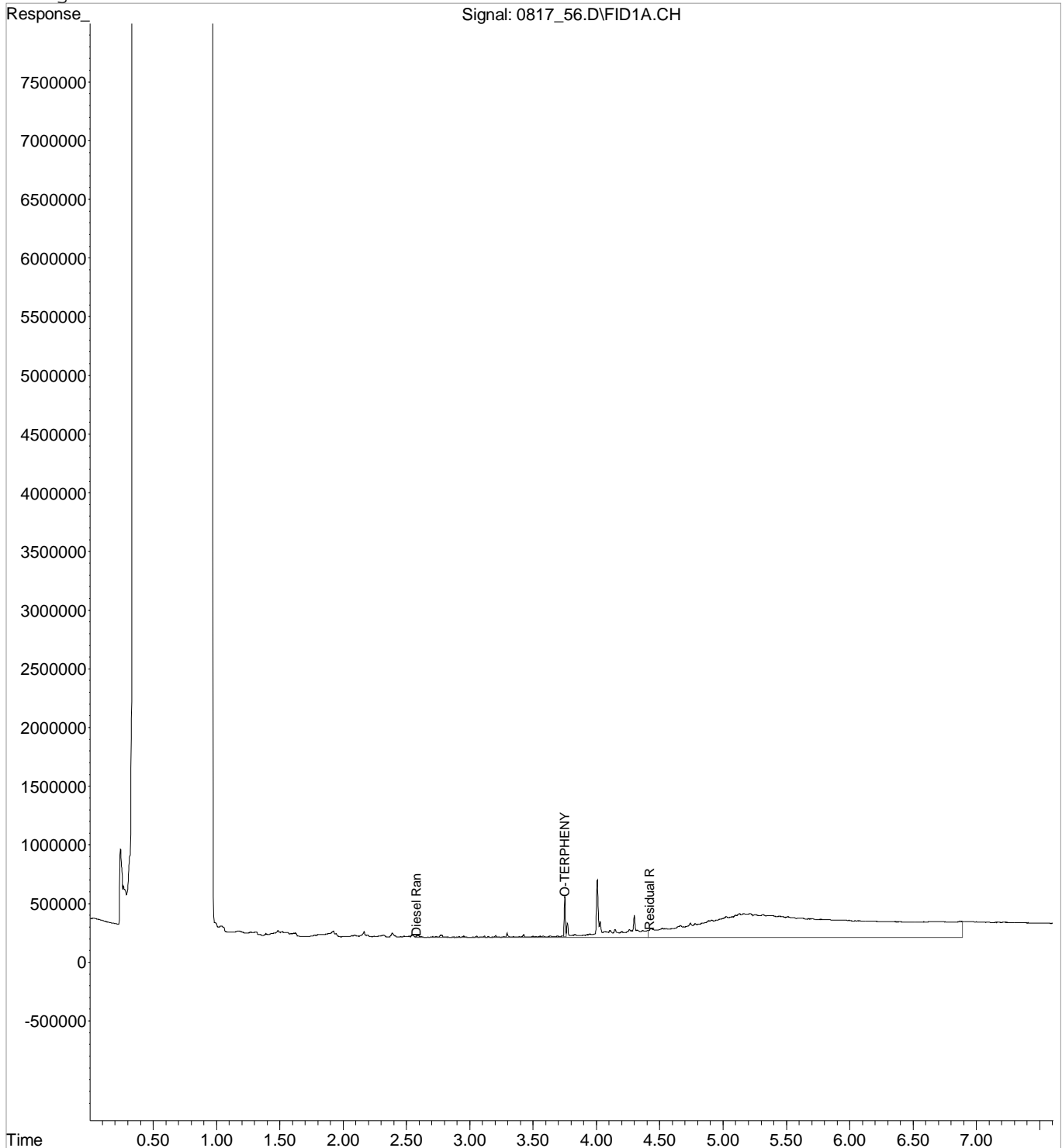
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 56.D Vial: 22
Acq On : 18 Aug 2018 4:54 am Operator: 647
Sample : L1017457-01 1X WG1153402 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:57 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

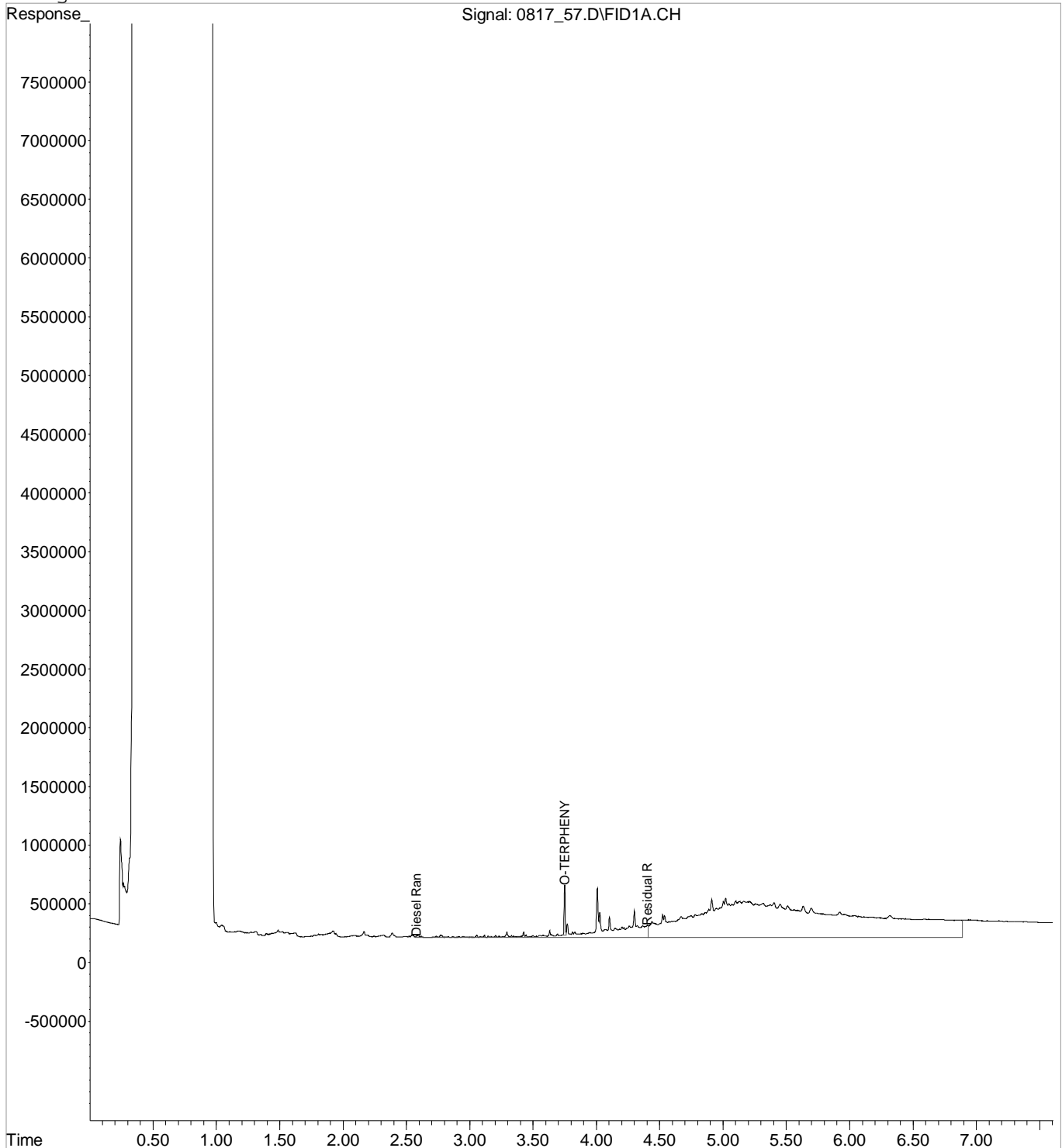
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 57.D Vial: 23
Acq On : 18 Aug 2018 5:07 am Operator: 647
Sample : L1017457-02 1X WG1153402 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:57 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

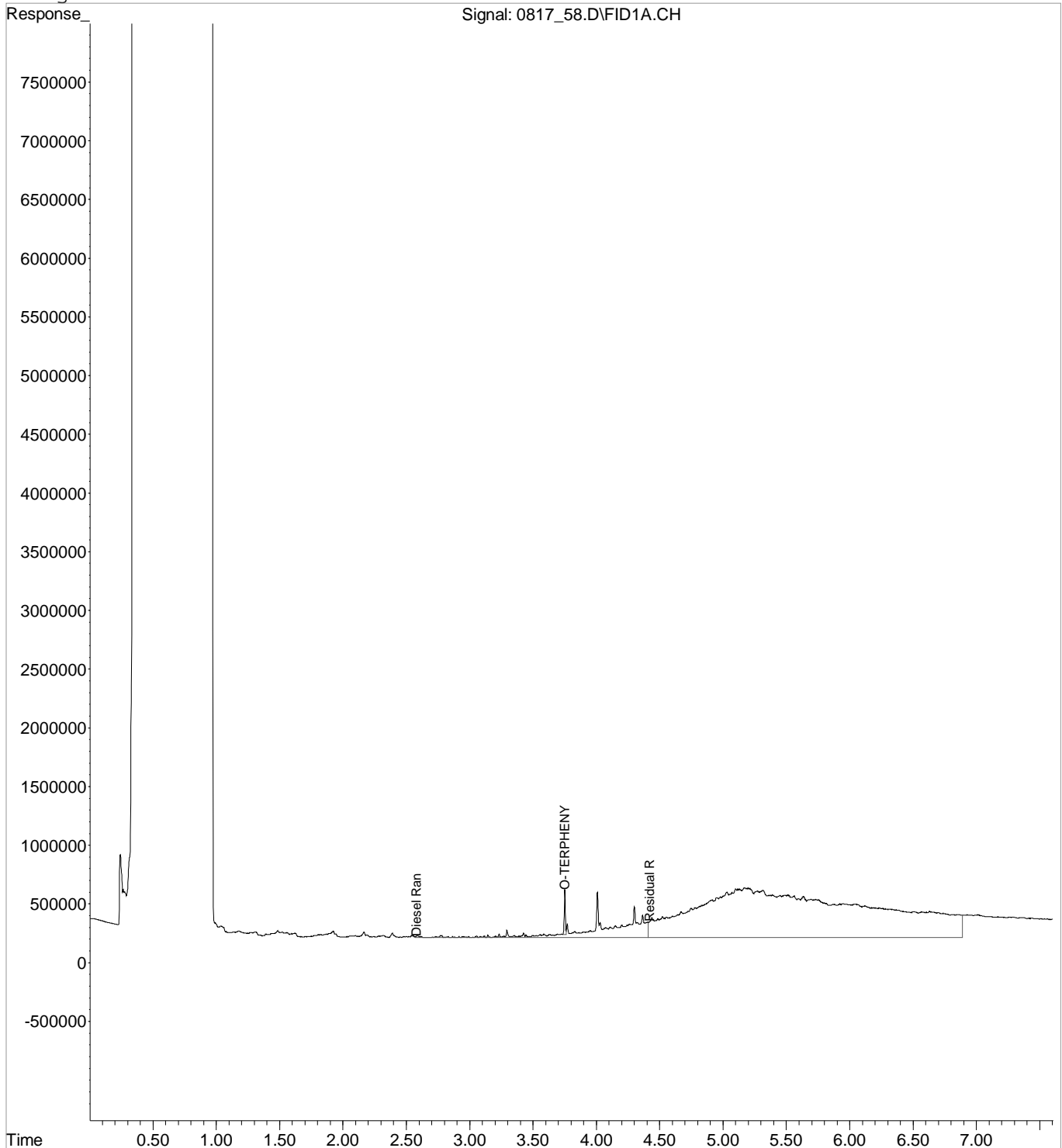
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 58.D Vial: 24
Acq On : 18 Aug 2018 5:20 am Operator: 647
Sample : L1017457-03 1X WG1153402 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:58 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

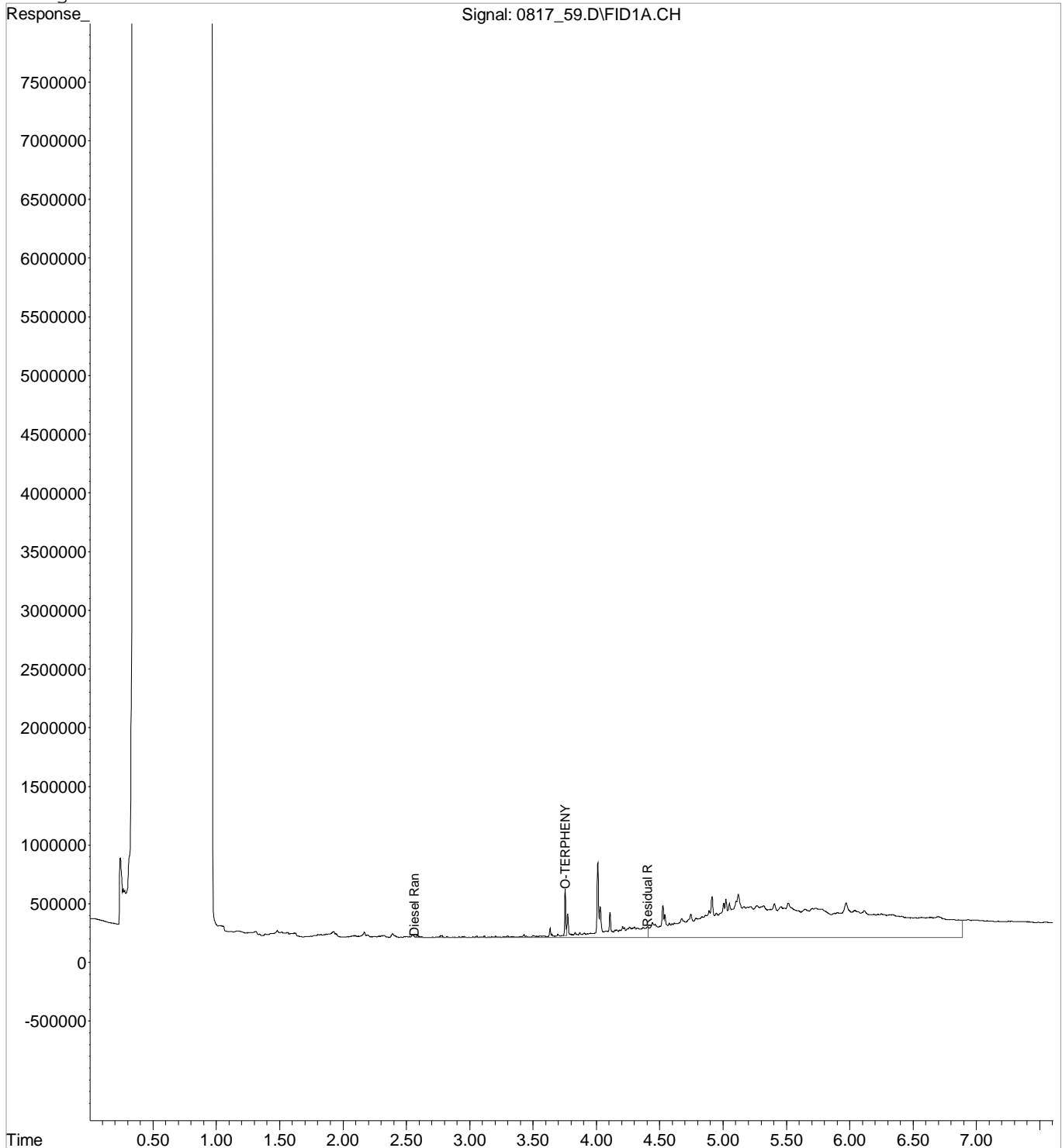
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 59.D Vial: 25
Acq On : 18 Aug 2018 5:32 am Operator: 647
Sample : L1017457-04 1X WG1153402 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:58 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

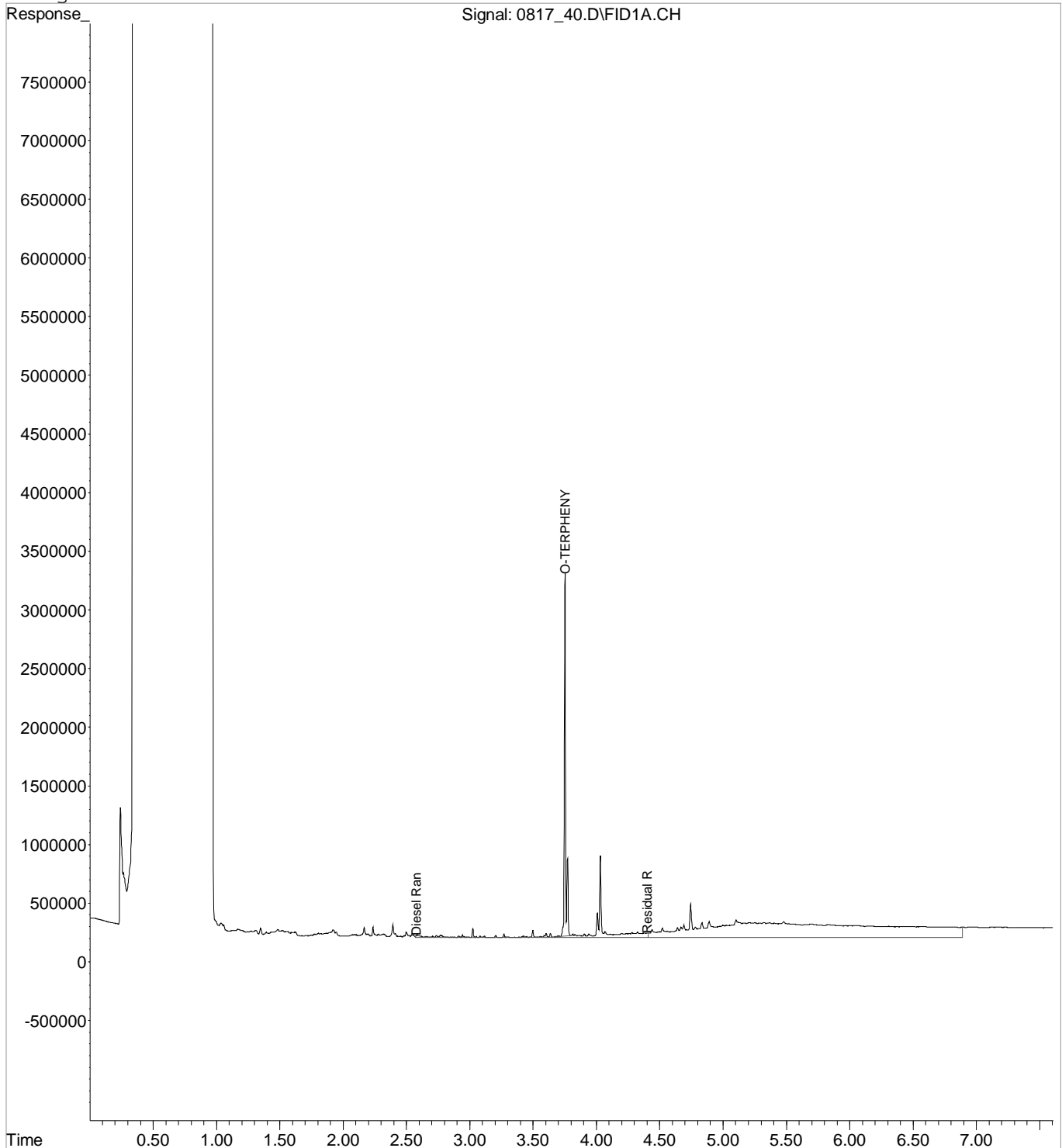
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 40.D Vial: 11
Acq On : 18 Aug 2018 1:31 am Operator: 647
Sample : L1017457-06 1X WG1153402 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:35 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

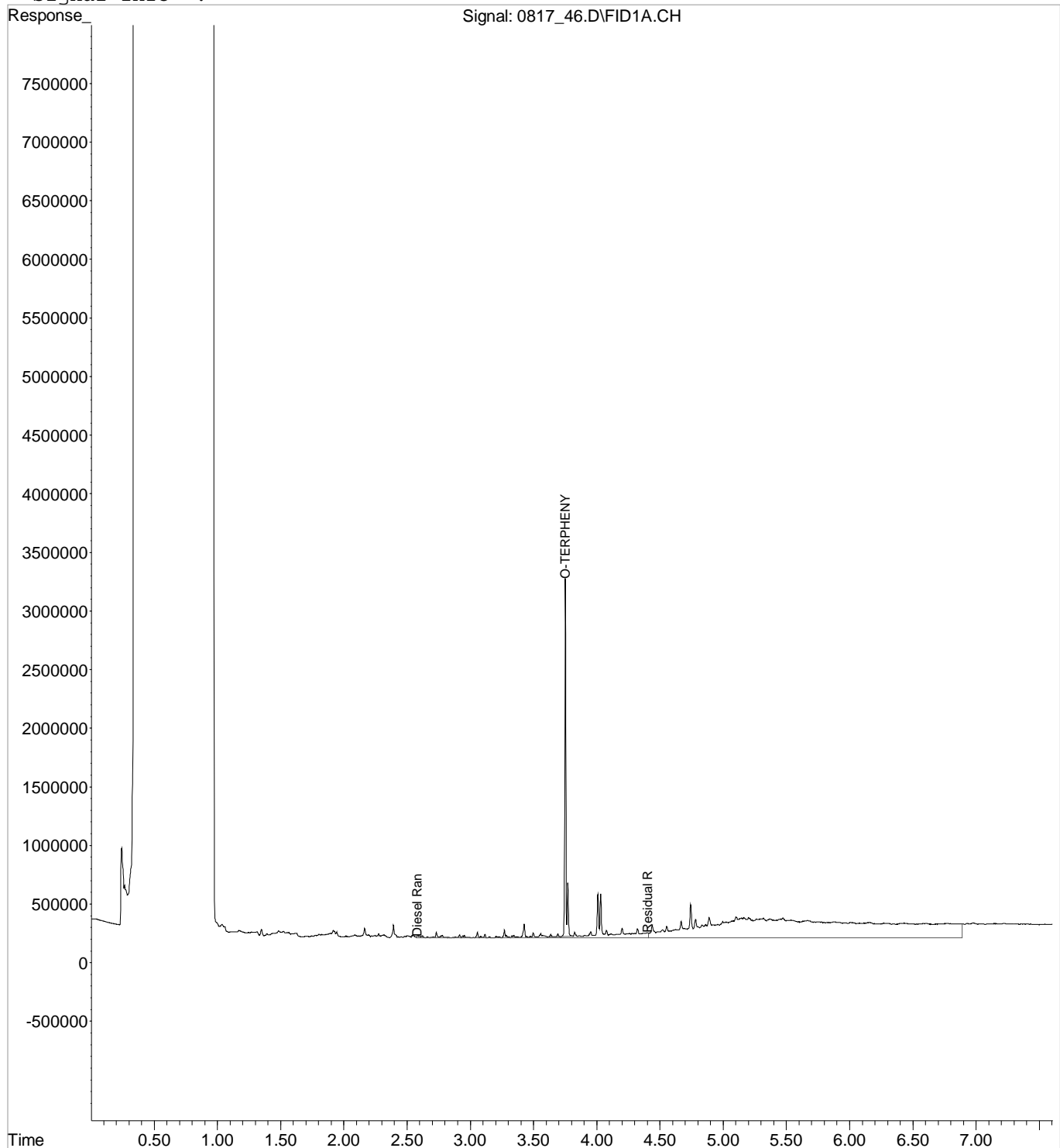
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 46.D Vial: 14
Acq On : 18 Aug 2018 2:47 am Operator: 647
Sample : L1017457-07 1X WG1153402 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:37 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

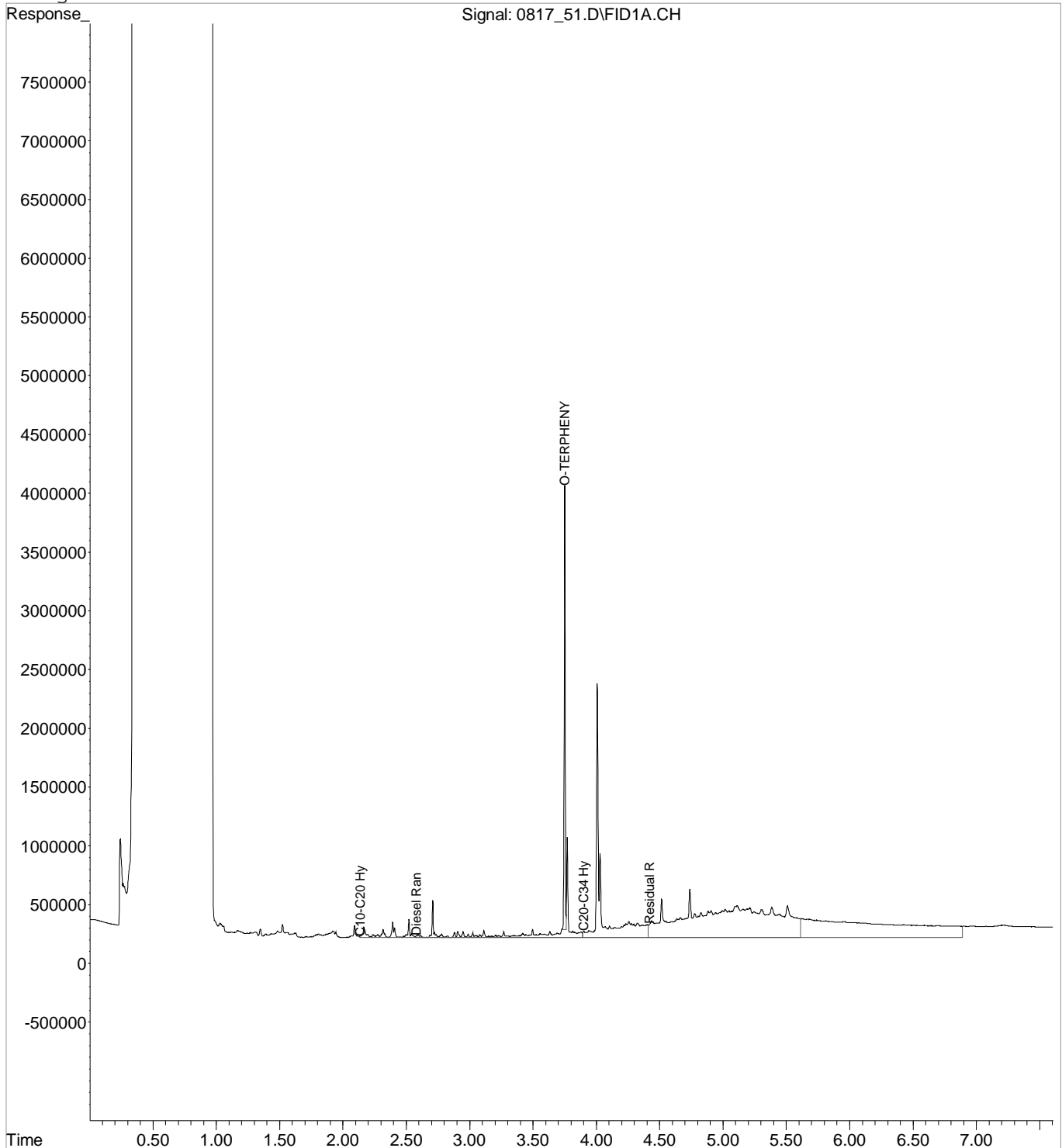
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 51.D Vial: 19
Acq On : 18 Aug 2018 3:50 am Operator: 647
Sample : L1017457-08 1X WG1153402 Inst : SVG13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:55 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

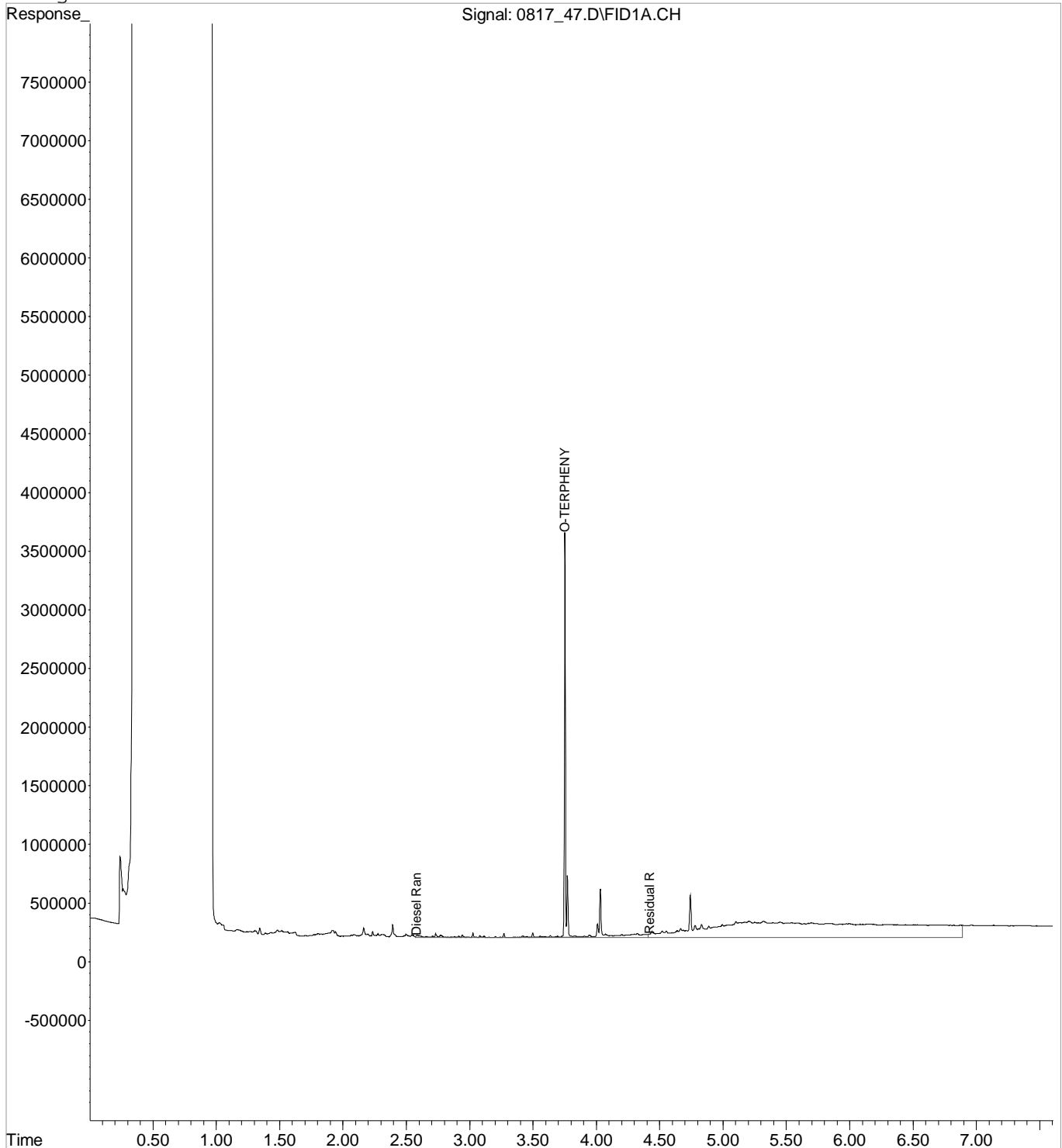
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 47.D Vial: 15
Acq On : 18 Aug 2018 3:00 am Operator: 647
Sample : L1017457-09 1X WG1153402 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:37 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

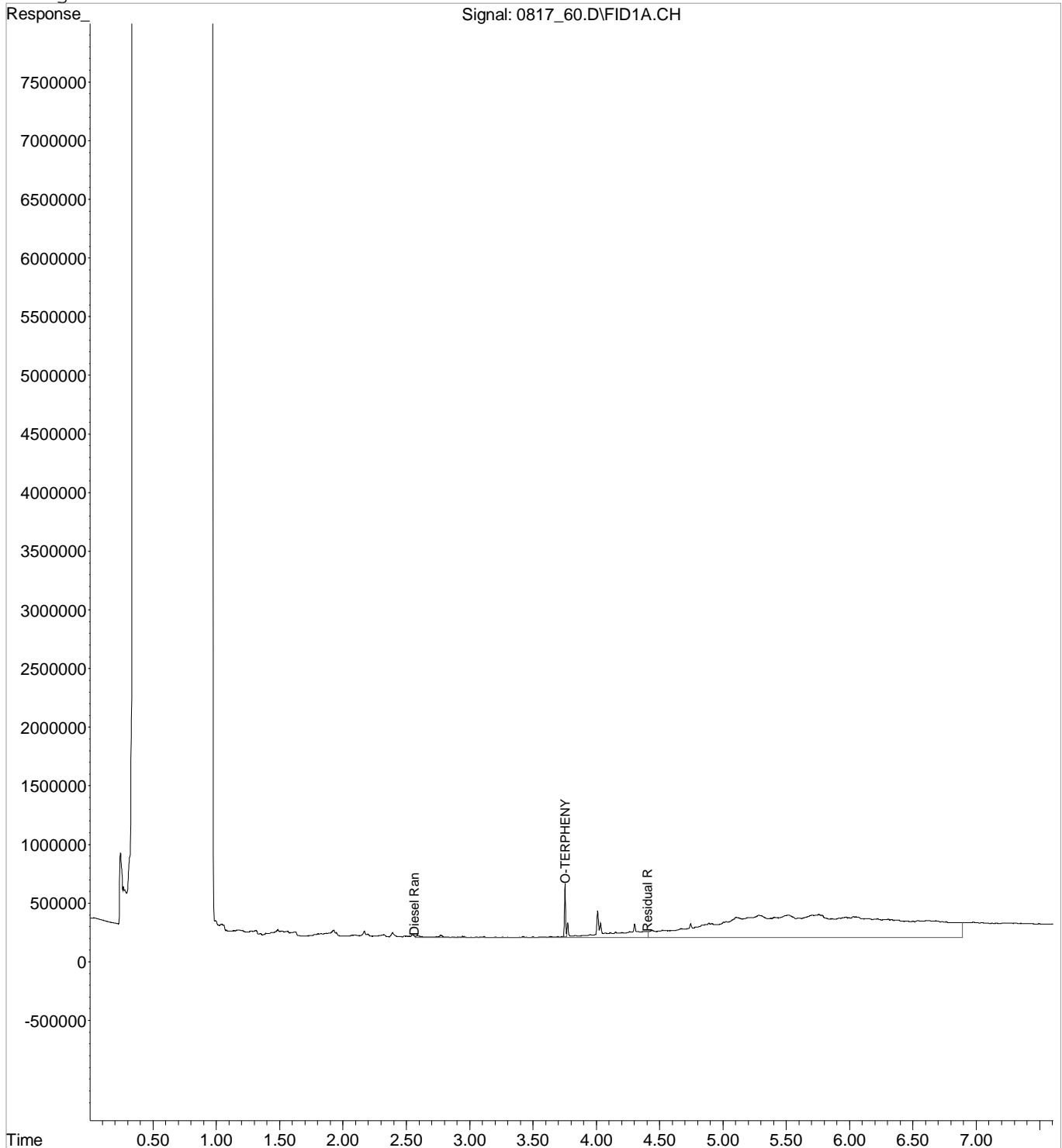
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 60.D Vial: 26
Acq On : 18 Aug 2018 5:45 am Operator: 647
Sample : L1017457-11 1X WG1153402 Inst : SVG13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:59 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

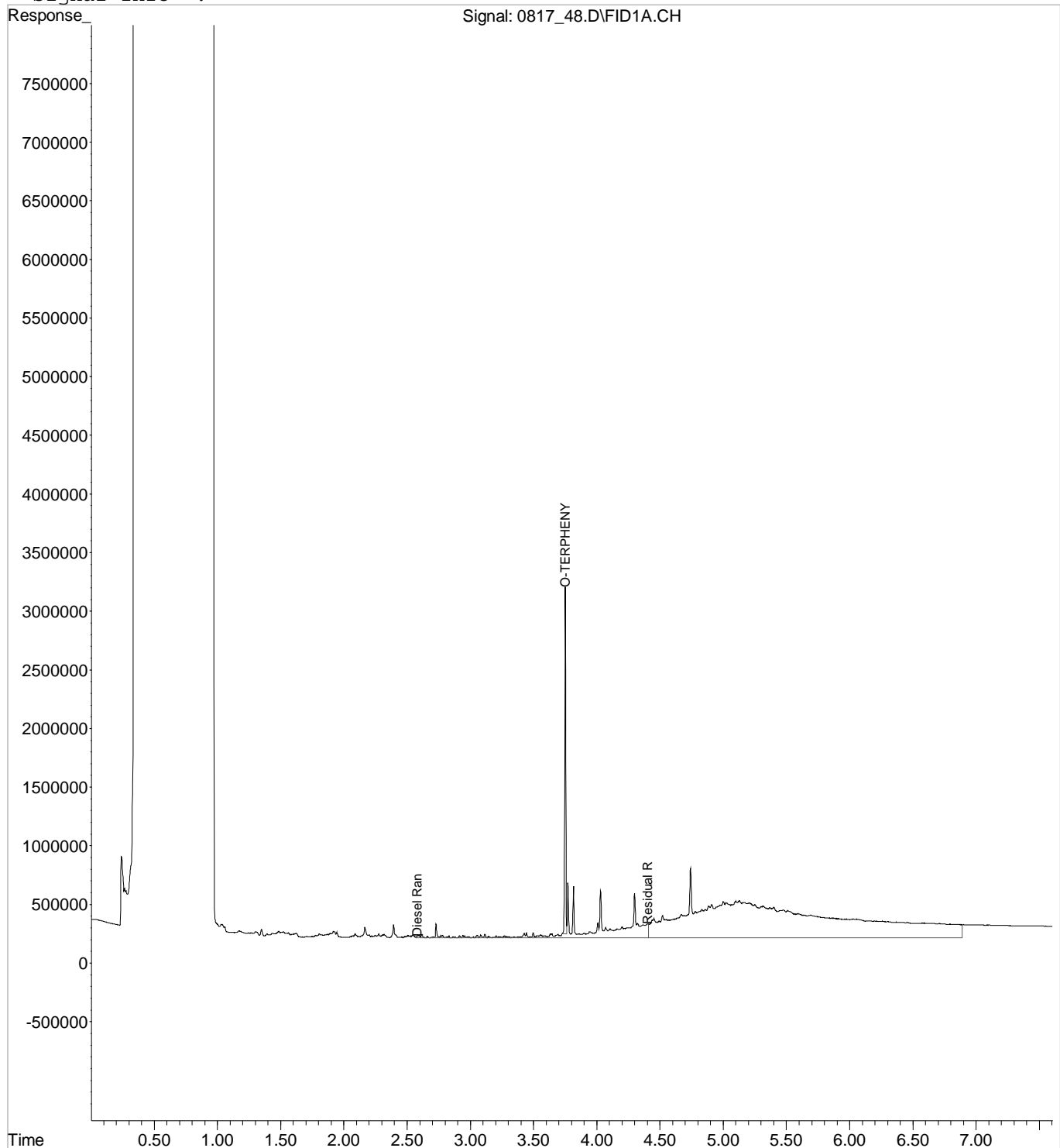
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 48.D Vial: 16
Acq On : 18 Aug 2018 3:13 am Operator: 647
Sample : L1017457-13 1X WG1153402 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:53 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

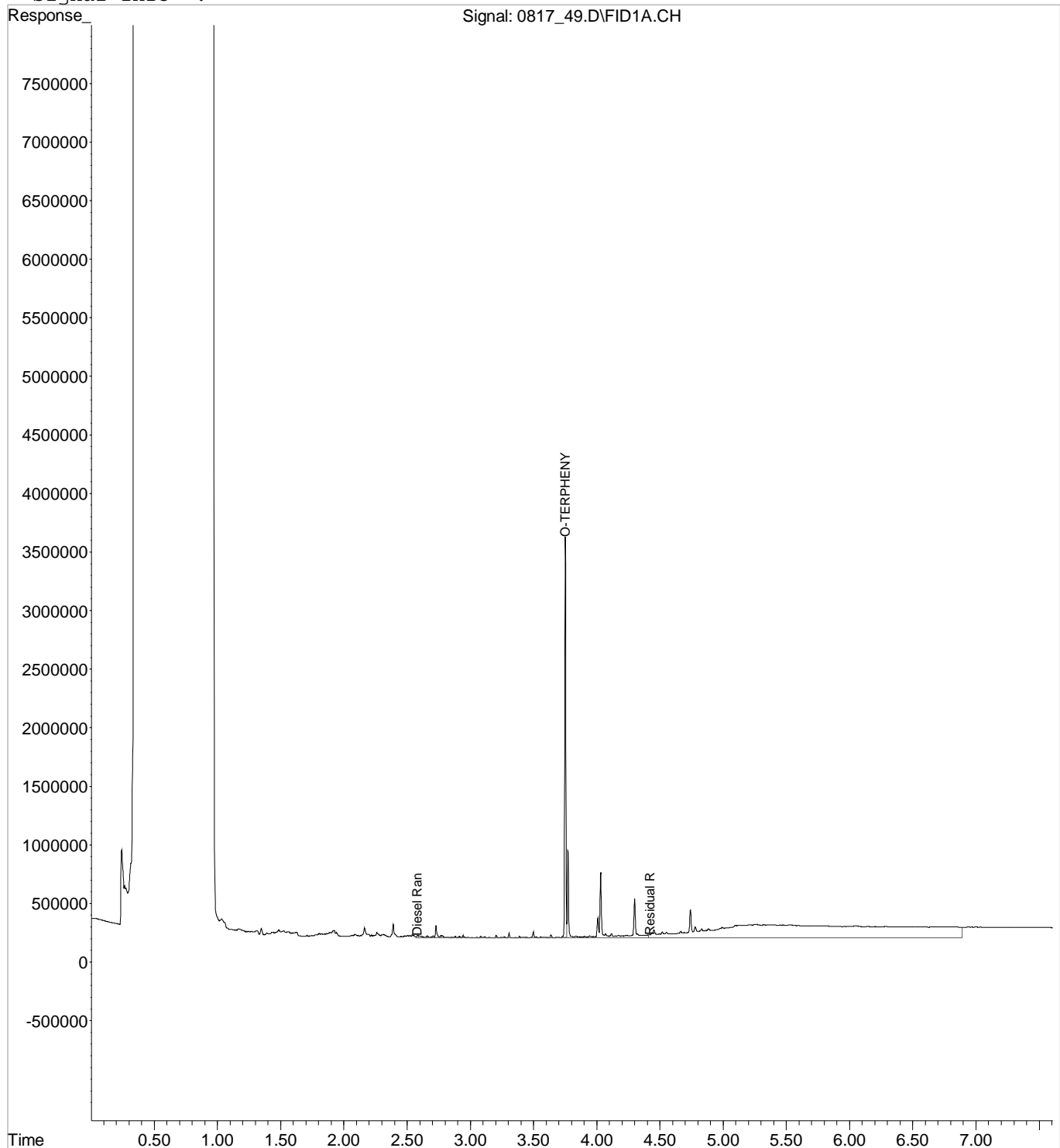
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 49.D Vial: 17
Acq On : 18 Aug 2018 3:25 am Operator: 647
Sample : L1017457-14 1X WG1153402 Inst : SVG13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:53 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

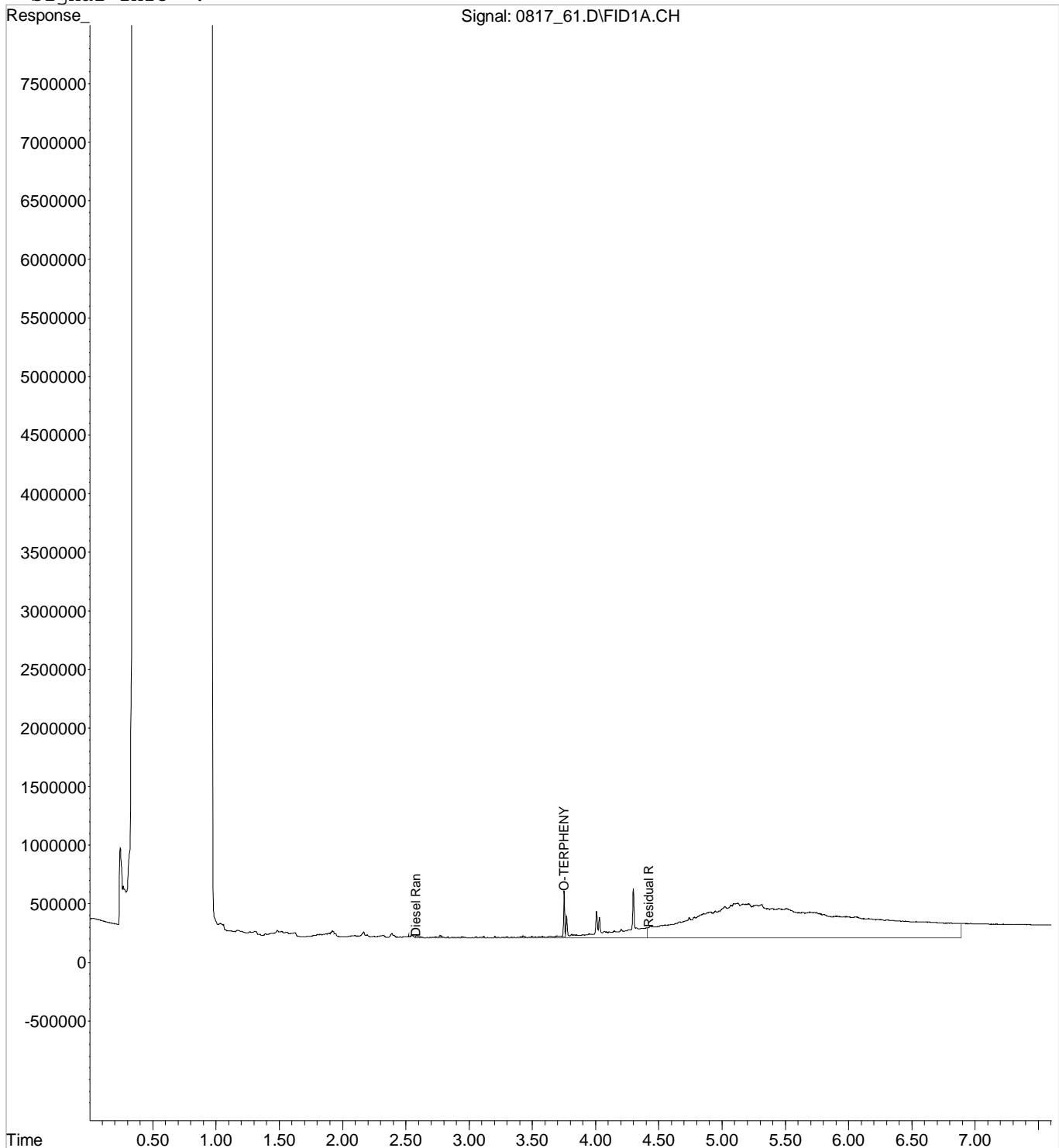
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 61.D Vial: 27
Acq On : 18 Aug 2018 5:57 am Operator: 647
Sample : L1017457-15 1X WG1153402 Inst : SVG13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:59 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

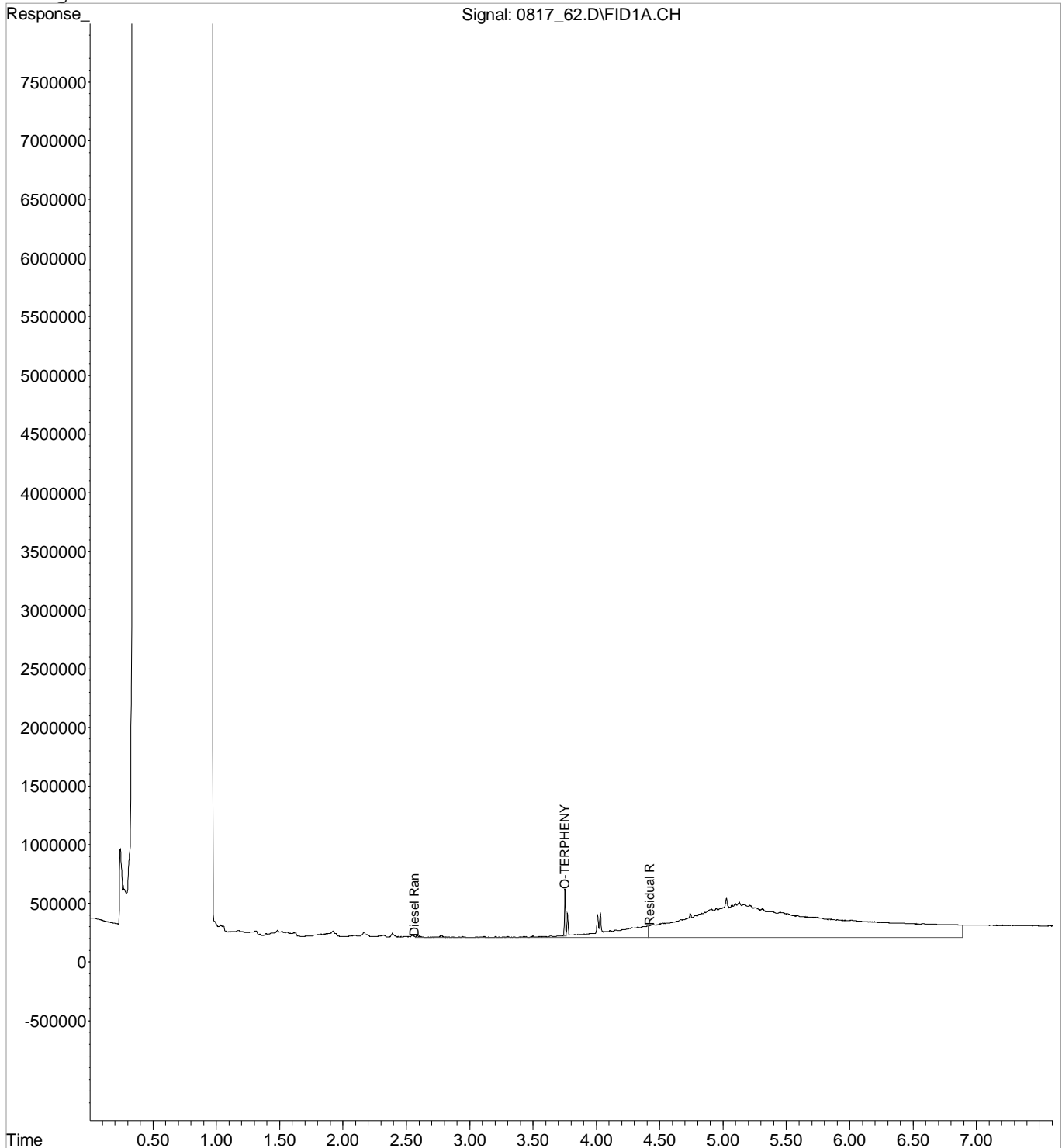
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 62.D Vial: 28
Acq On : 18 Aug 2018 6:10 am Operator: 647
Sample : L1017457-17 1X WG1153402 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 10:00 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

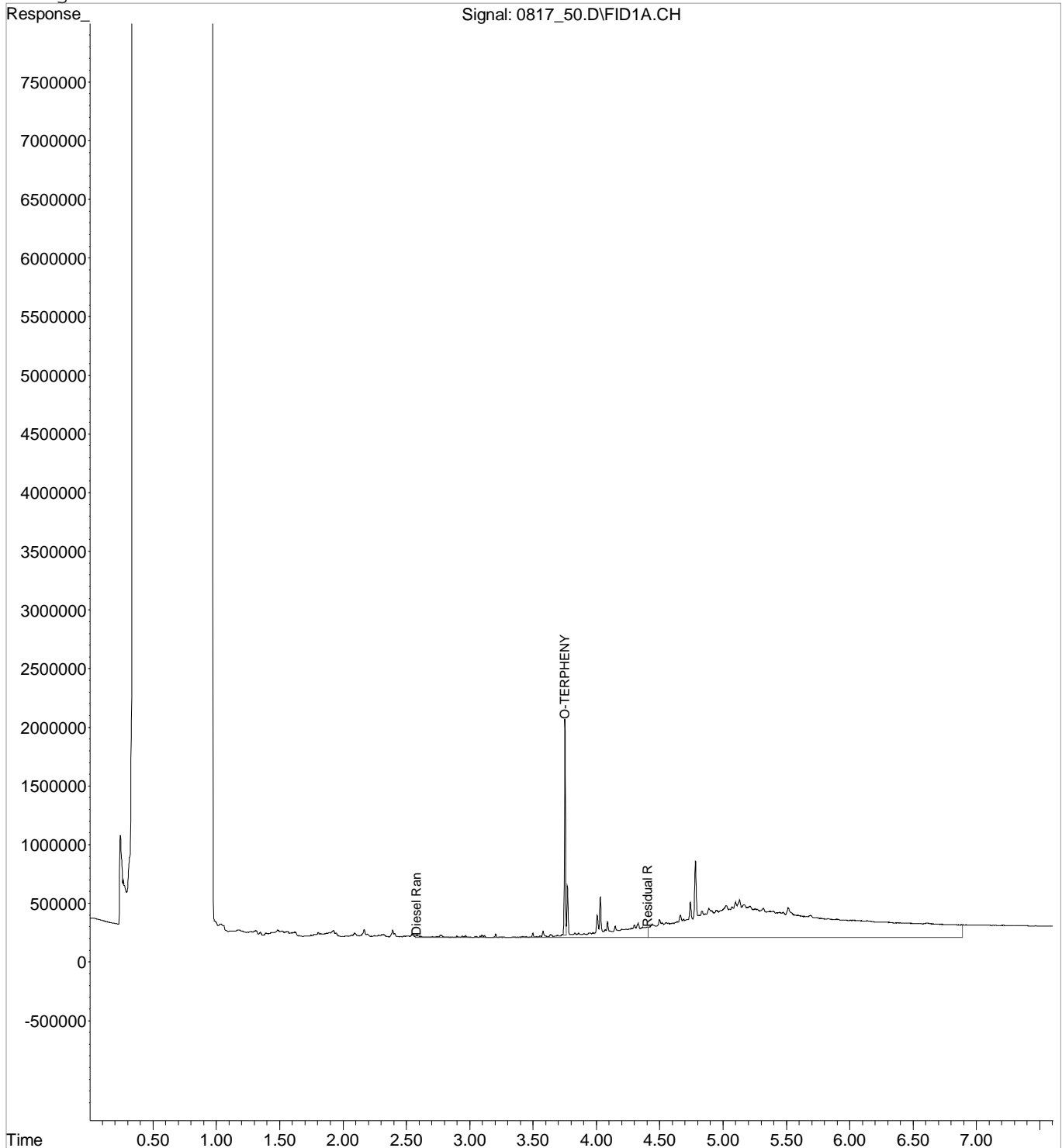
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081718\0817 50.D Vial: 18
Acq On : 18 Aug 2018 3:38 am Operator: 647
Sample : L1017457-18 1X WG1153402 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 18 9:54 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

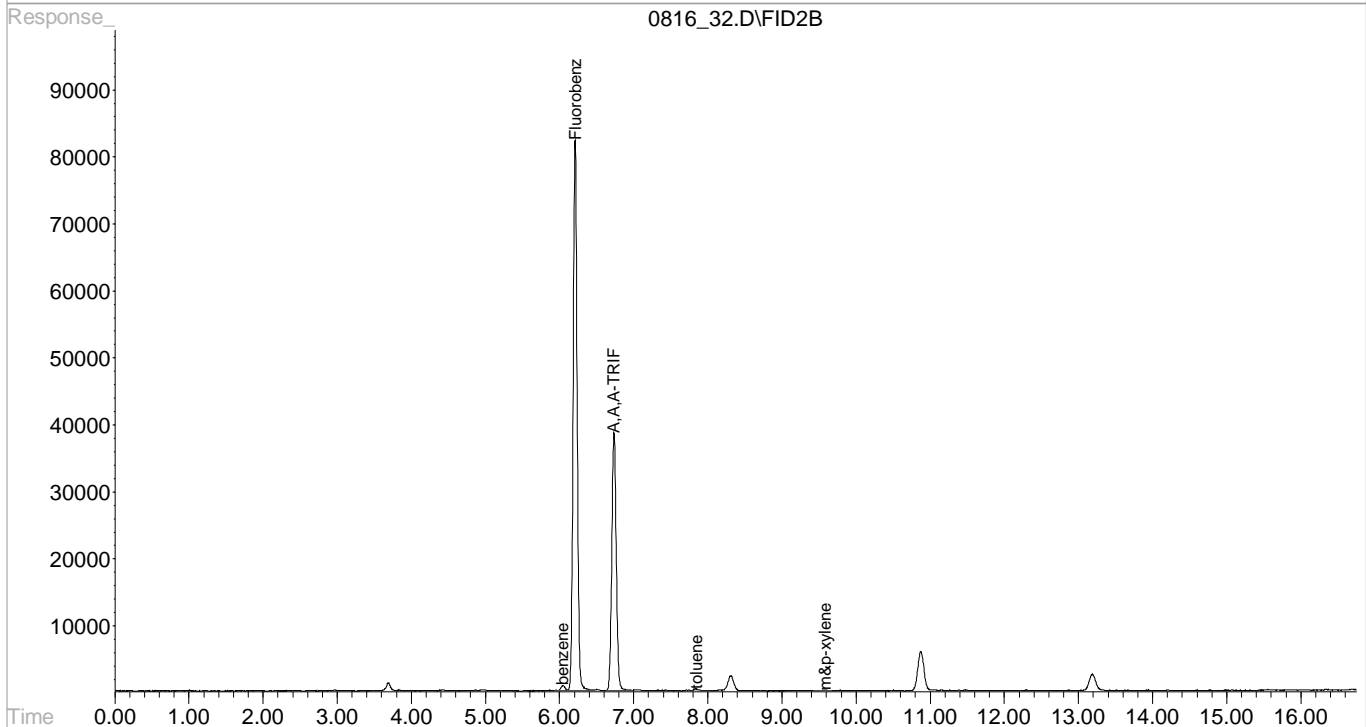
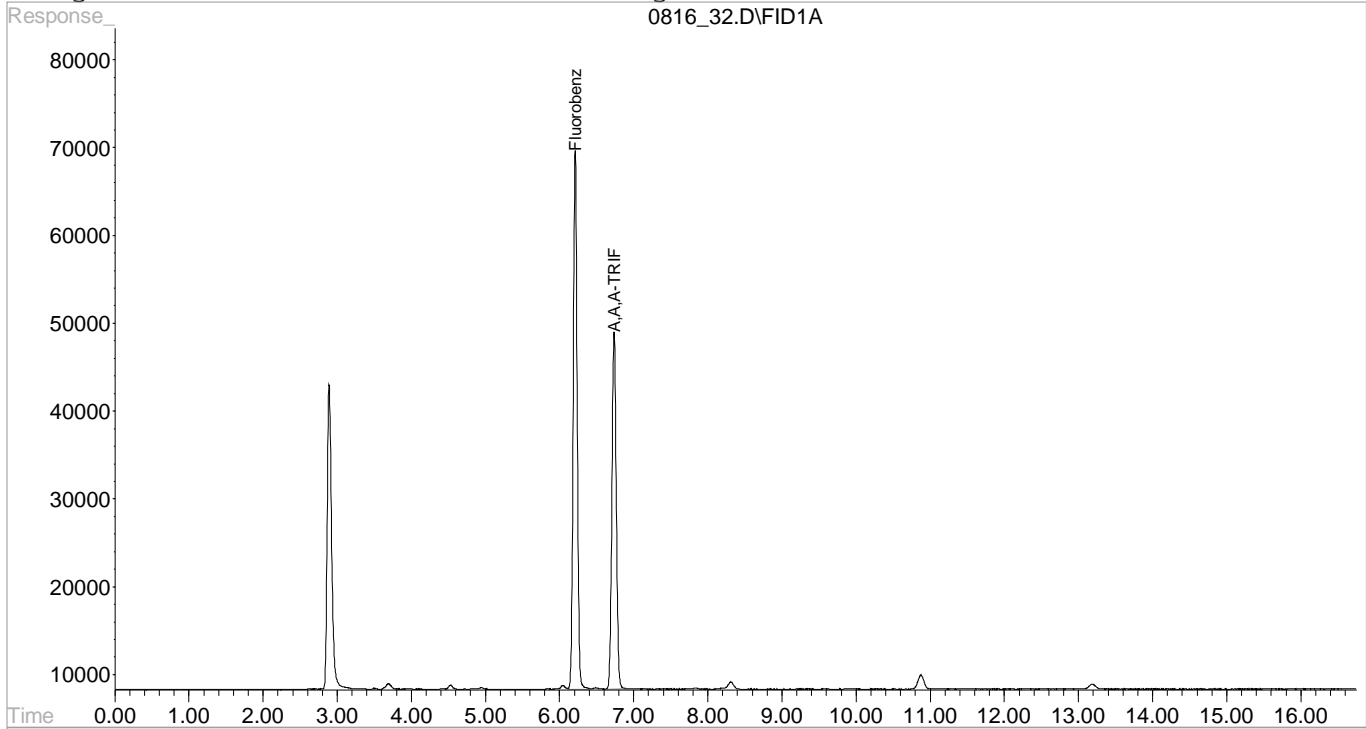
Volume Inj. :
Signal Phase :
Signal Info :



Signal #1 : C:\HPCHEM\1\DATA\081618\0816 32.D\FID1A.CH Vial: 32
 Signal #2 : C:\HPCHEM\1\DATA\081618\0816 32.D\FID2B.CH
 Acq On : 16 Aug 2018 9:12 pm Operator: 605
 Sample : L1017457-19A 1.09x WG1153101 Inst : VO CGC1
 Misc : SOIL Multiplr: 1.09
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Aug 18 5:36 2018 Quant Results File: BG01K16Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG01K16Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC01
 Last Update : Fri Nov 17 09:32:59 2017
 Response via : Single Level Calibration
 DataAcq Meth : GC1BG.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



August 22, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1017463
Samples Received: 08/14/2018
Project Number: 1896120 04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

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



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

SAMPLE SUMMARY



B-18-18 L1017463-01 GW

Collected by
K. Teague
Collected date/time
08/09/18 08:50
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:06	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 18:12	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 11:49	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/16/18 00:56	08/16/18 00:56	RAS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1152309	1	08/15/18 16:18	08/16/18 16:06	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1152400	1	08/15/18 10:24	08/15/18 19:26	KM

1
Cp

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Tc

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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

B-18-14 L1017463-02 GW

Collected by
K. Teague
Collected date/time
08/09/18 13:45
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:08	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 18:18	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 11:54	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/16/18 01:16	08/16/18 01:16	RAS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1152309	1	08/15/18 16:18	08/16/18 16:25	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1152400	1	08/15/18 10:24	08/15/18 19:48	KM

B-18-16 L1017463-03 GW

Collected by
K. Teague
Collected date/time
08/09/18 16:10
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1152363	1	08/15/18 10:55	08/16/18 10:33	EL
Metals (ICPMS) by Method 6020A	WG1153047	1	08/21/18 01:04	08/21/18 12:40	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/16/18 01:35	08/16/18 01:35	RAS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1152309	1	08/15/18 16:18	08/16/18 16:42	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1152400	1	08/15/18 10:24	08/15/18 20:10	KM

RB-02-20180809 L1017463-04 GW

Collected by
K. Teague
Collected date/time
08/09/18 15:00
Received date/time
08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1152362	1	08/15/18 10:53	08/15/18 15:40	RDS
Metals (ICPMS) by Method 6020A	WG1154985	1	08/21/18 01:10	08/21/18 13:12	LAT
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/16/18 01:55	08/16/18 01:55	RAS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1152309	1	08/15/18 16:18	08/16/18 07:42	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1152400	1	08/15/18 10:24	08/15/18 20:32	KM



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.

Mark W. Beasley
Project Manager

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



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:06	WG1154478

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	7.06		2.00	1	08/20/2018 18:12	WG1154114
Barium,Dissolved	44.9		5.00	1	08/20/2018 18:12	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 18:12	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 11:49	WG1154114
Lead,Dissolved	4.52		2.00	1	08/20/2018 18:12	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 18:12	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 18:12	WG1154114

3 Ss

4 Cn

5 Sr

6 Qc

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/16/2018 00:56	WG1152983
Acrolein	ND		50.0	1	08/16/2018 00:56	WG1152983
Acrylonitrile	ND		10.0	1	08/16/2018 00:56	WG1152983
Benzene	ND		1.00	1	08/16/2018 00:56	WG1152983
Bromobenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
Bromodichloromethane	ND		1.00	1	08/16/2018 00:56	WG1152983
Bromoform	ND		1.00	1	08/16/2018 00:56	WG1152983
Bromomethane	ND		5.00	1	08/16/2018 00:56	WG1152983
n-Butylbenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
sec-Butylbenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
tert-Butylbenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
Carbon tetrachloride	ND		1.00	1	08/16/2018 00:56	WG1152983
Chlorobenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
Chlorodibromomethane	ND		1.00	1	08/16/2018 00:56	WG1152983
Chloroethane	ND		5.00	1	08/16/2018 00:56	WG1152983
Chloroform	ND		5.00	1	08/16/2018 00:56	WG1152983
Chloromethane	ND		2.50	1	08/16/2018 00:56	WG1152983
2-Chlorotoluene	ND		1.00	1	08/16/2018 00:56	WG1152983
4-Chlorotoluene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/16/2018 00:56	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/16/2018 00:56	WG1152983
Dibromomethane	ND		1.00	1	08/16/2018 00:56	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/16/2018 00:56	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/16/2018 00:56	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/16/2018 00:56	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/16/2018 00:56	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/16/2018 00:56	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/16/2018 00:56	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/16/2018 00:56	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/16/2018 00:56	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/16/2018 00:56	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/16/2018 00:56	WG1152983
Di-isopropyl ether	ND		1.00	1	08/16/2018 00:56	WG1152983
Ethylbenzene	ND		1.00	1	08/16/2018 00:56	WG1152983

7 Gl

8 Al

9 Sc



Collected date/time: 08/09/18 08:50

L1017463

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/16/2018 00:56	WG1152983
Isopropylbenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
p-Isopropyltoluene	ND		1.00	1	08/16/2018 00:56	WG1152983
2-Butanone (MEK)	ND		10.0	1	08/16/2018 00:56	WG1152983
Methylene Chloride	ND		5.00	1	08/16/2018 00:56	WG1152983
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/16/2018 00:56	WG1152983
Methyl tert-butyl ether	ND		1.00	1	08/16/2018 00:56	WG1152983
Naphthalene	ND		5.00	1	08/16/2018 00:56	WG1152983
n-Propylbenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
Styrene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/16/2018 00:56	WG1152983
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/16/2018 00:56	WG1152983
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/16/2018 00:56	WG1152983
Tetrachloroethene	ND		1.00	1	08/16/2018 00:56	WG1152983
Toluene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,2,3-Trichlorobenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,2,4-Trichlorobenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,1,1-Trichloroethane	ND		1.00	1	08/16/2018 00:56	WG1152983
1,1,2-Trichloroethane	ND		1.00	1	08/16/2018 00:56	WG1152983
Trichloroethene	ND		1.00	1	08/16/2018 00:56	WG1152983
Trichlorofluoromethane	ND		5.00	1	08/16/2018 00:56	WG1152983
1,2,3-Trichloropropane	ND		2.50	1	08/16/2018 00:56	WG1152983
1,2,4-Trimethylbenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,2,3-Trimethylbenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
1,3,5-Trimethylbenzene	ND		1.00	1	08/16/2018 00:56	WG1152983
Vinyl chloride	ND		1.00	1	08/16/2018 00:56	WG1152983
o-Xylene	ND		1.00	1	08/16/2018 00:56	WG1152983
m&p-Xylene	ND		2.00	1	08/16/2018 00:56	WG1152983
(S) Toluene-d8	99.8		80.0-120		08/16/2018 00:56	WG1152983
(S) Dibromofluoromethane	96.8		76.0-123		08/16/2018 00:56	WG1152983
(S) 4-Bromofluorobenzene	97.0		80.0-120		08/16/2018 00:56	WG1152983

1 Cp

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6 Qc

7 Gl

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	418		200	1	08/16/2018 16:06	WG1152309
Residual Range Organics (RRO)	597		250	1	08/16/2018 16:06	WG1152309
(S) o-Terphenyl	111		52.0-156		08/16/2018 16:06	WG1152309

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Acenaphthene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Acenaphthylene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Benzo(a)anthracene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Benzo(a)pyrene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Benzo(b)fluoranthene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Benzo(g,h,i)perylene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Benzo(k)fluoranthene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Chrysene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Dibenz(a,h)anthracene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Fluoranthene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Fluorene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/15/2018 19:26	WG1152400



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	0.419		0.250	1	08/15/2018 19:26	WG1152400
Phenanthrene	ND		0.0500	1	08/15/2018 19:26	WG1152400
Pyrene	ND		0.0500	1	08/15/2018 19:26	WG1152400
1-Methylnaphthalene	ND		0.250	1	08/15/2018 19:26	WG1152400
2-Methylnaphthalene	ND		0.250	1	08/15/2018 19:26	WG1152400
2-Chloronaphthalene	ND		0.250	1	08/15/2018 19:26	WG1152400
(S) Nitrobenzene-d5	89.5		31.0-160		08/15/2018 19:26	WG1152400
(S) 2-Fluorobiphenyl	115		48.0-148		08/15/2018 19:26	WG1152400
(S) p-Terphenyl-d14	109		37.0-146		08/15/2018 19:26	WG1152400

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:08	WG1154478

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	7.57		2.00	1	08/20/2018 18:18	WG1154114
Barium,Dissolved	41.2		5.00	1	08/20/2018 18:18	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 18:18	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 11:54	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 18:18	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 18:18	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 18:18	WG1154114

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/16/2018 01:16	WG1152983
Acrolein	ND		50.0	1	08/16/2018 01:16	WG1152983
Acrylonitrile	ND		10.0	1	08/16/2018 01:16	WG1152983
Benzene	ND		1.00	1	08/16/2018 01:16	WG1152983
Bromobenzene	ND		1.00	1	08/16/2018 01:16	WG1152983
Bromodichloromethane	ND		1.00	1	08/16/2018 01:16	WG1152983
Bromoform	ND		1.00	1	08/16/2018 01:16	WG1152983
Bromomethane	ND		5.00	1	08/16/2018 01:16	WG1152983
n-Butylbenzene	ND		1.00	1	08/16/2018 01:16	WG1152983
sec-Butylbenzene	ND		1.00	1	08/16/2018 01:16	WG1152983
tert-Butylbenzene	ND		1.00	1	08/16/2018 01:16	WG1152983
Carbon tetrachloride	ND		1.00	1	08/16/2018 01:16	WG1152983
Chlorobenzene	ND		1.00	1	08/16/2018 01:16	WG1152983
Chlorodibromomethane	ND		1.00	1	08/16/2018 01:16	WG1152983
Chloroethane	ND		5.00	1	08/16/2018 01:16	WG1152983
Chloroform	ND		5.00	1	08/16/2018 01:16	WG1152983
Chloromethane	ND		2.50	1	08/16/2018 01:16	WG1152983
2-Chlorotoluene	ND		1.00	1	08/16/2018 01:16	WG1152983
4-Chlorotoluene	ND		1.00	1	08/16/2018 01:16	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/16/2018 01:16	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/16/2018 01:16	WG1152983
Dibromomethane	ND		1.00	1	08/16/2018 01:16	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/16/2018 01:16	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/16/2018 01:16	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/16/2018 01:16	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/16/2018 01:16	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/16/2018 01:16	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/16/2018 01:16	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/16/2018 01:16	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/16/2018 01:16	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/16/2018 01:16	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/16/2018 01:16	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/16/2018 01:16	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/16/2018 01:16	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/16/2018 01:16	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/16/2018 01:16	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/16/2018 01:16	WG1152983
Di-isopropyl ether	ND		1.00	1	08/16/2018 01:16	WG1152983
Ethylbenzene	ND		1.00	1	08/16/2018 01:16	WG1152983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/09/18 13:45

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Hexachloro-1,3-butadiene	ND		1.00	1	08/16/2018 01:16	WG1152983	1 Cp
Isopropylbenzene	ND		1.00	1	08/16/2018 01:16	WG1152983	2 Tc
p-Isopropyltoluene	ND		1.00	1	08/16/2018 01:16	WG1152983	3 Ss
2-Butanone (MEK)	ND		10.0	1	08/16/2018 01:16	WG1152983	4 Cn
Methylene Chloride	ND		5.00	1	08/16/2018 01:16	WG1152983	5 Sr
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/16/2018 01:16	WG1152983	6 Qc
Methyl tert-butyl ether	ND		1.00	1	08/16/2018 01:16	WG1152983	7 Gl
Naphthalene	ND		5.00	1	08/16/2018 01:16	WG1152983	8 Al
n-Propylbenzene	ND		1.00	1	08/16/2018 01:16	WG1152983	9 Sc
Styrene	ND		1.00	1	08/16/2018 01:16	WG1152983	
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/16/2018 01:16	WG1152983	
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/16/2018 01:16	WG1152983	
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/16/2018 01:16	WG1152983	
Tetrachloroethene	ND		1.00	1	08/16/2018 01:16	WG1152983	
Toluene	ND		1.00	1	08/16/2018 01:16	WG1152983	
1,2,3-Trichlorobenzene	ND		1.00	1	08/16/2018 01:16	WG1152983	
1,2,4-Trichlorobenzene	ND		1.00	1	08/16/2018 01:16	WG1152983	
1,1,1-Trichloroethane	ND		1.00	1	08/16/2018 01:16	WG1152983	
1,1,2-Trichloroethane	ND		1.00	1	08/16/2018 01:16	WG1152983	
Trichloroethene	ND		1.00	1	08/16/2018 01:16	WG1152983	
Trichlorofluoromethane	ND		5.00	1	08/16/2018 01:16	WG1152983	
1,2,3-Trichloropropane	ND		2.50	1	08/16/2018 01:16	WG1152983	
1,2,4-Trimethylbenzene	ND		1.00	1	08/16/2018 01:16	WG1152983	
1,2,3-Trimethylbenzene	ND		1.00	1	08/16/2018 01:16	WG1152983	
1,3,5-Trimethylbenzene	ND		1.00	1	08/16/2018 01:16	WG1152983	
Vinyl chloride	ND		1.00	1	08/16/2018 01:16	WG1152983	
o-Xylene	ND		1.00	1	08/16/2018 01:16	WG1152983	
m&p-Xylene	ND		2.00	1	08/16/2018 01:16	WG1152983	
(S) Toluene-d8	100		80.0-120		08/16/2018 01:16	WG1152983	
(S) Dibromofluoromethane	95.6		76.0-123		08/16/2018 01:16	WG1152983	
(S) 4-Bromofluorobenzene	98.5		80.0-120		08/16/2018 01:16	WG1152983	

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/16/2018 16:25	WG1152309
Residual Range Organics (RRO)	283		250	1	08/16/2018 16:25	WG1152309
(S) o-Terphenyl	105		52.0-156		08/16/2018 16:25	WG1152309

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Acenaphthene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Acenaphthylene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Benzo(a)anthracene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Benzo(a)pyrene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Benzo(b)fluoranthene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Benzo(g,h,i)perylene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Benzo(k)fluoranthene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Chrysene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Dibenz(a,h)anthracene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Fluoranthene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Fluorene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/15/2018 19:48	WG1152400



Collected date/time: 08/09/18 13:45

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	0.380		0.250	1	08/15/2018 19:48	WG1152400
Phenanthrene	ND		0.0500	1	08/15/2018 19:48	WG1152400
Pyrene	ND		0.0500	1	08/15/2018 19:48	WG1152400
1-Methylnaphthalene	ND		0.250	1	08/15/2018 19:48	WG1152400
2-Methylnaphthalene	ND		0.250	1	08/15/2018 19:48	WG1152400
2-Chloronaphthalene	ND		0.250	1	08/15/2018 19:48	WG1152400
(S) Nitrobenzene-d5	86.8		31.0-160		08/15/2018 19:48	WG1152400
(S) 2-Fluorobiphenyl	116		48.0-148		08/15/2018 19:48	WG1152400
(S) p-Terphenyl-d14	115		37.0-146		08/15/2018 19:48	WG1152400

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/16/2018 10:33	WG1152363

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	7.81		2.00	1	08/21/2018 12:40	WG1153047
Barium,Dissolved	41.6		5.00	1	08/21/2018 12:40	WG1153047
Cadmium,Dissolved	ND		1.00	1	08/21/2018 12:40	WG1153047
Chromium,Dissolved	ND		2.00	1	08/21/2018 12:40	WG1153047
Lead,Dissolved	ND		2.00	1	08/21/2018 12:40	WG1153047
Selenium,Dissolved	ND		2.00	1	08/21/2018 12:40	WG1153047
Silver,Dissolved	ND		2.00	1	08/21/2018 12:40	WG1153047

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/16/2018 01:35	WG1152983
Acrolein	ND		50.0	1	08/16/2018 01:35	WG1152983
Acrylonitrile	ND		10.0	1	08/16/2018 01:35	WG1152983
Benzene	ND		1.00	1	08/16/2018 01:35	WG1152983
Bromobenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
Bromodichloromethane	ND		1.00	1	08/16/2018 01:35	WG1152983
Bromoform	ND		1.00	1	08/16/2018 01:35	WG1152983
Bromomethane	ND		5.00	1	08/16/2018 01:35	WG1152983
n-Butylbenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
sec-Butylbenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
tert-Butylbenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
Carbon tetrachloride	ND		1.00	1	08/16/2018 01:35	WG1152983
Chlorobenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
Chlorodibromomethane	ND		1.00	1	08/16/2018 01:35	WG1152983
Chloroethane	ND		5.00	1	08/16/2018 01:35	WG1152983
Chloroform	ND		5.00	1	08/16/2018 01:35	WG1152983
Chloromethane	ND		2.50	1	08/16/2018 01:35	WG1152983
2-Chlorotoluene	ND		1.00	1	08/16/2018 01:35	WG1152983
4-Chlorotoluene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/16/2018 01:35	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/16/2018 01:35	WG1152983
Dibromomethane	ND		1.00	1	08/16/2018 01:35	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/16/2018 01:35	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/16/2018 01:35	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/16/2018 01:35	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/16/2018 01:35	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/16/2018 01:35	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/16/2018 01:35	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/16/2018 01:35	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/16/2018 01:35	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/16/2018 01:35	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/16/2018 01:35	WG1152983
Di-isopropyl ether	ND		1.00	1	08/16/2018 01:35	WG1152983
Ethylbenzene	ND		1.00	1	08/16/2018 01:35	WG1152983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/09/18 16:10

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/16/2018 01:35	WG1152983
Isopropylbenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
p-Isopropyltoluene	ND		1.00	1	08/16/2018 01:35	WG1152983
2-Butanone (MEK)	ND		10.0	1	08/16/2018 01:35	WG1152983
Methylene Chloride	ND		5.00	1	08/16/2018 01:35	WG1152983
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/16/2018 01:35	WG1152983
Methyl tert-butyl ether	ND		1.00	1	08/16/2018 01:35	WG1152983
Naphthalene	ND		5.00	1	08/16/2018 01:35	WG1152983
n-Propylbenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
Styrene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/16/2018 01:35	WG1152983
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/16/2018 01:35	WG1152983
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/16/2018 01:35	WG1152983
Tetrachloroethene	ND		1.00	1	08/16/2018 01:35	WG1152983
Toluene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,2,3-Trichlorobenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,2,4-Trichlorobenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,1,1-Trichloroethane	ND		1.00	1	08/16/2018 01:35	WG1152983
1,1,2-Trichloroethane	ND		1.00	1	08/16/2018 01:35	WG1152983
Trichloroethene	ND		1.00	1	08/16/2018 01:35	WG1152983
Trichlorofluoromethane	ND		5.00	1	08/16/2018 01:35	WG1152983
1,2,3-Trichloropropane	ND		2.50	1	08/16/2018 01:35	WG1152983
1,2,4-Trimethylbenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,2,3-Trimethylbenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
1,3,5-Trimethylbenzene	ND		1.00	1	08/16/2018 01:35	WG1152983
Vinyl chloride	ND		1.00	1	08/16/2018 01:35	WG1152983
o-Xylene	ND		1.00	1	08/16/2018 01:35	WG1152983
m&p-Xylene	ND		2.00	1	08/16/2018 01:35	WG1152983
(S) Toluene-d8	101		80.0-120		08/16/2018 01:35	WG1152983
(S) Dibromofluoromethane	97.5		76.0-123		08/16/2018 01:35	WG1152983
(S) 4-Bromofluorobenzene	98.3		80.0-120		08/16/2018 01:35	WG1152983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/16/2018 16:42	WG1152309
Residual Range Organics (RRO)	340		250	1	08/16/2018 16:42	WG1152309
(S) o-Terphenyl	105		52.0-156		08/16/2018 16:42	WG1152309

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Acenaphthene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Acenaphthylene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Benzo(a)anthracene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Benzo(a)pyrene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Benzo(b)fluoranthene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Benzo(g,h,i)perylene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Benzo(k)fluoranthene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Chrysene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Dibenz(a,h)anthracene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Fluoranthene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Fluorene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/15/2018 20:10	WG1152400



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	0.391		0.250	1	08/15/2018 20:10	WG1152400
Phenanthrene	ND		0.0500	1	08/15/2018 20:10	WG1152400
Pyrene	ND		0.0500	1	08/15/2018 20:10	WG1152400
1-Methylnaphthalene	ND		0.250	1	08/15/2018 20:10	WG1152400
2-Methylnaphthalene	ND		0.250	1	08/15/2018 20:10	WG1152400
2-Chloronaphthalene	ND		0.250	1	08/15/2018 20:10	WG1152400
(S) Nitrobenzene-d5	87.9		31.0-160		08/15/2018 20:10	WG1152400
(S) 2-Fluorobiphenyl	118		48.0-148		08/15/2018 20:10	WG1152400
(S) p-Terphenyl-d14	117		37.0-146		08/15/2018 20:10	WG1152400

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/15/2018 15:40	WG1152362

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

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		2.00	1	08/21/2018 13:12	WG1154985
Barium	ND		5.00	1	08/21/2018 13:12	WG1154985
Cadmium	ND		1.00	1	08/21/2018 13:12	WG1154985
Chromium	ND		2.00	1	08/21/2018 13:12	WG1154985
Lead	ND		2.00	1	08/21/2018 13:12	WG1154985
Selenium	ND		2.00	1	08/21/2018 13:12	WG1154985
Silver	ND		2.00	1	08/21/2018 13:12	WG1154985

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/16/2018 01:55	WG1152983
Acrolein	ND		50.0	1	08/16/2018 01:55	WG1152983
Acrylonitrile	ND		10.0	1	08/16/2018 01:55	WG1152983
Benzene	ND		1.00	1	08/16/2018 01:55	WG1152983
Bromobenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
Bromodichloromethane	ND		1.00	1	08/16/2018 01:55	WG1152983
Bromoform	ND		1.00	1	08/16/2018 01:55	WG1152983
Bromomethane	ND		5.00	1	08/16/2018 01:55	WG1152983
n-Butylbenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
sec-Butylbenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
tert-Butylbenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
Carbon tetrachloride	ND		1.00	1	08/16/2018 01:55	WG1152983
Chlorobenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
Chlorodibromomethane	ND		1.00	1	08/16/2018 01:55	WG1152983
Chloroethane	ND		5.00	1	08/16/2018 01:55	WG1152983
Chloroform	ND		5.00	1	08/16/2018 01:55	WG1152983
Chloromethane	ND		2.50	1	08/16/2018 01:55	WG1152983
2-Chlorotoluene	ND		1.00	1	08/16/2018 01:55	WG1152983
4-Chlorotoluene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/16/2018 01:55	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/16/2018 01:55	WG1152983
Dibromomethane	ND		1.00	1	08/16/2018 01:55	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/16/2018 01:55	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/16/2018 01:55	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/16/2018 01:55	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/16/2018 01:55	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/16/2018 01:55	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/16/2018 01:55	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/16/2018 01:55	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/16/2018 01:55	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/16/2018 01:55	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/16/2018 01:55	WG1152983
Di-isopropyl ether	ND		1.00	1	08/16/2018 01:55	WG1152983
Ethylbenzene	ND		1.00	1	08/16/2018 01:55	WG1152983



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Hexachloro-1,3-butadiene	ND		1.00	1	08/16/2018 01:55	WG1152983
Isopropylbenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
p-Isopropyltoluene	ND		1.00	1	08/16/2018 01:55	WG1152983
2-Butanone (MEK)	ND		10.0	1	08/16/2018 01:55	WG1152983
Methylene Chloride	ND		5.00	1	08/16/2018 01:55	WG1152983
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/16/2018 01:55	WG1152983
Methyl tert-butyl ether	ND		1.00	1	08/16/2018 01:55	WG1152983
Naphthalene	ND		5.00	1	08/16/2018 01:55	WG1152983
n-Propylbenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
Styrene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/16/2018 01:55	WG1152983
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/16/2018 01:55	WG1152983
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/16/2018 01:55	WG1152983
Tetrachloroethene	ND		1.00	1	08/16/2018 01:55	WG1152983
Toluene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,2,3-Trichlorobenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,2,4-Trichlorobenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,1,1-Trichloroethane	ND		1.00	1	08/16/2018 01:55	WG1152983
1,1,2-Trichloroethane	ND		1.00	1	08/16/2018 01:55	WG1152983
Trichloroethene	ND		1.00	1	08/16/2018 01:55	WG1152983
Trichlorofluoromethane	ND		5.00	1	08/16/2018 01:55	WG1152983
1,2,3-Trichloropropane	ND		2.50	1	08/16/2018 01:55	WG1152983
1,2,4-Trimethylbenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,2,3-Trimethylbenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
1,3,5-Trimethylbenzene	ND		1.00	1	08/16/2018 01:55	WG1152983
Vinyl chloride	ND		1.00	1	08/16/2018 01:55	WG1152983
o-Xylene	ND		1.00	1	08/16/2018 01:55	WG1152983
m&p-Xylene	ND		2.00	1	08/16/2018 01:55	WG1152983
(S) Toluene-d8	98.9		80.0-120		08/16/2018 01:55	WG1152983
(S) Dibromofluoromethane	96.4		76.0-123		08/16/2018 01:55	WG1152983
(S) 4-Bromofluorobenzene	99.4		80.0-120		08/16/2018 01:55	WG1152983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/16/2018 07:42	WG1152309
Residual Range Organics (RRO)	ND		250	1	08/16/2018 07:42	WG1152309
(S) o-Terphenyl	104		52.0-156		08/16/2018 07:42	WG1152309

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Acenaphthene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Acenaphthylene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Benzo(a)anthracene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Benzo(a)pyrene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Benzo(b)fluoranthene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Benzo(g,h,i)perylene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Benzo(k)fluoranthene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Chrysene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Dibenz(a,h)anthracene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Fluoranthene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Fluorene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/15/2018 20:32	WG1152400



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/15/2018 20:32	WG1152400
Phenanthrene	ND		0.0500	1	08/15/2018 20:32	WG1152400
Pyrene	ND		0.0500	1	08/15/2018 20:32	WG1152400
1-Methylnaphthalene	ND		0.250	1	08/15/2018 20:32	WG1152400
2-Methylnaphthalene	ND		0.250	1	08/15/2018 20:32	WG1152400
2-Chloronaphthalene	ND		0.250	1	08/15/2018 20:32	WG1152400
(S) Nitrobenzene-d5	87.9		31.0-160		08/15/2018 20:32	WG1152400
(S) 2-Fluorobiphenyl	117		48.0-148		08/15/2018 20:32	WG1152400
(S) p-Terphenyl-d14	115		37.0-146		08/15/2018 20:32	WG1152400

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334179-1 08/15/18 15:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.0490	0.200

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

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

(LCS) R3334179-2 08/15/18 15:10 • (LCSD) R3334179-3 08/15/18 15:13

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 %
Mercury	3.00	2.99	2.97	99.7	99.1	80.0-120			0.587	20

⁶Qc

L1017454-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017454-02 08/15/18 15:15 • (MS) R3334179-4 08/15/18 15:17 • (MSD) R3334179-5 08/15/18 15:19

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 %
Mercury	3.00	ND	3.03	2.97	101	99.2	1	75.0-125			1.85	20

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3334168-1 08/16/18 10:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury,Dissolved	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) R3334168-2 08/16/18 10:25 • (LCSD) R3334168-3 08/16/18 10:31

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury,Dissolved	3.00	2.73	2.89	91.1	96.2	80.0-120			5.37	20

L1017463-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017463-03 08/16/18 10:33 • (MS) R3334168-4 08/16/18 10:35 • (MSD) R3334168-5 08/16/18 10:38

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury,Dissolved	3.00	ND	2.70	2.74	89.9	91.5	1	75.0-125			1.80	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335083-1 08/20/18 14:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	0.0702	↓	0.0490	0.200

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

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

(LCS) R3335083-2 08/20/18 14:51 • (LCSD) R3335083-3 08/20/18 14:53

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 %
Mercury,Dissolved	3.00	3.32	3.20	111	107	80.0-120			3.46	20

⁷Gl

⁸Al

L1019065-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019065-12 08/20/18 15:00 • (MS) R3335083-4 08/20/18 15:02 • (MSD) R3335083-5 08/20/18 15:04

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 %
Mercury,Dissolved	3.00	ND	3.28	3.19	109	106	1	75.0-125			2.68	20

⁹Sc



Method Blank (MB)

(MB) R3335396-1 08/21/18 12:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		0.250	2.00
Barium,Dissolved	U		0.360	5.00
Cadmium,Dissolved	U		0.160	1.00
Chromium,Dissolved	U		0.540	2.00
Lead,Dissolved	U		0.240	2.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

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

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

(LCS) R3335396-2 08/21/18 12:12 • (LCSD) R3335396-3 08/21/18 12:17

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 %
Arsenic,Dissolved	50.0	50.7	51.4	101	103	80.0-120			1.30	20
Barium,Dissolved	50.0	49.1	48.6	98.1	97.1	80.0-120			1.05	20
Cadmium,Dissolved	50.0	46.9	46.6	93.9	93.2	80.0-120			0.707	20
Chromium,Dissolved	50.0	51.4	51.2	103	102	80.0-120			0.506	20
Lead,Dissolved	50.0	49.9	50.0	99.7	100	80.0-120			0.230	20
Selenium,Dissolved	50.0	49.6	51.1	99.1	102	80.0-120			3.10	20
Silver,Dissolved	50.0	47.6	47.5	95.2	95.0	80.0-120			0.284	20

L1017869-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017869-01 08/21/18 12:22 • (MS) R3335396-5 08/21/18 12:31 • (MSD) R3335396-6 08/21/18 12:35

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 %
Arsenic,Dissolved	50.0	7.12	57.2	57.6	100	101	1	75.0-125			0.748	20
Barium,Dissolved	50.0	43.6	90.9	92.7	94.6	98.2	1	75.0-125			1.95	20
Cadmium,Dissolved	50.0	ND	48.8	48.8	97.5	97.5	1	75.0-125			0.0273	20
Chromium,Dissolved	50.0	3.78	54.3	54.7	101	102	1	75.0-125			0.824	20
Lead,Dissolved	50.0	ND	50.9	51.1	102	102	1	75.0-125			0.437	20
Selenium,Dissolved	50.0	ND	50.9	52.0	102	104	1	75.0-125			2.10	20
Silver,Dissolved	50.0	ND	48.7	48.7	97.5	97.4	1	75.0-125			0.0873	20



Method Blank (MB)

(MB) R3335151-1 08/20/18 17:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		0.250	2.00
Barium,Dissolved	U		0.360	5.00
Cadmium,Dissolved	U		0.160	1.00
Chromium,Dissolved	U		0.540	2.00
Lead,Dissolved	U		0.240	2.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3335151-2 08/20/18 17:40 • (LCSD) R3335151-3 08/20/18 17:46

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,Dissolved	50.0	50.3	50.2	101	100	80.0-120			0.0416	20
Barium,Dissolved	50.0	45.5	45.6	91.1	91.2	80.0-120			0.126	20
Cadmium,Dissolved	50.0	50.7	50.8	101	102	80.0-120			0.134	20
Chromium,Dissolved	50.0	49.3	50.6	98.6	101	80.0-120			2.60	20
Lead,Dissolved	50.0	49.9	50.5	99.8	101	80.0-120			1.18	20
Selenium,Dissolved	50.0	50.2	53.0	100	106	80.0-120			5.35	20
Silver,Dissolved	50.0	49.6	50.0	99.2	100	80.0-120			0.799	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1018718-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018718-05 08/20/18 17:51 • (MS) R3335151-5 08/20/18 18:02 • (MSD) R3335151-6 08/20/18 18:07

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,Dissolved	50.0	9.47	57.9	57.6	96.8	96.4	1	75.0-125			0.375	20
Barium,Dissolved	50.0	240	286	287	92.3	94.2	1	75.0-125			0.345	20
Cadmium,Dissolved	50.0	ND	50.4	51.5	100	103	1	75.0-125			2.30	20
Chromium,Dissolved	50.0	ND	48.5	48.8	95.2	96.0	1	75.0-125			0.761	20
Lead,Dissolved	50.0	ND	48.8	49.8	96.2	98.1	1	75.0-125			1.92	20
Selenium,Dissolved	50.0	ND	51.3	53.6	103	107	1	75.0-125			4.35	20
Silver,Dissolved	50.0	ND	49.5	49.8	99.1	99.7	1	75.0-125			0.625	20



Method Blank (MB)

(MB) R3335407-1 08/21/18 12:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		0.250	2.00
Barium	U		0.360	5.00
Cadmium	U		0.160	1.00
Chromium	U		0.540	2.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Silver	U		0.310	2.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3335407-2 08/21/18 12:46 • (LCSD) R3335407-3 08/21/18 12:51

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	50.0	48.9	49.2	97.7	98.3	80.0-120			0.597	20
Barium	50.0	47.8	48.3	95.5	96.6	80.0-120			1.11	20
Cadmium	50.0	50.4	50.4	101	101	80.0-120			0.0325	20
Chromium	50.0	48.0	47.9	95.9	95.8	80.0-120			0.124	20
Lead	50.0	50.5	49.4	101	98.9	80.0-120			2.21	20
Selenium	50.0	51.0	50.3	102	101	80.0-120			1.47	20
Silver	50.0	48.4	47.6	96.9	95.2	80.0-120			1.73	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1018802-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018802-01 08/21/18 12:55 • (MS) R3335407-5 08/21/18 13:04 • (MSD) R3335407-6 08/21/18 13:08

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	50.0	1.68	50.5	51.9	97.7	100	1	75.0-125			2.69	20
Barium	50.0	346	393	393	93.7	94.1	1	75.0-125			0.0518	20
Cadmium	50.0	U	51.5	50.5	103	101	1	75.0-125			1.92	20
Chromium	50.0	U	46.7	47.4	93.4	94.9	1	75.0-125			1.57	20
Lead	50.0	U	49.2	50.3	98.3	101	1	75.0-125			2.36	20
Selenium	50.0	U	50.4	52.0	101	104	1	75.0-125			3.17	20
Silver	50.0	U	47.7	47.7	95.4	95.4	1	75.0-125			0.00973	20



Method Blank (MB)

(MB) R3334655-3 08/15/18 22:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	U		0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334655-3 08/15/18 22:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
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		0.412	1.00
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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	101			80.0-120
(S) Dibromofluoromethane	95.6			76.0-123
(S) 4-Bromofluorobenzene	98.5			80.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3334655-1 08/15/18 21:24 • (LCSD) R3334655-2 08/15/18 21:43

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	107	108	85.7	86.4	10.0-160			0.783	23
Acrolein	125	145	148	116	118	10.0-160			2.07	20
Acrylonitrile	125	120	121	95.7	96.9	60.0-142			1.16	20



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

(LCS) R3334655-1 08/15/18 21:24 • (LCSD) R3334655-2 08/15/18 21:43

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	25.2	25.5	101	102	69.0-123			1.32	20
Bromobenzene	25.0	25.1	25.5	100	102	79.0-120			1.65	20
Bromodichloromethane	25.0	25.7	25.4	103	102	76.0-120			1.05	20
Bromoform	25.0	28.3	28.5	113	114	67.0-132			0.703	20
Bromomethane	25.0	22.3	20.4	89.4	81.7	18.0-160			8.94	20
n-Butylbenzene	25.0	24.0	24.5	96.1	98.2	72.0-126			2.16	20
sec-Butylbenzene	25.0	25.9	26.5	103	106	74.0-121			2.30	20
tert-Butylbenzene	25.0	26.6	27.6	106	111	75.0-122			3.81	20
Carbon tetrachloride	25.0	26.3	26.8	105	107	63.0-122			2.04	20
Chlorobenzene	25.0	27.5	27.1	110	108	79.0-121			1.57	20
Chlorodibromomethane	25.0	27.5	27.6	110	111	75.0-125			0.420	20
Chloroethane	25.0	22.4	23.2	89.5	93.0	47.0-152			3.80	20
Chloroform	25.0	25.8	26.4	103	105	72.0-121			2.11	20
Chloromethane	25.0	21.0	21.2	84.0	84.8	48.0-139			0.961	20
2-Chlorotoluene	25.0	26.6	26.9	107	107	74.0-122			0.843	20
4-Chlorotoluene	25.0	26.1	26.4	104	106	79.0-120			1.33	20
1,2-Dibromo-3-Chloropropane	25.0	22.2	22.4	88.9	89.4	64.0-127			0.592	20
1,2-Dibromoethane	25.0	26.0	25.4	104	102	77.0-123			2.32	20
Dibromomethane	25.0	25.1	25.3	100	101	78.0-120			0.778	20
1,2-Dichlorobenzene	25.0	25.4	25.8	101	103	80.0-120			1.70	20
1,3-Dichlorobenzene	25.0	26.3	26.1	105	104	72.0-123			0.722	20
1,4-Dichlorobenzene	25.0	24.8	25.5	99.2	102	77.0-120			2.74	20
Dichlorodifluoromethane	25.0	19.7	19.5	78.9	77.9	49.0-155			1.20	20
1,1-Dichloroethane	25.0	25.5	26.4	102	106	70.0-126			3.49	20
1,2-Dichloroethane	25.0	24.2	24.6	96.7	98.3	67.0-126			1.59	20
1,1-Dichloroethene	25.0	26.6	28.0	106	112	64.0-129			5.05	20
cis-1,2-Dichloroethene	25.0	26.8	27.4	107	110	73.0-120			2.25	20
trans-1,2-Dichloroethene	25.0	25.3	26.4	101	105	71.0-121			4.22	20
1,2-Dichloropropane	25.0	26.0	26.5	104	106	75.0-125			1.67	20
1,1-Dichloropropene	25.0	25.1	26.2	101	105	71.0-129			4.34	20
1,3-Dichloropropane	25.0	26.2	25.4	105	101	80.0-121			3.12	20
cis-1,3-Dichloropropene	25.0	27.5	26.9	110	108	79.0-123			2.21	20
trans-1,3-Dichloropropene	25.0	27.4	26.4	109	106	74.0-127			3.61	20
2,2-Dichloropropane	25.0	23.9	24.4	95.6	97.7	60.0-125			2.18	20
Di-isopropyl ether	25.0	25.7	26.2	103	105	59.0-133			1.80	20
Ethylbenzene	25.0	27.1	26.7	108	107	77.0-120			1.47	20
Hexachloro-1,3-butadiene	25.0	24.9	27.2	99.5	109	64.0-131			8.81	20
Isopropylbenzene	25.0	26.4	27.0	106	108	75.0-120			2.34	20
p-Isopropyltoluene	25.0	26.3	26.9	105	107	74.0-126			2.21	20
2-Butanone (MEK)	125	113	114	90.5	91.4	37.0-158			1.03	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) R3334655-1 08/15/18 21:24 • (LCSD) R3334655-2 08/15/18 21:43

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 %
Methylene Chloride	25.0	25.5	26.5	102	106	66.0-121			3.78	20
4-Methyl-2-pentanone (MIBK)	125	124	120	98.9	96.1	59.0-143			2.87	20
Methyl tert-butyl ether	25.0	24.5	25.5	98.1	102	64.0-123			3.85	20
Naphthalene	25.0	19.4	20.3	77.6	81.2	62.0-128			4.43	20
n-Propylbenzene	25.0	25.9	26.4	104	106	79.0-120			1.82	20
Styrene	25.0	27.4	27.5	110	110	78.0-124			0.308	20
1,1,1,2-Tetrachloroethane	25.0	28.3	28.6	113	114	75.0-122			1.08	20
1,1,2,2-Tetrachloroethane	25.0	24.0	24.1	96.0	96.5	71.0-122			0.484	20
Tetrachloroethene	25.0	28.4	27.6	113	110	70.0-127			2.68	20
Toluene	25.0	26.4	25.9	106	104	77.0-120			2.09	20
1,1,2-Trichlorotrifluoroethane	25.0	23.7	25.1	94.9	100	61.0-136			5.45	20
1,2,3-Trichlorobenzene	25.0	21.2	22.7	84.8	90.9	61.0-133			6.95	20
1,2,4-Trichlorobenzene	25.0	24.3	25.6	97.2	103	69.0-129			5.43	20
1,1,1-Trichloroethane	25.0	26.6	27.3	106	109	68.0-122			2.77	20
1,1,2-Trichloroethane	25.0	26.5	25.8	106	103	78.0-120			2.70	20
Trichloroethene	25.0	28.0	28.5	112	114	78.0-120			1.78	20
Trichlorofluoromethane	25.0	24.1	25.1	96.5	100	56.0-137			3.90	20
1,2,3-Trichloropropane	25.0	25.2	25.2	101	101	72.0-124			0.0843	20
1,2,3-Trimethylbenzene	25.0	24.6	25.3	98.3	101	75.0-120			3.00	20
1,2,4-Trimethylbenzene	25.0	26.1	27.0	105	108	75.0-120			3.24	20
1,3,5-Trimethylbenzene	25.0	26.8	27.3	107	109	75.0-120			1.89	20
Vinyl chloride	25.0	23.6	24.2	94.5	96.7	64.0-133			2.29	20
o-Xylene	25.0	26.8	26.8	107	107	78.0-120			0.0208	20
m&p-Xylenes	50.0	53.7	53.2	107	106	77.0-120			0.982	20
(S) Toluene-d8				101	98.3	80.0-120				
(S) Dibromofluoromethane				96.3	97.4	76.0-123				
(S) 4-Bromofluorobenzene				97.4	95.1	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334128-1 08/16/18 00:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	106			52.0-156

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

(LCS) R3334128-2 08/16/18 01:16 • (LCSD) R3334128-3 08/16/18 01:34

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	706	784	94.1	105	50.0-150			10.5	20
Residual Range Organics (RRO)	750	706	794	94.1	106	50.0-150			11.7	20
<i>(S) o-Terphenyl</i>				98.5	106	52.0-156				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334272-3 08/15/18 13:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	0.00228	U	0.00212	0.0500
Benzo(g,h,i)perylene	0.00231	U	0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	U		0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	103			31.0-160
(S) 2-Fluorobiphenyl	131			48.0-148
(S) p-Terphenyl-d14	130			37.0-146

- 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) R3334272-1 08/15/18 12:32 • (LCSD) R3334272-2 08/15/18 12:54

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 %
Anthracene	2.00	2.60	2.49	130	124	64.0-142			4.32	20
Acenaphthene	2.00	2.29	2.21	114	111	66.0-132			3.56	20
Acenaphthylene	2.00	2.39	2.30	119	115	65.0-132			3.84	20
Benzo(a)anthracene	2.00	2.42	2.28	121	114	59.0-134			5.96	20
Benzo(a)pyrene	2.00	2.58	2.46	129	123	61.0-145			4.76	20
Benzo(b)fluoranthene	2.00	2.61	2.41	131	120	57.0-136			7.97	20
Benzo(g,h,i)perylene	2.00	2.63	2.52	132	126	54.0-140			4.27	20
Benzo(k)fluoranthene	2.00	2.42	2.44	121	122	57.0-141			0.823	20
Chrysene	2.00	2.45	2.34	122	117	63.0-140			4.59	20
Dibenz(a,h)anthracene	2.00	2.83	2.70	141	135	49.0-141			4.70	20
Fluoranthene	2.00	2.57	2.43	129	122	65.0-143			5.60	20



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

(LCS) R3334272-1 08/15/18 12:32 • (LCSD) R3334272-2 08/15/18 12:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	2.44	2.35	122	117	64.0-129			3.76	20
Indeno(1,2,3-cd)pyrene	2.00	2.71	2.57	135	129	53.0-141			5.30	20
Naphthalene	2.00	2.29	2.21	114	111	68.0-129			3.56	20
Phenanthrene	2.00	2.35	2.25	117	112	62.0-132			4.35	20
Pyrene	2.00	2.29	2.17	114	108	58.0-156			5.38	20
1-Methylnaphthalene	2.00	2.47	2.36	123	118	68.0-137			4.55	20
2-Methylnaphthalene	2.00	2.35	2.25	117	112	68.0-134			4.35	20
2-Chloronaphthalene	2.00	2.31	2.25	115	112	65.0-129			2.63	20
<i>(S) Nitrobenzene-d5</i>				93.5	89.5	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				119	113	48.0-148				
<i>(S) p-Terphenyl-d14</i>				121	113	37.0-146				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.

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

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
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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

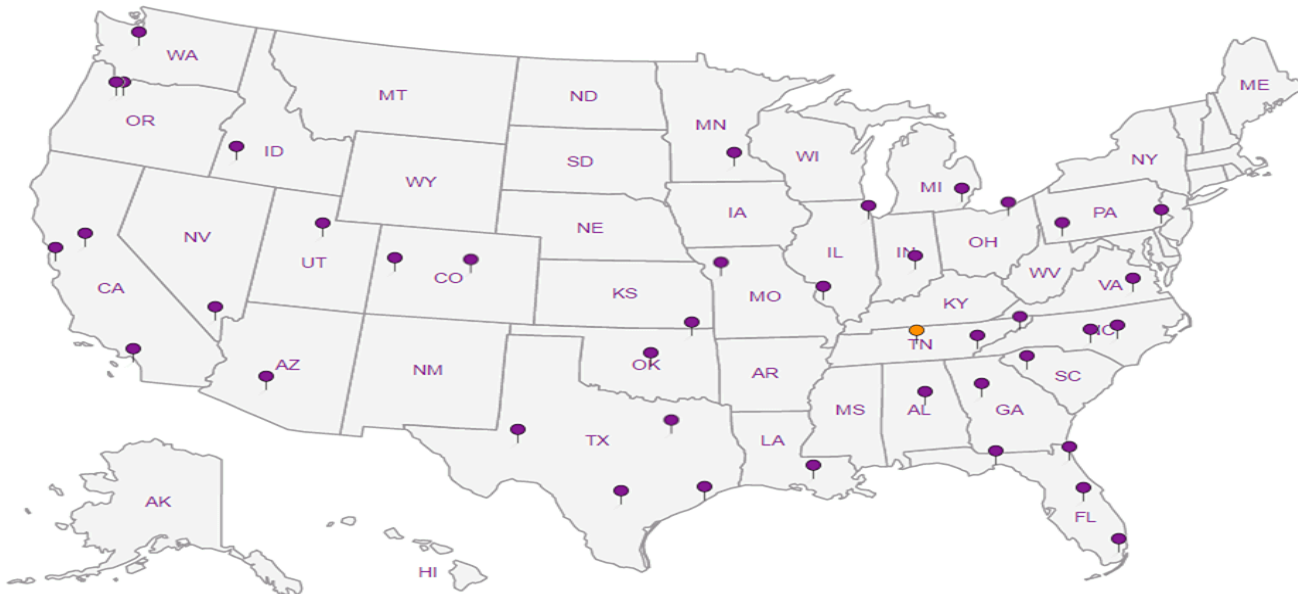
Third Party Federal Accreditations

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.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:

Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Pres
Chk

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
KatieTeague@kennedyjenks.com

Project
Description: **BNSF - Wishram Railyard, WA**

City/State
Collected: **Wishram, WA**

Phone: **253-835-6400**
Fax:

Client Project #
1896120-04

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

Immediately
Packed on Ice N Y

No.
of
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts
B-18-12		GW				
B-18-18	Grab	GW	—	8/18/18	0850	7 X
B-18-14	↓	GW	—	↓	1345	7 X
B-18-16	↓	GW	—	↓	1610	7 X
RB-02-20180809	Grab	GW	—	8/9/18	1500	7
		GW				
		GW				
		GW				
		GW				
		GW				

Analysis / Container / Preservative					
Diss	MRCRAB 250mlHDPE-HNO3	NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT	NWTPHDXLVI-NoSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT
				V8260C 40mlAmb-HCl	Total RCRAB Metals

Chain of Custody Page ___ of ___

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# **1617463**
H092

Acctnum: **BNSF1KEN**
Template: **T138674**
Prelogin: **P663890**
TSR: **134 - Mark W. Beasley**
PB:

Shipped Via: **FedEx Ground**

Remarks	Sample # (lab only)
	01
	02
	03
	04

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: Include NWTPHDx and Gx chromatograms
No spaces in sample names

Samples returned via:
 UPS FedEx Courier

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist	
COC Seal Present/Intact:	<input type="checkbox"/> N <input checked="" type="checkbox"/> Y
COC Signed/Accurate:	<input type="checkbox"/> N <input checked="" type="checkbox"/> Y
Bottles arrive intact:	<input type="checkbox"/> N <input checked="" type="checkbox"/> Y
Correct bottles used:	<input type="checkbox"/> N <input checked="" type="checkbox"/> Y
Sufficient volume sent:	<input type="checkbox"/> N <input checked="" type="checkbox"/> Y
if Applicable	
VOA Zero Headspace:	<input type="checkbox"/> N <input checked="" type="checkbox"/> Y
Preservation Correct/Checked:	<input type="checkbox"/> N <input checked="" type="checkbox"/> Y

2.5 ml/HZ

Relinquished by: (Signature) *[Signature]*
Date: **8/13/18** Time: **0930**

Relinquished by: (Signature) _____ Date: _____ Time: _____

Relinquished by: (Signature) _____ Date: _____ Time: _____

Tracking # **4492 6218 1859**

Received by: (Signature) *[Signature]*
Date: _____ Time: _____

Received by: (Signature) _____ Date: _____ Time: _____

Received for lab by: (Signature) *[Signature]*
Date: **8/14/18** Time: **8:45**

Trip Blank Received: No Yes
 HCl/MeOH TBR

Temp: **21.40** °C Bottles Received: **28**

If preservation required by Login: Date/Time

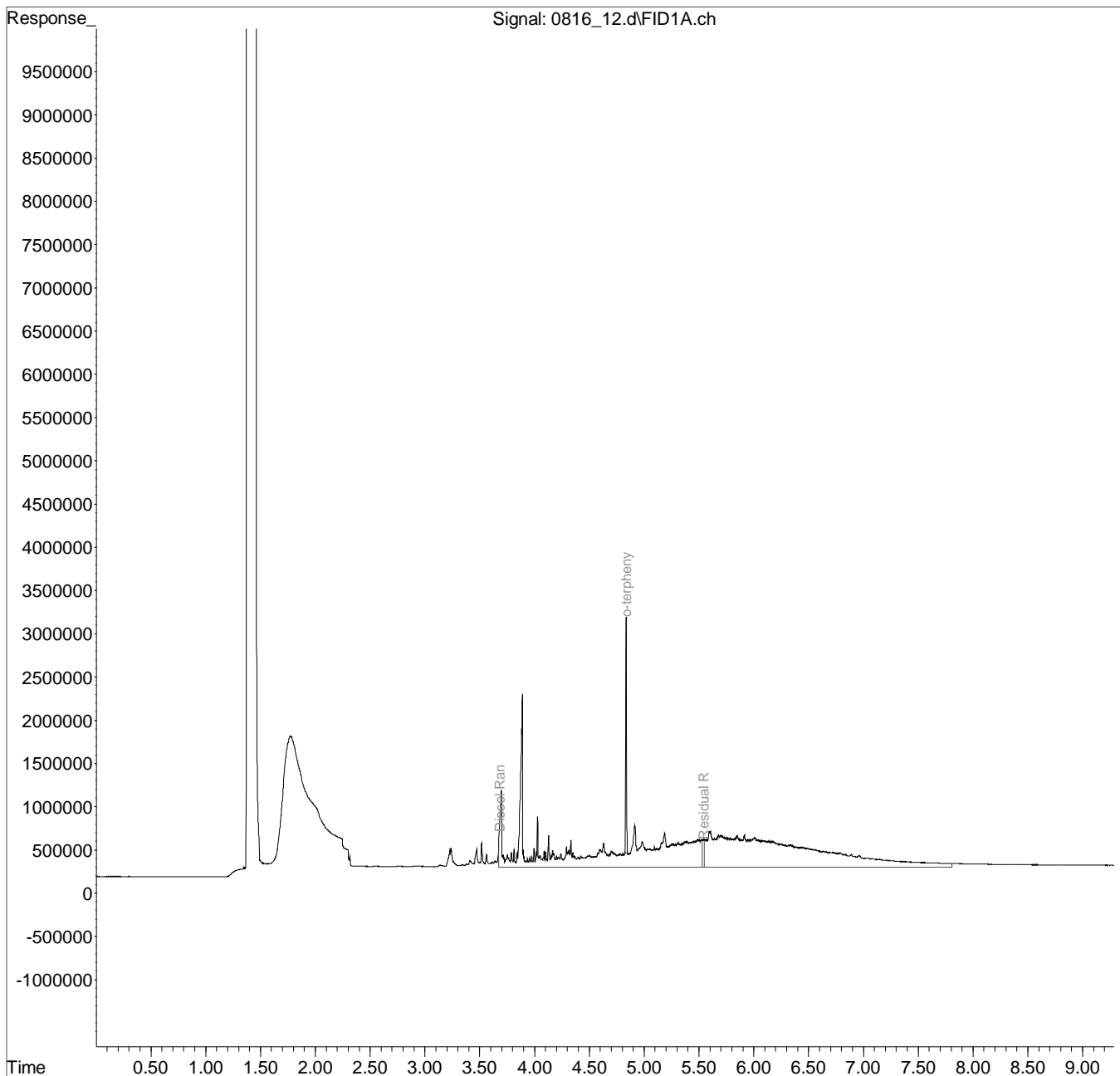
Hold:

Condition: **NCF / OK**

Data Path : C:\msdchem\1\data\081618\
 Data File : 0816 12.d
 Signal(s) : FID1A.ch
 Acq On : 16 Aug 2018 4:06 pm
 Operator : 773
 Sample : L1017463-01 1x WG1152309
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 6 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 16 16:30:59 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

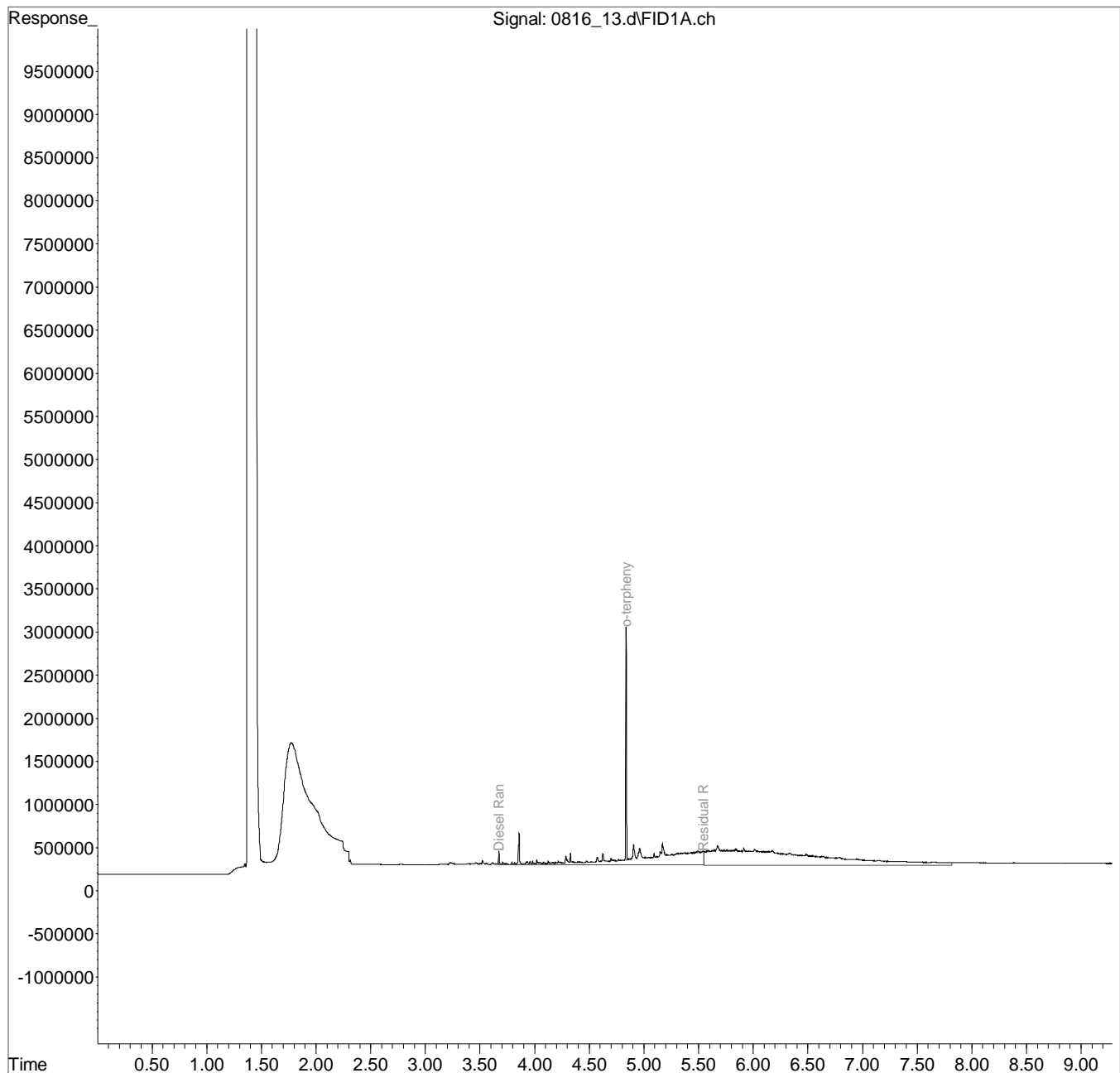
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081618\
Data File : 0816_13.d
Signal(s) : FID1A.ch
Acq On : 16 Aug 2018 4:25 pm
Operator : 773
Sample : L1017463-02 1x WG1152309
Misc : water M.I.s on ranges are corrections
ALS Vial : 7 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 18 08:26:44 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

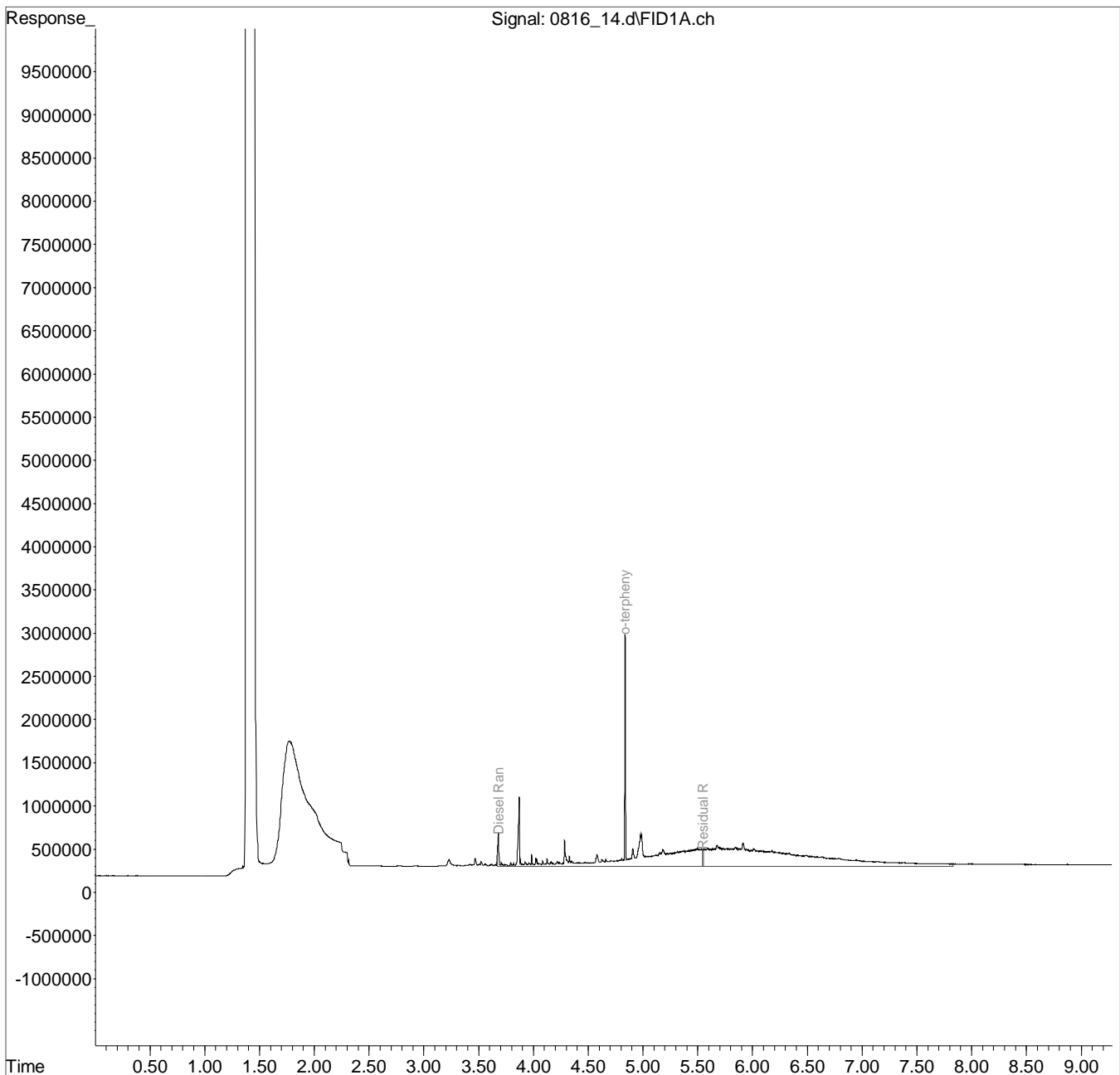
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081618\
Data File : 0816 14.d
Signal(s) : FID1A.ch
Acq On : 16 Aug 2018 4:42 pm
Operator : 773
Sample : L1017463-03 1x WG1152309
Misc : water M.I.s on ranges are corrections
ALS Vial : 8 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 18 08:27:19 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

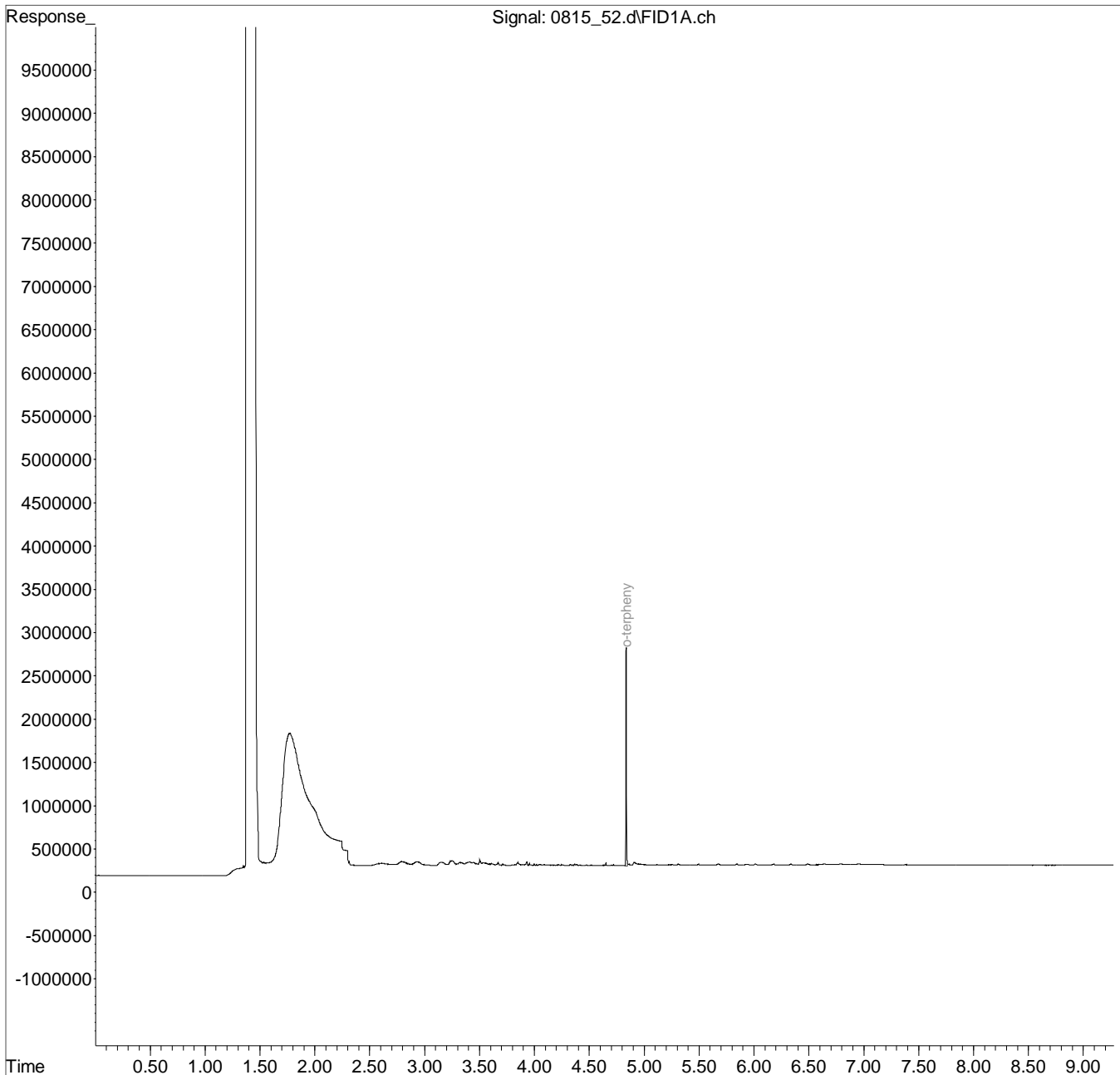
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081518\
 Data File : 0815 52.d
 Signal(s) : FID1A.ch
 Acq On : 16 Aug 2018 7:42 am
 Operator : 773
 Sample : L1017463-04 1x WG1152309
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 38 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 16 10:50:19 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1017857
Samples Received: 08/15/2018
Project Number: 1896120 04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:

[Preliminary Report]

Mark W. Beasley
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



B-18-15(12.0-12.5) L1017857-01 Solid

Collected by
K. Teague
Collected date/time
08/13/18 12:10
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1154706	1	08/20/18 11:05	08/20/18 11:14	KDW
Mercury by Method 7471B	WG1154460	1	08/20/18 09:34	08/21/18 09:25	EL
Metals (ICP) by Method 6010C	WG1154446	1	08/19/18 10:29	08/20/18 07:55	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153795	1	08/13/18 12:10	08/17/18 14:04	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154430	1	08/13/18 12:10	08/19/18 13:35	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154367	2	08/18/18 17:26	08/19/18 20:48	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154028	1	08/17/18 18:33	08/18/18 11:38	DMG

1
Cp

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Tc

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Ss

4
Cn

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Sr

B-18-17(9.0-9.5) L1017857-02 Solid

Collected by
K. Teague
Collected date/time
08/13/18 13:40
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1154706	1	08/20/18 11:05	08/20/18 11:14	KDW
Mercury by Method 7471B	WG1154460	1	08/20/18 09:34	08/21/18 09:27	EL
Metals (ICP) by Method 6010C	WG1154446	1	08/19/18 10:29	08/20/18 07:43	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153795	1	08/13/18 13:40	08/17/18 14:25	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154430	1	08/13/18 13:40	08/19/18 13:55	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154367	1	08/18/18 17:26	08/19/18 18:04	MG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1154190	1	08/21/18 07:04	08/22/18 01:10	AAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154028	1	08/17/18 18:33	08/18/18 12:00	DMG

6
Qc

7
Gl

8
Al

9
Sc

B-18-06(9.5-10.0) L1017857-04 Solid

Collected by
K. Teague
Collected date/time
08/13/18 15:05
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1154706	1	08/20/18 11:05	08/20/18 11:14	KDW
Mercury by Method 7471B	WG1154460	1	08/20/18 09:34	08/21/18 09:30	EL
Metals (ICP) by Method 6010C	WG1154446	1	08/19/18 10:29	08/20/18 07:58	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153795	1.04	08/13/18 15:05	08/17/18 14:46	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154430	1.04	08/13/18 15:05	08/19/18 14:14	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154367	1	08/18/18 17:26	08/19/18 18:16	MG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1154190	1	08/21/18 07:04	08/22/18 00:56	AAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154028	1	08/17/18 18:33	08/18/18 12:21	KM

WMW-32(9.5-10.0) L1017857-06 Solid

Collected by
K. Teague
Collected date/time
08/14/18 07:45
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1153735	1	08/14/18 09:19	08/17/18 12:38	JHH

B-18-07(9.5-10.0) L1017857-07 Solid

Collected by
K. Teague
Collected date/time
08/14/18 08:30
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1154706	1	08/20/18 11:05	08/20/18 11:14	KDW
Mercury by Method 7471B	WG1154460	1	08/20/18 09:34	08/21/18 09:33	EL
Metals (ICP) by Method 6010C	WG1154446	1	08/19/18 10:29	08/20/18 08:05	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153795	1	08/14/18 08:30	08/17/18 15:06	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154430	1	08/14/18 08:30	08/19/18 14:33	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154367	1	08/18/18 17:26	08/19/18 18:29	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154028	1	08/17/18 18:33	08/18/18 12:43	KM

SAMPLE SUMMARY



B-18-08(9.5-10.0) L1017857-08 Solid

Collected by
K. Teague
Collected date/time
08/14/18 10:15
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1154706	1	08/20/18 11:05	08/20/18 11:14	KDW
Mercury by Method 7471B	WG1154460	1	08/20/18 09:34	08/21/18 09:35	EL
Metals (ICP) by Method 6010C	WG1154446	1	08/19/18 10:29	08/20/18 08:08	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153795	1	08/14/18 10:15	08/17/18 15:27	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154430	1	08/14/18 10:15	08/19/18 14:53	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154367	1	08/18/18 17:26	08/19/18 19:07	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154028	1	08/17/18 18:33	08/18/18 13:05	KM

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

B-18-12(9.5-10.0) L1017857-09 Solid

Collected by
K. Teague
Collected date/time
08/14/18 11:00
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1154706	1	08/20/18 11:05	08/20/18 11:14	KDW
Mercury by Method 7471B	WG1154460	1	08/20/18 09:34	08/21/18 09:38	EL
Metals (ICP) by Method 6010C	WG1154446	1	08/19/18 10:29	08/20/18 08:10	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153795	1	08/14/18 11:00	08/17/18 15:48	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154430	1	08/14/18 11:00	08/19/18 15:12	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154367	1	08/18/18 17:26	08/19/18 19:20	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154028	1	08/17/18 18:33	08/18/18 13:27	KM

6
Qc

7
Gl

8
Al

9
Sc

B-18-13(12.0-12.5) L1017857-10 Solid

Collected by
K. Teague
Collected date/time
08/14/18 12:35
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1154707	1	08/20/18 14:08	08/20/18 14:20	JD
Mercury by Method 7471B	WG1154460	1	08/20/18 09:34	08/21/18 09:40	EL
Metals (ICP) by Method 6010C	WG1154446	1	08/19/18 10:29	08/20/18 08:13	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1153795	1	08/14/18 12:35	08/17/18 16:09	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154430	1	08/14/18 12:35	08/19/18 15:31	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154367	1	08/18/18 17:26	08/19/18 19:32	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154028	1	08/17/18 18:33	08/18/18 13:49	KM



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.

[Preliminary Report]

Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.3		1	08/20/2018 11:14	WG1154706

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0252	1	08/21/2018 09:25	WG1154460

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.52	1	08/20/2018 07:55	WG1154446
Barium	60.1		0.631	1	08/20/2018 07:55	WG1154446
Cadmium	ND		0.631	1	08/20/2018 07:55	WG1154446
Chromium	7.46		1.26	1	08/20/2018 07:55	WG1154446
Lead	3.11		0.631	1	08/20/2018 07:55	WG1154446
Selenium	ND		2.52	1	08/20/2018 07:55	WG1154446
Silver	ND		1.26	1	08/20/2018 07:55	WG1154446

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0315	1	08/19/2018 13:35	WG1154430
Acrylonitrile	ND		0.0158	1	08/17/2018 14:04	WG1153795
Benzene	ND		0.00126	1	08/17/2018 14:04	WG1153795
Bromobenzene	ND		0.0158	1	08/17/2018 14:04	WG1153795
Bromodichloromethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
Bromoform	ND		0.0315	1	08/17/2018 14:04	WG1153795
Bromomethane	ND		0.0158	1	08/17/2018 14:04	WG1153795
n-Butylbenzene	ND		0.0158	1	08/17/2018 14:04	WG1153795
sec-Butylbenzene	ND		0.0158	1	08/17/2018 14:04	WG1153795
tert-Butylbenzene	ND		0.00631	1	08/17/2018 14:04	WG1153795
Carbon tetrachloride	ND		0.00631	1	08/17/2018 14:04	WG1153795
Chlorobenzene	ND		0.00315	1	08/17/2018 14:04	WG1153795
Chlorodibromomethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
Chloroethane	ND		0.00631	1	08/17/2018 14:04	WG1153795
Chloroform	ND		0.00315	1	08/17/2018 14:04	WG1153795
Chloromethane	ND		0.0158	1	08/17/2018 14:04	WG1153795
2-Chlorotoluene	ND		0.00315	1	08/17/2018 14:04	WG1153795
4-Chlorotoluene	ND		0.00631	1	08/17/2018 14:04	WG1153795
1,2-Dibromo-3-Chloropropane	ND		0.0315	1	08/17/2018 14:04	WG1153795
1,2-Dibromoethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
Dibromomethane	ND		0.00631	1	08/17/2018 14:04	WG1153795
1,2-Dichlorobenzene	ND		0.00631	1	08/17/2018 14:04	WG1153795
1,3-Dichlorobenzene	ND		0.00631	1	08/17/2018 14:04	WG1153795
1,4-Dichlorobenzene	ND		0.00631	1	08/17/2018 14:04	WG1153795
Dichlorodifluoromethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
1,1-Dichloroethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
1,2-Dichloroethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
1,1-Dichloroethene	ND		0.00315	1	08/17/2018 14:04	WG1153795
cis-1,2-Dichloroethene	ND		0.00315	1	08/17/2018 14:04	WG1153795
trans-1,2-Dichloroethene	ND		0.00631	1	08/17/2018 14:04	WG1153795
1,2-Dichloropropane	ND		0.00631	1	08/17/2018 14:04	WG1153795
1,1-Dichloropropene	ND		0.00315	1	08/17/2018 14:04	WG1153795
1,3-Dichloropropane	ND	J4	0.00631	1	08/17/2018 14:04	WG1153795

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

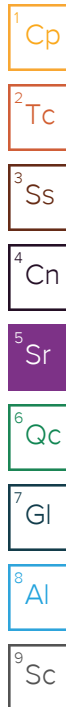


Collected date/time: 08/13/18 12:10

L1017857

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00315	1	08/17/2018 14:04	WG1153795
trans-1,3-Dichloropropene	ND		0.00631	1	08/17/2018 14:04	WG1153795
2,2-Dichloropropane	ND	JO	0.00315	1	08/19/2018 13:35	WG1154430
Di-isopropyl ether	ND		0.00126	1	08/17/2018 14:04	WG1153795
Ethylbenzene	ND		0.00315	1	08/17/2018 14:04	WG1153795
Hexachloro-1,3-butadiene	ND		0.0315	1	08/17/2018 14:04	WG1153795
Isopropylbenzene	ND		0.00315	1	08/17/2018 14:04	WG1153795
p-Isopropyltoluene	ND		0.00631	1	08/17/2018 14:04	WG1153795
2-Butanone (MEK)	ND		0.0315	1	08/19/2018 13:35	WG1154430
Methylene Chloride	ND		0.0315	1	08/17/2018 14:04	WG1153795
4-Methyl-2-pentanone (MIBK)	ND		0.0315	1	08/17/2018 14:04	WG1153795
Methyl tert-butyl ether	ND		0.00126	1	08/17/2018 14:04	WG1153795
Naphthalene	ND		0.0158	1	08/17/2018 14:04	WG1153795
n-Propylbenzene	ND		0.00631	1	08/17/2018 14:04	WG1153795
Styrene	ND		0.0158	1	08/17/2018 14:04	WG1153795
1,1,1,2-Tetrachloroethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
1,1,2,2-Tetrachloroethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
1,1,2-Trichlorotrifluoroethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
Tetrachloroethene	ND		0.00315	1	08/17/2018 14:04	WG1153795
Toluene	ND		0.00631	1	08/17/2018 14:04	WG1153795
1,2,3-Trichlorobenzene	ND		0.00315	1	08/17/2018 14:04	WG1153795
1,2,4-Trichlorobenzene	ND		0.0158	1	08/17/2018 14:04	WG1153795
1,1,1-Trichloroethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
1,1,2-Trichloroethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
Trichloroethene	ND		0.00126	1	08/17/2018 14:04	WG1153795
Trichlorofluoromethane	ND		0.00315	1	08/17/2018 14:04	WG1153795
1,2,3-Trichloropropane	ND		0.0158	1	08/17/2018 14:04	WG1153795
1,2,4-Trimethylbenzene	ND		0.00631	1	08/17/2018 14:04	WG1153795
1,2,3-Trimethylbenzene	ND		0.00631	1	08/17/2018 14:04	WG1153795
Vinyl chloride	ND		0.00315	1	08/19/2018 13:35	WG1154430
1,3,5-Trimethylbenzene	ND		0.00631	1	08/17/2018 14:04	WG1153795
o-Xylene	ND		0.00315	1	08/17/2018 14:04	WG1153795
m&p-Xylene	ND		0.00505	1	08/17/2018 14:04	WG1153795
(S) Toluene-d8	114		80.0-120		08/17/2018 14:04	WG1153795
(S) Toluene-d8	113		80.0-120		08/19/2018 13:35	WG1154430
(S) Dibromofluoromethane	89.9		74.0-131		08/17/2018 14:04	WG1153795
(S) Dibromofluoromethane	93.1		74.0-131		08/19/2018 13:35	WG1154430
(S) 4-Bromofluorobenzene	102		64.0-132		08/17/2018 14:04	WG1153795
(S) 4-Bromofluorobenzene	103		64.0-132		08/19/2018 13:35	WG1154430



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		10.1	2	08/19/2018 20:48	WG1154367
Residual Range Organics (RRO)	ND		25.2	2	08/19/2018 20:48	WG1154367
(S) o-Terphenyl	73.7		18.0-148		08/19/2018 20:48	WG1154367

Sample Narrative:

L1017857-01 WG1154367: Dilution due to matrix impact during extract concentration procedure



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Acenaphthene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Acenaphthylene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Benzo(a)anthracene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Benzo(a)pyrene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Benzo(b)fluoranthene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Benzo(g,h,i)perylene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Benzo(k)fluoranthene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Chrysene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Dibenz(a,h)anthracene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Fluoranthene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Fluorene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Indeno(1,2,3-cd)pyrene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Naphthalene	ND		0.0252	1	08/18/2018 11:38	WG1154028
Phenanthrene	ND		0.00757	1	08/18/2018 11:38	WG1154028
Pyrene	ND		0.00757	1	08/18/2018 11:38	WG1154028
1-Methylnaphthalene	ND		0.0252	1	08/18/2018 11:38	WG1154028
2-Methylnaphthalene	ND		0.0252	1	08/18/2018 11:38	WG1154028
2-Chloronaphthalene	ND		0.0252	1	08/18/2018 11:38	WG1154028
(S) Nitrobenzene-d5	83.6		14.0-149		08/18/2018 11:38	WG1154028
(S) 2-Fluorobiphenyl	76.0		34.0-125		08/18/2018 11:38	WG1154028
(S) p-Terphenyl-d14	66.3		23.0-120		08/18/2018 11:38	WG1154028

- 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	79.6		1	08/20/2018 11:14	WG1154706

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0251	1	08/21/2018 09:27	WG1154460

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.51	1	08/20/2018 07:43	WG1154446
Barium	54.6		0.628	1	08/20/2018 07:43	WG1154446
Cadmium	ND		0.628	1	08/20/2018 07:43	WG1154446
Chromium	7.78		1.26	1	08/20/2018 07:43	WG1154446
Lead	2.98		0.628	1	08/20/2018 07:43	WG1154446
Selenium	ND		2.51	1	08/20/2018 07:43	WG1154446
Silver	ND		1.26	1	08/20/2018 07:43	WG1154446

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0314	1	08/19/2018 13:55	WG1154430
Acrylonitrile	ND		0.0157	1	08/17/2018 14:25	WG1153795
Benzene	ND	J3 J6	0.00126	1	08/17/2018 14:25	WG1153795
Bromobenzene	ND	J3	0.0157	1	08/17/2018 14:25	WG1153795
Bromodichloromethane	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
Bromoform	ND		0.0314	1	08/17/2018 14:25	WG1153795
Bromomethane	ND	J3	0.0157	1	08/17/2018 14:25	WG1153795
n-Butylbenzene	ND	J3	0.0157	1	08/17/2018 14:25	WG1153795
sec-Butylbenzene	ND	J3 J6	0.0157	1	08/17/2018 14:25	WG1153795
tert-Butylbenzene	ND	J3 J6	0.00628	1	08/17/2018 14:25	WG1153795
Carbon tetrachloride	ND	J3 J6	0.00628	1	08/17/2018 14:25	WG1153795
Chlorobenzene	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
Chlorodibromomethane	ND	J6	0.00314	1	08/17/2018 14:25	WG1153795
Chloroethane	ND	J3	0.00628	1	08/17/2018 14:25	WG1153795
Chloroform	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
Chloromethane	ND	J3 J6	0.0157	1	08/17/2018 14:25	WG1153795
2-Chlorotoluene	ND	J3	0.00314	1	08/17/2018 14:25	WG1153795
4-Chlorotoluene	ND	J3	0.00628	1	08/17/2018 14:25	WG1153795
1,2-Dibromo-3-Chloropropane	ND		0.0314	1	08/17/2018 14:25	WG1153795
1,2-Dibromoethane	ND		0.00314	1	08/17/2018 14:25	WG1153795
Dibromomethane	ND	J3 J6	0.00628	1	08/17/2018 14:25	WG1153795
1,2-Dichlorobenzene	ND	J3	0.00628	1	08/17/2018 14:25	WG1153795
1,3-Dichlorobenzene	ND	J3	0.00628	1	08/17/2018 14:25	WG1153795
1,4-Dichlorobenzene	ND	J3	0.00628	1	08/17/2018 14:25	WG1153795
Dichlorodifluoromethane	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
1,1-Dichloroethane	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
1,2-Dichloroethane	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
1,1-Dichloroethene	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
cis-1,2-Dichloroethene	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
trans-1,2-Dichloroethene	ND	J3 J6	0.00628	1	08/17/2018 14:25	WG1153795
1,2-Dichloropropane	ND	J3 J6	0.00628	1	08/17/2018 14:25	WG1153795
1,1-Dichloropropene	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
1,3-Dichloropropane	ND	J3 J4	0.00628	1	08/17/2018 14:25	WG1153795

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
trans-1,3-Dichloropropene	ND	J3 J6	0.00628	1	08/17/2018 14:25	WG1153795
2,2-Dichloropropane	ND	J0	0.00314	1	08/19/2018 13:55	WG1154430
Di-isopropyl ether	ND	J3 J6	0.00126	1	08/17/2018 14:25	WG1153795
Ethylbenzene	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
Hexachloro-1,3-butadiene	ND	J3	0.0314	1	08/17/2018 14:25	WG1153795
Isopropylbenzene	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
p-Isopropyltoluene	ND	J3	0.00628	1	08/17/2018 14:25	WG1153795
2-Butanone (MEK)	ND		0.0314	1	08/19/2018 13:55	WG1154430
Methylene Chloride	ND	J3 J6	0.0314	1	08/17/2018 14:25	WG1153795
4-Methyl-2-pentanone (MIBK)	ND		0.0314	1	08/17/2018 14:25	WG1153795
Methyl tert-butyl ether	ND	J6	0.00126	1	08/17/2018 14:25	WG1153795
Naphthalene	ND		0.0157	1	08/17/2018 14:25	WG1153795
n-Propylbenzene	ND	J3 J6	0.00628	1	08/17/2018 14:25	WG1153795
Styrene	ND	J3	0.0157	1	08/17/2018 14:25	WG1153795
1,1,1,2-Tetrachloroethane	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
1,1,2,2-Tetrachloroethane	ND		0.00314	1	08/17/2018 14:25	WG1153795
1,1,2-Trichlorotrifluoroethane	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
Tetrachloroethene	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
Toluene	ND	J3 J6	0.00628	1	08/17/2018 14:25	WG1153795
1,2,3-Trichlorobenzene	ND		0.00314	1	08/17/2018 14:25	WG1153795
1,2,4-Trichlorobenzene	ND		0.0157	1	08/17/2018 14:25	WG1153795
1,1,1-Trichloroethane	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
1,1,2-Trichloroethane	ND	J3	0.00314	1	08/17/2018 14:25	WG1153795
Trichloroethene	ND	J3 J6	0.00126	1	08/17/2018 14:25	WG1153795
Trichlorofluoromethane	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
1,2,3-Trichloropropane	ND		0.0157	1	08/17/2018 14:25	WG1153795
1,2,4-Trimethylbenzene	ND	J3	0.00628	1	08/17/2018 14:25	WG1153795
1,2,3-Trimethylbenzene	ND	J3	0.00628	1	08/17/2018 14:25	WG1153795
Vinyl chloride	ND		0.00314	1	08/19/2018 13:55	WG1154430
1,3,5-Trimethylbenzene	ND	J3 J6	0.00628	1	08/17/2018 14:25	WG1153795
o-Xylene	ND	J3 J6	0.00314	1	08/17/2018 14:25	WG1153795
m&p-Xylene	ND	J3 J6	0.00503	1	08/17/2018 14:25	WG1153795
(S) Toluene-d8	110		80.0-120		08/17/2018 14:25	WG1153795
(S) Toluene-d8	114		80.0-120		08/19/2018 13:55	WG1154430
(S) Dibromofluoromethane	93.2		74.0-131		08/17/2018 14:25	WG1153795
(S) Dibromofluoromethane	93.3		74.0-131		08/19/2018 13:55	WG1154430
(S) 4-Bromofluorobenzene	106		64.0-132		08/17/2018 14:25	WG1153795
(S) 4-Bromofluorobenzene	101		64.0-132		08/19/2018 13:55	WG1154430

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.03	1	08/19/2018 18:04	WG1154367
Residual Range Organics (RRO)	ND		12.6	1	08/19/2018 18:04	WG1154367
(S) o-Terphenyl	79.1		18.0-148		08/19/2018 18:04	WG1154367

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.03	1	08/22/2018 01:10	WG1154190
Residual Range Organics (RRO)	ND		12.6	1	08/22/2018 01:10	WG1154190
(S) o-Terphenyl	93.8		18.0-148		08/22/2018 01:10	WG1154190



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Acenaphthene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Acenaphthylene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Benzo(a)anthracene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Benzo(a)pyrene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Benzo(b)fluoranthene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Benzo(g,h,i)perylene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Benzo(k)fluoranthene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Chrysene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Dibenz(a,h)anthracene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Fluoranthene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Fluorene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Indeno(1,2,3-cd)pyrene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Naphthalene	ND		0.0251	1	08/18/2018 12:00	WG1154028
Phenanthrene	ND		0.00754	1	08/18/2018 12:00	WG1154028
Pyrene	ND		0.00754	1	08/18/2018 12:00	WG1154028
1-Methylnaphthalene	ND		0.0251	1	08/18/2018 12:00	WG1154028
2-Methylnaphthalene	ND		0.0251	1	08/18/2018 12:00	WG1154028
2-Chloronaphthalene	ND		0.0251	1	08/18/2018 12:00	WG1154028
(S) Nitrobenzene-d5	93.6		14.0-149		08/18/2018 12:00	WG1154028
(S) 2-Fluorobiphenyl	81.8		34.0-125		08/18/2018 12:00	WG1154028
(S) p-Terphenyl-d14	74.1		23.0-120		08/18/2018 12:00	WG1154028

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
Total Solids	89.8		1	08/20/2018 11:14	WG1154706

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0223	1	08/21/2018 09:30	WG1154460

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.23	1	08/20/2018 07:58	WG1154446
Barium	73.5		0.557	1	08/20/2018 07:58	WG1154446
Cadmium	ND		0.557	1	08/20/2018 07:58	WG1154446
Chromium	9.66		1.11	1	08/20/2018 07:58	WG1154446
Lead	2.73		0.557	1	08/20/2018 07:58	WG1154446
Selenium	ND		2.23	1	08/20/2018 07:58	WG1154446
Silver	ND		1.11	1	08/20/2018 07:58	WG1154446

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0290	1.04	08/19/2018 14:14	WG1154430
Acrylonitrile	ND		0.0145	1.04	08/17/2018 14:46	WG1153795
Benzene	ND		0.00116	1.04	08/17/2018 14:46	WG1153795
Bromobenzene	ND		0.0145	1.04	08/17/2018 14:46	WG1153795
Bromodichloromethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
Bromoform	ND		0.0290	1.04	08/17/2018 14:46	WG1153795
Bromomethane	ND		0.0145	1.04	08/17/2018 14:46	WG1153795
n-Butylbenzene	ND		0.0145	1.04	08/17/2018 14:46	WG1153795
sec-Butylbenzene	ND		0.0145	1.04	08/17/2018 14:46	WG1153795
tert-Butylbenzene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
Carbon tetrachloride	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
Chlorobenzene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
Chlorodibromomethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
Chloroethane	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
Chloroform	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
Chloromethane	ND		0.0145	1.04	08/17/2018 14:46	WG1153795
2-Chlorotoluene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
4-Chlorotoluene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
1,2-Dibromo-3-Chloropropane	ND		0.0290	1.04	08/17/2018 14:46	WG1153795
1,2-Dibromoethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
Dibromomethane	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
1,2-Dichlorobenzene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
1,3-Dichlorobenzene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
1,4-Dichlorobenzene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
Dichlorodifluoromethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
1,1-Dichloroethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
1,2-Dichloroethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
1,1-Dichloroethene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
cis-1,2-Dichloroethene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
trans-1,2-Dichloroethene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
1,2-Dichloropropane	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
1,1-Dichloropropene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
1,3-Dichloropropane	ND	J4	0.00579	1.04	08/17/2018 14:46	WG1153795

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



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
trans-1,3-Dichloropropene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
2,2-Dichloropropane	ND	JO	0.00290	1.04	08/19/2018 14:14	WG1154430
Di-isopropyl ether	ND		0.00116	1.04	08/17/2018 14:46	WG1153795
Ethylbenzene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
Hexachloro-1,3-butadiene	ND		0.0290	1.04	08/17/2018 14:46	WG1153795
Isopropylbenzene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
p-Isopropyltoluene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
2-Butanone (MEK)	ND		0.0290	1.04	08/19/2018 14:14	WG1154430
Methylene Chloride	ND		0.0290	1.04	08/17/2018 14:46	WG1153795
4-Methyl-2-pentanone (MIBK)	ND		0.0290	1.04	08/17/2018 14:46	WG1153795
Methyl tert-butyl ether	ND		0.00116	1.04	08/17/2018 14:46	WG1153795
Naphthalene	ND		0.0145	1.04	08/17/2018 14:46	WG1153795
n-Propylbenzene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
Styrene	ND		0.0145	1.04	08/17/2018 14:46	WG1153795
1,1,1,2-Tetrachloroethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
1,1,2,2-Tetrachloroethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
1,1,2-Trichlorotrifluoroethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
Tetrachloroethene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
Toluene	0.0109		0.00579	1.04	08/17/2018 14:46	WG1153795
1,2,3-Trichlorobenzene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
1,2,4-Trichlorobenzene	ND		0.0145	1.04	08/17/2018 14:46	WG1153795
1,1,1-Trichloroethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
1,1,2-Trichloroethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
Trichloroethene	ND		0.00116	1.04	08/17/2018 14:46	WG1153795
Trichlorofluoromethane	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
1,2,3-Trichloropropane	ND		0.0145	1.04	08/17/2018 14:46	WG1153795
1,2,4-Trimethylbenzene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
1,2,3-Trimethylbenzene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
Vinyl chloride	ND		0.00290	1.04	08/19/2018 14:14	WG1154430
1,3,5-Trimethylbenzene	ND		0.00579	1.04	08/17/2018 14:46	WG1153795
o-Xylene	ND		0.00290	1.04	08/17/2018 14:46	WG1153795
m&p-Xylene	ND		0.00463	1.04	08/17/2018 14:46	WG1153795
(S) Toluene-d8	116		80.0-120		08/17/2018 14:46	WG1153795
(S) Toluene-d8	110		80.0-120		08/19/2018 14:14	WG1154430
(S) Dibromofluoromethane	92.0		74.0-131		08/17/2018 14:46	WG1153795
(S) Dibromofluoromethane	99.3		74.0-131		08/19/2018 14:14	WG1154430
(S) 4-Bromofluorobenzene	98.3		64.0-132		08/17/2018 14:46	WG1153795
(S) 4-Bromofluorobenzene	92.3		64.0-132		08/19/2018 14:14	WG1154430

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.45	1	08/19/2018 18:16	WG1154367
Residual Range Organics (RRO)	ND		11.1	1	08/19/2018 18:16	WG1154367
(S) o-Terphenyl	70.5		18.0-148		08/19/2018 18:16	WG1154367

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.45	1	08/22/2018 00:56	WG1154190
Residual Range Organics (RRO)	ND		11.1	1	08/22/2018 00:56	WG1154190
(S) o-Terphenyl	93.3		18.0-148		08/22/2018 00:56	WG1154190



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Acenaphthene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Acenaphthylene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Benzo(a)anthracene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Benzo(a)pyrene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Benzo(b)fluoranthene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Benzo(g,h,i)perylene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Benzo(k)fluoranthene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Chrysene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Dibenz(a,h)anthracene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Fluoranthene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Fluorene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Indeno(1,2,3-cd)pyrene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Naphthalene	ND		0.0223	1	08/18/2018 12:21	WG1154028
Phenanthrene	ND		0.00668	1	08/18/2018 12:21	WG1154028
Pyrene	ND		0.00668	1	08/18/2018 12:21	WG1154028
1-Methylnaphthalene	ND		0.0223	1	08/18/2018 12:21	WG1154028
2-Methylnaphthalene	ND		0.0223	1	08/18/2018 12:21	WG1154028
2-Chloronaphthalene	ND		0.0223	1	08/18/2018 12:21	WG1154028
(S) Nitrobenzene-d5	86.2		14.0-149		08/18/2018 12:21	WG1154028
(S) 2-Fluorobiphenyl	85.2		34.0-125		08/18/2018 12:21	WG1154028
(S) p-Terphenyl-d14	79.0		23.0-120		08/18/2018 12:21	WG1154028

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		0.0339	0.100	1	08/17/2018 12:38	WG1153735
(S) a,a,a-Trifluorotoluene(FID)	98.8			77.0-120		08/17/2018 12:38	WG1153735

- 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	81.4		1	08/20/2018 11:14	WG1154706

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0246	1	08/21/2018 09:33	WG1154460

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.46	1	08/20/2018 08:05	WG1154446
Barium	72.3		0.614	1	08/20/2018 08:05	WG1154446
Cadmium	ND		0.614	1	08/20/2018 08:05	WG1154446
Chromium	10.1		1.23	1	08/20/2018 08:05	WG1154446
Lead	2.82		0.614	1	08/20/2018 08:05	WG1154446
Selenium	ND		2.46	1	08/20/2018 08:05	WG1154446
Silver	ND		1.23	1	08/20/2018 08:05	WG1154446

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0307	1	08/19/2018 14:33	WG1154430
Acrylonitrile	ND		0.0154	1	08/17/2018 15:06	WG1153795
Benzene	ND		0.00123	1	08/17/2018 15:06	WG1153795
Bromobenzene	ND		0.0154	1	08/17/2018 15:06	WG1153795
Bromodichloromethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
Bromoform	ND		0.0307	1	08/17/2018 15:06	WG1153795
Bromomethane	ND		0.0154	1	08/17/2018 15:06	WG1153795
n-Butylbenzene	ND		0.0154	1	08/17/2018 15:06	WG1153795
sec-Butylbenzene	ND		0.0154	1	08/17/2018 15:06	WG1153795
tert-Butylbenzene	ND		0.00614	1	08/17/2018 15:06	WG1153795
Carbon tetrachloride	ND		0.00614	1	08/17/2018 15:06	WG1153795
Chlorobenzene	ND		0.00307	1	08/17/2018 15:06	WG1153795
Chlorodibromomethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
Chloroethane	ND		0.00614	1	08/17/2018 15:06	WG1153795
Chloroform	ND		0.00307	1	08/17/2018 15:06	WG1153795
Chloromethane	ND		0.0154	1	08/17/2018 15:06	WG1153795
2-Chlorotoluene	ND		0.00307	1	08/17/2018 15:06	WG1153795
4-Chlorotoluene	ND		0.00614	1	08/17/2018 15:06	WG1153795
1,2-Dibromo-3-Chloropropane	ND		0.0307	1	08/17/2018 15:06	WG1153795
1,2-Dibromoethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
Dibromomethane	ND		0.00614	1	08/17/2018 15:06	WG1153795
1,2-Dichlorobenzene	ND		0.00614	1	08/17/2018 15:06	WG1153795
1,3-Dichlorobenzene	ND		0.00614	1	08/17/2018 15:06	WG1153795
1,4-Dichlorobenzene	ND		0.00614	1	08/17/2018 15:06	WG1153795
Dichlorodifluoromethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
1,1-Dichloroethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
1,2-Dichloroethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
1,1-Dichloroethene	ND		0.00307	1	08/17/2018 15:06	WG1153795
cis-1,2-Dichloroethene	ND		0.00307	1	08/17/2018 15:06	WG1153795
trans-1,2-Dichloroethene	ND		0.00614	1	08/17/2018 15:06	WG1153795
1,2-Dichloropropane	ND		0.00614	1	08/17/2018 15:06	WG1153795
1,1-Dichloropropene	ND		0.00307	1	08/17/2018 15:06	WG1153795
1,3-Dichloropropane	ND	J4	0.00614	1	08/17/2018 15:06	WG1153795

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



Collected date/time: 08/14/18 08:30

L1017857

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00307	1	08/17/2018 15:06	WG1153795
trans-1,3-Dichloropropene	ND		0.00614	1	08/17/2018 15:06	WG1153795
2,2-Dichloropropane	ND	JO	0.00307	1	08/19/2018 14:33	WG1154430
Di-isopropyl ether	ND		0.00123	1	08/17/2018 15:06	WG1153795
Ethylbenzene	ND		0.00307	1	08/17/2018 15:06	WG1153795
Hexachloro-1,3-butadiene	ND		0.0307	1	08/17/2018 15:06	WG1153795
Isopropylbenzene	ND		0.00307	1	08/17/2018 15:06	WG1153795
p-Isopropyltoluene	ND		0.00614	1	08/17/2018 15:06	WG1153795
2-Butanone (MEK)	ND		0.0307	1	08/19/2018 14:33	WG1154430
Methylene Chloride	ND		0.0307	1	08/17/2018 15:06	WG1153795
4-Methyl-2-pentanone (MIBK)	ND		0.0307	1	08/17/2018 15:06	WG1153795
Methyl tert-butyl ether	ND		0.00123	1	08/17/2018 15:06	WG1153795
Naphthalene	ND		0.0154	1	08/17/2018 15:06	WG1153795
n-Propylbenzene	ND		0.00614	1	08/17/2018 15:06	WG1153795
Styrene	ND		0.0154	1	08/17/2018 15:06	WG1153795
1,1,1,2-Tetrachloroethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
1,1,2,2-Tetrachloroethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
1,1,2-Trichlorotrifluoroethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
Tetrachloroethene	ND		0.00307	1	08/17/2018 15:06	WG1153795
Toluene	ND		0.00614	1	08/17/2018 15:06	WG1153795
1,2,3-Trichlorobenzene	ND		0.00307	1	08/17/2018 15:06	WG1153795
1,2,4-Trichlorobenzene	ND		0.0154	1	08/17/2018 15:06	WG1153795
1,1,1-Trichloroethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
1,1,2-Trichloroethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
Trichloroethene	ND		0.00123	1	08/17/2018 15:06	WG1153795
Trichlorofluoromethane	ND		0.00307	1	08/17/2018 15:06	WG1153795
1,2,3-Trichloropropane	ND		0.0154	1	08/17/2018 15:06	WG1153795
1,2,4-Trimethylbenzene	ND		0.00614	1	08/17/2018 15:06	WG1153795
1,2,3-Trimethylbenzene	ND		0.00614	1	08/17/2018 15:06	WG1153795
Vinyl chloride	ND		0.00307	1	08/19/2018 14:33	WG1154430
1,3,5-Trimethylbenzene	ND		0.00614	1	08/17/2018 15:06	WG1153795
o-Xylene	ND		0.00307	1	08/17/2018 15:06	WG1153795
m&p-Xylene	ND		0.00492	1	08/17/2018 15:06	WG1153795
(S) Toluene-d8	112		80.0-120		08/17/2018 15:06	WG1153795
(S) Toluene-d8	114		80.0-120		08/19/2018 14:33	WG1154430
(S) Dibromofluoromethane	89.8		74.0-131		08/17/2018 15:06	WG1153795
(S) Dibromofluoromethane	94.9		74.0-131		08/19/2018 14:33	WG1154430
(S) 4-Bromofluorobenzene	106		64.0-132		08/17/2018 15:06	WG1153795
(S) 4-Bromofluorobenzene	95.8		64.0-132		08/19/2018 14:33	WG1154430

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.92	1	08/19/2018 18:29	WG1154367
Residual Range Organics (RRO)	ND		12.3	1	08/19/2018 18:29	WG1154367
(S) o-Terphenyl	85.3		18.0-148		08/19/2018 18:29	WG1154367

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Acenaphthene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Acenaphthylene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Benzo(a)anthracene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Benzo(a)pyrene	ND		0.00737	1	08/18/2018 12:43	WG1154028



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Benzo(g,h,i)perylene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Benzo(k)fluoranthene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Chrysene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Dibenz(a,h)anthracene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Fluoranthene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Fluorene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Indeno(1,2,3-cd)pyrene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Naphthalene	ND		0.0246	1	08/18/2018 12:43	WG1154028
Phenanthrene	ND		0.00737	1	08/18/2018 12:43	WG1154028
Pyrene	ND		0.00737	1	08/18/2018 12:43	WG1154028
1-Methylnaphthalene	ND		0.0246	1	08/18/2018 12:43	WG1154028
2-Methylnaphthalene	ND		0.0246	1	08/18/2018 12:43	WG1154028
2-Chloronaphthalene	ND		0.0246	1	08/18/2018 12:43	WG1154028
(S) Nitrobenzene-d5	99.6		14.0-149		08/18/2018 12:43	WG1154028
(S) 2-Fluorobiphenyl	84.9		34.0-125		08/18/2018 12:43	WG1154028
(S) p-Terphenyl-d14	75.2		23.0-120		08/18/2018 12:43	WG1154028

- 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	83.7		1	08/20/2018 11:14	WG1154706

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0239	1	08/21/2018 09:35	WG1154460

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.39	1	08/20/2018 08:08	WG1154446
Barium	87.3		0.597	1	08/20/2018 08:08	WG1154446
Cadmium	ND		0.597	1	08/20/2018 08:08	WG1154446
Chromium	15.4		1.19	1	08/20/2018 08:08	WG1154446
Lead	5.78		0.597	1	08/20/2018 08:08	WG1154446
Selenium	ND		2.39	1	08/20/2018 08:08	WG1154446
Silver	ND		1.19	1	08/20/2018 08:08	WG1154446

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0299	1	08/19/2018 14:53	WG1154430
Acrylonitrile	ND		0.0149	1	08/17/2018 15:27	WG1153795
Benzene	ND		0.00119	1	08/17/2018 15:27	WG1153795
Bromobenzene	ND		0.0149	1	08/17/2018 15:27	WG1153795
Bromodichloromethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
Bromoform	ND		0.0299	1	08/17/2018 15:27	WG1153795
Bromomethane	ND		0.0149	1	08/17/2018 15:27	WG1153795
n-Butylbenzene	ND		0.0149	1	08/17/2018 15:27	WG1153795
sec-Butylbenzene	ND		0.0149	1	08/17/2018 15:27	WG1153795
tert-Butylbenzene	ND		0.00597	1	08/17/2018 15:27	WG1153795
Carbon tetrachloride	ND		0.00597	1	08/17/2018 15:27	WG1153795
Chlorobenzene	ND		0.00299	1	08/17/2018 15:27	WG1153795
Chlorodibromomethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
Chloroethane	ND		0.00597	1	08/17/2018 15:27	WG1153795
Chloroform	ND		0.00299	1	08/17/2018 15:27	WG1153795
Chloromethane	ND		0.0149	1	08/17/2018 15:27	WG1153795
2-Chlorotoluene	ND		0.00299	1	08/17/2018 15:27	WG1153795
4-Chlorotoluene	ND		0.00597	1	08/17/2018 15:27	WG1153795
1,2-Dibromo-3-Chloropropane	ND		0.0299	1	08/17/2018 15:27	WG1153795
1,2-Dibromoethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
Dibromomethane	ND		0.00597	1	08/17/2018 15:27	WG1153795
1,2-Dichlorobenzene	ND		0.00597	1	08/17/2018 15:27	WG1153795
1,3-Dichlorobenzene	ND		0.00597	1	08/17/2018 15:27	WG1153795
1,4-Dichlorobenzene	ND		0.00597	1	08/17/2018 15:27	WG1153795
Dichlorodifluoromethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
1,1-Dichloroethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
1,2-Dichloroethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
1,1-Dichloroethene	ND		0.00299	1	08/17/2018 15:27	WG1153795
cis-1,2-Dichloroethene	ND		0.00299	1	08/17/2018 15:27	WG1153795
trans-1,2-Dichloroethene	ND		0.00597	1	08/17/2018 15:27	WG1153795
1,2-Dichloropropane	ND		0.00597	1	08/17/2018 15:27	WG1153795
1,1-Dichloropropene	ND		0.00299	1	08/17/2018 15:27	WG1153795
1,3-Dichloropropane	ND	J4	0.00597	1	08/17/2018 15:27	WG1153795

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00299	1	08/17/2018 15:27	WG1153795
trans-1,3-Dichloropropene	ND		0.00597	1	08/17/2018 15:27	WG1153795
2,2-Dichloropropane	ND	JO	0.00299	1	08/19/2018 14:53	WG1154430
Di-isopropyl ether	ND		0.00119	1	08/17/2018 15:27	WG1153795
Ethylbenzene	ND		0.00299	1	08/17/2018 15:27	WG1153795
Hexachloro-1,3-butadiene	ND		0.0299	1	08/17/2018 15:27	WG1153795
Isopropylbenzene	ND		0.00299	1	08/17/2018 15:27	WG1153795
p-Isopropyltoluene	ND		0.00597	1	08/17/2018 15:27	WG1153795
2-Butanone (MEK)	ND		0.0299	1	08/19/2018 14:53	WG1154430
Methylene Chloride	ND		0.0299	1	08/17/2018 15:27	WG1153795
4-Methyl-2-pentanone (MIBK)	ND		0.0299	1	08/17/2018 15:27	WG1153795
Methyl tert-butyl ether	ND		0.00119	1	08/17/2018 15:27	WG1153795
Naphthalene	ND		0.0149	1	08/17/2018 15:27	WG1153795
n-Propylbenzene	ND		0.00597	1	08/17/2018 15:27	WG1153795
Styrene	ND		0.0149	1	08/17/2018 15:27	WG1153795
1,1,1,2-Tetrachloroethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
1,1,2,2-Tetrachloroethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
1,1,2-Trichlorotrifluoroethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
Tetrachloroethene	ND		0.00299	1	08/17/2018 15:27	WG1153795
Toluene	ND		0.00597	1	08/17/2018 15:27	WG1153795
1,2,3-Trichlorobenzene	ND		0.00299	1	08/17/2018 15:27	WG1153795
1,2,4-Trichlorobenzene	ND		0.0149	1	08/17/2018 15:27	WG1153795
1,1,1-Trichloroethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
1,1,2-Trichloroethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
Trichloroethene	ND		0.00119	1	08/17/2018 15:27	WG1153795
Trichlorofluoromethane	ND		0.00299	1	08/17/2018 15:27	WG1153795
1,2,3-Trichloropropane	ND		0.0149	1	08/17/2018 15:27	WG1153795
1,2,4-Trimethylbenzene	ND		0.00597	1	08/17/2018 15:27	WG1153795
1,2,3-Trimethylbenzene	ND		0.00597	1	08/17/2018 15:27	WG1153795
Vinyl chloride	ND		0.00299	1	08/19/2018 14:53	WG1154430
1,3,5-Trimethylbenzene	ND		0.00597	1	08/17/2018 15:27	WG1153795
o-Xylene	ND		0.00299	1	08/17/2018 15:27	WG1153795
m&p-Xylene	ND		0.00478	1	08/17/2018 15:27	WG1153795
(S) Toluene-d8	111		80.0-120		08/17/2018 15:27	WG1153795
(S) Toluene-d8	113		80.0-120		08/19/2018 14:53	WG1154430
(S) Dibromofluoromethane	94.0		74.0-131		08/17/2018 15:27	WG1153795
(S) Dibromofluoromethane	95.4		74.0-131		08/19/2018 14:53	WG1154430
(S) 4-Bromofluorobenzene	106		64.0-132		08/17/2018 15:27	WG1153795
(S) 4-Bromofluorobenzene	92.8		64.0-132		08/19/2018 14:53	WG1154430

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.78	1	08/19/2018 19:07	WG1154367
Residual Range Organics (RRO)	ND		11.9	1	08/19/2018 19:07	WG1154367
(S) o-Terphenyl	78.0		18.0-148		08/19/2018 19:07	WG1154367

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Acenaphthene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Acenaphthylene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Benzo(a)anthracene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Benzo(a)pyrene	ND		0.00717	1	08/18/2018 13:05	WG1154028



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Benzo(g,h,i)perylene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Benzo(k)fluoranthene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Chrysene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Dibenz(a,h)anthracene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Fluoranthene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Fluorene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Indeno(1,2,3-cd)pyrene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Naphthalene	ND		0.0239	1	08/18/2018 13:05	WG1154028
Phenanthrene	ND		0.00717	1	08/18/2018 13:05	WG1154028
Pyrene	ND		0.00717	1	08/18/2018 13:05	WG1154028
1-Methylnaphthalene	ND		0.0239	1	08/18/2018 13:05	WG1154028
2-Methylnaphthalene	ND		0.0239	1	08/18/2018 13:05	WG1154028
2-Chloronaphthalene	ND		0.0239	1	08/18/2018 13:05	WG1154028
(S) Nitrobenzene-d5	105		14.0-149		08/18/2018 13:05	WG1154028
(S) 2-Fluorobiphenyl	75.3		34.0-125		08/18/2018 13:05	WG1154028
(S) p-Terphenyl-d14	64.0		23.0-120		08/18/2018 13:05	WG1154028

- 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
Total Solids	81.8		1	08/20/2018 11:14	WG1154706

Mercury by Method 7471B

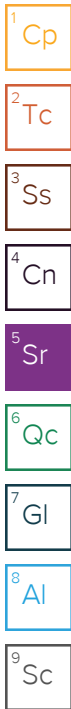
Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0245	1	08/21/2018 09:38	WG1154460

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.45	1	08/20/2018 08:10	WG1154446
Barium	75.7		0.611	1	08/20/2018 08:10	WG1154446
Cadmium	ND		0.611	1	08/20/2018 08:10	WG1154446
Chromium	9.56		1.22	1	08/20/2018 08:10	WG1154446
Lead	4.14		0.611	1	08/20/2018 08:10	WG1154446
Selenium	ND		2.45	1	08/20/2018 08:10	WG1154446
Silver	ND		1.22	1	08/20/2018 08:10	WG1154446

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0306	1	08/19/2018 15:12	WG1154430
Acrylonitrile	ND		0.0153	1	08/17/2018 15:48	WG1153795
Benzene	ND		0.00122	1	08/17/2018 15:48	WG1153795
Bromobenzene	ND		0.0153	1	08/17/2018 15:48	WG1153795
Bromodichloromethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
Bromoform	ND		0.0306	1	08/17/2018 15:48	WG1153795
Bromomethane	ND		0.0153	1	08/17/2018 15:48	WG1153795
n-Butylbenzene	ND		0.0153	1	08/17/2018 15:48	WG1153795
sec-Butylbenzene	ND		0.0153	1	08/17/2018 15:48	WG1153795
tert-Butylbenzene	ND		0.00611	1	08/17/2018 15:48	WG1153795
Carbon tetrachloride	ND		0.00611	1	08/17/2018 15:48	WG1153795
Chlorobenzene	ND		0.00306	1	08/17/2018 15:48	WG1153795
Chlorodibromomethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
Chloroethane	ND		0.00611	1	08/17/2018 15:48	WG1153795
Chloroform	ND		0.00306	1	08/17/2018 15:48	WG1153795
Chloromethane	ND		0.0153	1	08/17/2018 15:48	WG1153795
2-Chlorotoluene	ND		0.00306	1	08/17/2018 15:48	WG1153795
4-Chlorotoluene	ND		0.00611	1	08/17/2018 15:48	WG1153795
1,2-Dibromo-3-Chloropropane	ND		0.0306	1	08/17/2018 15:48	WG1153795
1,2-Dibromoethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
Dibromomethane	ND		0.00611	1	08/17/2018 15:48	WG1153795
1,2-Dichlorobenzene	ND		0.00611	1	08/17/2018 15:48	WG1153795
1,3-Dichlorobenzene	ND		0.00611	1	08/17/2018 15:48	WG1153795
1,4-Dichlorobenzene	ND		0.00611	1	08/17/2018 15:48	WG1153795
Dichlorodifluoromethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
1,1-Dichloroethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
1,2-Dichloroethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
1,1-Dichloroethene	ND		0.00306	1	08/17/2018 15:48	WG1153795
cis-1,2-Dichloroethene	ND		0.00306	1	08/17/2018 15:48	WG1153795
trans-1,2-Dichloroethene	ND		0.00611	1	08/17/2018 15:48	WG1153795
1,2-Dichloropropane	ND		0.00611	1	08/17/2018 15:48	WG1153795
1,1-Dichloropropene	ND		0.00306	1	08/17/2018 15:48	WG1153795
1,3-Dichloropropane	ND	J4	0.00611	1	08/17/2018 15:48	WG1153795





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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00306	1	08/17/2018 15:48	WG1153795
trans-1,3-Dichloropropene	ND		0.00611	1	08/17/2018 15:48	WG1153795
2,2-Dichloropropane	ND	JO	0.00306	1	08/19/2018 15:12	WG1154430
Di-isopropyl ether	ND		0.00122	1	08/17/2018 15:48	WG1153795
Ethylbenzene	ND		0.00306	1	08/17/2018 15:48	WG1153795
Hexachloro-1,3-butadiene	ND		0.0306	1	08/17/2018 15:48	WG1153795
Isopropylbenzene	ND		0.00306	1	08/17/2018 15:48	WG1153795
p-Isopropyltoluene	ND		0.00611	1	08/17/2018 15:48	WG1153795
2-Butanone (MEK)	ND		0.0306	1	08/19/2018 15:12	WG1154430
Methylene Chloride	ND		0.0306	1	08/17/2018 15:48	WG1153795
4-Methyl-2-pentanone (MIBK)	ND		0.0306	1	08/17/2018 15:48	WG1153795
Methyl tert-butyl ether	ND		0.00122	1	08/17/2018 15:48	WG1153795
Naphthalene	ND		0.0153	1	08/17/2018 15:48	WG1153795
n-Propylbenzene	ND		0.00611	1	08/17/2018 15:48	WG1153795
Styrene	ND		0.0153	1	08/17/2018 15:48	WG1153795
1,1,1,2-Tetrachloroethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
1,1,2,2-Tetrachloroethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
1,1,2-Trichlorotrifluoroethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
Tetrachloroethene	ND		0.00306	1	08/17/2018 15:48	WG1153795
Toluene	ND		0.00611	1	08/17/2018 15:48	WG1153795
1,2,3-Trichlorobenzene	ND		0.00306	1	08/17/2018 15:48	WG1153795
1,2,4-Trichlorobenzene	ND		0.0153	1	08/17/2018 15:48	WG1153795
1,1,1-Trichloroethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
1,1,2-Trichloroethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
Trichloroethene	ND		0.00122	1	08/17/2018 15:48	WG1153795
Trichlorofluoromethane	ND		0.00306	1	08/17/2018 15:48	WG1153795
1,2,3-Trichloropropane	ND		0.0153	1	08/17/2018 15:48	WG1153795
1,2,4-Trimethylbenzene	ND		0.00611	1	08/17/2018 15:48	WG1153795
1,2,3-Trimethylbenzene	ND		0.00611	1	08/17/2018 15:48	WG1153795
Vinyl chloride	ND		0.00306	1	08/19/2018 15:12	WG1154430
1,3,5-Trimethylbenzene	ND		0.00611	1	08/17/2018 15:48	WG1153795
o-Xylene	ND		0.00306	1	08/17/2018 15:48	WG1153795
m&p-Xylene	ND		0.00489	1	08/17/2018 15:48	WG1153795
(S) Toluene-d8	109		80.0-120		08/17/2018 15:48	WG1153795
(S) Toluene-d8	114		80.0-120		08/19/2018 15:12	WG1154430
(S) Dibromofluoromethane	95.6		74.0-131		08/17/2018 15:48	WG1153795
(S) Dibromofluoromethane	94.9		74.0-131		08/19/2018 15:12	WG1154430
(S) 4-Bromofluorobenzene	103		64.0-132		08/17/2018 15:48	WG1153795
(S) 4-Bromofluorobenzene	93.0		64.0-132		08/19/2018 15:12	WG1154430

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.89	1	08/19/2018 19:20	WG1154367
Residual Range Organics (RRO)	ND		12.2	1	08/19/2018 19:20	WG1154367
(S) o-Terphenyl	85.9		18.0-148		08/19/2018 19:20	WG1154367

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Acenaphthene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Acenaphthylene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Benzo(a)anthracene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Benzo(a)pyrene	ND		0.00734	1	08/18/2018 13:27	WG1154028



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Benzo(g,h,i)perylene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Benzo(k)fluoranthene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Chrysene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Dibenz(a,h)anthracene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Fluoranthene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Fluorene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Indeno(1,2,3-cd)pyrene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Naphthalene	ND		0.0245	1	08/18/2018 13:27	WG1154028
Phenanthrene	ND		0.00734	1	08/18/2018 13:27	WG1154028
Pyrene	ND		0.00734	1	08/18/2018 13:27	WG1154028
1-Methylnaphthalene	ND		0.0245	1	08/18/2018 13:27	WG1154028
2-Methylnaphthalene	ND		0.0245	1	08/18/2018 13:27	WG1154028
2-Chloronaphthalene	ND		0.0245	1	08/18/2018 13:27	WG1154028
<i>(S)</i> Nitrobenzene-d5	88.6		14.0-149		08/18/2018 13:27	WG1154028
<i>(S)</i> 2-Fluorobiphenyl	77.4		34.0-125		08/18/2018 13:27	WG1154028
<i>(S)</i> p-Terphenyl-d14	70.5		23.0-120		08/18/2018 13:27	WG1154028

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
Total Solids	79.3		1	08/20/2018 14:20	WG1154707

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0252	1	08/21/2018 09:40	WG1154460

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.52	1	08/20/2018 08:13	WG1154446
Barium	103		0.630	1	08/20/2018 08:13	WG1154446
Cadmium	ND		0.630	1	08/20/2018 08:13	WG1154446
Chromium	15.5		1.26	1	08/20/2018 08:13	WG1154446
Lead	5.18		0.630	1	08/20/2018 08:13	WG1154446
Selenium	ND		2.52	1	08/20/2018 08:13	WG1154446
Silver	ND		1.26	1	08/20/2018 08:13	WG1154446

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0315	1	08/19/2018 15:31	WG1154430
Acrylonitrile	ND		0.0158	1	08/17/2018 16:09	WG1153795
Benzene	ND		0.00126	1	08/17/2018 16:09	WG1153795
Bromobenzene	ND		0.0158	1	08/17/2018 16:09	WG1153795
Bromodichloromethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
Bromoform	ND		0.0315	1	08/17/2018 16:09	WG1153795
Bromomethane	ND		0.0158	1	08/17/2018 16:09	WG1153795
n-Butylbenzene	ND		0.0158	1	08/17/2018 16:09	WG1153795
sec-Butylbenzene	ND		0.0158	1	08/17/2018 16:09	WG1153795
tert-Butylbenzene	ND		0.00630	1	08/17/2018 16:09	WG1153795
Carbon tetrachloride	ND		0.00630	1	08/17/2018 16:09	WG1153795
Chlorobenzene	ND		0.00315	1	08/17/2018 16:09	WG1153795
Chlorodibromomethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
Chloroethane	ND		0.00630	1	08/17/2018 16:09	WG1153795
Chloroform	ND		0.00315	1	08/17/2018 16:09	WG1153795
Chloromethane	ND		0.0158	1	08/17/2018 16:09	WG1153795
2-Chlorotoluene	ND		0.00315	1	08/17/2018 16:09	WG1153795
4-Chlorotoluene	ND		0.00630	1	08/17/2018 16:09	WG1153795
1,2-Dibromo-3-Chloropropane	ND		0.0315	1	08/17/2018 16:09	WG1153795
1,2-Dibromoethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
Dibromomethane	ND		0.00630	1	08/17/2018 16:09	WG1153795
1,2-Dichlorobenzene	ND		0.00630	1	08/17/2018 16:09	WG1153795
1,3-Dichlorobenzene	ND		0.00630	1	08/17/2018 16:09	WG1153795
1,4-Dichlorobenzene	ND		0.00630	1	08/17/2018 16:09	WG1153795
Dichlorodifluoromethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
1,1-Dichloroethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
1,2-Dichloroethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
1,1-Dichloroethene	ND		0.00315	1	08/17/2018 16:09	WG1153795
cis-1,2-Dichloroethene	ND		0.00315	1	08/17/2018 16:09	WG1153795
trans-1,2-Dichloroethene	ND		0.00630	1	08/17/2018 16:09	WG1153795
1,2-Dichloropropane	ND		0.00630	1	08/17/2018 16:09	WG1153795
1,1-Dichloropropene	ND		0.00315	1	08/17/2018 16:09	WG1153795
1,3-Dichloropropane	ND	J4	0.00630	1	08/17/2018 16:09	WG1153795

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



Collected date/time: 08/14/18 12:35

L1017857

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00315	1	08/17/2018 16:09	WG1153795
trans-1,3-Dichloropropene	ND		0.00630	1	08/17/2018 16:09	WG1153795
2,2-Dichloropropane	ND	JO	0.00315	1	08/19/2018 15:31	WG1154430
Di-isopropyl ether	ND		0.00126	1	08/17/2018 16:09	WG1153795
Ethylbenzene	ND		0.00315	1	08/17/2018 16:09	WG1153795
Hexachloro-1,3-butadiene	ND		0.0315	1	08/17/2018 16:09	WG1153795
Isopropylbenzene	ND		0.00315	1	08/17/2018 16:09	WG1153795
p-Isopropyltoluene	ND		0.00630	1	08/17/2018 16:09	WG1153795
2-Butanone (MEK)	ND		0.0315	1	08/19/2018 15:31	WG1154430
Methylene Chloride	ND		0.0315	1	08/17/2018 16:09	WG1153795
4-Methyl-2-pentanone (MIBK)	ND		0.0315	1	08/17/2018 16:09	WG1153795
Methyl tert-butyl ether	ND		0.00126	1	08/17/2018 16:09	WG1153795
Naphthalene	ND		0.0158	1	08/17/2018 16:09	WG1153795
n-Propylbenzene	ND		0.00630	1	08/17/2018 16:09	WG1153795
Styrene	ND		0.0158	1	08/17/2018 16:09	WG1153795
1,1,1,2-Tetrachloroethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
1,1,2,2-Tetrachloroethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
1,1,2-Trichlorotrifluoroethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
Tetrachloroethene	ND		0.00315	1	08/17/2018 16:09	WG1153795
Toluene	ND		0.00630	1	08/17/2018 16:09	WG1153795
1,2,3-Trichlorobenzene	ND		0.00315	1	08/17/2018 16:09	WG1153795
1,2,4-Trichlorobenzene	ND		0.0158	1	08/17/2018 16:09	WG1153795
1,1,1-Trichloroethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
1,1,2-Trichloroethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
Trichloroethene	ND		0.00126	1	08/17/2018 16:09	WG1153795
Trichlorofluoromethane	ND		0.00315	1	08/17/2018 16:09	WG1153795
1,2,3-Trichloropropane	ND		0.0158	1	08/17/2018 16:09	WG1153795
1,2,4-Trimethylbenzene	ND		0.00630	1	08/17/2018 16:09	WG1153795
1,2,3-Trimethylbenzene	ND		0.00630	1	08/17/2018 16:09	WG1153795
Vinyl chloride	ND		0.00315	1	08/19/2018 15:31	WG1154430
1,3,5-Trimethylbenzene	ND		0.00630	1	08/17/2018 16:09	WG1153795
o-Xylene	ND		0.00315	1	08/17/2018 16:09	WG1153795
m&p-Xylene	ND		0.00504	1	08/17/2018 16:09	WG1153795
(S) Toluene-d8	117		80.0-120		08/17/2018 16:09	WG1153795
(S) Toluene-d8	113		80.0-120		08/19/2018 15:31	WG1154430
(S) Dibromofluoromethane	92.0		74.0-131		08/17/2018 16:09	WG1153795
(S) Dibromofluoromethane	94.7		74.0-131		08/19/2018 15:31	WG1154430
(S) 4-Bromofluorobenzene	109		64.0-132		08/17/2018 16:09	WG1153795
(S) 4-Bromofluorobenzene	98.4		64.0-132		08/19/2018 15:31	WG1154430

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.04	1	08/19/2018 19:32	WG1154367
Residual Range Organics (RRO)	ND		12.6	1	08/19/2018 19:32	WG1154367
(S) o-Terphenyl	66.0		18.0-148		08/19/2018 19:32	WG1154367

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Acenaphthene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Acenaphthylene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Benzo(a)anthracene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Benzo(a)pyrene	ND		0.00756	1	08/18/2018 13:49	WG1154028



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Benzo(g,h,i)perylene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Benzo(k)fluoranthene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Chrysene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Dibenz(a,h)anthracene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Fluoranthene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Fluorene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Indeno(1,2,3-cd)pyrene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Naphthalene	ND		0.0252	1	08/18/2018 13:49	WG1154028
Phenanthrene	ND		0.00756	1	08/18/2018 13:49	WG1154028
Pyrene	ND		0.00756	1	08/18/2018 13:49	WG1154028
1-Methylnaphthalene	ND		0.0252	1	08/18/2018 13:49	WG1154028
2-Methylnaphthalene	ND		0.0252	1	08/18/2018 13:49	WG1154028
2-Chloronaphthalene	ND		0.0252	1	08/18/2018 13:49	WG1154028
(S) Nitrobenzene-d5	81.7		14.0-149		08/18/2018 13:49	WG1154028
(S) 2-Fluorobiphenyl	57.9		34.0-125		08/18/2018 13:49	WG1154028
(S) p-Terphenyl-d14	48.5		23.0-120		08/18/2018 13:49	WG1154028

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335195-1 08/20/18 11:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00300			

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L1017857-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1017857-04 08/20/18 11:14 • (DUP) R3335195-3 08/20/18 11:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	89.8	88.7	1	1.19		10

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3335195-2 08/20/18 11:14

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	99.9	85.0-115	



Method Blank (MB)

(MB) R3335233-1 08/20/18 14:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1017897-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1017897-03 08/20/18 14:20 • (DUP) R3335233-3 08/20/18 14:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	94.5	94.1	1	0.376		10

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R3335233-2 08/20/18 14:20

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

⁹Sc



Method Blank (MB)

(MB) R3335332-1 08/21/18 08:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.00280	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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

(LCS) R3335332-2 08/21/18 08:57 • (LCSD) R3335332-3 08/21/18 08:59

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.264	0.264	88.0	88.2	80.0-120			0.132	20

L1018548-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018548-01 08/21/18 09:02 • (MS) R3335332-4 08/21/18 09:05 • (MSD) R3335332-5 08/21/18 09:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.300	1.29	1.55	1.63	84.3	112	1	75.0-125	<u>E</u>	<u>E</u>	5.26	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334980-1 08/20/18 07:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.740	2.00
Silver	U		0.280	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3334980-2 08/20/18 07:38 • (LCSD) R3334980-3 08/20/18 07:40

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	99.2	96.5	99.2	96.5	80.0-120			2.80	20
Barium	100	104	100	104	100	80.0-120			3.04	20
Cadmium	100	99.6	96.7	99.6	96.7	80.0-120			2.96	20
Chromium	100	101	97.9	101	97.9	80.0-120			3.05	20
Lead	100	101	98.3	101	98.3	80.0-120			2.48	20
Selenium	100	98.8	95.6	98.8	95.6	80.0-120			3.30	20
Silver	20.0	18.4	17.8	92.2	89.1	80.0-120			3.44	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1017857-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017857-02 08/20/18 07:43 • (MS) R3334980-6 08/20/18 07:50 • (MSD) R3334980-7 08/20/18 07:53

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	126	ND	123	120	96.9	95.0	1	75.0-125			1.92	20
Barium	126	54.6	199	191	115	108	1	75.0-125			4.18	20
Cadmium	126	ND	122	120	97.2	95.3	1	75.0-125			2.06	20
Chromium	126	7.78	133	129	99.3	96.5	1	75.0-125			2.69	20
Lead	126	2.98	129	127	101	98.5	1	75.0-125			2.08	20
Selenium	126	ND	119	117	94.9	93.1	1	75.0-125			1.89	20
Silver	25.1	ND	22.1	21.7	88.1	86.3	1	75.0-125			2.03	20



Method Blank (MB)

(MB) R3334819-3 08/17/18 11:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	102			77.0-120

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

(LCS) R3334819-1 08/17/18 10:27 • (LCSD) R3334819-2 08/17/18 10:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	4.89	4.89	88.8	88.9	70.0-133			0.0463	20
(S) a,a,a-Trifluorotoluene(FID)				101	101	77.0-120				

L1017897-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017897-03 08/17/18 12:59 • (MS) R3334819-4 08/17/18 19:29 • (MSD) R3334819-5 08/17/18 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 %
Gasoline Range Organics-NWTPH	5.82	U	140	126	92.7	83.6	26	10.0-146			10.3	30
(S) a,a,a-Trifluorotoluene(FID)					103	102		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334767-2 08/17/18 12:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
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
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250
p-Isopropyltoluene	U		0.00233	0.00500
Methylene Chloride	U		0.00664	0.0250

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334767-2 08/17/18 12:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	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
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	117			80.0-120
(S) Dibromofluoromethane	92.9			74.0-131
(S) 4-Bromofluorobenzene	98.8			64.0-132

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3334767-1 08/17/18 10:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acrylonitrile	0.625	0.554	88.6	57.8-143	
Benzene	0.125	0.122	98.0	72.6-120	
Bromobenzene	0.125	0.122	97.4	80.3-115	
Bromodichloromethane	0.125	0.144	115	75.3-119	
Bromoform	0.125	0.126	101	69.1-135	
Bromomethane	0.125	0.117	93.5	23.0-191	
n-Butylbenzene	0.125	0.122	97.9	74.2-134	
sec-Butylbenzene	0.125	0.131	104	77.8-129	



Laboratory Control Sample (LCS)

(LCS) R3334767-1 08/17/18 10:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
tert-Butylbenzene	0.125	0.122	97.9	77.2-129	
Carbon tetrachloride	0.125	0.130	104	69.4-129	
Chlorobenzene	0.125	0.126	101	78.9-122	
Chlorodibromomethane	0.125	0.115	92.0	76.4-126	
Chloroethane	0.125	0.123	98.2	47.2-147	
Chloroform	0.125	0.129	103	73.3-122	
Chloromethane	0.125	0.126	101	53.1-135	
2-Chlorotoluene	0.125	0.129	103	74.6-127	
4-Chlorotoluene	0.125	0.123	98.7	79.5-123	
1,2-Dibromo-3-Chloropropane	0.125	0.126	101	64.9-131	
1,2-Dibromoethane	0.125	0.131	105	78.7-123	
Dibromomethane	0.125	0.137	109	78.5-117	
1,2-Dichlorobenzene	0.125	0.122	97.7	83.6-119	
1,3-Dichlorobenzene	0.125	0.127	101	75.9-129	
1,4-Dichlorobenzene	0.125	0.116	93.0	81.0-115	
Dichlorodifluoromethane	0.125	0.121	96.5	50.9-139	
1,1-Dichloroethane	0.125	0.128	103	71.7-125	
1,2-Dichloroethane	0.125	0.121	97.0	67.2-121	
1,1-Dichloroethene	0.125	0.121	97.2	60.6-133	
cis-1,2-Dichloroethene	0.125	0.121	96.9	76.1-121	
trans-1,2-Dichloroethene	0.125	0.135	108	70.7-124	
1,2-Dichloropropane	0.125	0.112	89.8	76.9-123	
1,1-Dichloropropene	0.125	0.125	99.9	71.2-126	
1,3-Dichloropropane	0.125	0.148	119	80.3-114	J4
cis-1,3-Dichloropropene	0.125	0.130	104	77.3-123	
trans-1,3-Dichloropropene	0.125	0.130	104	73.0-127	
Di-isopropyl ether	0.125	0.111	88.6	67.2-131	
Ethylbenzene	0.125	0.130	104	78.6-124	
Hexachloro-1,3-butadiene	0.125	0.126	101	69.2-136	
Isopropylbenzene	0.125	0.104	83.0	79.4-126	
p-Isopropyltoluene	0.125	0.124	99.1	75.4-132	
Methylene Chloride	0.125	0.117	93.7	68.2-119	
4-Methyl-2-pentanone (MIBK)	0.625	0.638	102	61.1-138	
Methyl tert-butyl ether	0.125	0.120	96.0	70.2-122	
Naphthalene	0.125	0.119	95.1	69.9-132	
n-Propylbenzene	0.125	0.119	94.9	80.2-124	
Styrene	0.125	0.131	104	79.4-124	
1,1,1,2-Tetrachloroethane	0.125	0.111	88.8	76.7-127	
1,1,2,2-Tetrachloroethane	0.125	0.136	109	78.8-124	
Tetrachloroethene	0.125	0.113	90.3	71.1-133	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3334767-1 08/17/18 10:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Toluene	0.125	0.127	101	76.7-116	
1,1,2-Trichlorotrifluoroethane	0.125	0.127	102	62.6-138	
1,2,3-Trichlorobenzene	0.125	0.120	96.2	72.5-137	
1,2,4-Trichlorobenzene	0.125	0.118	94.1	74.0-137	
1,1,1-Trichloroethane	0.125	0.132	105	69.9-127	
1,1,2-Trichloroethane	0.125	0.142	114	81.9-119	
Trichloroethene	0.125	0.128	102	77.2-122	
Trichlorofluoromethane	0.125	0.110	87.7	51.5-151	
1,2,3-Trichloropropane	0.125	0.126	101	74.0-124	
1,2,3-Trimethylbenzene	0.125	0.125	100	79.4-118	
1,2,4-Trimethylbenzene	0.125	0.126	100	77.1-124	
1,3,5-Trimethylbenzene	0.125	0.130	104	79.0-125	
o-Xylene	0.125	0.125	100	78.5-124	
m&p-Xylenes	0.250	0.248	99.1	77.3-124	
(S) Toluene-d8			105	80.0-120	
(S) Dibromofluoromethane			99.5	74.0-131	
(S) 4-Bromofluorobenzene			104	64.0-132	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1017857-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017857-02 08/17/18 14:25 • (MS) R3334767-3 08/17/18 20:57 • (MSD) R3334767-4 08/17/18 21:18

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 %
Acrylonitrile	0.785	ND	0.447	0.401	57.0	51.0	1	39.3-152			11.1	27.2
Benzene	0.157	ND	0.0731	0.0337	46.5	21.5	1	47.8-131	J6	J3 J6	73.7	22.8
Bromobenzene	0.157	ND	0.101	0.0742	64.3	47.2	1	40.0-130		J3	30.6	27.4
Bromodichloromethane	0.157	ND	0.110	0.0689	70.3	43.9	1	50.6-128		J3 J6	46.4	22.8
Bromoform	0.157	ND	0.0975	0.0791	62.0	50.4	1	43.3-139			20.7	25.9
Bromomethane	0.157	ND	0.0332	0.0176	21.1	11.2	1	5.00-189		J3	61.4	26.7
n-Butylbenzene	0.157	ND	0.111	0.0483	70.9	30.8	1	23.6-146		J3	78.9	39.2
sec-Butylbenzene	0.157	ND	0.115	0.0481	72.9	30.6	1	31.0-142		J3 J6	81.7	34.7
tert-Butylbenzene	0.157	ND	0.108	0.0482	68.9	30.7	1	36.9-142		J3 J6	76.8	31.7
Carbon tetrachloride	0.157	ND	0.0757	0.0239	48.2	15.2	1	46.0-140		J3 J6	104	27.2
Chlorobenzene	0.157	ND	0.108	0.0621	68.9	39.5	1	44.1-134		J3 J6	54.2	25.7
Chlorodibromomethane	0.157	ND	0.0928	0.0750	59.1	47.8	1	49.7-134		J6	21.2	24
Chloroethane	0.157	ND	0.0423	0.0202	27.0	12.9	1	5.00-164		J3	70.6	28.4
Chloroform	0.157	ND	0.103	0.0548	65.6	34.9	1	51.2-133		J3 J6	61.1	22.8
Chloromethane	0.157	ND	0.0290	0.0135	18.5	8.62	1	31.4-141	J6	J3 J6	72.7	24.6
2-Chlorotoluene	0.157	ND	0.103	0.0595	65.7	37.9	1	36.1-137		J3	53.7	28.9



L1017857-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017857-02 08/17/18 14:25 • (MS) R3334767-3 08/17/18 20:57 • (MSD) R3334767-4 08/17/18 21:18

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 %
4-Chlorotoluene	0.157	ND	0.105	0.0616	66.8	39.2	1	35.4-137		J3	52.1	29.8
1,2-Dibromo-3-Chloropropane	0.157	ND	0.103	0.0941	65.4	59.9	1	40.4-138			8.78	30.8
1,2-Dibromoethane	0.157	ND	0.102	0.0818	64.9	52.1	1	50.2-133			21.8	23.6
Dibromomethane	0.157	ND	0.0985	0.0681	62.7	43.3	1	52.4-128		J3 J6	36.5	23
1,2-Dichlorobenzene	0.157	ND	0.110	0.0786	70.0	50.0	1	34.6-139		J3	33.3	29.9
1,3-Dichlorobenzene	0.157	ND	0.111	0.0701	70.4	44.7	1	28.4-142		J3	44.8	31.2
1,4-Dichlorobenzene	0.157	ND	0.102	0.0736	65.0	46.9	1	35.0-133		J3	32.3	31.1
Dichlorodifluoromethane	0.157	ND	0.0516	0.0110	32.9	7.02	1	31.2-144		J3 J6	130	30.2
1,1-Dichloroethane	0.157	ND	0.0924	0.0419	58.8	26.7	1	49.1-136		J3 J6	75.2	22.9
1,2-Dichloroethane	0.157	ND	0.0877	0.0626	55.8	39.8	1	47.1-129		J3 J6	33.4	22.7
1,1-Dichloroethene	0.157	ND	0.0509	0.0172	32.4	11.0	1	36.1-142	J6	J3 J6	98.8	25.6
cis-1,2-Dichloroethene	0.157	ND	0.0803	0.0437	51.1	27.8	1	50.6-133		J3 J6	59.0	23
trans-1,2-Dichloroethene	0.157	ND	0.0494	0.0228	31.5	14.5	1	43.8-135	J6	J3 J6	73.9	24.8
1,2-Dichloropropane	0.157	ND	0.0889	0.0517	56.6	32.9	1	50.3-134		J3 J6	52.9	22.7
1,1-Dichloropropene	0.157	ND	0.0612	0.0215	38.9	13.7	1	43.0-137	J6	J3 J6	95.8	26.4
1,3-Dichloropropane	0.157	ND	0.121	0.0907	76.9	57.7	1	51.4-127		J3	28.5	23.1
cis-1,3-Dichloropropene	0.157	ND	0.110	0.0705	69.8	44.9	1	48.4-134		J3 J6	43.6	23.6
trans-1,3-Dichloropropene	0.157	ND	0.0932	0.0704	59.3	44.8	1	46.6-135		J3 J6	27.9	25.3
Di-isopropyl ether	0.157	ND	0.0874	0.0596	55.7	37.9	1	46.7-140		J3 J6	37.8	23.5
Ethylbenzene	0.157	ND	0.102	0.0505	64.7	32.2	1	44.8-135		J3 J6	67.1	26.9
Hexachloro-1,3-butadiene	0.157	ND	0.119	0.0603	75.8	38.4	1	10.0-149		J3	65.5	40
Isopropylbenzene	0.157	ND	0.0824	0.0385	52.5	24.5	1	41.9-139		J3 J6	72.6	29.3
p-Isopropyltoluene	0.157	ND	0.105	0.0496	66.6	31.6	1	27.3-146		J3	71.4	35.1
Methylene Chloride	0.157	ND	0.0711	0.0428	45.3	27.2	1	46.7-125	J6	J3 J6	49.8	22.2
4-Methyl-2-pentanone (MIBK)	0.785	ND	0.567	0.516	72.2	65.6	1	42.4-146			9.48	26.7
Methyl tert-butyl ether	0.157	ND	0.0887	0.0720	56.5	45.8	1	50.4-131		J6	20.8	24.8
Naphthalene	0.157	ND	0.102	0.0957	64.6	60.9	1	18.4-145			5.92	34
n-Propylbenzene	0.157	ND	0.0903	0.0410	57.5	26.1	1	35.2-139		J3 J6	75.0	31.9
Styrene	0.157	ND	0.103	0.0647	65.7	41.2	1	39.7-137		J3	45.9	28.2
1,1,1,2-Tetrachloroethane	0.157	ND	0.104	0.0653	66.1	41.6	1	48.8-136		J3 J6	45.6	25.5
1,1,2,2-Tetrachloroethane	0.157	ND	0.0982	0.0961	62.5	61.2	1	45.7-140			2.11	26.4
Tetrachloroethene	0.157	ND	0.0664	0.0302	42.2	19.2	1	37.7-140		J3 J6	74.9	29.2
Toluene	0.157	ND	0.0887	0.0445	54.6	26.5	1	47.8-127		J3 J6	66.4	24.3
1,2,3-Trichlorobenzene	0.157	ND	0.115	0.0943	72.9	60.0	1	10.0-150			19.4	38.5
1,1,2-Trichlorotrifluoroethane	0.157	ND	0.0741	0.0190	47.1	12.1	1	35.7-146		J3 J6	118	28.8
1,2,4-Trichlorobenzene	0.157	ND	0.107	0.0811	68.2	51.6	1	10.0-153			27.7	39.3
1,1,1-Trichloroethane	0.157	ND	0.0926	0.0319	58.9	20.3	1	49.0-138		J3 J6	97.6	25.3
1,1,2-Trichloroethane	0.157	ND	0.130	0.0924	82.5	58.8	1	52.3-132		J3	33.5	23.4
Trichloroethene	0.157	ND	0.0924	0.0407	58.8	25.9	1	48.0-132		J3 J6	77.6	24.8

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1017857-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017857-02 08/17/18 14:25 • (MS) R3334767-3 08/17/18 20:57 • (MSD) R3334767-4 08/17/18 21:18

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 %
Trichlorofluoromethane	0.157	ND	0.0584	0.0153	37.2	9.72	1	12.8-169		J3 J6	117	29.7
1,2,3-Trichloropropane	0.157	ND	0.122	0.100	77.5	63.6	1	44.4-138			19.7	26.3
1,2,4-Trimethylbenzene	0.157	ND	0.103	0.0611	65.9	38.9	1	32.9-139		J3	51.5	30.6
1,2,3-Trimethylbenzene	0.157	ND	0.109	0.0670	69.3	42.6	1	41.0-133		J3	47.7	27.6
1,3,5-Trimethylbenzene	0.157	ND	0.105	0.0522	67.1	33.3	1	37.1-138		J3 J6	67.5	30.6
o-Xylene	0.157	ND	0.105	0.0532	67.1	33.9	1	43.2-136		J3 J6	65.9	26.2
m&p-Xylenes	0.314	ND	0.190	0.0923	60.4	29.4	1	42.2-134		J3 J6	69.1	27.1
(S) Toluene-d8					112	113		80.0-120				
(S) Dibromofluoromethane					95.5	96.7		74.0-131				
(S) 4-Bromofluorobenzene					102	106		64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335060-2 08/19/18 10:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
2,2-Dichloropropane	U		0.000793	0.00250
2-Butanone (MEK)	U		0.0125	0.0250
Vinyl chloride	U		0.000683	0.00250
(S) Toluene-d8	113			80.0-120
(S) Dibromofluoromethane	94.0			74.0-131
(S) 4-Bromofluorobenzene	97.7			64.0-132

Laboratory Control Sample (LCS)

(LCS) R3335060-1 08/19/18 09:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.659	105	25.3-178	
2,2-Dichloropropane	0.125	0.0971	77.7	61.9-132	
2-Butanone (MEK)	0.625	0.957	153	44.5-154	
Vinyl chloride	0.125	0.149	119	58.4-134	
(S) Toluene-d8			105	80.0-120	
(S) Dibromofluoromethane			103	74.0-131	
(S) 4-Bromofluorobenzene			93.3	64.0-132	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334987-1 08/19/18 15:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	83.8			18.0-148

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

(LCS) R3334987-2 08/19/18 15:56 • (LCSD) R3334987-3 08/19/18 16:09

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 %
Diesel Range Organics (DRO)	25.0	22.2	21.9	88.8	87.6	50.0-150			1.36	20
Residual Range Organics (RRO)	25.0	17.3	17.4	69.2	69.6	50.0-150			0.576	20
(S) o-Terphenyl				85.4	81.2	18.0-148				

L1017857-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017857-07 08/19/18 18:29 • (MS) R3334987-4 08/19/18 18:42 • (MSD) R3334987-5 08/19/18 18:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	30.7	ND	23.0	24.3	74.8	79.2	1	50.0-150			5.71	20
Residual Range Organics (RRO)	30.7	ND	21.3	20.8	69.2	67.6	1	50.0-150			2.34	20
(S) o-Terphenyl					68.8	73.1		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335432-1 08/21/18 12:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	94.1			18.0-148

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) R3335432-2 08/21/18 13:03 • (LCSD) R3335432-3 08/21/18 13:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	25.7	24.1	103	96.4	50.0-150			6.43	20
Residual Range Organics (RRO)	25.0	21.4	21.2	85.6	84.8	50.0-150			0.939	20
(S) o-Terphenyl				94.3	87.4	18.0-148				

L1017751-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017751-01 08/22/18 10:17 • (MS) R3335700-1 08/22/18 10:31 • (MSD) R3335700-2 08/22/18 10:44

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	29.8	ND	28.0	27.9	94.0	94.0	1	50.0-150			0.428	20
Residual Range Organics (RRO)	29.8	ND	27.0	26.9	90.8	90.7	1	50.0-150			0.443	20
(S) o-Terphenyl					79.5	79.0		18.0-148				



Method Blank (MB)

(MB) R3334728-3 08/18/18 08:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	96.9			14.0-149
(S) 2-Fluorobiphenyl	95.4			34.0-125
(S) p-Terphenyl-d14	86.9			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3334728-1 08/18/18 07:58 • (LCSD) R3334728-2 08/18/18 08:20

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 %
Anthracene	0.0800	0.0720	0.0785	90.0	98.1	50.0-125			8.64	20
Acenaphthene	0.0800	0.0678	0.0729	84.8	91.1	52.0-120			7.25	20
Acenaphthylene	0.0800	0.0685	0.0734	85.6	91.8	51.0-120			6.91	20
Benzo(a)anthracene	0.0800	0.0722	0.0769	90.3	96.1	46.0-121			6.30	20
Benzo(a)pyrene	0.0800	0.0626	0.0700	78.3	87.5	42.0-121			11.2	20
Benzo(b)fluoranthene	0.0800	0.0696	0.0725	87.0	90.6	42.0-123			4.08	20
Benzo(g,h,i)perylene	0.0800	0.0679	0.0726	84.9	90.8	43.0-128			6.69	20
Benzo(k)fluoranthene	0.0800	0.0809	0.0896	101	112	45.0-128			10.2	20
Chrysene	0.0800	0.0793	0.0884	99.1	111	48.0-127			10.9	20
Dibenz(a,h)anthracene	0.0800	0.0705	0.0768	88.1	96.0	43.0-132			8.55	20
Fluoranthene	0.0800	0.0767	0.0837	95.9	105	49.0-129			8.73	20



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

(LCS) R3334728-1 08/18/18 07:58 • (LCSD) R3334728-2 08/18/18 08:20

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 %
Fluorene	0.0800	0.0716	0.0772	89.5	96.5	50.0-120			7.53	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0700	0.0757	87.5	94.6	44.0-131			7.82	20
Naphthalene	0.0800	0.0729	0.0777	91.1	97.1	50.0-120			6.37	20
Phenanthrene	0.0800	0.0693	0.0737	86.6	92.1	48.0-120			6.15	20
Pyrene	0.0800	0.0682	0.0737	85.3	92.1	48.0-135			7.75	20
1-Methylnaphthalene	0.0800	0.0735	0.0803	91.9	100	52.0-122			8.84	20
2-Methylnaphthalene	0.0800	0.0702	0.0752	87.8	94.0	52.0-120			6.88	20
2-Chloronaphthalene	0.0800	0.0710	0.0764	88.8	95.5	50.0-120			7.33	20
(S) Nitrobenzene-d5				90.5	103	14.0-149				
(S) 2-Fluorobiphenyl				98.2	102	34.0-125				
(S) p-Terphenyl-d14				86.8	91.6	23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1017912-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017912-03 08/18/18 15:17 • (MS) R3334728-4 08/18/18 15:39 • (MSD) R3334728-5 08/18/18 16:01

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 %
Anthracene	0.0847	U	0.0427	0.0467	50.4	55.1	1	20.0-136			9.00	24
Acenaphthene	0.0847	U	0.0458	0.0463	54.0	54.6	1	29.0-124			1.15	20
Acenaphthylene	0.0847	U	0.0487	0.0484	57.5	57.1	1	35.0-120			0.654	20
Benzo(a)anthracene	0.0847	U	0.0318	0.0366	37.5	43.3	1	13.0-132			14.2	27
Benzo(a)pyrene	0.0847	U	0.0272	0.0345	32.1	40.8	1	14.0-138			23.7	27
Benzo(b)fluoranthene	0.0847	U	0.0184	0.0262	21.8	30.9	1	10.0-129		J3	34.7	31
Benzo(g,h,i)perylene	0.0847	U	0.0178	0.0256	21.0	30.3	1	10.0-133		J3	36.1	30
Benzo(k)fluoranthene	0.0847	U	0.0368	0.0422	43.4	49.8	1	15.0-131			13.7	27
Chrysene	0.0847	U	0.0466	0.0507	55.0	59.9	1	15.0-137			8.49	25
Dibenz(a,h)anthracene	0.0847	U	0.0275	0.0351	32.5	41.4	1	15.0-132			24.0	27
Fluoranthene	0.0847	U	0.0304	0.0373	35.9	44.0	1	13.0-139			20.3	28
Fluorene	0.0847	U	0.0417	0.0441	49.3	52.0	1	27.0-122			5.43	22
Indeno(1,2,3-cd)pyrene	0.0847	U	0.0185	0.0269	21.9	31.8	1	11.0-133		J3	36.8	29
Naphthalene	0.0847	0.00280	0.0643	0.0651	72.6	73.6	1	18.0-136			1.31	21
Phenanthrene	0.0847	U	0.0339	0.0388	40.0	45.8	1	15.0-133			13.4	25
Pyrene	0.0847	U	0.0258	0.0320	30.5	37.8	1	11.0-146			21.2	29
1-Methylnaphthalene	0.0847	U	0.0571	0.0572	67.4	67.5	1	24.0-137			0.185	22
2-Methylnaphthalene	0.0847	U	0.0525	0.0537	62.0	63.4	1	23.0-136			2.19	22
2-Chloronaphthalene	0.0847	U	0.0497	0.0501	58.6	59.1	1	36.0-120			0.849	20
(S) Nitrobenzene-d5					119	120		14.0-149				
(S) 2-Fluorobiphenyl					69.9	69.4		34.0-125				
(S) p-Terphenyl-d14					49.5	52.9		23.0-120				



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.

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

Qualifier Description

E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.



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.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

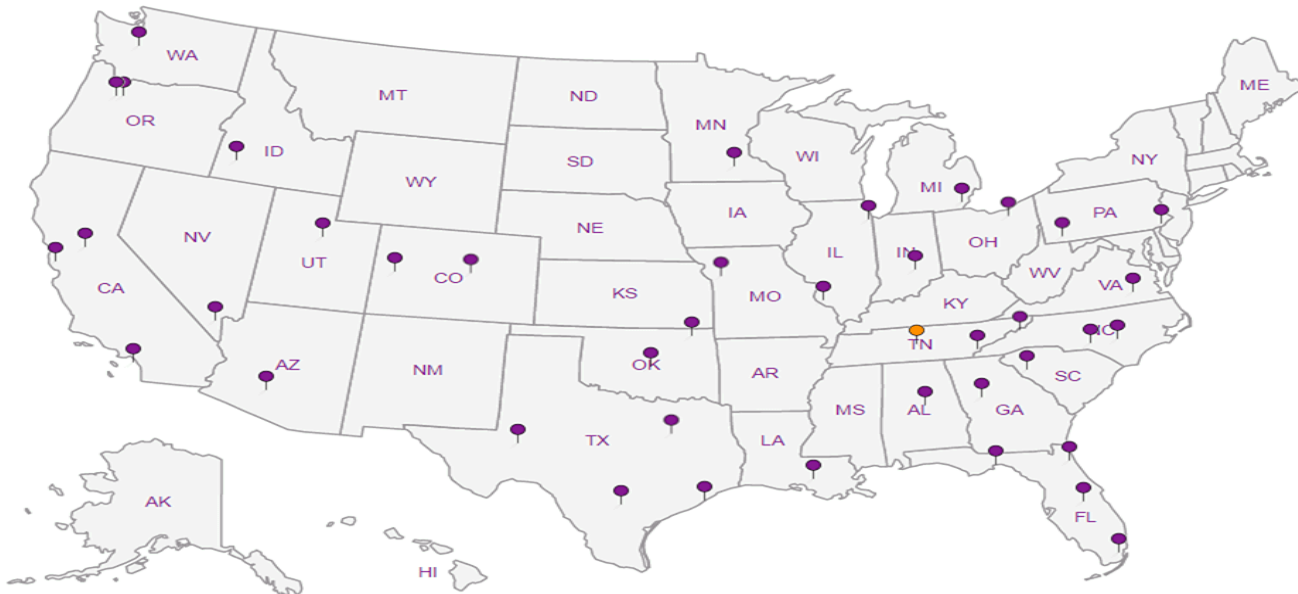
Third Party Federal Accreditations

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.



Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Accounts Payable
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
KatieTeague@kennedyjenks.com

Project Description: **BNSF - Wishram Rail yard, WA**


City/State Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #
 P.O. #

Collected by (signature):

 Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day
 Quote #
 Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
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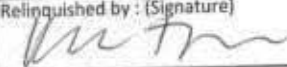
B-18-15(12.0-12.5)	Grab	SS	12-12.5	8/13/18	1210	3
B-18-17(9.0-9.5)		SS	9-9.5	8/13/18	1340	4
B-18-17(9.0-9.5)MS		SS	↓	↓	↓	1
B-18-17(9.0-9.5)MSD		SS	↓	↓	↓	1
B-18-06(9.5-10.0)		SS	9.5-10	8/13/18	1505	4
WMW-32(9.5-10.0)		SS	9.5-10	8/14/18	0745	2
B-18-07(9.5-10.0)		SS	9.5-10	8/14/18	0830	3
B-18-08(9.5-10.0)		SS	9.5-10	8/14/18	1015	3
B-18-12(9.5-10.0)		SS	9.5-10	8/14/18	1100	3
B-18-13(12.0-12.5)	↓	SS	12-12.5	8/14/18	1235	3

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - Waste Water
 DW - Drinking Water
 OT - Other

Remarks: **include Dx and Gx chromatograms**
No spaces in sample names

Samples returned via:
 UPS FedEx Courier

Tracking # **4492 6218 1918, 4492 6218 1918**

Relinquished by: (Signature)


Date: **8/14/18** Time: **1430**

Received by: (Signature)
FedEx

Trip Blank Received: **2** (1 HCL, 1 MeOH)
 HCL / MeOH
 TBR

Relinquished by: (Signature)

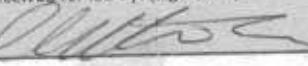
Date: Time:

Received by: (Signature)

Temp: **3.1K** °C Bottles Received: **27**

Relinquished by: (Signature)

Date: Time:

Received for lab by: (signature)


Date: **8/15/18** Time: **8:45**

Analysis / Container / Preservative				
MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V82.60C. 40mlAmb/MeOH5ml/Syr

Chain of Custody Page 1 of 1



12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **1017857**
H133

Acctnum: **BNSF1KEN**
 Template: **T138670**
 Prelogin: **P663876**
 TSR: **134 - Mark W. Beasley**
 PB: **7-23-186**

Shipped Via: **FedEX Ground**

Remarks	Sample # (lab only)
	21
	02-03
	02
	02
	04/05
	06
	07
	08
	09
	10

Sample Receipt Checklist

COC Seal Present/Intact: 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

45 ml HCL

If preservation required by Login: Date/Time

Hold:

Condition: **NCR / OK**



Login #:1017857	Client:BNSF1KEN	Date:08/15/18	Evaluated by:Matthew Lockhart
-----------------	-----------------	---------------	-------------------------------

Non-Conformance (check applicable items)

	Sample Integrity	Chain of Custody Clarification	
	Parameter(s) past holding time	Login Clarification Needed	If Broken Container:
	Improper temperature	Chain of custody is incomplete	Insufficient packing material around container
	Improper container type	Please specify Metals requested.	Insufficient packing material inside cooler
	Improper preservation	Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courier)
X	Insufficient sample volume.	Received additional samples not listed on coc.	Sample was frozen
	Sample is biphasic.	Sample ids on containers do not match ids on coc	Container lid not intact
	Vials received with headspace.	Trip Blank not received.	If no Chain of Custody:
	Broken container	Client did not "X" analysis.	Received by:
	Broken container:	Chain of Custody is missing	Date/Time:
	Sufficient sample remains		Temp./Cont. Rec./pH:
			Carrier:
			Tracking#

Login Comments: Client did not send bulk container for WMW-32 (9.5-10.0). Ran sample as wet weight.

Client informed by:	Call	Email	Voice Mail	Date: 8/15/18	Time: 1835
TSR Initials: MB	Client Contact: Ryan Hultgren				

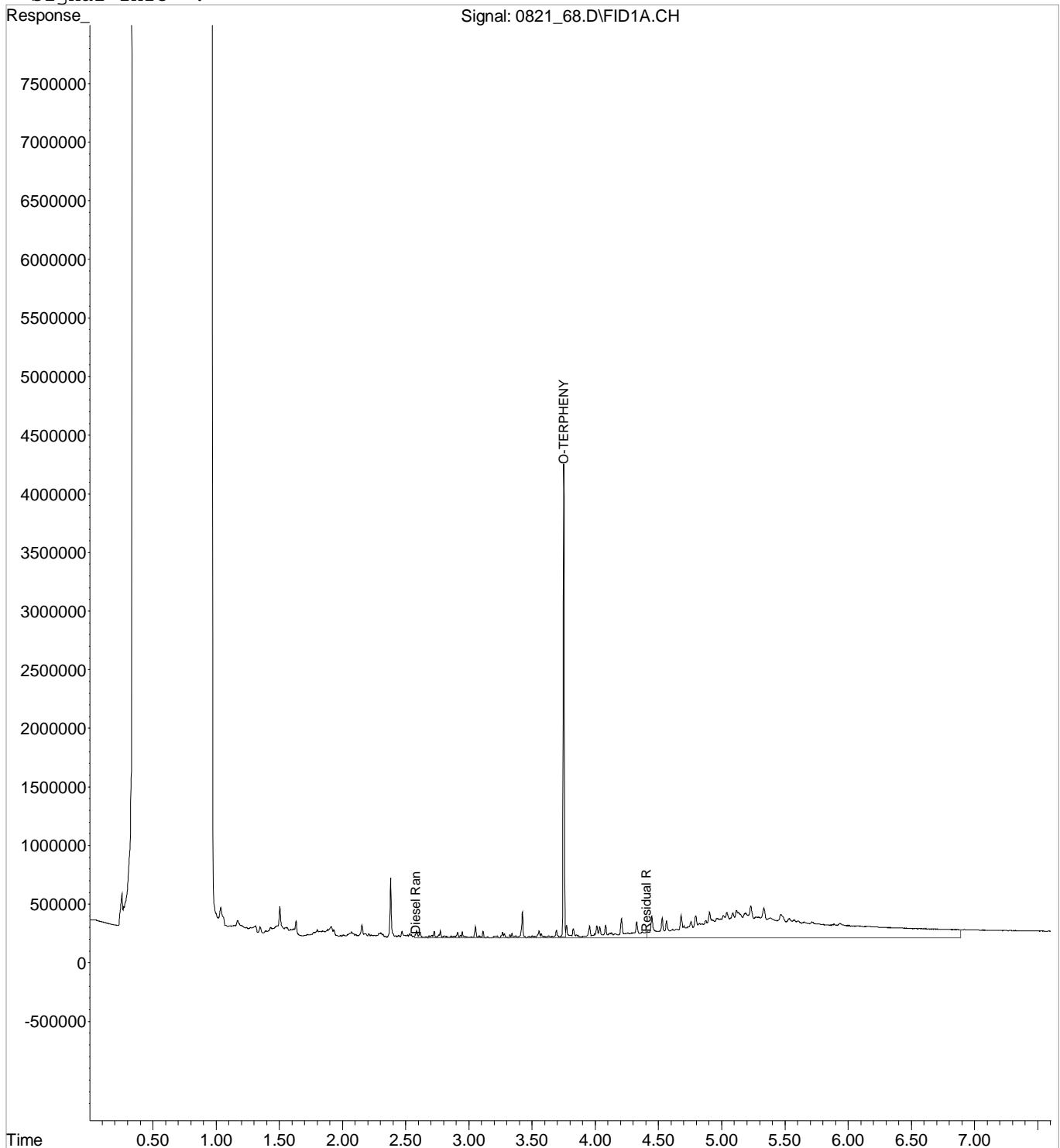
Login Instructions:

Client notified, transfer TS from L1016055-03 to L1017857-06.

Data File : C:\MSDCHEM\1\DATA\082118\0821 68.D Vial: 36
Acq On : 22 Aug 2018 1:10 am Operator: 647
Sample : L1017857-02 1X WG1154190 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 22 9:06 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

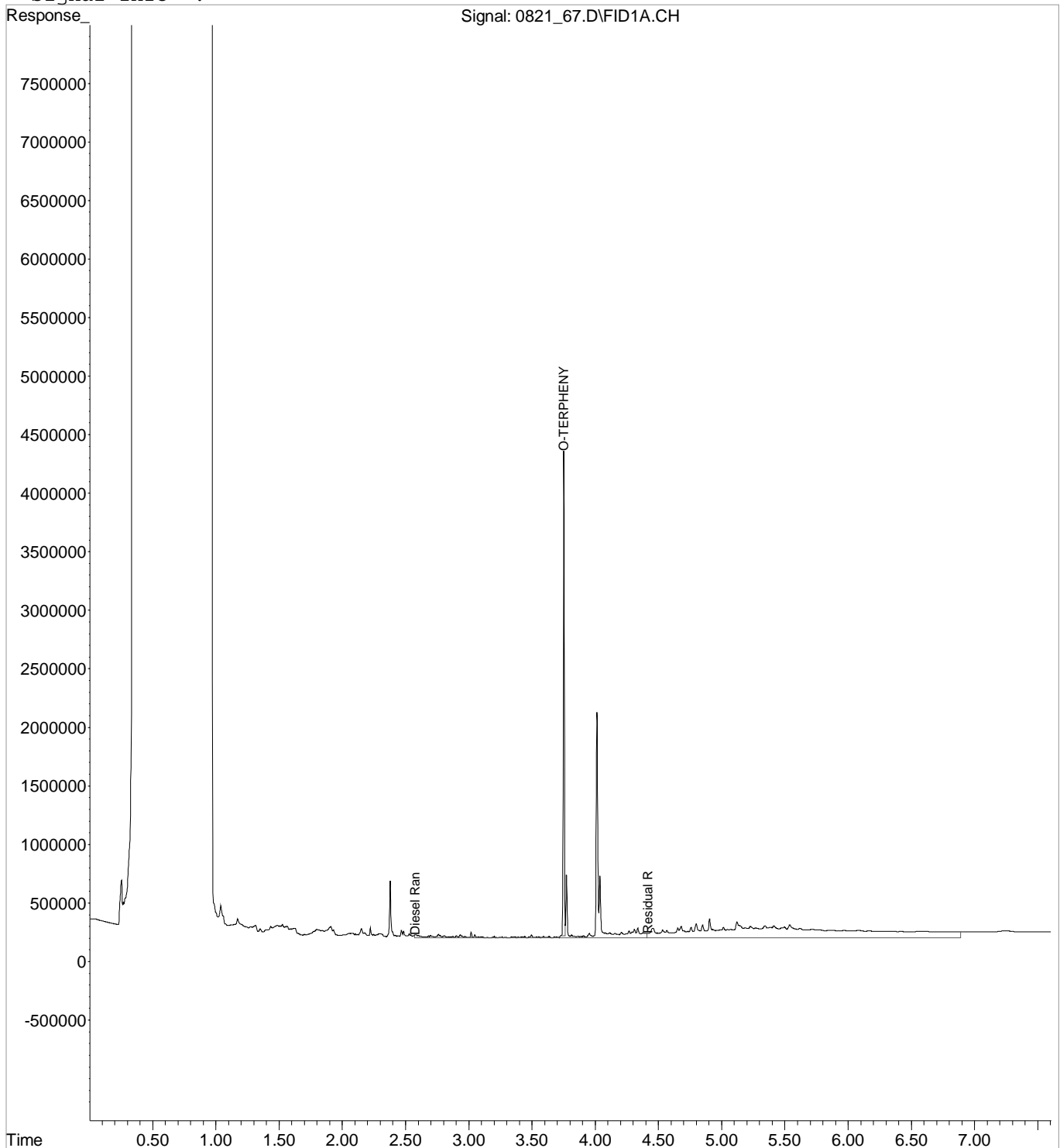
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082118\0821 67.D Vial: 35
Acq On : 22 Aug 2018 12:56 am Operator: 647
Sample : L1017857-04 1X WG1154190 Inst : SVG13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 22 9:06 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

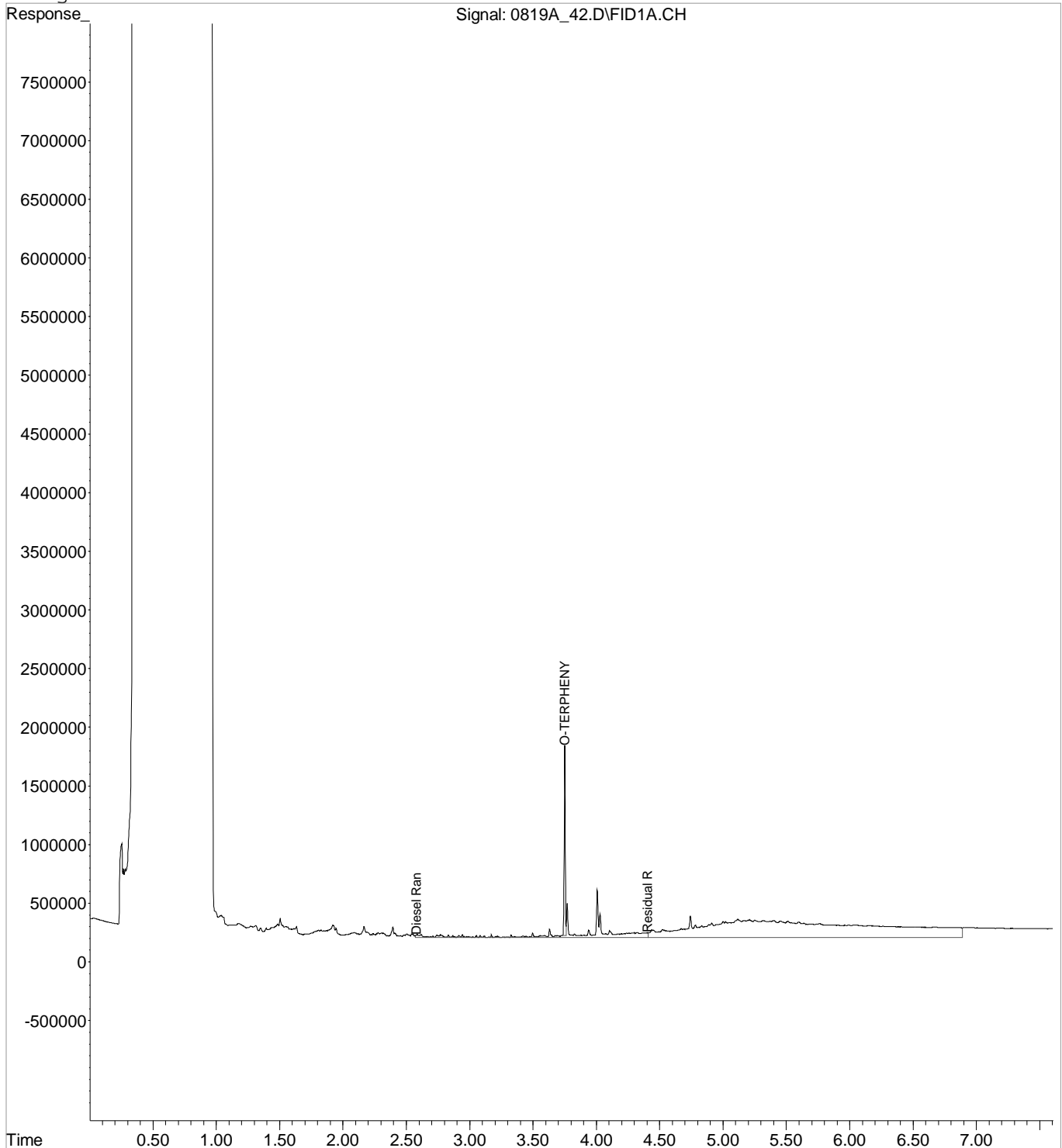
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081918A\0819A 42.D Vial: 31
Acq On : 19 Aug 2018 8:48 pm Operator: 851
Sample : L1017857-01 1X WG1154367 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 20 10:48 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

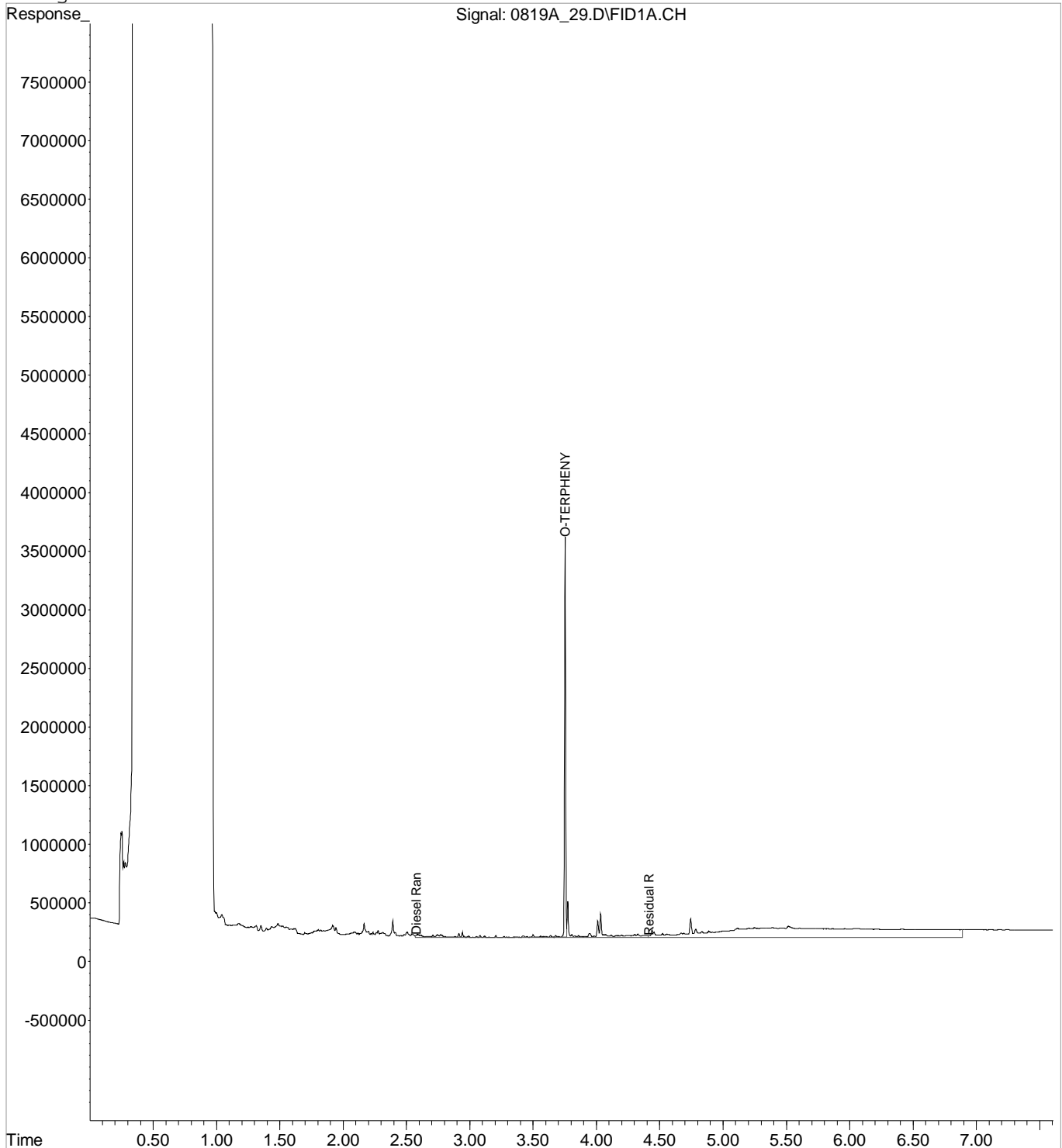
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081918A\0819A 29.D Vial: 21
Acq On : 19 Aug 2018 6:04 pm Operator: 851
Sample : L1017857-02 1X WG1154367 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 20 10:13 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

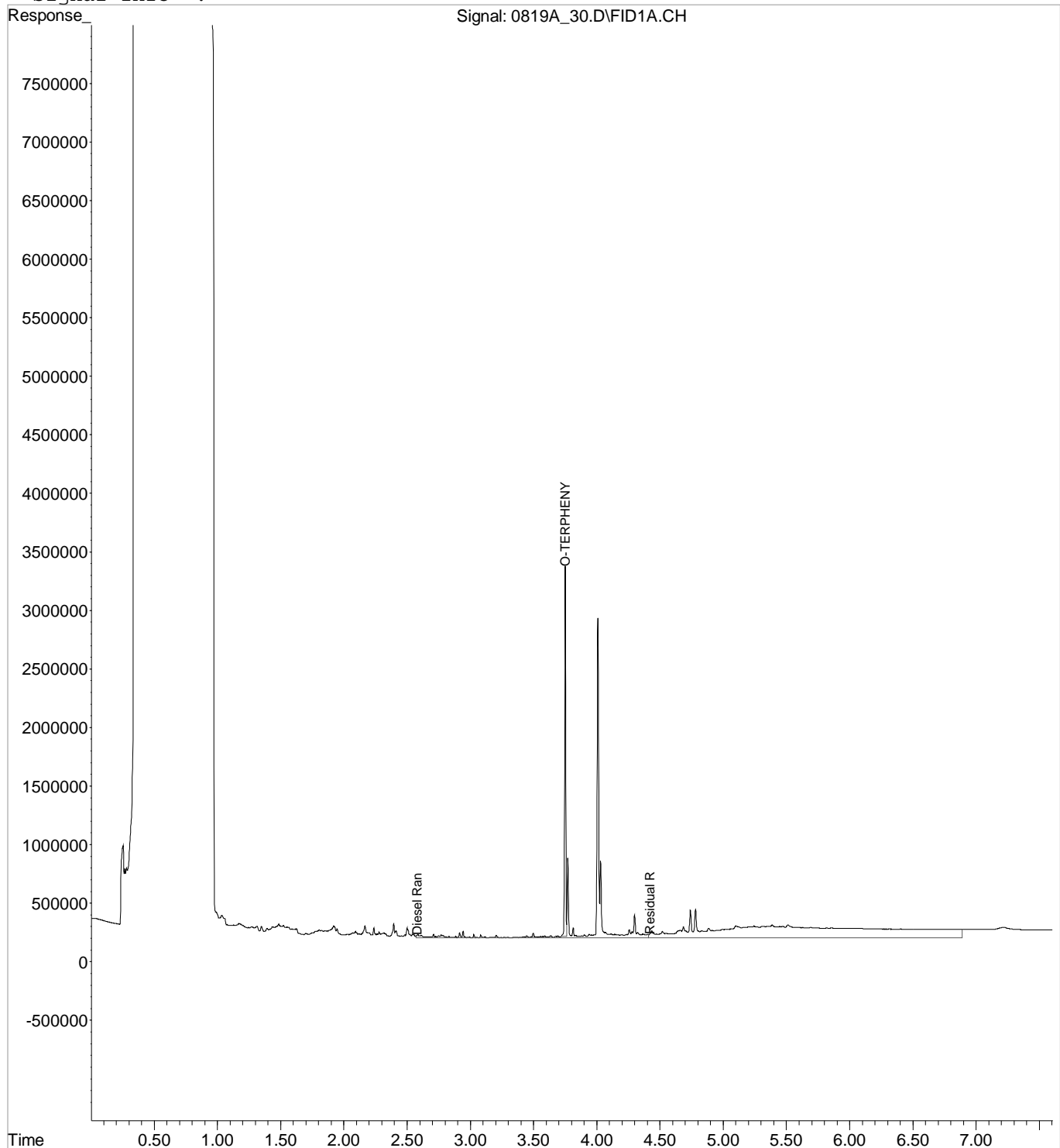
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081918A\0819A 30.D Vial: 22
 Acq On : 19 Aug 2018 6:16 pm Operator: 851
 Sample : L1017857-04 1X WG1154367 Inst : SVGC13
 Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Aug 20 10:13 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
 Title :
 Last Update : Mon Aug 13 23:06:30 2018
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

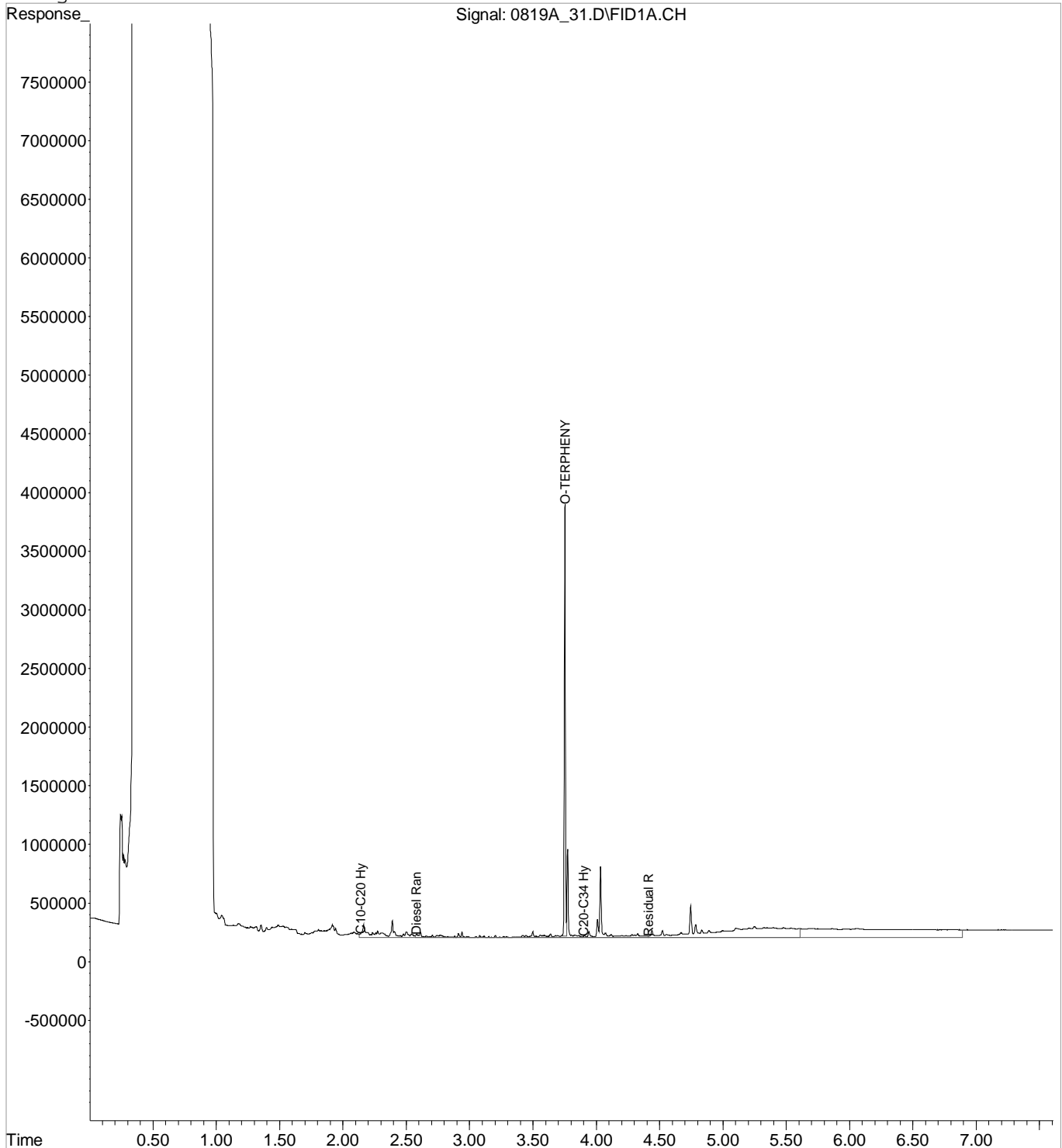
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\081918A\0819A 31.D Vial: 23
 Acq On : 19 Aug 2018 6:29 pm Operator: 851
 Sample : L1017857-07 1X WG1154367 Inst : SVGC13
 Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Aug 20 10:22 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
 Title :
 Last Update : Mon Aug 13 23:06:30 2018
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

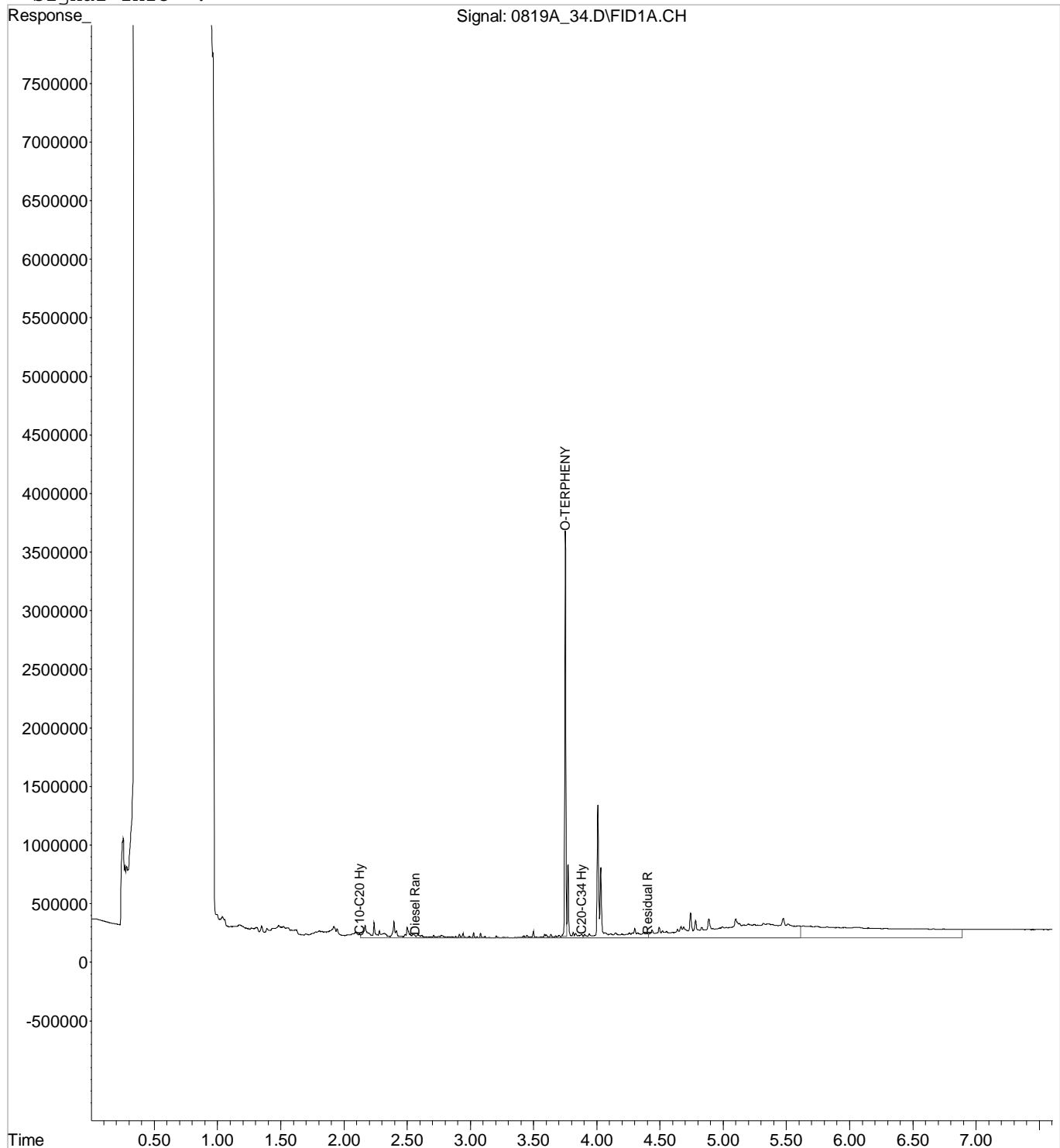
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\081918A\0819A 34.D Vial: 26
Acq On : 19 Aug 2018 7:07 pm Operator: 851
Sample : L1017857-08 1X WG1154367 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 20 10:23 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

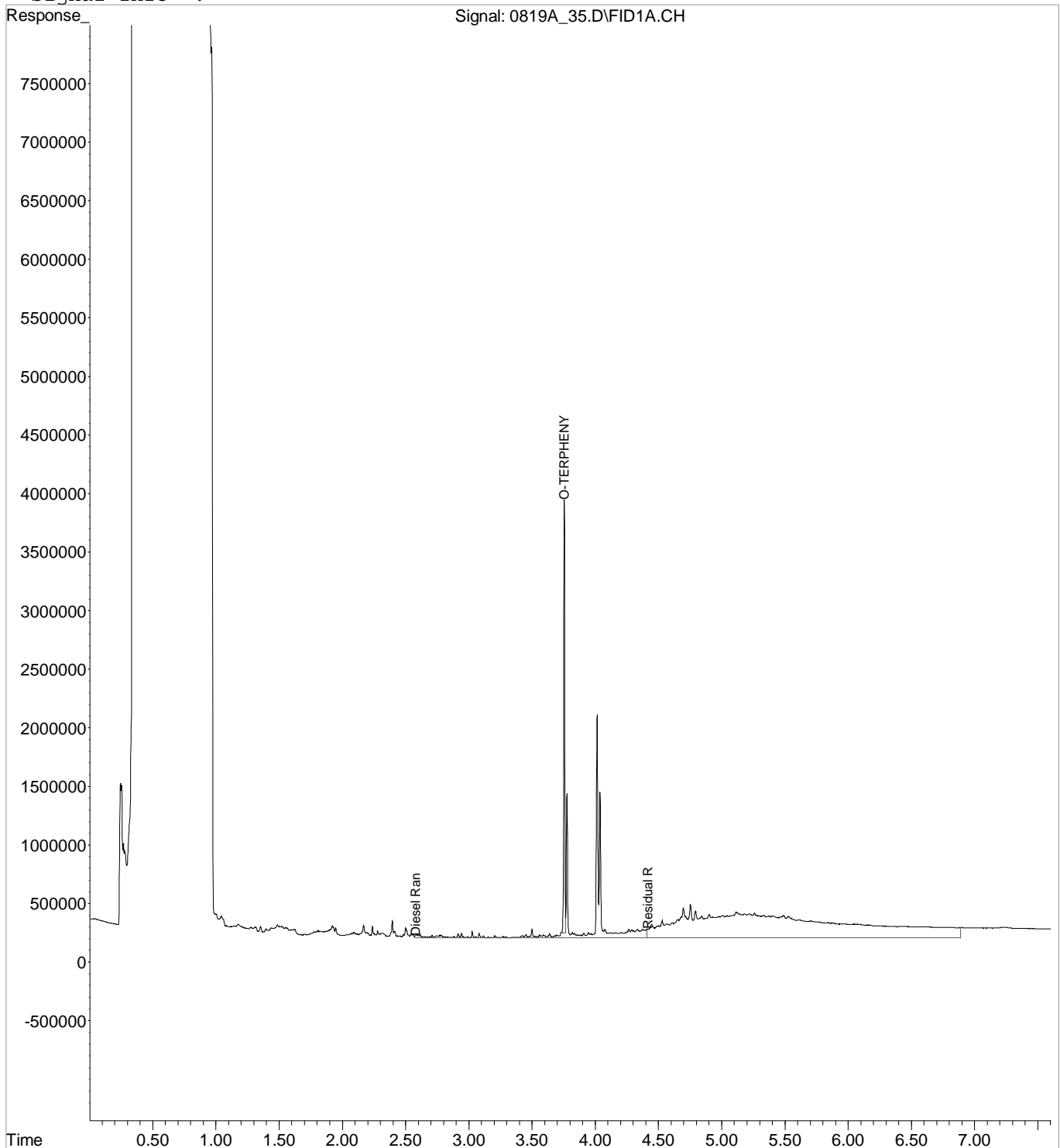
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081918A\0819A 35.D Vial: 27
Acq On : 19 Aug 2018 7:20 pm Operator: 851
Sample : L1017857-09 1X WG1154367 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 20 10:45 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

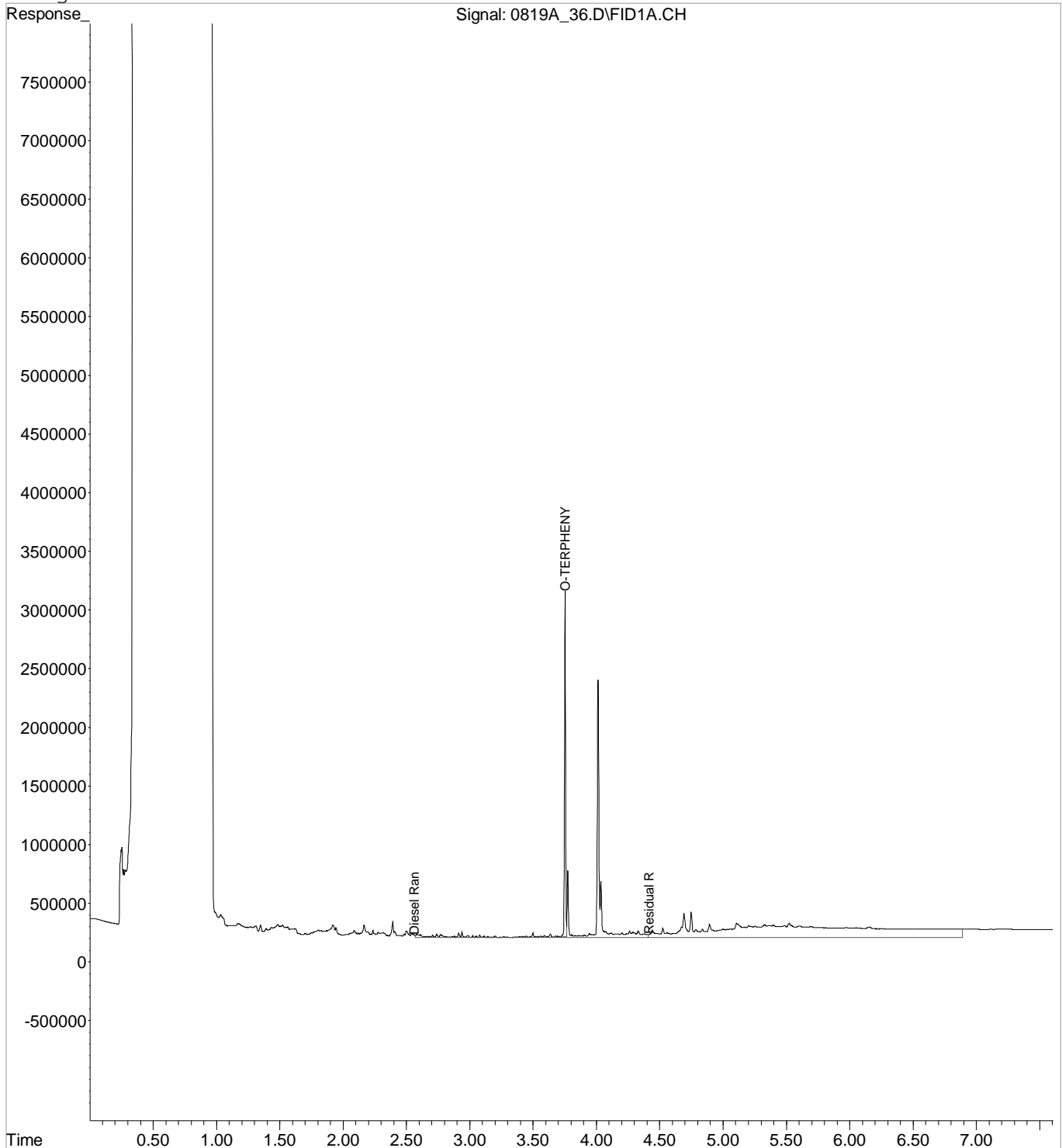
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\081918A\0819A 36.D Vial: 28
Acq On : 19 Aug 2018 7:32 pm Operator: 851
Sample : L1017857-10 1X WG1154367 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 20 10:46 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

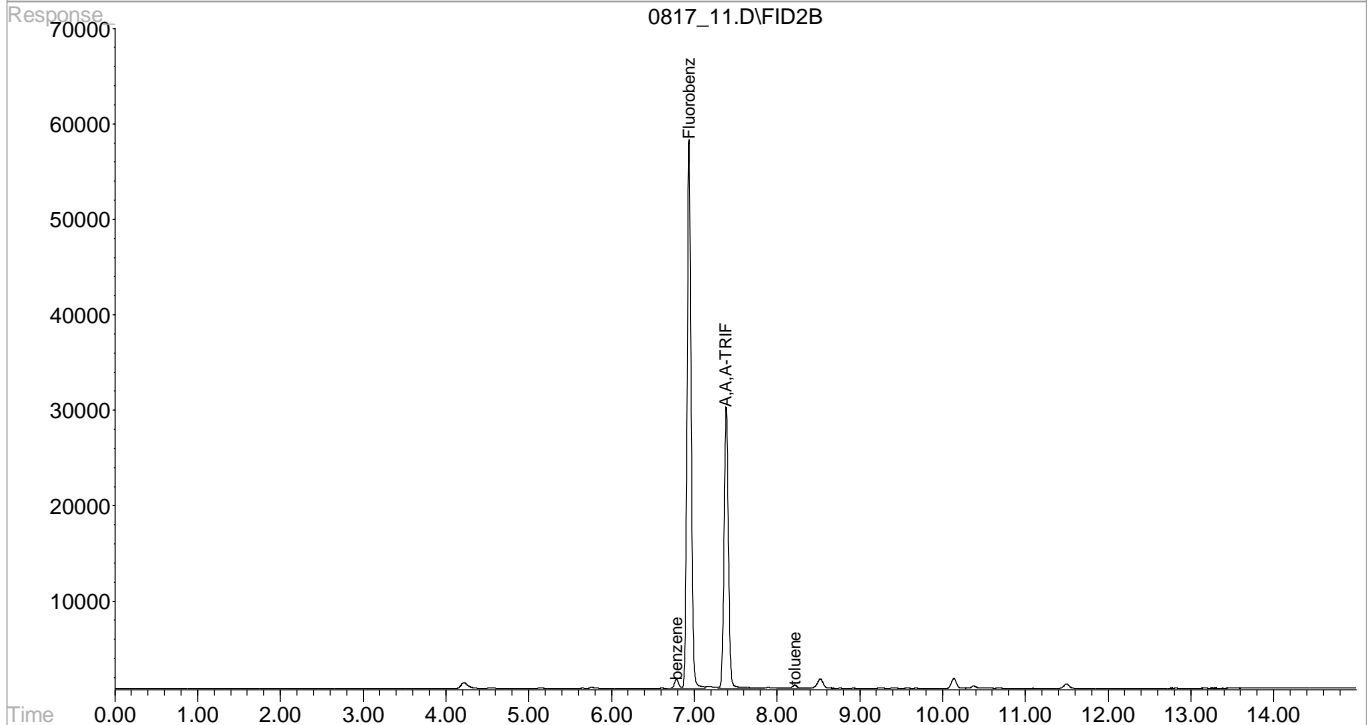
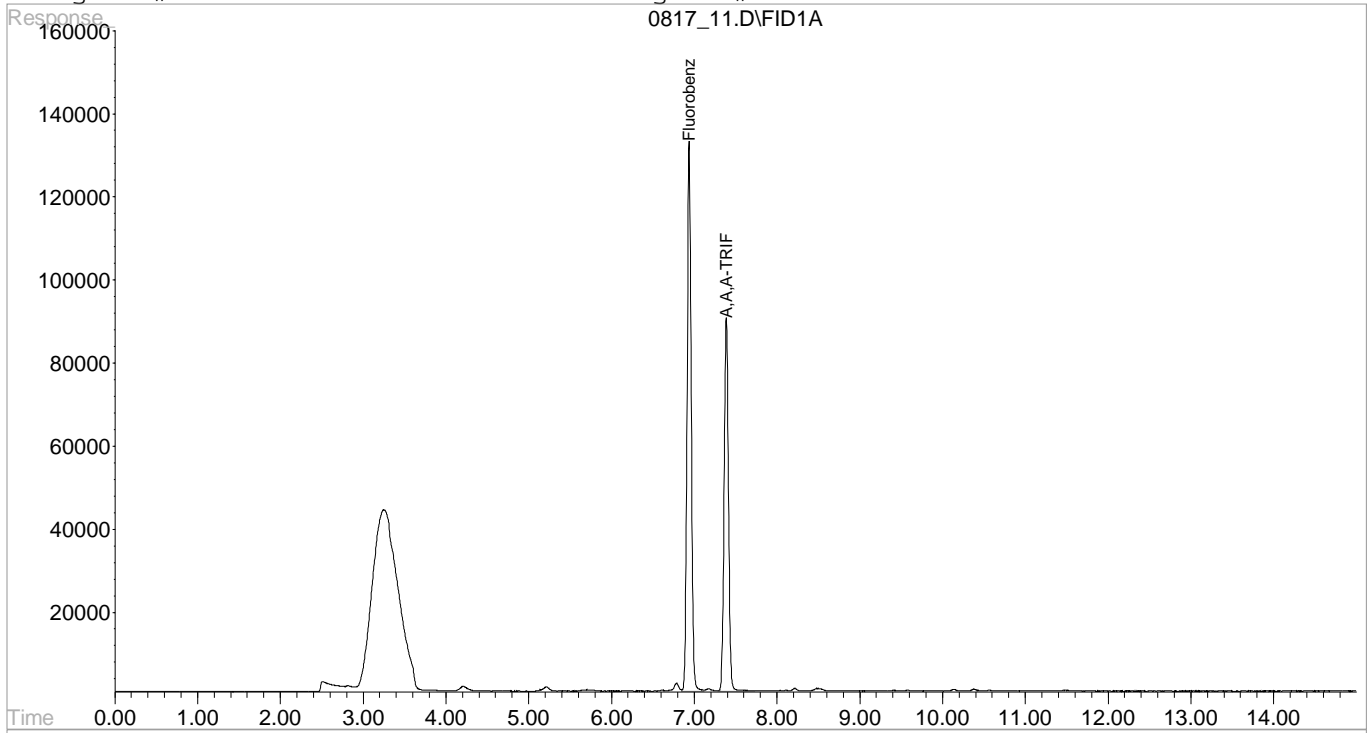
Volume Inj. :
Signal Phase :
Signal Info :



Signal #1 : C:\HPCHEM\1\DATA\081718\0817 11.D\FID1A.CH Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\081718\0817 11.D\FID2B.CH
Acq On : 17 Aug 2018 12:38 pm Operator: 605
Sample : L1017857-06A 1x WG1153735 Inst : VOCGC5
Misc : SOIL Multiplr: 0.72
IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
Quant Time: Aug 19 12:59 2018 Quant Results File: BG05H14R.RES

Quant Method : C:\HPCHEM\1\METHODS\BG05H14R.M (Chemstation Integrator)
Title : BTEX/GRO VOCGC04
Last Update : Wed Aug 15 08:43:11 2018
Response via : Single Level Calibration
DataAcq Meth : VGC5-1.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



August 23, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1017869
Samples Received: 08/15/2018
Project Number: 1896120 04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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



B-18-15 L1017869-01 GW

Collected by
K. Teague
Collected date/time
08/13/18 12:55
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1152870	1	08/16/18 16:56	08/17/18 13:40	TRB
Metals (ICPMS) by Method 6020A	WG1153047	1	08/21/18 01:04	08/21/18 12:22	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/16/18 04:29	08/16/18 04:29	RAS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153211	1	08/16/18 13:24	08/21/18 17:34	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153565	1	08/16/18 22:35	08/17/18 15:28	DMG

1
Cp

2
Tc

3
Ss

4
Cn

TB-07-20180814 L1017869-02 GW

Collected by
K. Teague
Collected date/time
08/14/18 00:00
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/15/18 23:58	08/15/18 23:58	RAS

5
Sr

6
Qc

7
Gl

B-18-17 L1017869-03 GW

Collected by
K. Teague
Collected date/time
08/13/18 14:20
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1152870	1	08/16/18 16:56	08/17/18 13:42	TRB
Metals (ICPMS) by Method 6020A	WG1153047	1	08/21/18 01:04	08/21/18 13:13	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/16/18 04:48	08/16/18 04:48	RAS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153211	1	08/16/18 13:24	08/21/18 17:51	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1154242	1	08/19/18 16:46	08/20/18 16:09	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153565	1	08/16/18 22:35	08/17/18 15:51	DMG

8
Al

9
Sc

B-18-06 L1017869-05 GW

Collected by
K. Teague
Collected date/time
08/13/18 15:40
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1152870	1	08/16/18 16:56	08/17/18 13:00	TRB
Metals (ICPMS) by Method 6020A	WG1153047	1	08/21/18 01:04	08/21/18 13:17	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/16/18 05:07	08/16/18 05:07	RAS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153211	1	08/16/18 13:24	08/21/18 18:09	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1154242	1	08/19/18 16:46	08/20/18 16:27	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153565	1	08/16/18 22:35	08/17/18 16:14	DMG

TB-08-20180814 L1017869-07 GW

Collected by
K. Teague
Collected date/time
08/14/18 00:00
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/16/18 00:18	08/16/18 00:18	RAS

B-18-12 L1017869-08 GW

Collected by
K. Teague
Collected date/time
08/14/18 12:10
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1152870	1	08/16/18 16:56	08/17/18 13:44	TRB
Metals (ICPMS) by Method 6020A	WG1153047	1	08/21/18 01:04	08/21/18 13:22	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/16/18 05:27	08/16/18 05:27	RAS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153211	1	08/16/18 13:24	08/21/18 18:27	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153565	1	08/16/18 22:35	08/17/18 16:37	DMG

SAMPLE SUMMARY



B-18-07 L1017869-09 GW

Collected by
K. Teague
Collected date/time
08/14/18 09:10
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1152870	1	08/16/18 16:56	08/17/18 13:46	TRB
Metals (ICPMS) by Method 6020A	WG1153047	1	08/21/18 01:04	08/21/18 13:26	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1152983	1	08/16/18 05:46	08/16/18 05:46	RAS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153211	1	08/16/18 13:24	08/21/18 18:45	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153565	1	08/16/18 22:35	08/17/18 17:01	DMG

1
Cp

2
Tc

3
Ss

4
Cn

B-18-13 L1017869-10 GW

Collected by
K. Teague
Collected date/time
08/14/18 13:05
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1152870	1	08/16/18 16:56	08/17/18 13:53	TRB
Metals (ICPMS) by Method 6020A	WG1153047	1	08/21/18 01:04	08/21/18 13:31	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 00:38	08/18/18 00:38	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1153211	1	08/16/18 13:24	08/21/18 19:02	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153565	1	08/16/18 22:35	08/17/18 17:24	DMG

5
Sr

6
Qc

7
Gl

8
Al

DUP-01-20180814 L1017869-11 GW

Collected by
K. Teague
Collected date/time
08/14/18 00:00
Received date/time
08/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1153654	1	08/17/18 10:14	08/19/18 20:37	EL
Metals (ICPMS) by Method 6020A	WG1153047	1	08/21/18 01:04	08/21/18 13:36	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 00:58	08/18/18 00:58	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/19/18 15:26	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1153565	1	08/16/18 22:35	08/17/18 17:47	DMG

9
Sc



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

Mark W. Beasley
Project Manager

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



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/17/2018 13:40	WG1152870

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	7.12		2.00	1	08/21/2018 12:22	WG1153047
Barium,Dissolved	43.6		5.00	1	08/21/2018 12:22	WG1153047
Cadmium,Dissolved	ND		1.00	1	08/21/2018 12:22	WG1153047
Chromium,Dissolved	3.78		2.00	1	08/21/2018 12:22	WG1153047
Lead,Dissolved	ND		2.00	1	08/21/2018 12:22	WG1153047
Selenium,Dissolved	ND		2.00	1	08/21/2018 12:22	WG1153047
Silver,Dissolved	ND		2.00	1	08/21/2018 12:22	WG1153047

3 Ss

4 Cn

5 Sr

6 Qc

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/16/2018 04:29	WG1152983
Acrolein	ND		50.0	1	08/16/2018 04:29	WG1152983
Acrylonitrile	ND		10.0	1	08/16/2018 04:29	WG1152983
Benzene	ND		1.00	1	08/16/2018 04:29	WG1152983
Bromobenzene	ND		1.00	1	08/16/2018 04:29	WG1152983
Bromodichloromethane	ND		1.00	1	08/16/2018 04:29	WG1152983
Bromoform	ND		1.00	1	08/16/2018 04:29	WG1152983
Bromomethane	ND		5.00	1	08/16/2018 04:29	WG1152983
n-Butylbenzene	ND		1.00	1	08/16/2018 04:29	WG1152983
sec-Butylbenzene	ND		1.00	1	08/16/2018 04:29	WG1152983
tert-Butylbenzene	ND		1.00	1	08/16/2018 04:29	WG1152983
Carbon tetrachloride	ND		1.00	1	08/16/2018 04:29	WG1152983
Chlorobenzene	ND		1.00	1	08/16/2018 04:29	WG1152983
Chlorodibromomethane	ND		1.00	1	08/16/2018 04:29	WG1152983
Chloroethane	ND		5.00	1	08/16/2018 04:29	WG1152983
Chloroform	ND		5.00	1	08/16/2018 04:29	WG1152983
Chloromethane	ND		2.50	1	08/16/2018 04:29	WG1152983
2-Chlorotoluene	ND		1.00	1	08/16/2018 04:29	WG1152983
4-Chlorotoluene	ND		1.00	1	08/16/2018 04:29	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/16/2018 04:29	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/16/2018 04:29	WG1152983
Dibromomethane	ND		1.00	1	08/16/2018 04:29	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/16/2018 04:29	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/16/2018 04:29	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/16/2018 04:29	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/16/2018 04:29	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/16/2018 04:29	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/16/2018 04:29	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/16/2018 04:29	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/16/2018 04:29	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/16/2018 04:29	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/16/2018 04:29	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/16/2018 04:29	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/16/2018 04:29	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/16/2018 04:29	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/16/2018 04:29	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/16/2018 04:29	WG1152983
Di-isopropyl ether	ND		1.00	1	08/16/2018 04:29	WG1152983
Ethylbenzene	ND		1.00	1	08/16/2018 04:29	WG1152983

7 Gl

8 Al

9 Sc



Collected date/time: 08/13/18 12:55

L1017869

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Hexachloro-1,3-butadiene	ND		1.00	1	08/16/2018 04:29	WG1152983	¹ Cp
Isopropylbenzene	ND		1.00	1	08/16/2018 04:29	WG1152983	² Tc
p-Isopropyltoluene	ND		1.00	1	08/16/2018 04:29	WG1152983	³ Ss
2-Butanone (MEK)	ND		10.0	1	08/16/2018 04:29	WG1152983	⁴ Cn
Methylene Chloride	ND		5.00	1	08/16/2018 04:29	WG1152983	⁵ Sr
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/16/2018 04:29	WG1152983	⁶ Qc
Methyl tert-butyl ether	ND		1.00	1	08/16/2018 04:29	WG1152983	⁷ Gl
Naphthalene	ND		5.00	1	08/16/2018 04:29	WG1152983	⁸ Al
n-Propylbenzene	ND		1.00	1	08/16/2018 04:29	WG1152983	⁹ Sc
Styrene	ND		1.00	1	08/16/2018 04:29	WG1152983	
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/16/2018 04:29	WG1152983	
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/16/2018 04:29	WG1152983	
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/16/2018 04:29	WG1152983	
Tetrachloroethene	ND		1.00	1	08/16/2018 04:29	WG1152983	
Toluene	ND		1.00	1	08/16/2018 04:29	WG1152983	
1,2,3-Trichlorobenzene	ND		1.00	1	08/16/2018 04:29	WG1152983	
1,2,4-Trichlorobenzene	ND		1.00	1	08/16/2018 04:29	WG1152983	
1,1,1-Trichloroethane	ND		1.00	1	08/16/2018 04:29	WG1152983	
1,1,2-Trichloroethane	ND		1.00	1	08/16/2018 04:29	WG1152983	
Trichloroethene	ND		1.00	1	08/16/2018 04:29	WG1152983	
Trichlorofluoromethane	ND		5.00	1	08/16/2018 04:29	WG1152983	
1,2,3-Trichloropropane	ND		2.50	1	08/16/2018 04:29	WG1152983	
1,2,4-Trimethylbenzene	ND		1.00	1	08/16/2018 04:29	WG1152983	
1,2,3-Trimethylbenzene	ND		1.00	1	08/16/2018 04:29	WG1152983	
1,3,5-Trimethylbenzene	ND		1.00	1	08/16/2018 04:29	WG1152983	
Vinyl chloride	ND		1.00	1	08/16/2018 04:29	WG1152983	
o-Xylene	ND		1.00	1	08/16/2018 04:29	WG1152983	
m&p-Xylene	ND		2.00	1	08/16/2018 04:29	WG1152983	
(S) Toluene-d8	102		80.0-120		08/16/2018 04:29	WG1152983	
(S) Dibromofluoromethane	99.6		76.0-123		08/16/2018 04:29	WG1152983	
(S) 4-Bromofluorobenzene	99.1		80.0-120		08/16/2018 04:29	WG1152983	

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	515		200	1	08/21/2018 17:34	WG1153211
Residual Range Organics (RRO)	550		250	1	08/21/2018 17:34	WG1153211
(S) o-Terphenyl	123		52.0-156		08/21/2018 17:34	WG1153211

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Acenaphthene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Acenaphthylene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Benzo(a)anthracene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Benzo(a)pyrene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Benzo(b)fluoranthene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Benzo(g,h,i)perylene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Benzo(k)fluoranthene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Chrysene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Dibenz(a,h)anthracene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Fluoranthene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Fluorene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/17/2018 15:28	WG1153565



Collected date/time: 08/13/18 12:55

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	0.407		0.250	1	08/17/2018 15:28	WG1153565
Phenanthrene	ND		0.0500	1	08/17/2018 15:28	WG1153565
Pyrene	ND		0.0500	1	08/17/2018 15:28	WG1153565
1-Methylnaphthalene	ND		0.250	1	08/17/2018 15:28	WG1153565
2-Methylnaphthalene	ND		0.250	1	08/17/2018 15:28	WG1153565
2-Chloronaphthalene	ND		0.250	1	08/17/2018 15:28	WG1153565
(S) Nitrobenzene-d5	66.8		31.0-160		08/17/2018 15:28	WG1153565
(S) 2-Fluorobiphenyl	112		48.0-148		08/17/2018 15:28	WG1153565
(S) p-Terphenyl-d14	117		37.0-146		08/17/2018 15:28	WG1153565

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/15/2018 23:58	WG1152983
Acrolein	ND		50.0	1	08/15/2018 23:58	WG1152983
Acrylonitrile	ND		10.0	1	08/15/2018 23:58	WG1152983
Benzene	ND		1.00	1	08/15/2018 23:58	WG1152983
Bromobenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
Bromodichloromethane	ND		1.00	1	08/15/2018 23:58	WG1152983
Bromoform	ND		1.00	1	08/15/2018 23:58	WG1152983
Bromomethane	ND		5.00	1	08/15/2018 23:58	WG1152983
n-Butylbenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
sec-Butylbenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
tert-Butylbenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
Carbon tetrachloride	ND		1.00	1	08/15/2018 23:58	WG1152983
Chlorobenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
Chlorodibromomethane	ND		1.00	1	08/15/2018 23:58	WG1152983
Chloroethane	ND		5.00	1	08/15/2018 23:58	WG1152983
Chloroform	ND		5.00	1	08/15/2018 23:58	WG1152983
Chloromethane	ND		2.50	1	08/15/2018 23:58	WG1152983
2-Chlorotoluene	ND		1.00	1	08/15/2018 23:58	WG1152983
4-Chlorotoluene	ND		1.00	1	08/15/2018 23:58	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/15/2018 23:58	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/15/2018 23:58	WG1152983
Dibromomethane	ND		1.00	1	08/15/2018 23:58	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/15/2018 23:58	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/15/2018 23:58	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/15/2018 23:58	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/15/2018 23:58	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/15/2018 23:58	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/15/2018 23:58	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/15/2018 23:58	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/15/2018 23:58	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/15/2018 23:58	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/15/2018 23:58	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/15/2018 23:58	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/15/2018 23:58	WG1152983
Di-isopropyl ether	ND		1.00	1	08/15/2018 23:58	WG1152983
Ethylbenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
Hexachloro-1,3-butadiene	ND		1.00	1	08/15/2018 23:58	WG1152983
Isopropylbenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
p-Isopropyltoluene	ND		1.00	1	08/15/2018 23:58	WG1152983
2-Butanone (MEK)	ND		10.0	1	08/15/2018 23:58	WG1152983
Methylene Chloride	ND		5.00	1	08/15/2018 23:58	WG1152983
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/15/2018 23:58	WG1152983
Methyl tert-butyl ether	ND		1.00	1	08/15/2018 23:58	WG1152983
Naphthalene	ND		5.00	1	08/15/2018 23:58	WG1152983
n-Propylbenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
Styrene	ND		1.00	1	08/15/2018 23:58	WG1152983
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/15/2018 23:58	WG1152983
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/15/2018 23:58	WG1152983
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/15/2018 23:58	WG1152983
Tetrachloroethene	ND		1.00	1	08/15/2018 23:58	WG1152983
Toluene	ND		1.00	1	08/15/2018 23:58	WG1152983
1,2,3-Trichlorobenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
1,2,4-Trichlorobenzene	ND		1.00	1	08/15/2018 23:58	WG1152983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/15/2018 23:58	WG1152983
1,1,2-Trichloroethane	ND		1.00	1	08/15/2018 23:58	WG1152983
Trichloroethene	ND		1.00	1	08/15/2018 23:58	WG1152983
Trichlorofluoromethane	ND		5.00	1	08/15/2018 23:58	WG1152983
1,2,3-Trichloropropane	ND		2.50	1	08/15/2018 23:58	WG1152983
1,2,4-Trimethylbenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
1,2,3-Trimethylbenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
1,3,5-Trimethylbenzene	ND		1.00	1	08/15/2018 23:58	WG1152983
Vinyl chloride	ND		1.00	1	08/15/2018 23:58	WG1152983
o-Xylene	ND		1.00	1	08/15/2018 23:58	WG1152983
m&p-Xylene	ND		2.00	1	08/15/2018 23:58	WG1152983
(S) Toluene-d8	98.1		80.0-120		08/15/2018 23:58	WG1152983
(S) Dibromofluoromethane	98.0		76.0-123		08/15/2018 23:58	WG1152983
(S) 4-Bromofluorobenzene	96.9		80.0-120		08/15/2018 23:58	WG1152983

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



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/17/2018 13:42	WG1152870

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	15.5		2.00	1	08/21/2018 13:13	WG1153047
Barium,Dissolved	34.3		5.00	1	08/21/2018 13:13	WG1153047
Cadmium,Dissolved	ND		1.00	1	08/21/2018 13:13	WG1153047
Chromium,Dissolved	ND		2.00	1	08/21/2018 13:13	WG1153047
Lead,Dissolved	ND		2.00	1	08/21/2018 13:13	WG1153047
Selenium,Dissolved	ND		2.00	1	08/21/2018 13:13	WG1153047
Silver,Dissolved	ND		2.00	1	08/21/2018 13:13	WG1153047

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/16/2018 04:48	WG1152983
Acrolein	ND		50.0	1	08/16/2018 04:48	WG1152983
Acrylonitrile	ND		10.0	1	08/16/2018 04:48	WG1152983
Benzene	ND		1.00	1	08/16/2018 04:48	WG1152983
Bromobenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
Bromodichloromethane	ND		1.00	1	08/16/2018 04:48	WG1152983
Bromoform	ND		1.00	1	08/16/2018 04:48	WG1152983
Bromomethane	ND		5.00	1	08/16/2018 04:48	WG1152983
n-Butylbenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
sec-Butylbenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
tert-Butylbenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
Carbon tetrachloride	ND		1.00	1	08/16/2018 04:48	WG1152983
Chlorobenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
Chlorodibromomethane	ND		1.00	1	08/16/2018 04:48	WG1152983
Chloroethane	ND		5.00	1	08/16/2018 04:48	WG1152983
Chloroform	ND		5.00	1	08/16/2018 04:48	WG1152983
Chloromethane	ND		2.50	1	08/16/2018 04:48	WG1152983
2-Chlorotoluene	ND		1.00	1	08/16/2018 04:48	WG1152983
4-Chlorotoluene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/16/2018 04:48	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/16/2018 04:48	WG1152983
Dibromomethane	ND		1.00	1	08/16/2018 04:48	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/16/2018 04:48	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/16/2018 04:48	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/16/2018 04:48	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/16/2018 04:48	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/16/2018 04:48	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/16/2018 04:48	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/16/2018 04:48	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/16/2018 04:48	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/16/2018 04:48	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/16/2018 04:48	WG1152983
Di-isopropyl ether	ND		1.00	1	08/16/2018 04:48	WG1152983
Ethylbenzene	ND		1.00	1	08/16/2018 04:48	WG1152983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/13/18 14:20

L1017869

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/16/2018 04:48	WG1152983
Isopropylbenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
p-Isopropyltoluene	ND		1.00	1	08/16/2018 04:48	WG1152983
2-Butanone (MEK)	ND		10.0	1	08/16/2018 04:48	WG1152983
Methylene Chloride	ND		5.00	1	08/16/2018 04:48	WG1152983
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/16/2018 04:48	WG1152983
Methyl tert-butyl ether	ND		1.00	1	08/16/2018 04:48	WG1152983
Naphthalene	ND		5.00	1	08/16/2018 04:48	WG1152983
n-Propylbenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
Styrene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/16/2018 04:48	WG1152983
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/16/2018 04:48	WG1152983
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/16/2018 04:48	WG1152983
Tetrachloroethene	ND		1.00	1	08/16/2018 04:48	WG1152983
Toluene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,2,3-Trichlorobenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,2,4-Trichlorobenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,1,1-Trichloroethane	ND		1.00	1	08/16/2018 04:48	WG1152983
1,1,2-Trichloroethane	ND		1.00	1	08/16/2018 04:48	WG1152983
Trichloroethene	ND		1.00	1	08/16/2018 04:48	WG1152983
Trichlorofluoromethane	ND		5.00	1	08/16/2018 04:48	WG1152983
1,2,3-Trichloropropane	ND		2.50	1	08/16/2018 04:48	WG1152983
1,2,4-Trimethylbenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,2,3-Trimethylbenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
1,3,5-Trimethylbenzene	ND		1.00	1	08/16/2018 04:48	WG1152983
Vinyl chloride	ND		1.00	1	08/16/2018 04:48	WG1152983
o-Xylene	ND		1.00	1	08/16/2018 04:48	WG1152983
m&p-Xylene	ND		2.00	1	08/16/2018 04:48	WG1152983
(S) Toluene-d8	98.9		80.0-120		08/16/2018 04:48	WG1152983
(S) Dibromofluoromethane	94.8		76.0-123		08/16/2018 04:48	WG1152983
(S) 4-Bromofluorobenzene	100		80.0-120		08/16/2018 04:48	WG1152983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	209		200	1	08/21/2018 17:51	WG1153211
Residual Range Organics (RRO)	343		250	1	08/21/2018 17:51	WG1153211
(S) o-Terphenyl	120		52.0-156		08/21/2018 17:51	WG1153211

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/20/2018 16:09	WG1154242
Residual Range Organics (RRO)	ND		250	1	08/20/2018 16:09	WG1154242
(S) o-Terphenyl	82.6		52.0-156		08/20/2018 16:09	WG1154242

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Acenaphthene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Acenaphthylene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Benzo(a)anthracene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Benzo(a)pyrene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Benzo(b)fluoranthene	ND		0.0500	1	08/17/2018 15:51	WG1153565



Collected date/time: 08/13/18 14:20

L1017869

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Benzo(k)fluoranthene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Chrysene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Dibenz(a,h)anthracene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Fluoranthene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Fluorene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Naphthalene	ND		0.250	1	08/17/2018 15:51	WG1153565
Phenanthrene	ND		0.0500	1	08/17/2018 15:51	WG1153565
Pyrene	ND		0.0500	1	08/17/2018 15:51	WG1153565
1-Methylnaphthalene	ND		0.250	1	08/17/2018 15:51	WG1153565
2-Methylnaphthalene	ND		0.250	1	08/17/2018 15:51	WG1153565
2-Chloronaphthalene	ND		0.250	1	08/17/2018 15:51	WG1153565
(S) Nitrobenzene-d5	67.9		31.0-160		08/17/2018 15:51	WG1153565
(S) 2-Fluorobiphenyl	115		48.0-148		08/17/2018 15:51	WG1153565
(S) p-Terphenyl-d14	115		37.0-146		08/17/2018 15:51	WG1153565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/17/2018 13:00	WG1152870

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	3.24		2.00	1	08/21/2018 13:17	WG1153047
Barium,Dissolved	41.1		5.00	1	08/21/2018 13:17	WG1153047
Cadmium,Dissolved	ND		1.00	1	08/21/2018 13:17	WG1153047
Chromium,Dissolved	2.87		2.00	1	08/21/2018 13:17	WG1153047
Lead,Dissolved	ND		2.00	1	08/21/2018 13:17	WG1153047
Selenium,Dissolved	ND		2.00	1	08/21/2018 13:17	WG1153047
Silver,Dissolved	ND		2.00	1	08/21/2018 13:17	WG1153047

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/16/2018 05:07	WG1152983
Acrolein	ND		50.0	1	08/16/2018 05:07	WG1152983
Acrylonitrile	ND		10.0	1	08/16/2018 05:07	WG1152983
Benzene	ND		1.00	1	08/16/2018 05:07	WG1152983
Bromobenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
Bromodichloromethane	ND		1.00	1	08/16/2018 05:07	WG1152983
Bromoform	ND		1.00	1	08/16/2018 05:07	WG1152983
Bromomethane	ND		5.00	1	08/16/2018 05:07	WG1152983
n-Butylbenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
sec-Butylbenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
tert-Butylbenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
Carbon tetrachloride	ND		1.00	1	08/16/2018 05:07	WG1152983
Chlorobenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
Chlorodibromomethane	ND		1.00	1	08/16/2018 05:07	WG1152983
Chloroethane	ND		5.00	1	08/16/2018 05:07	WG1152983
Chloroform	ND		5.00	1	08/16/2018 05:07	WG1152983
Chloromethane	ND		2.50	1	08/16/2018 05:07	WG1152983
2-Chlorotoluene	ND		1.00	1	08/16/2018 05:07	WG1152983
4-Chlorotoluene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/16/2018 05:07	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/16/2018 05:07	WG1152983
Dibromomethane	ND		1.00	1	08/16/2018 05:07	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/16/2018 05:07	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/16/2018 05:07	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/16/2018 05:07	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/16/2018 05:07	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/16/2018 05:07	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/16/2018 05:07	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/16/2018 05:07	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/16/2018 05:07	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/16/2018 05:07	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/16/2018 05:07	WG1152983
Di-isopropyl ether	ND		1.00	1	08/16/2018 05:07	WG1152983
Ethylbenzene	ND		1.00	1	08/16/2018 05:07	WG1152983

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/16/2018 05:07	WG1152983
Isopropylbenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
p-Isopropyltoluene	ND		1.00	1	08/16/2018 05:07	WG1152983
2-Butanone (MEK)	ND		10.0	1	08/16/2018 05:07	WG1152983
Methylene Chloride	ND		5.00	1	08/16/2018 05:07	WG1152983
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/16/2018 05:07	WG1152983
Methyl tert-butyl ether	ND		1.00	1	08/16/2018 05:07	WG1152983
Naphthalene	ND		5.00	1	08/16/2018 05:07	WG1152983
n-Propylbenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
Styrene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/16/2018 05:07	WG1152983
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/16/2018 05:07	WG1152983
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/16/2018 05:07	WG1152983
Tetrachloroethene	ND		1.00	1	08/16/2018 05:07	WG1152983
Toluene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,2,3-Trichlorobenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,2,4-Trichlorobenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,1,1-Trichloroethane	ND		1.00	1	08/16/2018 05:07	WG1152983
1,1,2-Trichloroethane	ND		1.00	1	08/16/2018 05:07	WG1152983
Trichloroethene	ND		1.00	1	08/16/2018 05:07	WG1152983
Trichlorofluoromethane	ND		5.00	1	08/16/2018 05:07	WG1152983
1,2,3-Trichloropropane	ND		2.50	1	08/16/2018 05:07	WG1152983
1,2,4-Trimethylbenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,2,3-Trimethylbenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
1,3,5-Trimethylbenzene	ND		1.00	1	08/16/2018 05:07	WG1152983
Vinyl chloride	ND		1.00	1	08/16/2018 05:07	WG1152983
o-Xylene	ND		1.00	1	08/16/2018 05:07	WG1152983
m&p-Xylene	ND		2.00	1	08/16/2018 05:07	WG1152983
(S) Toluene-d8	102		80.0-120		08/16/2018 05:07	WG1152983
(S) Dibromofluoromethane	98.3		76.0-123		08/16/2018 05:07	WG1152983
(S) 4-Bromofluorobenzene	99.2		80.0-120		08/16/2018 05:07	WG1152983

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	335		200	1	08/21/2018 18:09	WG1153211
Residual Range Organics (RRO)	1030		250	1	08/21/2018 18:09	WG1153211
(S) o-Terphenyl	119		52.0-156		08/21/2018 18:09	WG1153211

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/20/2018 16:27	WG1154242
Residual Range Organics (RRO)	ND		250	1	08/20/2018 16:27	WG1154242
(S) o-Terphenyl	78.9		52.0-156		08/20/2018 16:27	WG1154242

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Acenaphthene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Acenaphthylene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Benzo(a)anthracene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Benzo(a)pyrene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Benzo(b)fluoranthene	ND		0.0500	1	08/17/2018 16:14	WG1153565



Collected date/time: 08/13/18 15:40

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Benzo(k)fluoranthene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Chrysene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Dibenz(a,h)anthracene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Fluoranthene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Fluorene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Naphthalene	ND		0.250	1	08/17/2018 16:14	WG1153565
Phenanthrene	ND		0.0500	1	08/17/2018 16:14	WG1153565
Pyrene	ND		0.0500	1	08/17/2018 16:14	WG1153565
1-Methylnaphthalene	ND		0.250	1	08/17/2018 16:14	WG1153565
2-Methylnaphthalene	ND		0.250	1	08/17/2018 16:14	WG1153565
2-Chloronaphthalene	ND		0.250	1	08/17/2018 16:14	WG1153565
(S) Nitrobenzene-d5	66.8		31.0-160		08/17/2018 16:14	WG1153565
(S) 2-Fluorobiphenyl	112		48.0-148		08/17/2018 16:14	WG1153565
(S) p-Terphenyl-d14	114		37.0-146		08/17/2018 16:14	WG1153565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/16/2018 00:18	WG1152983
Acrolein	ND		50.0	1	08/16/2018 00:18	WG1152983
Acrylonitrile	ND		10.0	1	08/16/2018 00:18	WG1152983
Benzene	ND		1.00	1	08/16/2018 00:18	WG1152983
Bromobenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
Bromodichloromethane	ND		1.00	1	08/16/2018 00:18	WG1152983
Bromoform	ND		1.00	1	08/16/2018 00:18	WG1152983
Bromomethane	ND		5.00	1	08/16/2018 00:18	WG1152983
n-Butylbenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
sec-Butylbenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
tert-Butylbenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
Carbon tetrachloride	ND		1.00	1	08/16/2018 00:18	WG1152983
Chlorobenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
Chlorodibromomethane	ND		1.00	1	08/16/2018 00:18	WG1152983
Chloroethane	ND		5.00	1	08/16/2018 00:18	WG1152983
Chloroform	ND		5.00	1	08/16/2018 00:18	WG1152983
Chloromethane	ND		2.50	1	08/16/2018 00:18	WG1152983
2-Chlorotoluene	ND		1.00	1	08/16/2018 00:18	WG1152983
4-Chlorotoluene	ND		1.00	1	08/16/2018 00:18	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/16/2018 00:18	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/16/2018 00:18	WG1152983
Dibromomethane	ND		1.00	1	08/16/2018 00:18	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/16/2018 00:18	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/16/2018 00:18	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/16/2018 00:18	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/16/2018 00:18	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/16/2018 00:18	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/16/2018 00:18	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/16/2018 00:18	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/16/2018 00:18	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/16/2018 00:18	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/16/2018 00:18	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/16/2018 00:18	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/16/2018 00:18	WG1152983
Di-isopropyl ether	ND		1.00	1	08/16/2018 00:18	WG1152983
Ethylbenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
Hexachloro-1,3-butadiene	ND		1.00	1	08/16/2018 00:18	WG1152983
Isopropylbenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
p-Isopropyltoluene	ND		1.00	1	08/16/2018 00:18	WG1152983
2-Butanone (MEK)	ND		10.0	1	08/16/2018 00:18	WG1152983
Methylene Chloride	ND		5.00	1	08/16/2018 00:18	WG1152983
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/16/2018 00:18	WG1152983
Methyl tert-butyl ether	ND		1.00	1	08/16/2018 00:18	WG1152983
Naphthalene	ND		5.00	1	08/16/2018 00:18	WG1152983
n-Propylbenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
Styrene	ND		1.00	1	08/16/2018 00:18	WG1152983
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/16/2018 00:18	WG1152983
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/16/2018 00:18	WG1152983
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/16/2018 00:18	WG1152983
Tetrachloroethene	ND		1.00	1	08/16/2018 00:18	WG1152983
Toluene	ND		1.00	1	08/16/2018 00:18	WG1152983
1,2,3-Trichlorobenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
1,2,4-Trichlorobenzene	ND		1.00	1	08/16/2018 00:18	WG1152983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/16/2018 00:18	WG1152983
1,1,2-Trichloroethane	ND		1.00	1	08/16/2018 00:18	WG1152983
Trichloroethene	ND		1.00	1	08/16/2018 00:18	WG1152983
Trichlorofluoromethane	ND		5.00	1	08/16/2018 00:18	WG1152983
1,2,3-Trichloropropane	ND		2.50	1	08/16/2018 00:18	WG1152983
1,2,4-Trimethylbenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
1,2,3-Trimethylbenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
1,3,5-Trimethylbenzene	ND		1.00	1	08/16/2018 00:18	WG1152983
Vinyl chloride	ND		1.00	1	08/16/2018 00:18	WG1152983
o-Xylene	ND		1.00	1	08/16/2018 00:18	WG1152983
m&p-Xylene	ND		2.00	1	08/16/2018 00:18	WG1152983
(S) Toluene-d8	99.2		80.0-120		08/16/2018 00:18	WG1152983
(S) Dibromofluoromethane	95.4		76.0-123		08/16/2018 00:18	WG1152983
(S) 4-Bromofluorobenzene	99.1		80.0-120		08/16/2018 00:18	WG1152983

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



Collected date/time: 08/14/18 12:10

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Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/17/2018 13:44	WG1152870

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	5.34		2.00	1	08/21/2018 13:22	WG1153047
Barium,Dissolved	31.8		5.00	1	08/21/2018 13:22	WG1153047
Cadmium,Dissolved	ND		1.00	1	08/21/2018 13:22	WG1153047
Chromium,Dissolved	4.98		2.00	1	08/21/2018 13:22	WG1153047
Lead,Dissolved	ND		2.00	1	08/21/2018 13:22	WG1153047
Selenium,Dissolved	ND		2.00	1	08/21/2018 13:22	WG1153047
Silver,Dissolved	ND		2.00	1	08/21/2018 13:22	WG1153047

3 Ss

4 Cn

5 Sr

6 Qc

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/16/2018 05:27	WG1152983
Acrolein	ND		50.0	1	08/16/2018 05:27	WG1152983
Acrylonitrile	ND		10.0	1	08/16/2018 05:27	WG1152983
Benzene	ND		1.00	1	08/16/2018 05:27	WG1152983
Bromobenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
Bromodichloromethane	ND		1.00	1	08/16/2018 05:27	WG1152983
Bromoform	ND		1.00	1	08/16/2018 05:27	WG1152983
Bromomethane	ND		5.00	1	08/16/2018 05:27	WG1152983
n-Butylbenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
sec-Butylbenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
tert-Butylbenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
Carbon tetrachloride	ND		1.00	1	08/16/2018 05:27	WG1152983
Chlorobenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
Chlorodibromomethane	ND		1.00	1	08/16/2018 05:27	WG1152983
Chloroethane	ND		5.00	1	08/16/2018 05:27	WG1152983
Chloroform	ND		5.00	1	08/16/2018 05:27	WG1152983
Chloromethane	ND		2.50	1	08/16/2018 05:27	WG1152983
2-Chlorotoluene	ND		1.00	1	08/16/2018 05:27	WG1152983
4-Chlorotoluene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/16/2018 05:27	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/16/2018 05:27	WG1152983
Dibromomethane	ND		1.00	1	08/16/2018 05:27	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/16/2018 05:27	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/16/2018 05:27	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/16/2018 05:27	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/16/2018 05:27	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/16/2018 05:27	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/16/2018 05:27	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/16/2018 05:27	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/16/2018 05:27	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/16/2018 05:27	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/16/2018 05:27	WG1152983
Di-isopropyl ether	ND		1.00	1	08/16/2018 05:27	WG1152983
Ethylbenzene	ND		1.00	1	08/16/2018 05:27	WG1152983

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Hexachloro-1,3-butadiene	ND		1.00	1	08/16/2018 05:27	WG1152983
Isopropylbenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
p-Isopropyltoluene	ND		1.00	1	08/16/2018 05:27	WG1152983
2-Butanone (MEK)	ND		10.0	1	08/16/2018 05:27	WG1152983
Methylene Chloride	ND		5.00	1	08/16/2018 05:27	WG1152983
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/16/2018 05:27	WG1152983
Methyl tert-butyl ether	ND		1.00	1	08/16/2018 05:27	WG1152983
Naphthalene	ND		5.00	1	08/16/2018 05:27	WG1152983
n-Propylbenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
Styrene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/16/2018 05:27	WG1152983
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/16/2018 05:27	WG1152983
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/16/2018 05:27	WG1152983
Tetrachloroethene	ND		1.00	1	08/16/2018 05:27	WG1152983
Toluene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,2,3-Trichlorobenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,2,4-Trichlorobenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,1,1-Trichloroethane	ND		1.00	1	08/16/2018 05:27	WG1152983
1,1,2-Trichloroethane	ND		1.00	1	08/16/2018 05:27	WG1152983
Trichloroethene	ND		1.00	1	08/16/2018 05:27	WG1152983
Trichlorofluoromethane	ND		5.00	1	08/16/2018 05:27	WG1152983
1,2,3-Trichloropropane	ND		2.50	1	08/16/2018 05:27	WG1152983
1,2,4-Trimethylbenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,2,3-Trimethylbenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
1,3,5-Trimethylbenzene	ND		1.00	1	08/16/2018 05:27	WG1152983
Vinyl chloride	ND		1.00	1	08/16/2018 05:27	WG1152983
o-Xylene	ND		1.00	1	08/16/2018 05:27	WG1152983
m&p-Xylene	ND		2.00	1	08/16/2018 05:27	WG1152983
(S) Toluene-d8	102		80.0-120		08/16/2018 05:27	WG1152983
(S) Dibromofluoromethane	97.7		76.0-123		08/16/2018 05:27	WG1152983
(S) 4-Bromofluorobenzene	97.2		80.0-120		08/16/2018 05:27	WG1152983

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

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/21/2018 18:27	WG1153211
Residual Range Organics (RRO)	ND		250	1	08/21/2018 18:27	WG1153211
(S) o-Terphenyl	118		52.0-156		08/21/2018 18:27	WG1153211

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Acenaphthene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Acenaphthylene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Benzo(a)anthracene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Benzo(a)pyrene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Benzo(b)fluoranthene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Benzo(g,h,i)perylene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Benzo(k)fluoranthene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Chrysene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Dibenz(a,h)anthracene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Fluoranthene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Fluorene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/17/2018 16:37	WG1153565



Collected date/time: 08/14/18 12:10

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	0.318		0.250	1	08/17/2018 16:37	WG1153565
Phenanthrene	ND		0.0500	1	08/17/2018 16:37	WG1153565
Pyrene	ND		0.0500	1	08/17/2018 16:37	WG1153565
1-Methylnaphthalene	ND		0.250	1	08/17/2018 16:37	WG1153565
2-Methylnaphthalene	ND		0.250	1	08/17/2018 16:37	WG1153565
2-Chloronaphthalene	ND		0.250	1	08/17/2018 16:37	WG1153565
(S) Nitrobenzene-d5	68.4		31.0-160		08/17/2018 16:37	WG1153565
(S) 2-Fluorobiphenyl	115		48.0-148		08/17/2018 16:37	WG1153565
(S) p-Terphenyl-d14	112		37.0-146		08/17/2018 16:37	WG1153565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/17/2018 13:46	WG1152870

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	8.15		2.00	1	08/21/2018 13:26	WG1153047
Barium,Dissolved	58.5		5.00	1	08/21/2018 13:26	WG1153047
Cadmium,Dissolved	ND		1.00	1	08/21/2018 13:26	WG1153047
Chromium,Dissolved	ND		2.00	1	08/21/2018 13:26	WG1153047
Lead,Dissolved	ND		2.00	1	08/21/2018 13:26	WG1153047
Selenium,Dissolved	ND		2.00	1	08/21/2018 13:26	WG1153047
Silver,Dissolved	ND		2.00	1	08/21/2018 13:26	WG1153047

3 Ss

4 Cn

5 Sr

6 Qc

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/16/2018 05:46	WG1152983
Acrolein	ND		50.0	1	08/16/2018 05:46	WG1152983
Acrylonitrile	ND		10.0	1	08/16/2018 05:46	WG1152983
Benzene	ND		1.00	1	08/16/2018 05:46	WG1152983
Bromobenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
Bromodichloromethane	ND		1.00	1	08/16/2018 05:46	WG1152983
Bromoform	ND		1.00	1	08/16/2018 05:46	WG1152983
Bromomethane	ND		5.00	1	08/16/2018 05:46	WG1152983
n-Butylbenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
sec-Butylbenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
tert-Butylbenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
Carbon tetrachloride	ND		1.00	1	08/16/2018 05:46	WG1152983
Chlorobenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
Chlorodibromomethane	ND		1.00	1	08/16/2018 05:46	WG1152983
Chloroethane	ND		5.00	1	08/16/2018 05:46	WG1152983
Chloroform	ND		5.00	1	08/16/2018 05:46	WG1152983
Chloromethane	ND		2.50	1	08/16/2018 05:46	WG1152983
2-Chlorotoluene	ND		1.00	1	08/16/2018 05:46	WG1152983
4-Chlorotoluene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/16/2018 05:46	WG1152983
1,2-Dibromoethane	ND		1.00	1	08/16/2018 05:46	WG1152983
Dibromomethane	ND		1.00	1	08/16/2018 05:46	WG1152983
1,2-Dichlorobenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,3-Dichlorobenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,4-Dichlorobenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
Dichlorodifluoromethane	ND		5.00	1	08/16/2018 05:46	WG1152983
1,1-Dichloroethane	ND		1.00	1	08/16/2018 05:46	WG1152983
1,2-Dichloroethane	ND		1.00	1	08/16/2018 05:46	WG1152983
1,1-Dichloroethene	ND		1.00	1	08/16/2018 05:46	WG1152983
cis-1,2-Dichloroethene	ND		1.00	1	08/16/2018 05:46	WG1152983
trans-1,2-Dichloroethene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,2-Dichloropropane	ND		1.00	1	08/16/2018 05:46	WG1152983
1,1-Dichloropropene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,3-Dichloropropane	ND		1.00	1	08/16/2018 05:46	WG1152983
cis-1,3-Dichloropropene	ND		1.00	1	08/16/2018 05:46	WG1152983
trans-1,3-Dichloropropene	ND		1.00	1	08/16/2018 05:46	WG1152983
2,2-Dichloropropane	ND		1.00	1	08/16/2018 05:46	WG1152983
Di-isopropyl ether	ND		1.00	1	08/16/2018 05:46	WG1152983
Ethylbenzene	ND		1.00	1	08/16/2018 05:46	WG1152983

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/16/2018 05:46	WG1152983
Isopropylbenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
p-Isopropyltoluene	ND		1.00	1	08/16/2018 05:46	WG1152983
2-Butanone (MEK)	ND		10.0	1	08/16/2018 05:46	WG1152983
Methylene Chloride	ND		5.00	1	08/16/2018 05:46	WG1152983
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/16/2018 05:46	WG1152983
Methyl tert-butyl ether	ND		1.00	1	08/16/2018 05:46	WG1152983
Naphthalene	ND		5.00	1	08/16/2018 05:46	WG1152983
n-Propylbenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
Styrene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/16/2018 05:46	WG1152983
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/16/2018 05:46	WG1152983
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/16/2018 05:46	WG1152983
Tetrachloroethene	ND		1.00	1	08/16/2018 05:46	WG1152983
Toluene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,2,3-Trichlorobenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,2,4-Trichlorobenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,1,1-Trichloroethane	ND		1.00	1	08/16/2018 05:46	WG1152983
1,1,2-Trichloroethane	ND		1.00	1	08/16/2018 05:46	WG1152983
Trichloroethene	ND		1.00	1	08/16/2018 05:46	WG1152983
Trichlorofluoromethane	ND		5.00	1	08/16/2018 05:46	WG1152983
1,2,3-Trichloropropane	ND		2.50	1	08/16/2018 05:46	WG1152983
1,2,4-Trimethylbenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,2,3-Trimethylbenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
1,3,5-Trimethylbenzene	ND		1.00	1	08/16/2018 05:46	WG1152983
Vinyl chloride	ND		1.00	1	08/16/2018 05:46	WG1152983
o-Xylene	ND		1.00	1	08/16/2018 05:46	WG1152983
m&p-Xylene	ND		2.00	1	08/16/2018 05:46	WG1152983
(S) Toluene-d8	101		80.0-120		08/16/2018 05:46	WG1152983
(S) Dibromofluoromethane	97.1		76.0-123		08/16/2018 05:46	WG1152983
(S) 4-Bromofluorobenzene	99.8		80.0-120		08/16/2018 05:46	WG1152983

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

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	333		200	1	08/21/2018 18:45	WG1153211
Residual Range Organics (RRO)	1220		250	1	08/21/2018 18:45	WG1153211
(S) o-Terphenyl	122		52.0-156		08/21/2018 18:45	WG1153211

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Acenaphthene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Acenaphthylene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Benzo(a)anthracene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Benzo(a)pyrene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Benzo(b)fluoranthene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Benzo(g,h,i)perylene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Benzo(k)fluoranthene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Chrysene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Dibenz(a,h)anthracene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Fluoranthene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Fluorene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/17/2018 17:01	WG1153565



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	0.318		0.250	1	08/17/2018 17:01	WG1153565
Phenanthrene	ND		0.0500	1	08/17/2018 17:01	WG1153565
Pyrene	ND		0.0500	1	08/17/2018 17:01	WG1153565
1-Methylnaphthalene	ND		0.250	1	08/17/2018 17:01	WG1153565
2-Methylnaphthalene	ND		0.250	1	08/17/2018 17:01	WG1153565
2-Chloronaphthalene	ND		0.250	1	08/17/2018 17:01	WG1153565
(S) Nitrobenzene-d5	66.8		31.0-160		08/17/2018 17:01	WG1153565
(S) 2-Fluorobiphenyl	111		48.0-148		08/17/2018 17:01	WG1153565
(S) p-Terphenyl-d14	117		37.0-146		08/17/2018 17:01	WG1153565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/14/18 13:05

L1017869

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/17/2018 13:53	WG1152870

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	7.33		2.00	1	08/21/2018 13:31	WG1153047
Barium,Dissolved	45.4		5.00	1	08/21/2018 13:31	WG1153047
Cadmium,Dissolved	ND		1.00	1	08/21/2018 13:31	WG1153047
Chromium,Dissolved	ND		2.00	1	08/21/2018 13:31	WG1153047
Lead,Dissolved	ND		2.00	1	08/21/2018 13:31	WG1153047
Selenium,Dissolved	ND		2.00	1	08/21/2018 13:31	WG1153047
Silver,Dissolved	ND		2.00	1	08/21/2018 13:31	WG1153047

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 00:38	WG1154074
Acrolein	ND		50.0	1	08/18/2018 00:38	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 00:38	WG1154074
Benzene	ND		1.00	1	08/18/2018 00:38	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 00:38	WG1154074
Bromoform	ND		1.00	1	08/18/2018 00:38	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 00:38	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 00:38	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 00:38	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 00:38	WG1154074
Chloroform	ND		5.00	1	08/18/2018 00:38	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 00:38	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 00:38	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 00:38	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 00:38	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 00:38	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 00:38	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 00:38	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 00:38	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 00:38	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 00:38	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 00:38	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 00:38	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 00:38	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 00:38	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 00:38	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 00:38	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 00:38	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 00:38	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 00:38	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 00:38	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 00:38	WG1154074

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



Collected date/time: 08/14/18 13:05

L1017869

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 00:38	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 00:38	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 00:38	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 00:38	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 00:38	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 00:38	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 00:38	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
Styrene	ND		1.00	1	08/18/2018 00:38	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 00:38	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 00:38	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 00:38	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 00:38	WG1154074
Toluene	ND		1.00	1	08/18/2018 00:38	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 00:38	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 00:38	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 00:38	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 00:38	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 00:38	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 00:38	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 00:38	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 00:38	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 00:38	WG1154074
(S) Toluene-d8	98.4		80.0-120		08/18/2018 00:38	WG1154074
(S) Dibromofluoromethane	105		76.0-123		08/18/2018 00:38	WG1154074
(S) 4-Bromofluorobenzene	99.6		80.0-120		08/18/2018 00:38	WG1154074

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/21/2018 19:02	WG1153211
Residual Range Organics (RRO)	459		250	1	08/21/2018 19:02	WG1153211
(S) o-Terphenyl	119		52.0-156		08/21/2018 19:02	WG1153211

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Acenaphthene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Acenaphthylene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Benzo(a)anthracene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Benzo(a)pyrene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Benzo(b)fluoranthene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Benzo(g,h,i)perylene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Benzo(k)fluoranthene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Chrysene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Dibenz(a,h)anthracene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Fluoranthene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Fluorene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/17/2018 17:24	WG1153565



Collected date/time: 08/14/18 13:05

L1017869

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/17/2018 17:24	WG1153565
Phenanthrene	ND		0.0500	1	08/17/2018 17:24	WG1153565
Pyrene	ND		0.0500	1	08/17/2018 17:24	WG1153565
1-Methylnaphthalene	ND		0.250	1	08/17/2018 17:24	WG1153565
2-Methylnaphthalene	ND		0.250	1	08/17/2018 17:24	WG1153565
2-Chloronaphthalene	ND		0.250	1	08/17/2018 17:24	WG1153565
(S) Nitrobenzene-d5	68.9		31.0-160		08/17/2018 17:24	WG1153565
(S) 2-Fluorobiphenyl	112		48.0-148		08/17/2018 17:24	WG1153565
(S) p-Terphenyl-d14	118		37.0-146		08/17/2018 17:24	WG1153565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/19/2018 20:37	WG1153654

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	5.27		2.00	1	08/21/2018 13:36	WG1153047
Barium,Dissolved	32.4		5.00	1	08/21/2018 13:36	WG1153047
Cadmium,Dissolved	ND		1.00	1	08/21/2018 13:36	WG1153047
Chromium,Dissolved	5.01		2.00	1	08/21/2018 13:36	WG1153047
Lead,Dissolved	ND		2.00	1	08/21/2018 13:36	WG1153047
Selenium,Dissolved	ND		2.00	1	08/21/2018 13:36	WG1153047
Silver,Dissolved	ND		2.00	1	08/21/2018 13:36	WG1153047

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 00:58	WG1154074
Acrolein	ND		50.0	1	08/18/2018 00:58	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 00:58	WG1154074
Benzene	ND		1.00	1	08/18/2018 00:58	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 00:58	WG1154074
Bromoform	ND		1.00	1	08/18/2018 00:58	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 00:58	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 00:58	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 00:58	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 00:58	WG1154074
Chloroform	ND		5.00	1	08/18/2018 00:58	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 00:58	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 00:58	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 00:58	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 00:58	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 00:58	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 00:58	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 00:58	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 00:58	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 00:58	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 00:58	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 00:58	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 00:58	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 00:58	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 00:58	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 00:58	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 00:58	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 00:58	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 00:58	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 00:58	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 00:58	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 00:58	WG1154074

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 00:58	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 00:58	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 00:58	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 00:58	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 00:58	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 00:58	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 00:58	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
Styrene	ND		1.00	1	08/18/2018 00:58	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 00:58	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 00:58	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 00:58	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 00:58	WG1154074
Toluene	ND		1.00	1	08/18/2018 00:58	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 00:58	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 00:58	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 00:58	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 00:58	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 00:58	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 00:58	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 00:58	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 00:58	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 00:58	WG1154074
(S) Toluene-d8	99.9		80.0-120		08/18/2018 00:58	WG1154074
(S) Dibromofluoromethane	109		76.0-123		08/18/2018 00:58	WG1154074
(S) 4-Bromofluorobenzene	99.9		80.0-120		08/18/2018 00:58	WG1154074

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

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/19/2018 15:26	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/19/2018 15:26	WG1154198
(S) o-Terphenyl	106		52.0-156		08/19/2018 15:26	WG1154198

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Acenaphthene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Acenaphthylene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Benzo(a)anthracene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Benzo(a)pyrene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Benzo(b)fluoranthene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Benzo(g,h,i)perylene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Benzo(k)fluoranthene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Chrysene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Dibenz(a,h)anthracene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Fluoranthene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Fluorene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/17/2018 17:47	WG1153565



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	0.339		0.250	1	08/17/2018 17:47	WG1153565
Phenanthrene	ND		0.0500	1	08/17/2018 17:47	WG1153565
Pyrene	ND		0.0500	1	08/17/2018 17:47	WG1153565
1-Methylnaphthalene	ND		0.250	1	08/17/2018 17:47	WG1153565
2-Methylnaphthalene	ND		0.250	1	08/17/2018 17:47	WG1153565
2-Chloronaphthalene	ND		0.250	1	08/17/2018 17:47	WG1153565
(S) Nitrobenzene-d5	68.4		31.0-160		08/17/2018 17:47	WG1153565
(S) 2-Fluorobiphenyl	118		48.0-148		08/17/2018 17:47	WG1153565
(S) p-Terphenyl-d14	116		37.0-146		08/17/2018 17:47	WG1153565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334568-1 08/17/18 12:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	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) R3334568-2 08/17/18 12:51 • (LCSD) R3334568-3 08/17/18 12:53

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 %
Mercury,Dissolved	3.00	2.73	2.89	91.1	96.5	80.0-120			5.67	20

7 Gl

8 Al

L1017869-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017869-05 08/17/18 13:00 • (MS) R3334568-4 08/17/18 13:02 • (MSD) R3334568-5 08/17/18 13:04

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 %
Mercury,Dissolved	3.00	ND	3.06	2.93	100	95.9	1	75.0-125			4.53	20

9 Sc



Method Blank (MB)

(MB) R3334897-1 08/19/18 20:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.0490	0.200

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) R3334897-2 08/19/18 20:29 • (LCSD) R3334897-3 08/19/18 20:31

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 %
Mercury,Dissolved	3.00	2.89	2.77	96.3	92.4	80.0-120			4.15	20

L1017869-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017869-11 08/19/18 20:37 • (MS) R3334897-4 08/19/18 20:40 • (MSD) R3334897-5 08/19/18 20:42

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 %
Mercury,Dissolved	3.00	ND	2.83	2.68	94.2	89.3	1	75.0-125			5.36	20



Method Blank (MB)

(MB) R3335396-1 08/21/18 12:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		0.250	2.00
Barium,Dissolved	U		0.360	5.00
Cadmium,Dissolved	U		0.160	1.00
Chromium,Dissolved	U		0.540	2.00
Lead,Dissolved	U		0.240	2.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3335396-2 08/21/18 12:12 • (LCSD) R3335396-3 08/21/18 12:17

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 %
Arsenic,Dissolved	50.0	50.7	51.4	101	103	80.0-120			1.30	20
Barium,Dissolved	50.0	49.1	48.6	98.1	97.1	80.0-120			1.05	20
Cadmium,Dissolved	50.0	46.9	46.6	93.9	93.2	80.0-120			0.707	20
Chromium,Dissolved	50.0	51.4	51.2	103	102	80.0-120			0.506	20
Lead,Dissolved	50.0	49.9	50.0	99.7	100	80.0-120			0.230	20
Selenium,Dissolved	50.0	49.6	51.1	99.1	102	80.0-120			3.10	20
Silver,Dissolved	50.0	47.6	47.5	95.2	95.0	80.0-120			0.284	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1017869-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017869-01 08/21/18 12:22 • (MS) R3335396-5 08/21/18 12:31 • (MSD) R3335396-6 08/21/18 12:35

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 %
Arsenic,Dissolved	50.0	7.12	57.2	57.6	100	101	1	75.0-125			0.748	20
Barium,Dissolved	50.0	43.6	90.9	92.7	94.6	98.2	1	75.0-125			1.95	20
Cadmium,Dissolved	50.0	ND	48.8	48.8	97.5	97.5	1	75.0-125			0.0273	20
Chromium,Dissolved	50.0	3.78	54.3	54.7	101	102	1	75.0-125			0.824	20
Lead,Dissolved	50.0	ND	50.9	51.1	102	102	1	75.0-125			0.437	20
Selenium,Dissolved	50.0	ND	50.9	52.0	102	104	1	75.0-125			2.10	20
Silver,Dissolved	50.0	ND	48.7	48.7	97.5	97.4	1	75.0-125			0.0873	20



Method Blank (MB)

(MB) R3334655-3 08/15/18 22:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	U		0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334655-3 08/15/18 22:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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		0.412	1.00
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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	101			80.0-120
(S) Dibromofluoromethane	95.6			76.0-123
(S) 4-Bromofluorobenzene	98.5			80.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R3334655-1 08/15/18 21:24 • (LCSD) R3334655-2 08/15/18 21:43

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 %
Acetone	125	107	108	85.7	86.4	10.0-160			0.783	23
Acrolein	125	145	148	116	118	10.0-160			2.07	20
Acrylonitrile	125	120	121	95.7	96.9	60.0-142			1.16	20



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

(LCS) R3334655-1 08/15/18 21:24 • (LCSD) R3334655-2 08/15/18 21:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Benzene	25.0	25.2	25.5	101	102	69.0-123			1.32	20
Bromobenzene	25.0	25.1	25.5	100	102	79.0-120			1.65	20
Bromodichloromethane	25.0	25.7	25.4	103	102	76.0-120			1.05	20
Bromoform	25.0	28.3	28.5	113	114	67.0-132			0.703	20
Bromomethane	25.0	22.3	20.4	89.4	81.7	18.0-160			8.94	20
n-Butylbenzene	25.0	24.0	24.5	96.1	98.2	72.0-126			2.16	20
sec-Butylbenzene	25.0	25.9	26.5	103	106	74.0-121			2.30	20
tert-Butylbenzene	25.0	26.6	27.6	106	111	75.0-122			3.81	20
Carbon tetrachloride	25.0	26.3	26.8	105	107	63.0-122			2.04	20
Chlorobenzene	25.0	27.5	27.1	110	108	79.0-121			1.57	20
Chlorodibromomethane	25.0	27.5	27.6	110	111	75.0-125			0.420	20
Chloroethane	25.0	22.4	23.2	89.5	93.0	47.0-152			3.80	20
Chloroform	25.0	25.8	26.4	103	105	72.0-121			2.11	20
Chloromethane	25.0	21.0	21.2	84.0	84.8	48.0-139			0.961	20
2-Chlorotoluene	25.0	26.6	26.9	107	107	74.0-122			0.843	20
4-Chlorotoluene	25.0	26.1	26.4	104	106	79.0-120			1.33	20
1,2-Dibromo-3-Chloropropane	25.0	22.2	22.4	88.9	89.4	64.0-127			0.592	20
1,2-Dibromoethane	25.0	26.0	25.4	104	102	77.0-123			2.32	20
Dibromomethane	25.0	25.1	25.3	100	101	78.0-120			0.778	20
1,2-Dichlorobenzene	25.0	25.4	25.8	101	103	80.0-120			1.70	20
1,3-Dichlorobenzene	25.0	26.3	26.1	105	104	72.0-123			0.722	20
1,4-Dichlorobenzene	25.0	24.8	25.5	99.2	102	77.0-120			2.74	20
Dichlorodifluoromethane	25.0	19.7	19.5	78.9	77.9	49.0-155			1.20	20
1,1-Dichloroethane	25.0	25.5	26.4	102	106	70.0-126			3.49	20
1,2-Dichloroethane	25.0	24.2	24.6	96.7	98.3	67.0-126			1.59	20
1,1-Dichloroethene	25.0	26.6	28.0	106	112	64.0-129			5.05	20
cis-1,2-Dichloroethene	25.0	26.8	27.4	107	110	73.0-120			2.25	20
trans-1,2-Dichloroethene	25.0	25.3	26.4	101	105	71.0-121			4.22	20
1,2-Dichloropropane	25.0	26.0	26.5	104	106	75.0-125			1.67	20
1,1-Dichloropropene	25.0	25.1	26.2	101	105	71.0-129			4.34	20
1,3-Dichloropropane	25.0	26.2	25.4	105	101	80.0-121			3.12	20
cis-1,3-Dichloropropene	25.0	27.5	26.9	110	108	79.0-123			2.21	20
trans-1,3-Dichloropropene	25.0	27.4	26.4	109	106	74.0-127			3.61	20
2,2-Dichloropropane	25.0	23.9	24.4	95.6	97.7	60.0-125			2.18	20
Di-isopropyl ether	25.0	25.7	26.2	103	105	59.0-133			1.80	20
Ethylbenzene	25.0	27.1	26.7	108	107	77.0-120			1.47	20
Hexachloro-1,3-butadiene	25.0	24.9	27.2	99.5	109	64.0-131			8.81	20
Isopropylbenzene	25.0	26.4	27.0	106	108	75.0-120			2.34	20
p-Isopropyltoluene	25.0	26.3	26.9	105	107	74.0-126			2.21	20
2-Butanone (MEK)	125	113	114	90.5	91.4	37.0-158			1.03	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) R3334655-1 08/15/18 21:24 • (LCSD) R3334655-2 08/15/18 21:43

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 %
Methylene Chloride	25.0	25.5	26.5	102	106	66.0-121			3.78	20
4-Methyl-2-pentanone (MIBK)	125	124	120	98.9	96.1	59.0-143			2.87	20
Methyl tert-butyl ether	25.0	24.5	25.5	98.1	102	64.0-123			3.85	20
Naphthalene	25.0	19.4	20.3	77.6	81.2	62.0-128			4.43	20
n-Propylbenzene	25.0	25.9	26.4	104	106	79.0-120			1.82	20
Styrene	25.0	27.4	27.5	110	110	78.0-124			0.308	20
1,1,1,2-Tetrachloroethane	25.0	28.3	28.6	113	114	75.0-122			1.08	20
1,1,2,2-Tetrachloroethane	25.0	24.0	24.1	96.0	96.5	71.0-122			0.484	20
Tetrachloroethene	25.0	28.4	27.6	113	110	70.0-127			2.68	20
Toluene	25.0	26.4	25.9	106	104	77.0-120			2.09	20
1,1,2-Trichlorotrifluoroethane	25.0	23.7	25.1	94.9	100	61.0-136			5.45	20
1,2,3-Trichlorobenzene	25.0	21.2	22.7	84.8	90.9	61.0-133			6.95	20
1,2,4-Trichlorobenzene	25.0	24.3	25.6	97.2	103	69.0-129			5.43	20
1,1,1-Trichloroethane	25.0	26.6	27.3	106	109	68.0-122			2.77	20
1,1,2-Trichloroethane	25.0	26.5	25.8	106	103	78.0-120			2.70	20
Trichloroethene	25.0	28.0	28.5	112	114	78.0-120			1.78	20
Trichlorofluoromethane	25.0	24.1	25.1	96.5	100	56.0-137			3.90	20
1,2,3-Trichloropropane	25.0	25.2	25.2	101	101	72.0-124			0.0843	20
1,2,3-Trimethylbenzene	25.0	24.6	25.3	98.3	101	75.0-120			3.00	20
1,2,4-Trimethylbenzene	25.0	26.1	27.0	105	108	75.0-120			3.24	20
1,3,5-Trimethylbenzene	25.0	26.8	27.3	107	109	75.0-120			1.89	20
Vinyl chloride	25.0	23.6	24.2	94.5	96.7	64.0-133			2.29	20
o-Xylene	25.0	26.8	26.8	107	107	78.0-120			0.0208	20
m&p-Xylenes	50.0	53.7	53.2	107	106	77.0-120			0.982	20
(S) Toluene-d8				101	98.3	80.0-120				
(S) Dibromofluoromethane				96.3	97.4	76.0-123				
(S) 4-Bromofluorobenzene				97.4	95.1	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334848-3 08/17/18 22:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	U		0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334848-3 08/17/18 22:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
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		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	0.336	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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	95.7			80.0-120
(S) Dibromofluoromethane	110			76.0-123
(S) 4-Bromofluorobenzene	96.7			80.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R3334848-1 08/17/18 21:18 • (LCSD) R3334848-2 08/17/18 21:38

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	149	139	120	111	10.0-160			7.13	23
Acrolein	125	190	163	152	130	10.0-160			15.4	20
Acrylonitrile	125	134	131	107	105	60.0-142			2.63	20



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

(LCS) R3334848-1 08/17/18 21:18 • (LCSD) R3334848-2 08/17/18 21:38

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Benzene	25.0	28.9	27.4	115	110	69.0-123			5.15	20
Bromobenzene	25.0	29.0	26.0	116	104	79.0-120			11.1	20
Bromodichloromethane	25.0	27.9	27.5	111	110	76.0-120			1.29	20
Bromoform	25.0	32.4	28.9	130	115	67.0-132			11.6	20
Bromomethane	25.0	28.9	29.0	116	116	18.0-160			0.225	20
n-Butylbenzene	25.0	27.9	24.7	112	98.8	72.0-126			12.1	20
sec-Butylbenzene	25.0	28.1	26.5	112	106	74.0-121			5.79	20
tert-Butylbenzene	25.0	28.4	25.4	113	102	75.0-122			10.9	20
Carbon tetrachloride	25.0	27.5	26.5	110	106	63.0-122			3.89	20
Chlorobenzene	25.0	29.5	28.7	118	115	79.0-121			2.86	20
Chlorodibromomethane	25.0	29.4	28.4	118	113	75.0-125			3.55	20
Chloroethane	25.0	26.0	25.5	104	102	47.0-152			2.00	20
Chloroform	25.0	29.0	27.4	116	110	72.0-121			5.68	20
Chloromethane	25.0	23.5	23.0	94.1	92.1	48.0-139			2.11	20
2-Chlorotoluene	25.0	29.6	26.3	118	105	74.0-122			11.5	20
4-Chlorotoluene	25.0	29.2	26.0	117	104	79.0-120			11.9	20
1,2-Dibromo-3-Chloropropane	25.0	29.3	27.0	117	108	64.0-127			8.03	20
1,2-Dibromoethane	25.0	29.9	29.2	120	117	77.0-123			2.61	20
Dibromomethane	25.0	29.4	27.6	118	111	78.0-120			6.15	20
1,2-Dichlorobenzene	25.0	29.6	27.1	118	109	80.0-120			8.69	20
1,3-Dichlorobenzene	25.0	31.9	29.1	128	116	72.0-123	J4		9.37	20
1,4-Dichlorobenzene	25.0	25.9	25.2	103	101	77.0-120			2.49	20
Dichlorodifluoromethane	25.0	32.7	30.0	131	120	49.0-155			8.51	20
1,1-Dichloroethane	25.0	26.0	25.5	104	102	70.0-126			2.13	20
1,2-Dichloroethane	25.0	29.5	29.3	118	117	67.0-126			0.471	20
1,1-Dichloroethene	25.0	28.2	26.6	113	106	64.0-129			5.67	20
cis-1,2-Dichloroethene	25.0	27.2	27.5	109	110	73.0-120			0.802	20
trans-1,2-Dichloroethene	25.0	28.3	27.3	113	109	71.0-121			3.51	20
1,2-Dichloropropane	25.0	26.4	25.7	105	103	75.0-125			2.69	20
1,1-Dichloropropene	25.0	28.6	27.7	114	111	71.0-129			2.93	20
1,3-Dichloropropane	25.0	29.3	29.4	117	118	80.0-121			0.509	20
cis-1,3-Dichloropropene	25.0	30.0	29.4	120	118	79.0-123			1.91	20
trans-1,3-Dichloropropene	25.0	30.4	29.5	122	118	74.0-127			3.04	20
2,2-Dichloropropane	25.0	30.5	29.4	122	118	60.0-125			3.60	20
Di-isopropyl ether	25.0	25.6	25.4	102	102	59.0-133			0.672	20
Ethylbenzene	25.0	29.1	27.6	117	111	77.0-120			5.32	20
Hexachloro-1,3-butadiene	25.0	30.3	26.1	121	104	64.0-131			15.0	20
Isopropylbenzene	25.0	28.1	25.6	112	102	75.0-120			9.23	20
p-Isopropyltoluene	25.0	29.3	26.0	117	104	74.0-126			12.0	20
2-Butanone (MEK)	125	145	138	116	110	37.0-158			4.72	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) R3334848-1 08/17/18 21:18 • (LCSD) R3334848-2 08/17/18 21:38

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 %
Methylene Chloride	25.0	28.2	27.7	113	111	66.0-121			1.81	20
4-Methyl-2-pentanone (MIBK)	125	137	132	109	106	59.0-143			3.17	20
Methyl tert-butyl ether	25.0	29.2	30.3	117	121	64.0-123			3.86	20
Naphthalene	25.0	28.3	26.0	113	104	62.0-128			8.50	20
n-Propylbenzene	25.0	30.0	26.6	120	106	79.0-120			12.0	20
Styrene	25.0	28.7	26.2	115	105	78.0-124			9.05	20
1,1,1,2-Tetrachloroethane	25.0	29.1	27.5	117	110	75.0-122			5.89	20
1,1,2,2-Tetrachloroethane	25.0	29.6	27.9	118	112	71.0-122			5.64	20
Tetrachloroethene	25.0	30.0	28.1	120	112	70.0-127			6.64	20
Toluene	25.0	28.7	26.6	115	107	77.0-120			7.35	20
1,1,2-Trichlorotrifluoroethane	25.0	33.3	32.0	133	128	61.0-136			4.05	20
1,2,3-Trichlorobenzene	25.0	29.9	27.1	120	108	61.0-133			9.86	20
1,2,4-Trichlorobenzene	25.0	30.4	28.2	122	113	69.0-129			7.47	20
1,1,1-Trichloroethane	25.0	29.4	27.8	118	111	68.0-122			5.62	20
1,1,2-Trichloroethane	25.0	29.4	28.5	117	114	78.0-120			3.15	20
Trichloroethene	25.0	26.9	25.6	108	102	78.0-120			4.98	20
Trichlorofluoromethane	25.0	31.0	28.7	124	115	56.0-137			7.96	20
1,2,3-Trichloropropane	25.0	31.6	28.9	126	116	72.0-124	J4		8.83	20
1,2,3-Trimethylbenzene	25.0	28.1	26.3	112	105	75.0-120			6.63	20
1,2,4-Trimethylbenzene	25.0	29.0	26.1	116	104	75.0-120			10.7	20
1,3,5-Trimethylbenzene	25.0	29.2	24.2	117	96.9	75.0-120			18.7	20
Vinyl chloride	25.0	25.7	24.4	103	97.4	64.0-133			5.54	20
o-Xylene	25.0	30.0	28.5	120	114	78.0-120			5.26	20
m&p-Xylenes	50.0	56.4	54.5	113	109	77.0-120			3.55	20
(S) Toluene-d8				101	101	80.0-120				
(S) Dibromofluoromethane				101	107	76.0-123				
(S) 4-Bromofluorobenzene				98.8	95.5	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334517-1 08/17/18 02:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	97.0			52.0-156

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

(LCS) R3334517-2 08/17/18 02:19 • (LCSD) R3334517-3 08/17/18 02:37

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	783	802	104	107	50.0-150			2.40	20
Residual Range Organics (RRO)	750	845	873	113	116	50.0-150			3.26	20
<i>(S) o-Terphenyl</i>				111	113	52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334996-1 08/19/18 13:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	89.0			52.0-156

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

(LCS) R3334996-2 08/19/18 13:18 • (LCSD) R3334996-3 08/19/18 13:37

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	770	731	103	97.5	50.0-150			5.20	20
Residual Range Organics (RRO)	750	805	773	107	103	50.0-150			4.06	20
<i>(S) o-Terphenyl</i>				108	111	52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335303-1 08/20/18 15:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	87.5			52.0-156

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

(LCS) R3335303-2 08/20/18 15:34 • (LCSD) R3335303-3 08/20/18 15:52

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 %
Diesel Range Organics (DRO)	750	682	692	90.9	92.3	50.0-150			1.46	20
Residual Range Organics (RRO)	750	710	688	94.7	91.7	50.0-150			3.15	20
<i>(S) o-Terphenyl</i>				99.5	96.5	52.0-156				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334615-3 08/17/18 09:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	U		0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	0.0301	J	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	70.5			31.0-160
(S) 2-Fluorobiphenyl	116			48.0-148
(S) p-Terphenyl-d14	109			37.0-146

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) R3334615-1 08/17/18 08:51 • (LCSD) R3334615-2 08/17/18 09:14

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 %
Anthracene	2.00	2.38	2.32	119	116	64.0-142			2.55	20
Acenaphthene	2.00	2.18	2.19	109	109	66.0-132			0.458	20
Acenaphthylene	2.00	2.33	2.32	117	116	65.0-132			0.430	20
Benzo(a)anthracene	2.00	2.36	2.33	118	117	59.0-134			1.28	20
Benzo(a)pyrene	2.00	2.51	2.47	125	123	61.0-145			1.61	20
Benzo(b)fluoranthene	2.00	2.52	2.30	126	115	57.0-136			9.13	20
Benzo(g,h,i)perylene	2.00	2.66	2.61	133	131	54.0-140			1.90	20
Benzo(k)fluoranthene	2.00	2.29	2.50	114	125	57.0-141			8.77	20
Chrysene	2.00	2.43	2.40	122	120	63.0-140			1.24	20
Dibenz(a,h)anthracene	2.00	2.68	2.64	134	132	49.0-141			1.50	20
Fluoranthene	2.00	2.59	2.53	129	126	65.0-143			2.34	20



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

(LCS) R3334615-1 08/17/18 08:51 • (LCSD) R3334615-2 08/17/18 09:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	2.38	2.35	119	117	64.0-129			1.27	20
Indeno(1,2,3-cd)pyrene	2.00	2.68	2.62	134	131	53.0-141			2.26	20
Naphthalene	2.00	1.98	1.98	99.0	99.0	68.0-129			0.000	20
Phenanthrene	2.00	2.12	2.10	106	105	62.0-132			0.948	20
Pyrene	2.00	2.13	2.10	106	105	58.0-156			1.42	20
1-Methylnaphthalene	2.00	2.20	2.20	110	110	68.0-137			0.000	20
2-Methylnaphthalene	2.00	2.09	2.10	105	105	68.0-134			0.477	20
2-Chloronaphthalene	2.00	2.30	2.29	115	114	65.0-129			0.436	20
<i>(S) Nitrobenzene-d5</i>				72.0	70.0	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				117	117	48.0-148				
<i>(S) p-Terphenyl-d14</i>				111	109	37.0-146				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.

1 Cp

2 Tc

3 Ss

4 Cn

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6 Qc

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Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.



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

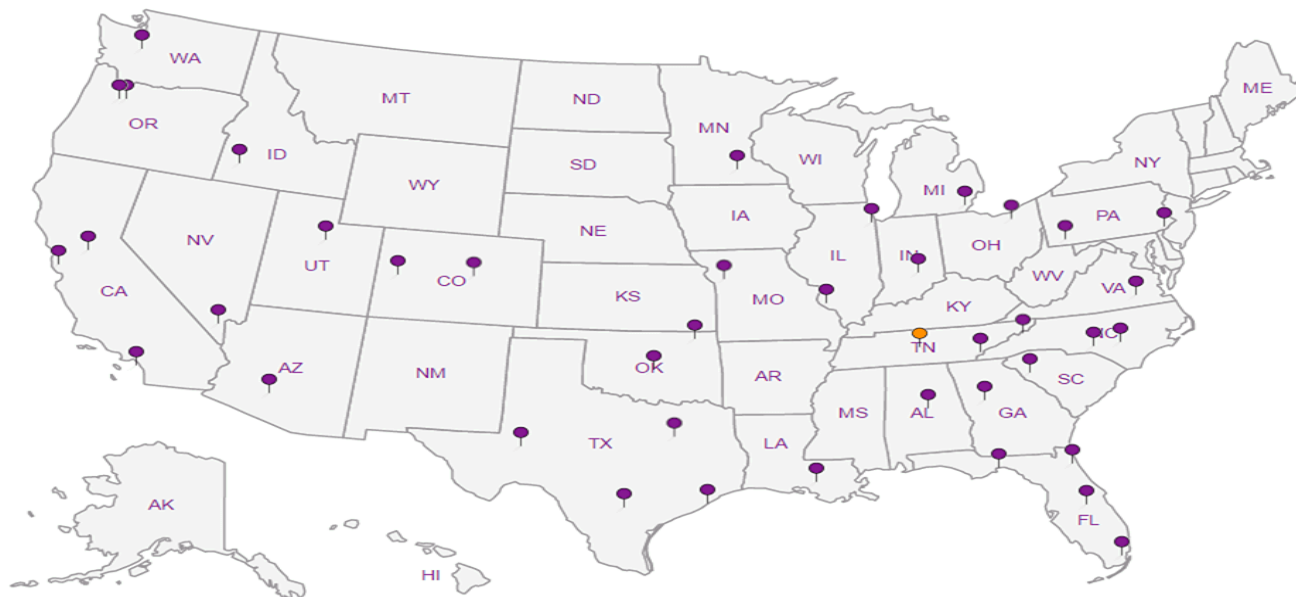
Third Party Federal Accreditations

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.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
Accounts Payable
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Pres Chk	Analysis / Container / Preservative
12	

Chain of Custody Page 1 of 1

 National Center for Testing & Innovation

Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
 Katie.Teague@kennedyjenks.com

Project Description: **BNSF - Wishram Railyard, WA**

City/State Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:


Client Project #
189612004

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):


Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
 Date Results Needed

Immediately Packed on Ice: N Y

Diss M6020RCRAB-D 250mlHDPE-HNO3	NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT	NWTPHDXLVI-NoSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	V8260C 40mlAmb-HCl
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12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-757-5859
 Fax: 615-758-5859



L# **1017869**
H134

Acctnum: **BNSF1KEN**

Template: **T138674**

Prelogin: **P663892**

TSR: **134 - Mark W. Beasley**

PB: **7-23-186**

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss M6020RCRAB-D 250mlHDPE-HNO3	NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT	NWTPHDXLVI-NoSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	V8260C 40mlAmb-HCl	Remarks	Sample # (lab only)
B-18-15	Grab	GW	-	8/13/18	1255	1	X		X		X	X		01
TB-07-20180814	-	GW	-	8/14/18	-	1						X		02
B-18-17	Grab	GW	-	8/13/18	1420	9	X	X	X		X	X		03-04
B-18-06	Grab	GW	-	8/13/18	1540	9	X	X	X		X	X		05-06
TB-08-20180814	-	GW	-	8/14/18	-	1						X		07
B-18-12	Grab	GW	-	8/14/18	1210	7	X		X		X	X		08
B-18-07	Grab	GW	-	8/14/18	0910	7	X		X		X	X		09
B-18-13	Grab	GW	-	8/14/18	1305	7	X		X		X	X		10
		GW												
		GW												

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: **Include NWTPHDx and Gx chromatograms**
No spaces in sample names. Diss. Metals samples field filtered.
 Samples returned via:
 UPS FedEx Courier

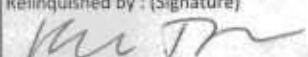
Tracking # **4442 621F 1915**

pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact:	NP	<input checked="" type="checkbox"/>	N
COC Signed/Accurate:		<input checked="" type="checkbox"/>	N
Bottles arrive intact:		<input checked="" type="checkbox"/>	N
Correct bottles used:		<input checked="" type="checkbox"/>	N
Sufficient volume sent:		<input checked="" type="checkbox"/>	N
If Applicable			
VOA Zero Headspace:		<input checked="" type="checkbox"/>	N
Preservation Correct/Checked:		<input checked="" type="checkbox"/>	N

LSMATT

Relinquished by: (Signature)


Date: **8/14/18**
 Time: **1430**

Received by: (Signature)
FedEx

Trip Blank Received: Yes No
2 (1 HCl 1 MeOH TBR)

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: _____
 Time: _____

Received by: (Signature)

Temp: **3.14** °C
 Bottles Received: **52**

Hold: _____

Relinquished by: (Signature)

Date: _____
 Time: _____

Received for lab by: (Signature)


Date: **8/15/18**
 Time: **8:05**

Condition: **NCF / OK**



Login #:1017869	Client:BNSF1KEN	Date:08/15/18	Evaluated by:Matthew Lockhart
-----------------	-----------------	---------------	-------------------------------

Non-Conformance (check applicable items)

Sample Integrity		Chain of Custody Clarification	
Parameter(s) past holding time	X	Login Clarification Needed	If Broken Container:
Improper temperature		Chain of custody is incomplete	Insufficient packing material around container
Improper container type		Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation		Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courie
Insufficient sample volume.	X	Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.		Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.		Trip Blank not received.	If no Chain of Custody:
Broken container		Client did not "X" analysis.	Received by:
Broken container:		Chain of Custody is missing	Date/Time:
Sufficient sample remains			Temp./Cont. Rec./pH:
			Carrier:
			Tracking#

Login Comments: 1)Received 1 40mlamb-hCL empty for B-18-15.
 2)Received sample with ID "Dup-01-20180814" not listed on the COC. Containers received are 1-250mlHDPE-HNO3, 4-40mlamb-HCL, 2-40mlamb-NOPRES.

Client informed by:	Call	Email	Voice Mail	Date: 8/16/18	Time: 0910
TSR Initials: MB	Client Contact: Ryan Hultgren				

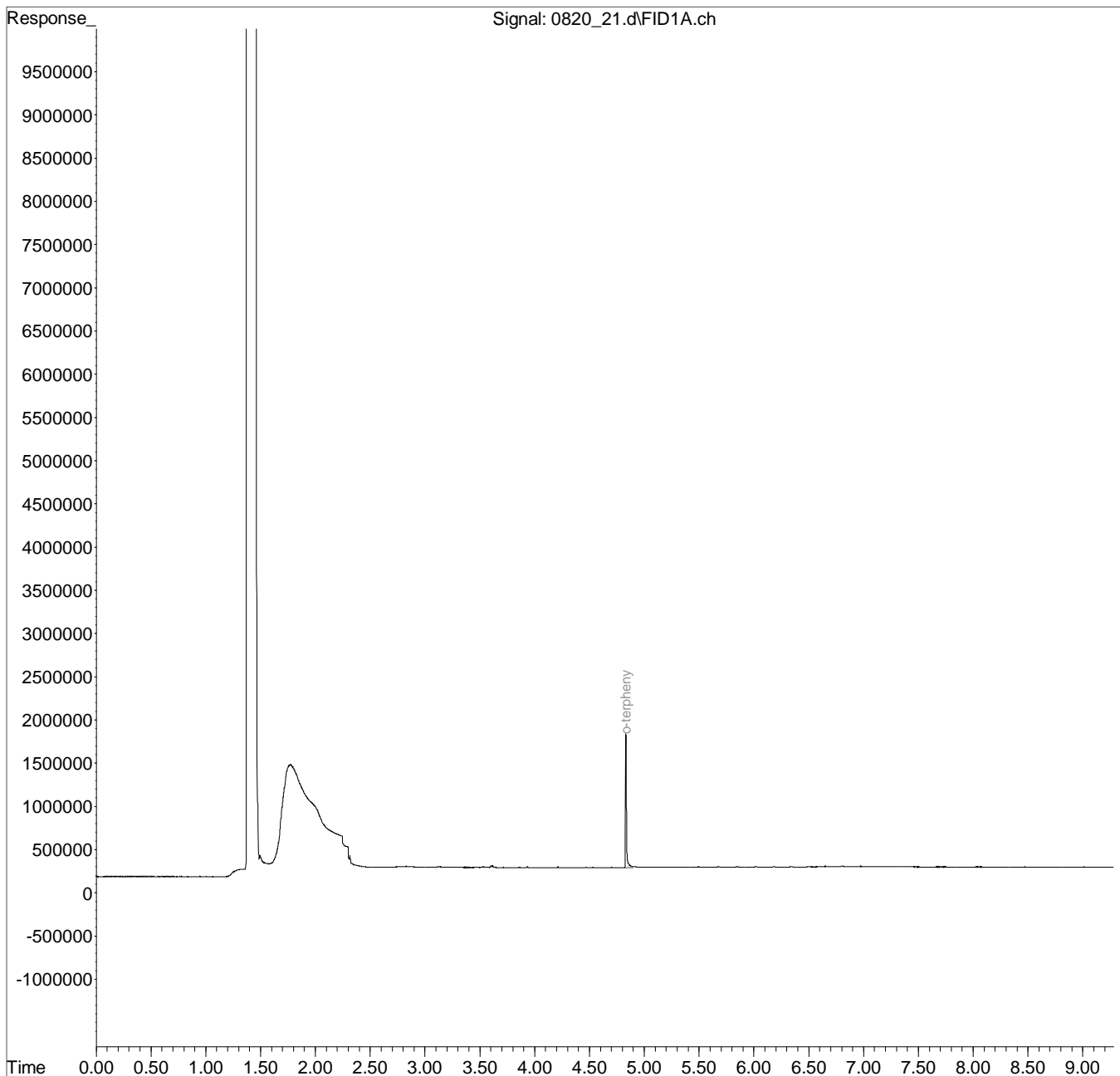
Login Instructions:

- 1) Client notified, run from other containers
- 2) Add to COC and run for M6020RCRA8-D, NWTPHDXLVINOSGT, PAHSIMLVID, & V8260C

Data Path : C:\msdchem\1\data\082018\
Data File : 0820 21.d
Signal(s) : FID1A.ch
Acq On : 20 Aug 2018 4:09 pm
Operator : 773
Sample : L1017869-03 1x WG1154242
Misc : water M.I.s on ranges are corrections
ALS Vial : 16 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 20 16:34:27 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

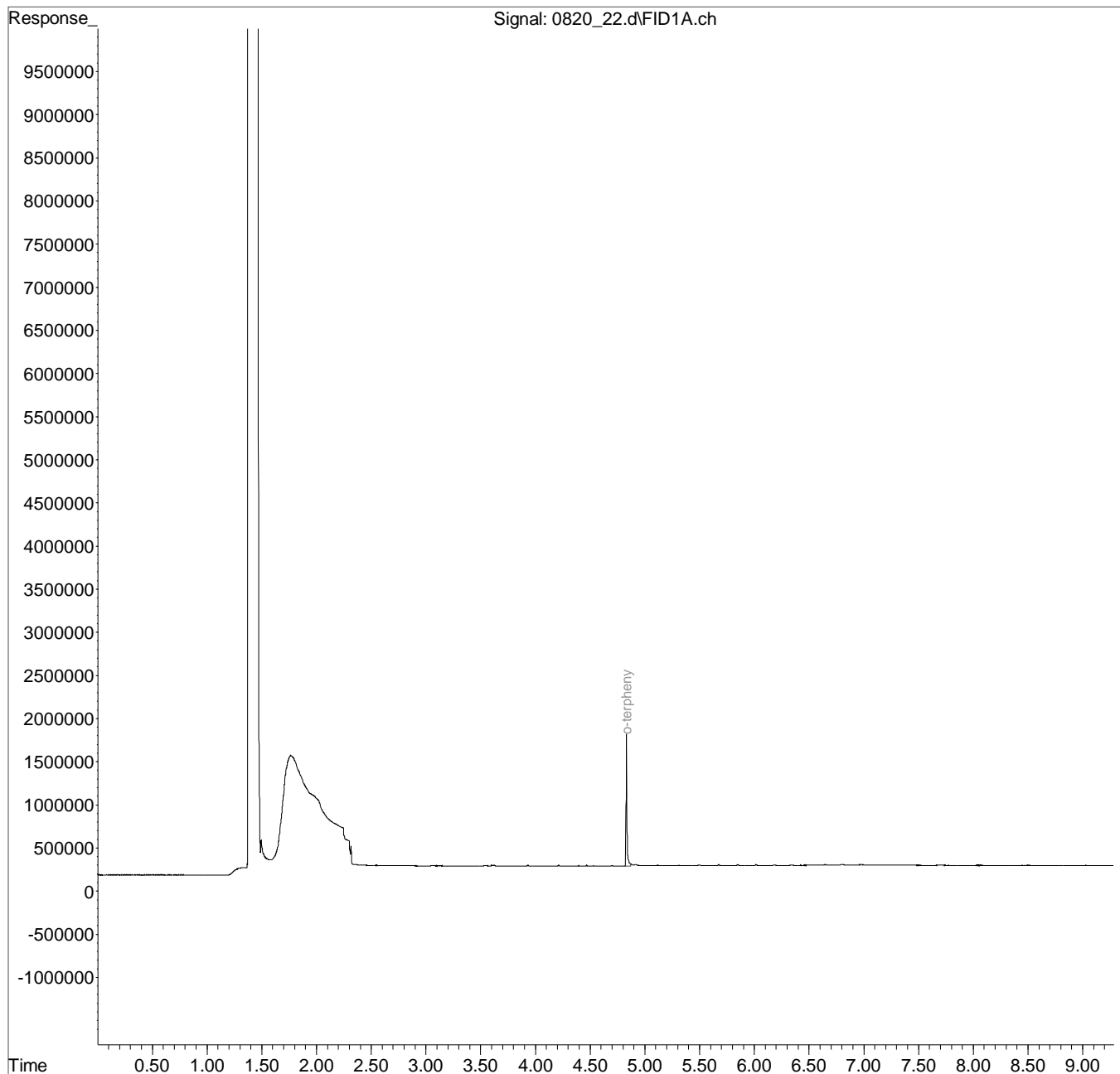
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082018\
Data File : 0820 22.d
Signal(s) : FID1A.ch
Acq On : 20 Aug 2018 4:27 pm
Operator : 773
Sample : L1017869-05 1x WG1154242
Misc : water M.I.s on ranges are corrections
ALS Vial : 17 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 21 10:59:24 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

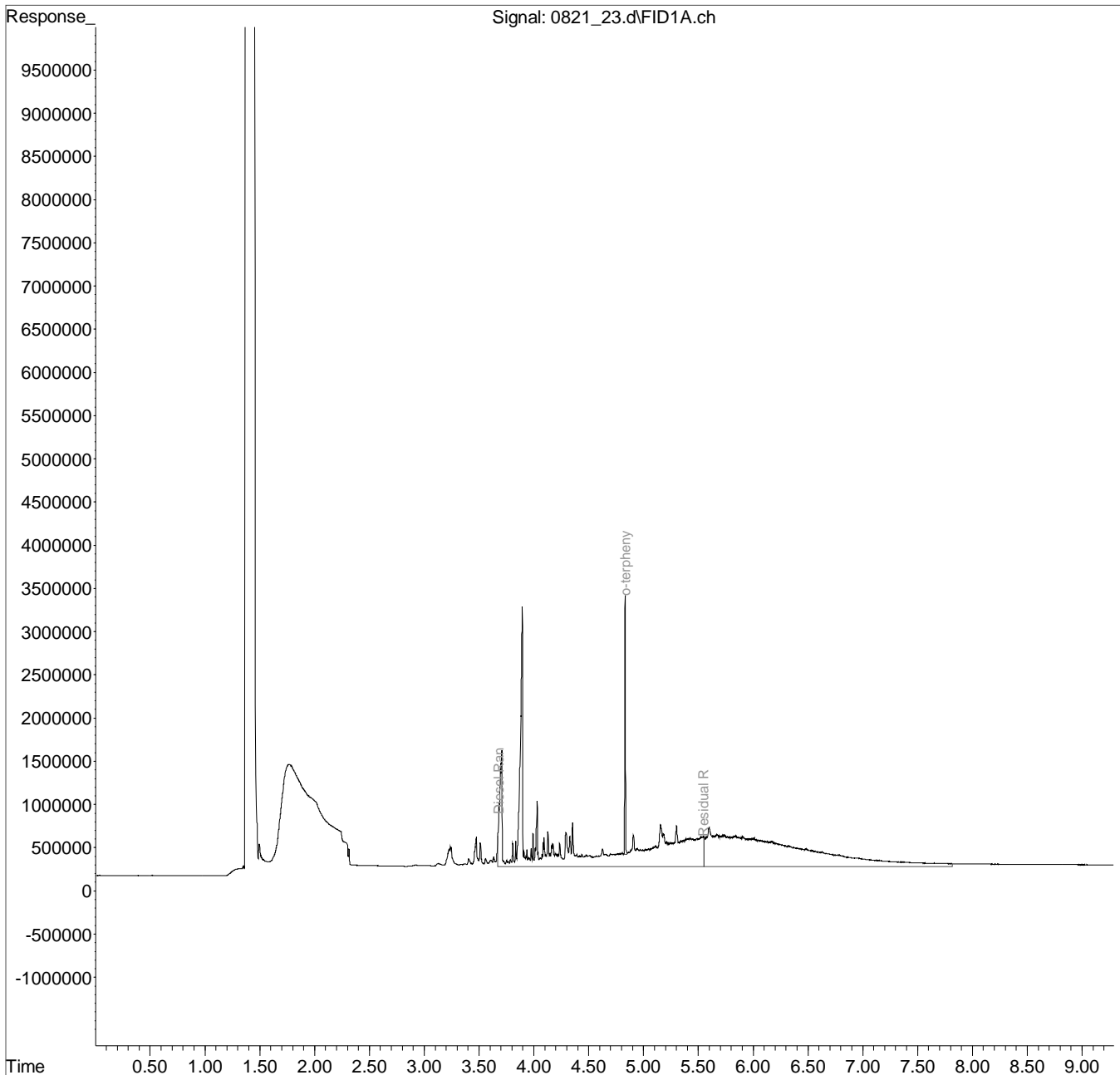
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082118\
 Data File : 0821_23.d
 Signal(s) : FID1A.ch
 Acq On : 21 Aug 2018 5:34 pm
 Operator : 784
 Sample : L1017869-01 1x WG1153211
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 18 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 21 23:14:44 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

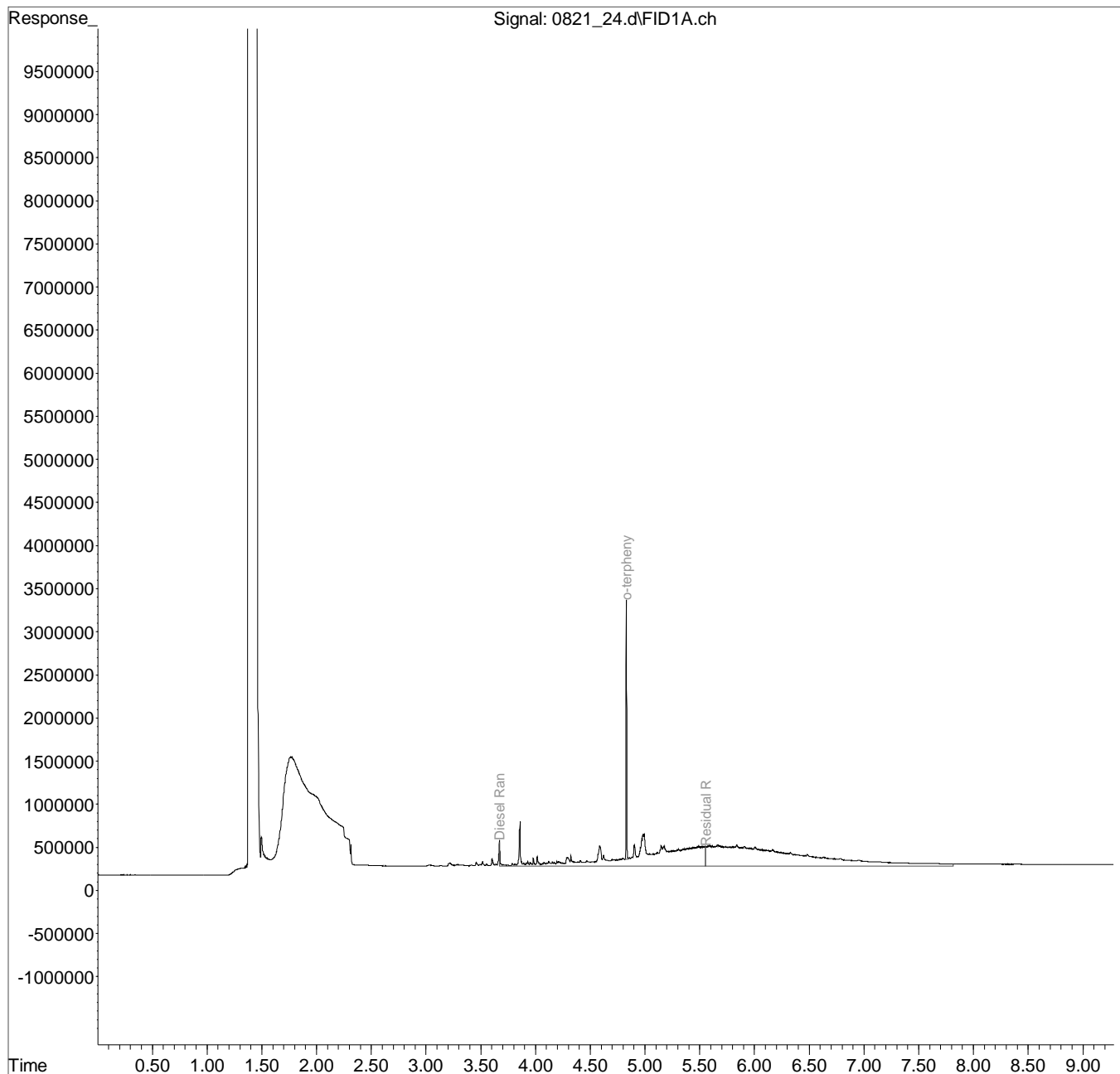
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082118\
Data File : 0821_24.d
Signal(s) : FID1A.ch
Acq On : 21 Aug 2018 5:51 pm
Operator : 784
Sample : L1017869-03 1x WG1153211
Misc : water M.I.s on ranges are corrections
ALS Vial : 19 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 21 23:15:26 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

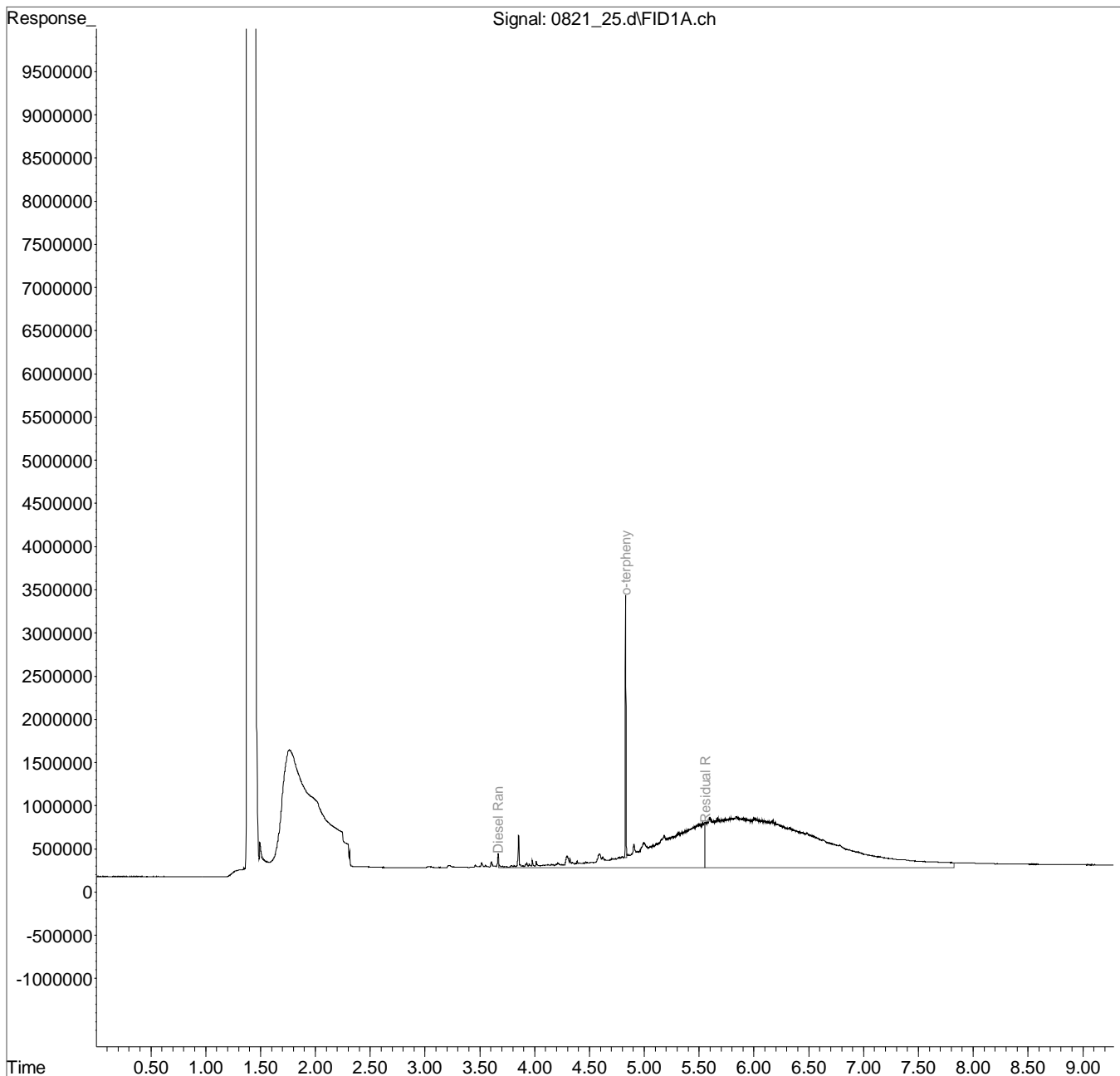
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082118\
 Data File : 0821_25.d
 Signal(s) : FID1A.ch
 Acq On : 21 Aug 2018 6:09 pm
 Operator : 784
 Sample : L1017869-05 1x WG1153211
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 20 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 21 23:16:02 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

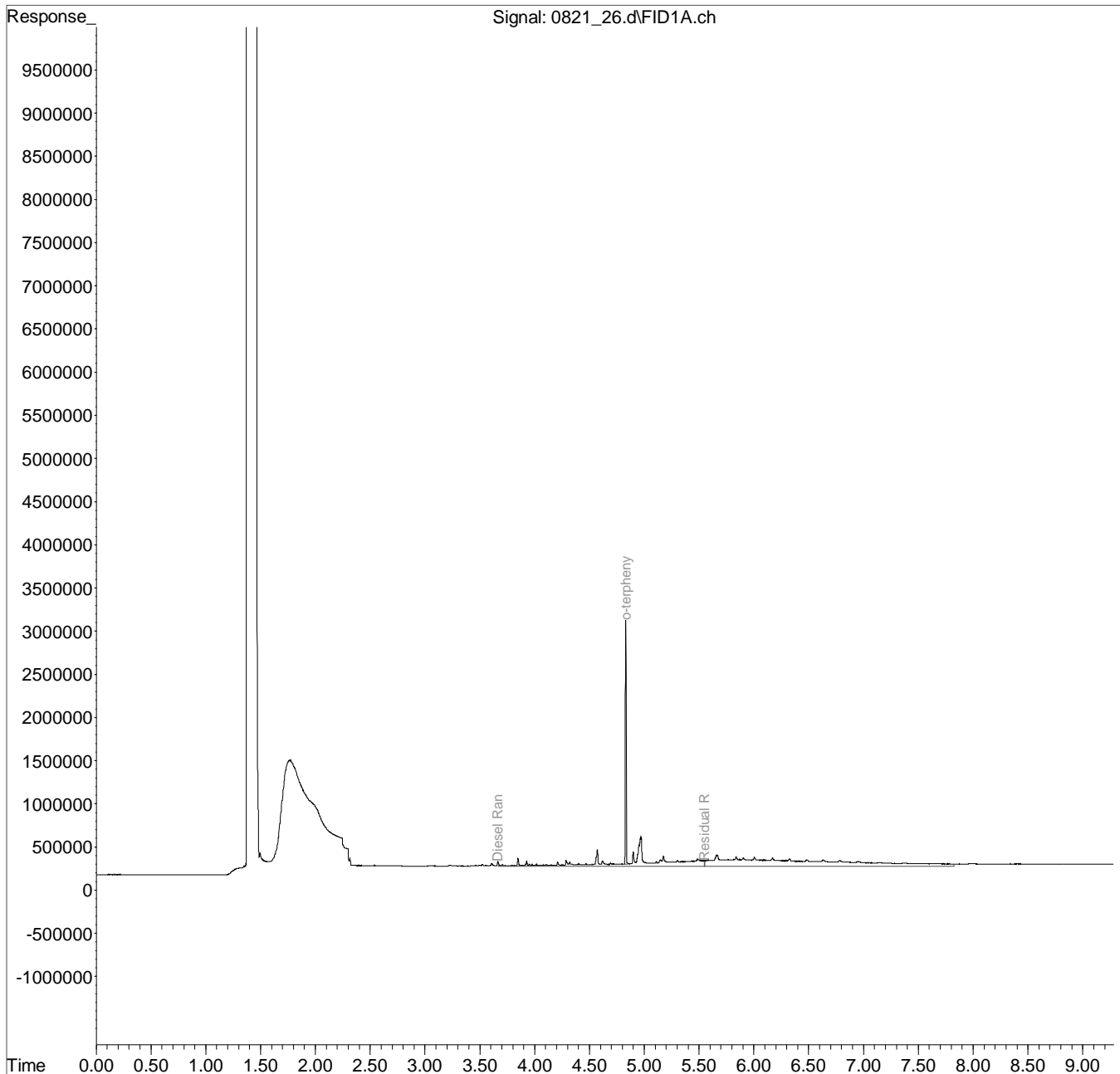
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082118\
 Data File : 0821_26.d
 Signal(s) : FID1A.ch
 Acq On : 21 Aug 2018 6:27 pm
 Operator : 784
 Sample : L1017869-08 1x WG1153211
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 21 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 21 23:25:39 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

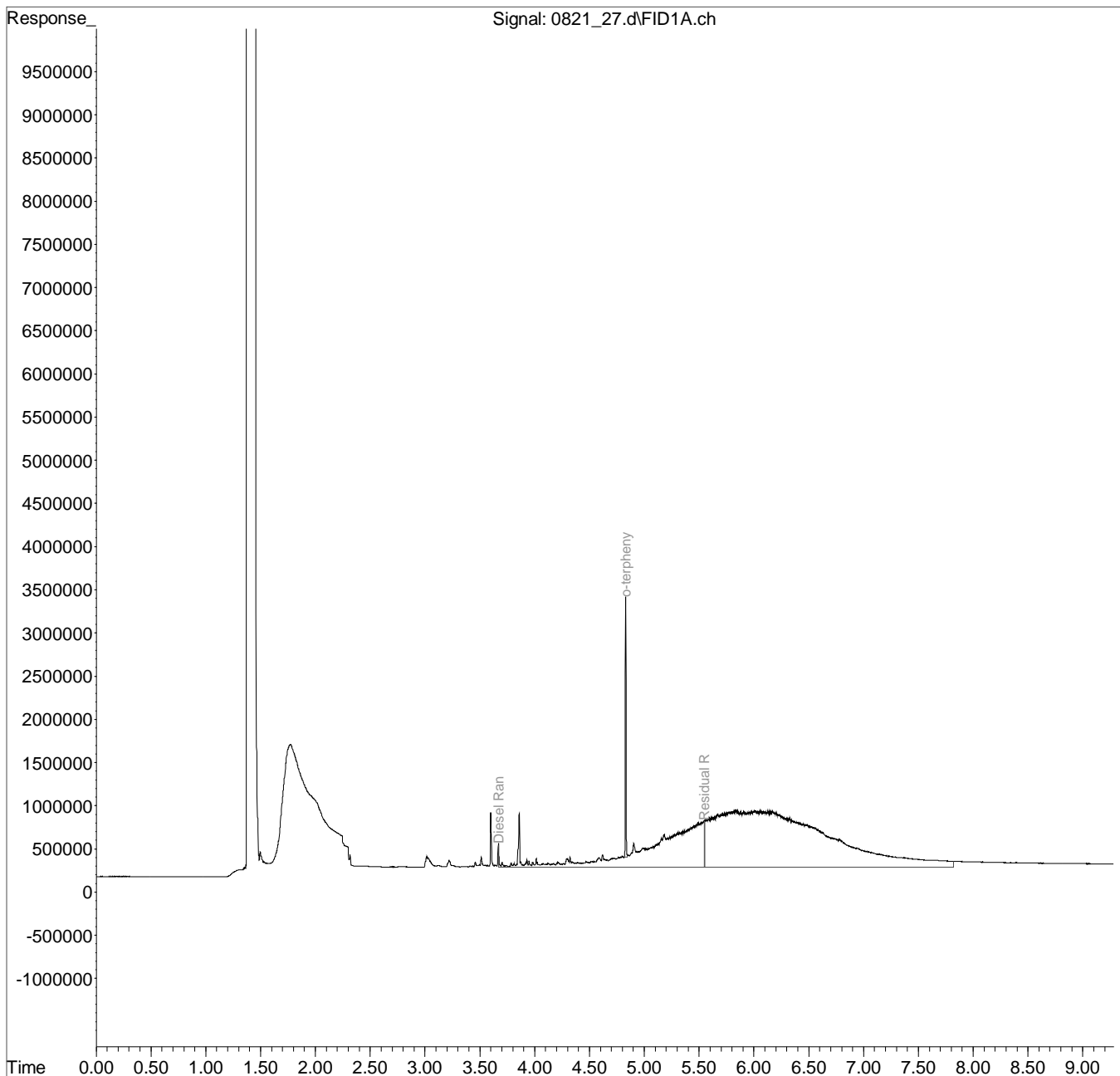
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082118\
 Data File : 0821_27.d
 Signal(s) : FID1A.ch
 Acq On : 21 Aug 2018 6:45 pm
 Operator : 784
 Sample : L1017869-09 1x WG1153211
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 22 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 21 23:26:24 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

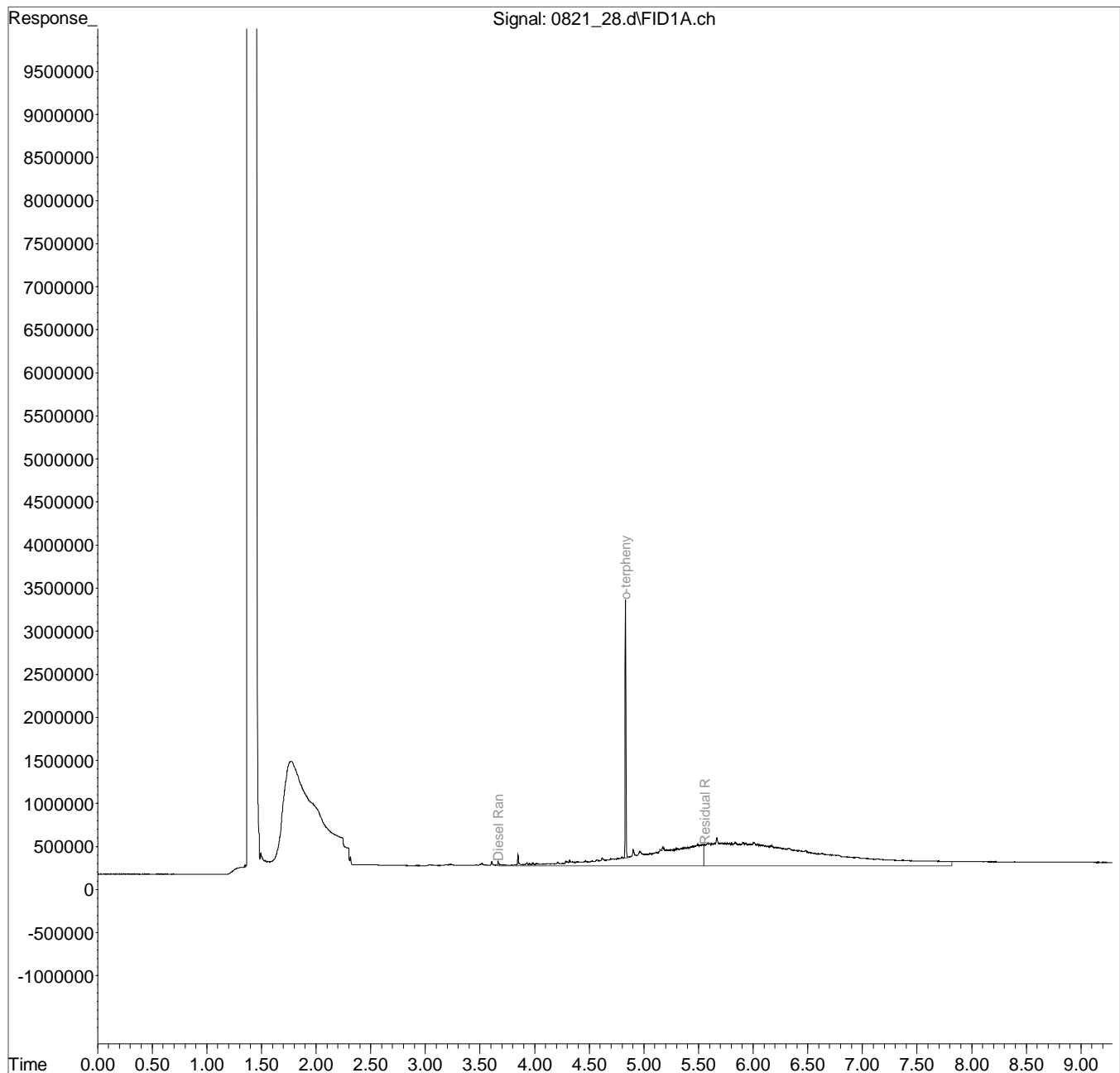
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082118\
Data File : 0821_28.d
Signal(s) : FID1A.ch
Acq On : 21 Aug 2018 7:02 pm
Operator : 784
Sample : L1017869-10 1x WG1153211
Misc : water M.I.s on ranges are corrections
ALS Vial : 23 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 21 23:27:03 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

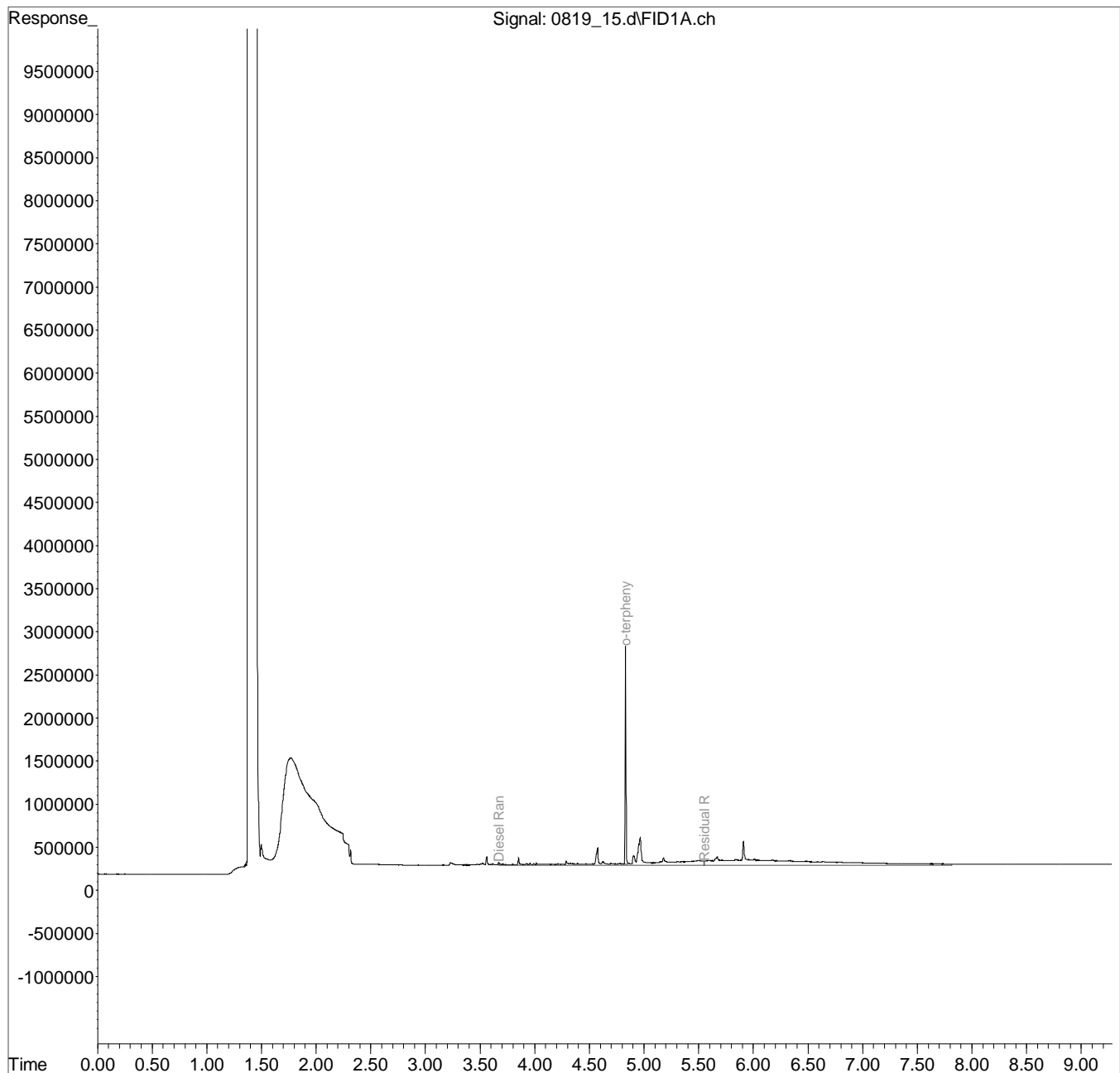
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081918\
Data File : 0819 15.d
Signal(s) : FID1A.ch
Acq On : 19 Aug 2018 3:26 pm
Operator : 773
Sample : L1017869-11 1x WG1154198
Misc : water M.I.s on ranges are corrections
ALS Vial : 10 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 20 15:16:08 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



August 21, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1018582
Samples Received: 08/09/2018
Project Number: 1896120.04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

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



Cp: Cover Page	1	¹Cp
Tc: Table of Contents	2	²Tc
Ss: Sample Summary	3	³Ss
Cn: Case Narrative	4	⁴Cn
Sr: Sample Results	5	⁵Sr
RIVERSHEEN-20180807 L1018582-01	5	⁴Cn
RIVERSHEEN-20180807 L1018582-02	6	⁵Sr
Qc: Quality Control Summary	7	⁶Qc
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	7	⁷Gl
Gl: Glossary of Terms	8	⁸Al
Al: Accreditations & Locations	9	⁹Sc
Sc: Sample Chain of Custody	10	

SAMPLE SUMMARY



RIVERSHEEN-20180807 L1018582-01 GW

Collected by K. Teague	Collected date/time 08/07/18 09:40	Received date/time 08/09/18 08:45
---------------------------	---------------------------------------	--------------------------------------

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/19/18 13:55	SHG

1
Cp

2
Tc

3
Ss

RIVERSHEEN-20180807 L1018582-02 GW

Collected by K. Teague	Collected date/time 08/07/18 09:40	Received date/time 08/09/18 08:45
---------------------------	---------------------------------------	--------------------------------------

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/19/18 14:13	SHG

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



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

Mark W. Beasley
Project Manager

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/19/2018 13:55	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/19/2018 13:55	WG1154198
(S) o-Terphenyl	103		52.0-156		08/19/2018 13:55	WG1154198

Sample Narrative:

L1018582-01 WG1154198: VOC vial pH < 2

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



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/19/2018 14:13	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/19/2018 14:13	WG1154198
(S) o-Terphenyl	106		52.0-156		08/19/2018 14:13	WG1154198

Sample Narrative:

L1018582-02 WG1154198: VOC vial pH < 2

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



Method Blank (MB)

(MB) R3334996-1 08/19/18 13:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	89.0			52.0-156

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

(LCS) R3334996-2 08/19/18 13:18 • (LCSD) R3334996-3 08/19/18 13:37

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	770	731	103	97.5	50.0-150			5.20	20
Residual Range Organics (RRO)	750	805	773	107	103	50.0-150			4.06	20
<i>(S) o-Terphenyl</i>				108	111	52.0-156				

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



Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
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.

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

Qualifier Description

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



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.

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

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

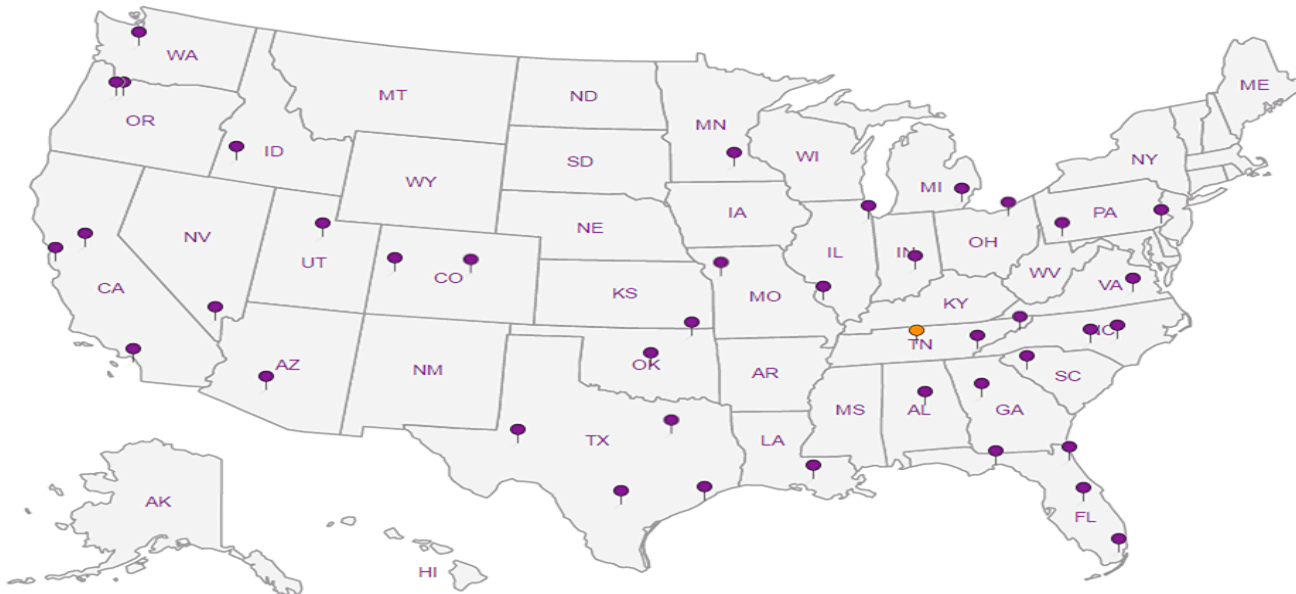
Third Party Federal Accreditations

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.



Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing information:
Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
KatieTeague@kennedyjenks.com

Project Description: BNSF - Wishram Railyard, WA

City/State Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1890120 04

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
Katie Teague

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

Immediately Packed on ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
RIVERSHEEN-20180807	Grab	GW	-	8/7/18	0940	6
		GW				1

Diss: M602QRGRAB-D-250MIMDPE-NOPres

MRCRAB, TS 4ozClr-NoPres
 NWTPHDXLVINOSGT 40mlAmb-HCl-BT
 PAHSIMLVID 40mlAmb-NoPres-WT
 TPHDX no SGT, PAHs 4ozClr-NoPres
 VB260C 40mlAmb-HCl
 VB260C 40mlAmb/MeOH5ml/Syr

Lot: L1016265
F052
 L1018582

Acctnum: BNSF1KEN
 Template: T138772
 Prelogin: P664090
 TSN: 134 - Mark W. Beasley
 PB:
 Shipped Via:

N
8/17/18

-at- 01/02

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:

pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist:
 COC Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 if Applicable
 Vial caps Resealed: Y N
 Preservation Correct/Checked: Y N

Samples returned via:
 UPS FedEx Courier

Tracking # 4361 6931 8924

Trip Blank Received: Yes No
 HCl / MeOH
 TBH

LUIS MR/HR

Temp: 4.43 °C
 Bottles Received: 6

If preservation required by Login: Date/Time

Date: 8/9/18
 Time: 845

Hold: _____
 Condition: NCL / OK

Relinquished by: (Signature)
[Signature]

Date: 8/18/18
 Time: 1430

Received by: (Signature)
FedEx

Relinquished by: (Signature)

Date: _____
 Time: _____

Received by: (Signature)

Relinquished by: (Signature)

Date: _____
 Time: _____

Received for lab by: (Signature)
[Signature]

Andy Vann

From: Mark Beasley
Sent: Friday, August 17, 2018 1:35 PM
To: Login; Sample Storage
Subject: L1016263 *BNSF1KEN* rush relog

Relog L1016263-01 for NWTPHDXLVINOSGT. Relog in duplicate (two dash #'s)... use leftover pristine vial from Dx analysis and leftover pristine vial from VOCs. Log as R3 due 8/21.

Thanks

Mark Beasley

National Account Manager

Pace Analytical National Center for Testing & Innovation
12065 Lebanon Road | Mt. Juliet, TN 37122
615.773.9672 | Cell 615.330.1602
mbeasley@pacenational.com | pacenational.com

ESC Lab Sciences is now Pace Analytical National Center for Testing & Innovation! Please make note of my new email address and website.

August 28, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1018742
Samples Received: 08/17/2018
Project Number: 1896120 04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

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



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

SAMPLE SUMMARY



B-18-29(2.0-2.5) L1018742-01 Solid

Collected by
K. Teague
Collected date/time
08/14/18 14:05
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155678	1	08/23/18 12:13	08/23/18 12:28	JD
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 10:52	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:07	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1.07	08/14/18 14:05	08/21/18 10:52	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1.06	08/14/18 14:05	08/23/18 03:11	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/22/18 21:46	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 18:35	DMG

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

B-18-28(2.0-2.5) L1018742-02 Solid

Collected by
K. Teague
Collected date/time
08/14/18 14:20
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155868	1	08/23/18 10:11	08/23/18 10:19	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:00	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:20	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/14/18 14:20	08/21/18 11:11	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/14/18 14:20	08/23/18 03:34	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/22/18 22:00	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 18:56	DMG

6
Qc

7
Gl

8
Al

9
Sc

B-18-27(2.0-2.5) L1018742-03 Solid

Collected by
K. Teague
Collected date/time
08/14/18 14:40
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155868	1	08/23/18 10:11	08/23/18 10:19	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:02	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:23	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/14/18 14:40	08/21/18 11:30	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/14/18 14:40	08/23/18 03:58	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/23/18 07:31	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 19:17	DMG

B-18-26(2.0-2.5) L1018742-04 Solid

Collected by
K. Teague
Collected date/time
08/14/18 14:50
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155868	1	08/23/18 10:11	08/23/18 10:19	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:05	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:31	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1.03	08/14/18 14:50	08/21/18 11:49	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1.02	08/14/18 14:50	08/23/18 04:22	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/22/18 22:13	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 19:38	DMG

B-18-30(2.0-2.5) L1018742-05 Solid

Collected by
K. Teague
Collected date/time
08/14/18 15:40
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155868	1	08/23/18 10:11	08/23/18 10:19	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:08	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:34	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1.01	08/14/18 15:40	08/21/18 12:08	BMB

SAMPLE SUMMARY



B-18-30(2.0-2.5) L1018742-05 Solid

Collected by
K. Teague
Collected date/time
08/14/18 15:40
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1.01	08/14/18 15:40	08/23/18 04:45	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/22/18 22:26	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 19:59	DMG

1
Cp

2
Tc

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Ss

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Cn

5
Sr

6
Qc

7
Gl

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Al

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Sc

TB-09-20180816 L1018742-06 Solid

Collected by
K. Teague
Collected date/time
08/16/18 00:00
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/16/18 00:00	08/21/18 12:27	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/16/18 00:00	08/23/18 05:09	LRL

B-18-29(9.5-10.0) L1018742-07 Solid

Collected by
K. Teague
Collected date/time
08/15/18 08:15
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155864	1	08/23/18 10:25	08/23/18 10:33	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:10	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:36	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/15/18 08:15	08/21/18 12:46	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/15/18 08:15	08/23/18 05:33	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/22/18 22:38	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 20:21	DMG

B-18-28(7.5-8.0) L1018742-08 Solid

Collected by
K. Teague
Collected date/time
08/15/18 09:00
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155864	1	08/23/18 10:25	08/23/18 10:33	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:13	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:39	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/15/18 09:00	08/21/18 13:05	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/15/18 09:00	08/23/18 05:57	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/22/18 22:51	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 20:42	DMG

B-18-27(8.0-8.5) L1018742-09 Solid

Collected by
K. Teague
Collected date/time
08/15/18 10:50
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155864	1	08/23/18 10:25	08/23/18 10:33	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:23	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:42	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/15/18 10:50	08/21/18 13:24	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/15/18 10:50	08/23/18 06:20	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/22/18 23:04	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 21:03	DMG

SAMPLE SUMMARY

B-18-26(7.5-8.0) L1018742-10 Solid

Collected by
K. Teague
Collected date/time
08/15/18 12:50
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155862	1	08/23/18 10:40	08/23/18 10:48	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:25	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:44	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/15/18 12:50	08/21/18 13:43	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/15/18 12:50	08/23/18 06:44	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/22/18 23:16	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 21:24	DMG

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

B-18-30(9.5-10.0) L1018742-11 Solid

Collected by
K. Teague
Collected date/time
08/15/18 14:35
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155864	1	08/23/18 10:25	08/23/18 10:33	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:28	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:47	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/15/18 14:35	08/21/18 14:02	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/15/18 14:35	08/23/18 07:07	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/23/18 06:27	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 21:45	DMG

6
Qc

7
Gl

8
Al

9
Sc

B-18-05(2.0-2.5) L1018742-12 Solid

Collected by
K. Teague
Collected date/time
08/16/18 07:45
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155864	1	08/23/18 10:25	08/23/18 10:33	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:30	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:50	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/16/18 07:45	08/21/18 14:20	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/16/18 07:45	08/23/18 07:30	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/23/18 06:40	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 22:06	DMG

B-18-05(9.5-10.0) L1018742-13 Solid

Collected by
K. Teague
Collected date/time
08/16/18 08:15
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155864	1	08/23/18 10:25	08/23/18 10:33	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:33	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:52	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/16/18 08:15	08/21/18 14:40	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/16/18 08:15	08/23/18 07:54	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/23/18 06:52	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 22:27	DMG

B-18-04(2.0-2.5) L1018742-14 Solid

Collected by
K. Teague
Collected date/time
08/16/18 07:50
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155864	1	08/23/18 10:25	08/23/18 10:33	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:36	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 16:55	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/16/18 07:50	08/21/18 14:58	BMB

SAMPLE SUMMARY



B-18-04(2.0-2.5) L1018742-14 Solid

Collected by: K. Teague
 Collected date/time: 08/16/18 07:50
 Received date/time: 08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/16/18 07:50	08/23/18 08:17	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/23/18 07:05	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 23:31	DMG

1 Cp

2 Tc

3 Ss

B-18-04(9.5-10.0) L1018742-15 Solid

Collected by: K. Teague
 Collected date/time: 08/16/18 09:00
 Received date/time: 08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155864	1	08/23/18 10:25	08/23/18 10:33	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:38	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 17:03	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/16/18 09:00	08/21/18 15:17	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/16/18 09:00	08/23/18 08:41	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155921	1	08/22/18 15:34	08/23/18 07:18	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/23/18 23:52	DMG

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

B-18-03(2.0-2.5) L1018742-16 Solid

Collected by: K. Teague
 Collected date/time: 08/16/18 08:05
 Received date/time: 08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155864	1	08/23/18 10:25	08/23/18 10:33	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:41	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 17:06	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1.04	08/16/18 08:05	08/21/18 15:36	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1.04	08/16/18 08:05	08/23/18 09:04	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155939	200	08/23/18 15:11	08/24/18 09:23	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	5	08/23/18 12:05	08/24/18 01:59	DMG

9 Sc

B-18-03(9.5-10.0) L1018742-17 Solid

Collected by: K. Teague
 Collected date/time: 08/16/18 10:00
 Received date/time: 08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155864	1	08/23/18 10:25	08/23/18 10:33	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:43	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 17:09	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/16/18 10:00	08/21/18 15:55	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1	08/16/18 10:00	08/23/18 09:28	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155939	1	08/23/18 15:11	08/24/18 08:23	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/24/18 00:13	DMG

B-18-02(2.0-2.5) L1018742-18 Solid

Collected by: K. Teague
 Collected date/time: 08/16/18 08:25
 Received date/time: 08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155862	1	08/23/18 10:40	08/23/18 10:48	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:46	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 17:11	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1.06	08/16/18 08:25	08/21/18 16:14	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156089	1.06	08/16/18 08:25	08/23/18 09:52	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155939	1	08/23/18 15:11	08/24/18 08:35	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/24/18 00:34	DMG

SAMPLE SUMMARY

B-18-02(9.5-10.0) L1018742-19 Solid

Collected by
K. Teague
Collected date/time
08/16/18 10:40
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155862	1	08/23/18 10:40	08/23/18 10:48	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:54	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 17:14	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155085	1	08/16/18 10:40	08/21/18 16:33	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156340	1	08/16/18 10:40	08/23/18 12:56	JHH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155939	1	08/23/18 15:11	08/24/18 08:47	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/24/18 00:55	DMG

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

TB-11-20180816 L1018742-20 Solid

Collected by
K. Teague
Collected date/time
08/16/18 00:00
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155097	1	08/16/18 00:00	08/21/18 11:34	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155250	1	08/16/18 00:00	08/21/18 20:04	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155705	1	08/16/18 00:00	08/22/18 13:07	LRL

B-18-01(3.0-3.5) L1018742-21 Solid

Collected by
K. Teague
Collected date/time
08/16/18 09:20
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155862	1	08/23/18 10:40	08/23/18 10:48	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:56	ABL
Metals (ICP) by Method 6010C	WG1155924	1	08/22/18 15:14	08/23/18 17:17	ST
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155097	1.09	08/16/18 09:20	08/21/18 15:17	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155519	1	08/16/18 09:20	08/23/18 00:25	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155939	1	08/23/18 15:11	08/24/18 08:59	MG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1155941	1	08/23/18 01:12	08/23/18 14:24	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/24/18 01:16	DMG

DUP-03-20180816 L1018742-22 Solid

Collected by
K. Teague
Collected date/time
08/16/18 00:00
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155862	1	08/23/18 10:40	08/23/18 10:48	KDW
Mercury by Method 7471B	WG1155814	1	08/22/18 12:24	08/24/18 11:59	ABL
Metals (ICP) by Method 6010C	WG1156076	1	08/22/18 17:42	08/23/18 10:00	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155097	1	08/16/18 00:00	08/21/18 15:37	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155519	1.09	08/16/18 00:00	08/23/18 00:49	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155939	1	08/23/18 15:11	08/24/18 09:11	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155953	1	08/23/18 12:05	08/24/18 01:38	DMG

B-18-01(9.5-10.0) L1018742-23 Solid

Collected by
K. Teague
Collected date/time
08/16/18 11:20
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155862	1	08/23/18 10:40	08/23/18 10:48	KDW
Mercury by Method 7471B	WG1155818	1	08/22/18 12:42	08/23/18 13:13	EL
Metals (ICP) by Method 6010C	WG1156076	1	08/22/18 17:42	08/23/18 10:03	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155097	1	08/16/18 11:20	08/21/18 15:57	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155519	1	08/16/18 11:20	08/23/18 01:13	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156163	1	08/23/18 08:39	08/23/18 17:14	MG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1155941	1	08/23/18 01:12	08/23/18 14:37	MTJ

SAMPLE SUMMARY



B-18-01(9.5-10.0) L1018742-23 Solid

Collected by K. Teague	Collected date/time 08/16/18 11:20	Received date/time 08/17/18 09:00
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Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155959	1	08/23/18 15:02	08/24/18 02:56	DMG

1
Cp

2
Tc

3
Ss

B-18-22(2.0-2.5) L1018742-25 Solid

Collected by K. Teague	Collected date/time 08/16/18 11:45	Received date/time 08/17/18 09:00
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Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1155862	1	08/23/18 10:40	08/23/18 10:48	KDW
Mercury by Method 7471B	WG1155818	1	08/22/18 12:42	08/23/18 13:16	EL
Metals (ICP) by Method 6010C	WG1156076	1	08/22/18 17:42	08/23/18 10:11	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155097	1	08/16/18 11:45	08/21/18 16:18	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155519	1	08/16/18 11:45	08/23/18 01:36	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156163	1	08/23/18 08:39	08/25/18 02:41	AAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155959	1	08/23/18 15:02	08/24/18 03:18	DMG

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



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

Mark W. Beasley
Project Manager

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	82.1		1	08/23/2018 12:28	WG1155678

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0244	1	08/24/2018 10:52	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.44	1	08/23/2018 16:07	WG1155924
Barium	75.0		0.609	1	08/23/2018 16:07	WG1155924
Cadmium	ND		0.609	1	08/23/2018 16:07	WG1155924
Chromium	14.1		1.22	1	08/23/2018 16:07	WG1155924
Lead	3.93	<u>B</u>	0.609	1	08/23/2018 16:07	WG1155924
Selenium	ND		2.44	1	08/23/2018 16:07	WG1155924
Silver	ND		1.22	1	08/23/2018 16:07	WG1155924

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	0.106		0.0326	1.07	08/21/2018 10:52	WG1155085
Acrylonitrile	ND		0.0163	1.07	08/21/2018 10:52	WG1155085
Benzene	ND		0.00130	1.07	08/21/2018 10:52	WG1155085
Bromobenzene	ND		0.0163	1.07	08/21/2018 10:52	WG1155085
Bromodichloromethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
Bromoform	ND		0.0326	1.07	08/21/2018 10:52	WG1155085
Bromomethane	ND		0.0163	1.07	08/21/2018 10:52	WG1155085
n-Butylbenzene	ND		0.0163	1.07	08/21/2018 10:52	WG1155085
sec-Butylbenzene	ND		0.0163	1.07	08/21/2018 10:52	WG1155085
tert-Butylbenzene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
Carbon tetrachloride	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
Chlorobenzene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
Chlorodibromomethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
Chloroethane	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
Chloroform	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
Chloromethane	ND		0.0163	1.07	08/21/2018 10:52	WG1155085
2-Chlorotoluene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
4-Chlorotoluene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0326	1.07	08/21/2018 10:52	WG1155085
1,2-Dibromoethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
Dibromomethane	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
1,2-Dichlorobenzene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
1,3-Dichlorobenzene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
1,4-Dichlorobenzene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
Dichlorodifluoromethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
1,1-Dichloroethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
1,2-Dichloroethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
1,1-Dichloroethene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
cis-1,2-Dichloroethene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
trans-1,2-Dichloroethene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
1,2-Dichloropropane	ND		0.00645	1.06	08/23/2018 03:11	WG1156089
1,1-Dichloropropene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
1,3-Dichloropropane	ND		0.00651	1.07	08/21/2018 10:52	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/14/18 14:05

L1018742

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
trans-1,3-Dichloropropene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
2,2-Dichloropropane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
Di-isopropyl ether	ND		0.00130	1.07	08/21/2018 10:52	WG1155085
Ethylbenzene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
Hexachloro-1,3-butadiene	ND		0.0326	1.07	08/21/2018 10:52	WG1155085
Isopropylbenzene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
p-Isopropyltoluene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
2-Butanone (MEK)	0.0849	JO	0.0326	1.07	08/21/2018 10:52	WG1155085
Methylene Chloride	ND		0.0326	1.07	08/21/2018 10:52	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0326	1.07	08/21/2018 10:52	WG1155085
Methyl tert-butyl ether	ND		0.00130	1.07	08/21/2018 10:52	WG1155085
Naphthalene	ND		0.0163	1.07	08/21/2018 10:52	WG1155085
n-Propylbenzene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
Styrene	ND		0.0163	1.07	08/21/2018 10:52	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
Tetrachloroethene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
Toluene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
1,2,3-Trichlorobenzene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
1,2,4-Trichlorobenzene	ND		0.0163	1.07	08/21/2018 10:52	WG1155085
1,1,1-Trichloroethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
1,1,2-Trichloroethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
Trichloroethene	ND		0.00129	1.06	08/23/2018 03:11	WG1156089
Trichlorofluoromethane	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
1,2,3-Trichloropropane	ND		0.0163	1.07	08/21/2018 10:52	WG1155085
1,2,4-Trimethylbenzene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
1,2,3-Trimethylbenzene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
Vinyl chloride	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
1,3,5-Trimethylbenzene	ND		0.00651	1.07	08/21/2018 10:52	WG1155085
o-Xylene	ND		0.00326	1.07	08/21/2018 10:52	WG1155085
m&p-Xylene	ND		0.00516	1.06	08/23/2018 03:11	WG1156089
(S) Toluene-d8	107		80.0-120		08/21/2018 10:52	WG1155085
(S) Toluene-d8	117		80.0-120		08/23/2018 03:11	WG1156089
(S) Dibromofluoromethane	104		74.0-131		08/21/2018 10:52	WG1155085
(S) Dibromofluoromethane	99.4		74.0-131		08/23/2018 03:11	WG1156089
(S) 4-Bromofluorobenzene	91.8		64.0-132		08/21/2018 10:52	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 03:11	WG1156089

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.87	1	08/22/2018 21:46	WG1155921
Residual Range Organics (RRO)	ND		12.2	1	08/22/2018 21:46	WG1155921
(S) o-Terphenyl	67.2		18.0-148		08/22/2018 21:46	WG1155921

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Acenaphthene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Acenaphthylene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Benzo(a)anthracene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Benzo(a)pyrene	ND		0.00731	1	08/23/2018 18:35	WG1155953



Collected date/time: 08/14/18 14:05

L1018742

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Benzo(g,h,i)perylene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Benzo(k)fluoranthene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Chrysene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Dibenz(a,h)anthracene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Fluoranthene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Fluorene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Naphthalene	ND		0.0244	1	08/23/2018 18:35	WG1155953
Phenanthrene	ND		0.00731	1	08/23/2018 18:35	WG1155953
Pyrene	ND		0.00731	1	08/23/2018 18:35	WG1155953
1-Methylnaphthalene	ND		0.0244	1	08/23/2018 18:35	WG1155953
2-Methylnaphthalene	ND		0.0244	1	08/23/2018 18:35	WG1155953
2-Chloronaphthalene	ND		0.0244	1	08/23/2018 18:35	WG1155953
(S) Nitrobenzene-d5	84.1		14.0-149		08/23/2018 18:35	WG1155953
(S) 2-Fluorobiphenyl	71.8		34.0-125		08/23/2018 18:35	WG1155953
(S) p-Terphenyl-d14	61.8		23.0-120		08/23/2018 18:35	WG1155953

- 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	82.0		1	08/23/2018 10:19	WG1155868

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0244	1	08/24/2018 11:00	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.44	1	08/23/2018 16:20	WG1155924
Barium	84.1		0.610	1	08/23/2018 16:20	WG1155924
Cadmium	ND		0.610	1	08/23/2018 16:20	WG1155924
Chromium	12.7		1.22	1	08/23/2018 16:20	WG1155924
Lead	4.36	<u>B</u>	0.610	1	08/23/2018 16:20	WG1155924
Selenium	ND		2.44	1	08/23/2018 16:20	WG1155924
Silver	ND		1.22	1	08/23/2018 16:20	WG1155924

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	0.0548		0.0305	1	08/21/2018 11:11	WG1155085
Acrylonitrile	ND		0.0152	1	08/21/2018 11:11	WG1155085
Benzene	ND		0.00122	1	08/21/2018 11:11	WG1155085
Bromobenzene	ND		0.0152	1	08/21/2018 11:11	WG1155085
Bromodichloromethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
Bromoform	ND		0.0305	1	08/21/2018 11:11	WG1155085
Bromomethane	ND		0.0152	1	08/21/2018 11:11	WG1155085
n-Butylbenzene	ND		0.0152	1	08/21/2018 11:11	WG1155085
sec-Butylbenzene	ND		0.0152	1	08/21/2018 11:11	WG1155085
tert-Butylbenzene	ND		0.00610	1	08/21/2018 11:11	WG1155085
Carbon tetrachloride	ND		0.00610	1	08/21/2018 11:11	WG1155085
Chlorobenzene	ND		0.00305	1	08/21/2018 11:11	WG1155085
Chlorodibromomethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
Chloroethane	ND		0.00610	1	08/21/2018 11:11	WG1155085
Chloroform	ND		0.00305	1	08/21/2018 11:11	WG1155085
Chloromethane	ND		0.0152	1	08/21/2018 11:11	WG1155085
2-Chlorotoluene	ND		0.00305	1	08/21/2018 11:11	WG1155085
4-Chlorotoluene	ND		0.00610	1	08/21/2018 11:11	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0305	1	08/21/2018 11:11	WG1155085
1,2-Dibromoethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
Dibromomethane	ND		0.00610	1	08/21/2018 11:11	WG1155085
1,2-Dichlorobenzene	ND		0.00610	1	08/21/2018 11:11	WG1155085
1,3-Dichlorobenzene	ND		0.00610	1	08/21/2018 11:11	WG1155085
1,4-Dichlorobenzene	ND		0.00610	1	08/21/2018 11:11	WG1155085
Dichlorodifluoromethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
1,1-Dichloroethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
1,2-Dichloroethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
1,1-Dichloroethene	ND		0.00305	1	08/21/2018 11:11	WG1155085
cis-1,2-Dichloroethene	ND		0.00305	1	08/21/2018 11:11	WG1155085
trans-1,2-Dichloroethene	ND		0.00610	1	08/21/2018 11:11	WG1155085
1,2-Dichloropropane	ND		0.00610	1	08/23/2018 03:34	WG1156089
1,1-Dichloropropene	ND		0.00305	1	08/21/2018 11:11	WG1155085
1,3-Dichloropropane	ND		0.00610	1	08/21/2018 11:11	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00305	1	08/21/2018 11:11	WG1155085
trans-1,3-Dichloropropene	ND		0.00610	1	08/21/2018 11:11	WG1155085
2,2-Dichloropropane	ND		0.00305	1	08/21/2018 11:11	WG1155085
Di-isopropyl ether	ND		0.00122	1	08/21/2018 11:11	WG1155085
Ethylbenzene	ND		0.00305	1	08/21/2018 11:11	WG1155085
Hexachloro-1,3-butadiene	ND		0.0305	1	08/21/2018 11:11	WG1155085
Isopropylbenzene	ND		0.00305	1	08/21/2018 11:11	WG1155085
p-Isopropyltoluene	ND		0.00610	1	08/21/2018 11:11	WG1155085
2-Butanone (MEK)	0.0419	JO	0.0305	1	08/21/2018 11:11	WG1155085
Methylene Chloride	ND		0.0305	1	08/21/2018 11:11	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0305	1	08/21/2018 11:11	WG1155085
Methyl tert-butyl ether	ND		0.00122	1	08/21/2018 11:11	WG1155085
Naphthalene	ND		0.0152	1	08/21/2018 11:11	WG1155085
n-Propylbenzene	ND		0.00610	1	08/21/2018 11:11	WG1155085
Styrene	ND		0.0152	1	08/21/2018 11:11	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
Tetrachloroethene	ND		0.00305	1	08/21/2018 11:11	WG1155085
Toluene	ND		0.00610	1	08/21/2018 11:11	WG1155085
1,2,3-Trichlorobenzene	ND		0.00305	1	08/21/2018 11:11	WG1155085
1,2,4-Trichlorobenzene	ND		0.0152	1	08/21/2018 11:11	WG1155085
1,1,1-Trichloroethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
1,1,2-Trichloroethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
Trichloroethene	ND		0.00122	1	08/23/2018 03:34	WG1156089
Trichlorofluoromethane	ND		0.00305	1	08/21/2018 11:11	WG1155085
1,2,3-Trichloropropane	ND		0.0152	1	08/21/2018 11:11	WG1155085
1,2,4-Trimethylbenzene	ND		0.00610	1	08/21/2018 11:11	WG1155085
1,2,3-Trimethylbenzene	ND		0.00610	1	08/21/2018 11:11	WG1155085
Vinyl chloride	ND		0.00305	1	08/21/2018 11:11	WG1155085
1,3,5-Trimethylbenzene	ND		0.00610	1	08/21/2018 11:11	WG1155085
o-Xylene	ND		0.00305	1	08/21/2018 11:11	WG1155085
m&p-Xylene	ND		0.00488	1	08/23/2018 03:34	WG1156089
(S) Toluene-d8	100		80.0-120		08/21/2018 11:11	WG1155085
(S) Toluene-d8	116		80.0-120		08/23/2018 03:34	WG1156089
(S) Dibromofluoromethane	95.5		74.0-131		08/21/2018 11:11	WG1155085
(S) Dibromofluoromethane	97.7		74.0-131		08/23/2018 03:34	WG1156089
(S) 4-Bromofluorobenzene	104		64.0-132		08/21/2018 11:11	WG1155085
(S) 4-Bromofluorobenzene	104		64.0-132		08/23/2018 03:34	WG1156089

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.88	1	08/22/2018 22:00	WG1155921
Residual Range Organics (RRO)	ND		12.2	1	08/22/2018 22:00	WG1155921
(S) o-Terphenyl	68.1		18.0-148		08/22/2018 22:00	WG1155921

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Acenaphthene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Acenaphthylene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Benzo(a)anthracene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Benzo(a)pyrene	ND		0.00732	1	08/23/2018 18:56	WG1155953



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Benzo(g,h,i)perylene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Benzo(k)fluoranthene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Chrysene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Dibenz(a,h)anthracene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Fluoranthene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Fluorene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Naphthalene	ND		0.0244	1	08/23/2018 18:56	WG1155953
Phenanthrene	ND		0.00732	1	08/23/2018 18:56	WG1155953
Pyrene	ND		0.00732	1	08/23/2018 18:56	WG1155953
1-Methylnaphthalene	ND		0.0244	1	08/23/2018 18:56	WG1155953
2-Methylnaphthalene	ND		0.0244	1	08/23/2018 18:56	WG1155953
2-Chloronaphthalene	ND		0.0244	1	08/23/2018 18:56	WG1155953
(S) Nitrobenzene-d5	88.5		14.0-149		08/23/2018 18:56	WG1155953
(S) 2-Fluorobiphenyl	75.9		34.0-125		08/23/2018 18:56	WG1155953
(S) p-Terphenyl-d14	73.0		23.0-120		08/23/2018 18:56	WG1155953

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	80.4		1	08/23/2018 10:19	WG1155868

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0249	1	08/24/2018 11:02	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.49	1	08/23/2018 16:23	WG1155924
Barium	84.7		0.622	1	08/23/2018 16:23	WG1155924
Cadmium	ND		0.622	1	08/23/2018 16:23	WG1155924
Chromium	12.0		1.24	1	08/23/2018 16:23	WG1155924
Lead	3.18	<u>B</u>	0.622	1	08/23/2018 16:23	WG1155924
Selenium	ND		2.49	1	08/23/2018 16:23	WG1155924
Silver	ND		1.24	1	08/23/2018 16:23	WG1155924

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	0.0518		0.0311	1	08/21/2018 11:30	WG1155085
Acrylonitrile	ND		0.0155	1	08/21/2018 11:30	WG1155085
Benzene	ND		0.00124	1	08/21/2018 11:30	WG1155085
Bromobenzene	ND		0.0155	1	08/21/2018 11:30	WG1155085
Bromodichloromethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
Bromoform	ND		0.0311	1	08/21/2018 11:30	WG1155085
Bromomethane	ND		0.0155	1	08/21/2018 11:30	WG1155085
n-Butylbenzene	ND		0.0155	1	08/21/2018 11:30	WG1155085
sec-Butylbenzene	ND		0.0155	1	08/21/2018 11:30	WG1155085
tert-Butylbenzene	ND		0.00622	1	08/21/2018 11:30	WG1155085
Carbon tetrachloride	ND		0.00622	1	08/21/2018 11:30	WG1155085
Chlorobenzene	ND		0.00311	1	08/21/2018 11:30	WG1155085
Chlorodibromomethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
Chloroethane	ND		0.00622	1	08/21/2018 11:30	WG1155085
Chloroform	ND		0.00311	1	08/21/2018 11:30	WG1155085
Chloromethane	ND		0.0155	1	08/21/2018 11:30	WG1155085
2-Chlorotoluene	ND		0.00311	1	08/21/2018 11:30	WG1155085
4-Chlorotoluene	ND		0.00622	1	08/21/2018 11:30	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0311	1	08/21/2018 11:30	WG1155085
1,2-Dibromoethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
Dibromomethane	ND		0.00622	1	08/21/2018 11:30	WG1155085
1,2-Dichlorobenzene	ND		0.00622	1	08/21/2018 11:30	WG1155085
1,3-Dichlorobenzene	ND		0.00622	1	08/21/2018 11:30	WG1155085
1,4-Dichlorobenzene	ND		0.00622	1	08/21/2018 11:30	WG1155085
Dichlorodifluoromethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
1,1-Dichloroethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
1,2-Dichloroethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
1,1-Dichloroethene	ND		0.00311	1	08/21/2018 11:30	WG1155085
cis-1,2-Dichloroethene	ND		0.00311	1	08/21/2018 11:30	WG1155085
trans-1,2-Dichloroethene	ND		0.00622	1	08/21/2018 11:30	WG1155085
1,2-Dichloropropane	ND		0.00622	1	08/23/2018 03:58	WG1156089
1,1-Dichloropropene	ND		0.00311	1	08/21/2018 11:30	WG1155085
1,3-Dichloropropane	ND		0.00622	1	08/21/2018 11:30	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/14/18 14:40

L1018742

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00311	1	08/21/2018 11:30	WG1155085
trans-1,3-Dichloropropene	ND		0.00622	1	08/21/2018 11:30	WG1155085
2,2-Dichloropropane	ND		0.00311	1	08/21/2018 11:30	WG1155085
Di-isopropyl ether	ND		0.00124	1	08/21/2018 11:30	WG1155085
Ethylbenzene	ND		0.00311	1	08/21/2018 11:30	WG1155085
Hexachloro-1,3-butadiene	ND		0.0311	1	08/21/2018 11:30	WG1155085
Isopropylbenzene	ND		0.00311	1	08/21/2018 11:30	WG1155085
p-Isopropyltoluene	ND		0.00622	1	08/21/2018 11:30	WG1155085
2-Butanone (MEK)	0.0365	JO	0.0311	1	08/21/2018 11:30	WG1155085
Methylene Chloride	ND		0.0311	1	08/21/2018 11:30	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0311	1	08/21/2018 11:30	WG1155085
Methyl tert-butyl ether	ND		0.00124	1	08/21/2018 11:30	WG1155085
Naphthalene	ND		0.0155	1	08/21/2018 11:30	WG1155085
n-Propylbenzene	ND		0.00622	1	08/21/2018 11:30	WG1155085
Styrene	ND		0.0155	1	08/21/2018 11:30	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
Tetrachloroethene	ND		0.00311	1	08/21/2018 11:30	WG1155085
Toluene	ND		0.00622	1	08/21/2018 11:30	WG1155085
1,2,3-Trichlorobenzene	ND		0.00311	1	08/21/2018 11:30	WG1155085
1,2,4-Trichlorobenzene	ND		0.0155	1	08/21/2018 11:30	WG1155085
1,1,1-Trichloroethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
1,1,2-Trichloroethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
Trichloroethene	ND		0.00124	1	08/23/2018 03:58	WG1156089
Trichlorofluoromethane	ND		0.00311	1	08/21/2018 11:30	WG1155085
1,2,3-Trichloropropane	ND		0.0155	1	08/21/2018 11:30	WG1155085
1,2,4-Trimethylbenzene	ND		0.00622	1	08/21/2018 11:30	WG1155085
1,2,3-Trimethylbenzene	ND		0.00622	1	08/21/2018 11:30	WG1155085
Vinyl chloride	ND		0.00311	1	08/21/2018 11:30	WG1155085
1,3,5-Trimethylbenzene	ND		0.00622	1	08/21/2018 11:30	WG1155085
o-Xylene	ND		0.00311	1	08/21/2018 11:30	WG1155085
m&p-Xylene	ND		0.00497	1	08/23/2018 03:58	WG1156089
(S) Toluene-d8	106		80.0-120		08/21/2018 11:30	WG1155085
(S) Toluene-d8	114		80.0-120		08/23/2018 03:58	WG1156089
(S) Dibromofluoromethane	99.7		74.0-131		08/21/2018 11:30	WG1155085
(S) Dibromofluoromethane	98.7		74.0-131		08/23/2018 03:58	WG1156089
(S) 4-Bromofluorobenzene	99.3		64.0-132		08/21/2018 11:30	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 03:58	WG1156089

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.97	1	08/23/2018 07:31	WG1155921
Residual Range Organics (RRO)	ND		12.4	1	08/23/2018 07:31	WG1155921
(S) o-Terphenyl	76.2		18.0-148		08/23/2018 07:31	WG1155921

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Acenaphthene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Acenaphthylene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Benzo(a)anthracene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Benzo(a)pyrene	ND		0.00746	1	08/23/2018 19:17	WG1155953



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Benzo(g,h,i)perylene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Benzo(k)fluoranthene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Chrysene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Dibenz(a,h)anthracene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Fluoranthene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Fluorene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Naphthalene	ND		0.0249	1	08/23/2018 19:17	WG1155953
Phenanthrene	ND		0.00746	1	08/23/2018 19:17	WG1155953
Pyrene	ND		0.00746	1	08/23/2018 19:17	WG1155953
1-Methylnaphthalene	ND		0.0249	1	08/23/2018 19:17	WG1155953
2-Methylnaphthalene	ND		0.0249	1	08/23/2018 19:17	WG1155953
2-Chloronaphthalene	ND		0.0249	1	08/23/2018 19:17	WG1155953
<i>(S)</i> Nitrobenzene-d5	89.2		14.0-149		08/23/2018 19:17	WG1155953
<i>(S)</i> 2-Fluorobiphenyl	72.2		34.0-125		08/23/2018 19:17	WG1155953
<i>(S)</i> p-Terphenyl-d14	66.8		23.0-120		08/23/2018 19:17	WG1155953

- 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	79.3		1	08/23/2018 10:19	WG1155868

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0252	1	08/24/2018 11:05	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.52	1	08/23/2018 16:31	WG1155924
Barium	76.2		0.631	1	08/23/2018 16:31	WG1155924
Cadmium	ND		0.631	1	08/23/2018 16:31	WG1155924
Chromium	12.3		1.26	1	08/23/2018 16:31	WG1155924
Lead	3.27	<u>B</u>	0.631	1	08/23/2018 16:31	WG1155924
Selenium	ND		2.52	1	08/23/2018 16:31	WG1155924
Silver	ND		1.26	1	08/23/2018 16:31	WG1155924

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	0.0709		0.0325	1.03	08/21/2018 11:49	WG1155085
Acrylonitrile	ND		0.0162	1.03	08/21/2018 11:49	WG1155085
Benzene	ND		0.00130	1.03	08/21/2018 11:49	WG1155085
Bromobenzene	ND		0.0162	1.03	08/21/2018 11:49	WG1155085
Bromodichloromethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
Bromoform	ND		0.0325	1.03	08/21/2018 11:49	WG1155085
Bromomethane	ND		0.0162	1.03	08/21/2018 11:49	WG1155085
n-Butylbenzene	ND		0.0162	1.03	08/21/2018 11:49	WG1155085
sec-Butylbenzene	ND		0.0162	1.03	08/21/2018 11:49	WG1155085
tert-Butylbenzene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
Carbon tetrachloride	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
Chlorobenzene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
Chlorodibromomethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
Chloroethane	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
Chloroform	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
Chloromethane	ND		0.0162	1.03	08/21/2018 11:49	WG1155085
2-Chlorotoluene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
4-Chlorotoluene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0325	1.03	08/21/2018 11:49	WG1155085
1,2-Dibromoethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
Dibromomethane	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
1,2-Dichlorobenzene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
1,3-Dichlorobenzene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
1,4-Dichlorobenzene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
Dichlorodifluoromethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
1,1-Dichloroethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
1,2-Dichloroethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
1,1-Dichloroethene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
cis-1,2-Dichloroethene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
trans-1,2-Dichloroethene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
1,2-Dichloropropane	ND		0.00643	1.02	08/23/2018 04:22	WG1156089
1,1-Dichloropropene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
1,3-Dichloropropane	ND		0.00650	1.03	08/21/2018 11:49	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
trans-1,3-Dichloropropene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
2,2-Dichloropropane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
Di-isopropyl ether	ND		0.00130	1.03	08/21/2018 11:49	WG1155085
Ethylbenzene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
Hexachloro-1,3-butadiene	ND		0.0325	1.03	08/21/2018 11:49	WG1155085
Isopropylbenzene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
p-Isopropyltoluene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
2-Butanone (MEK)	0.0398	JO	0.0325	1.03	08/21/2018 11:49	WG1155085
Methylene Chloride	ND		0.0325	1.03	08/21/2018 11:49	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0325	1.03	08/21/2018 11:49	WG1155085
Methyl tert-butyl ether	ND		0.00130	1.03	08/21/2018 11:49	WG1155085
Naphthalene	ND		0.0162	1.03	08/21/2018 11:49	WG1155085
n-Propylbenzene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
Styrene	ND		0.0162	1.03	08/21/2018 11:49	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
Tetrachloroethene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
Toluene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
1,2,3-Trichlorobenzene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
1,2,4-Trichlorobenzene	ND		0.0162	1.03	08/21/2018 11:49	WG1155085
1,1,1-Trichloroethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
1,1,2-Trichloroethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
Trichloroethene	ND		0.00129	1.02	08/23/2018 04:22	WG1156089
Trichlorofluoromethane	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
1,2,3-Trichloropropane	ND		0.0162	1.03	08/21/2018 11:49	WG1155085
1,2,4-Trimethylbenzene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
1,2,3-Trimethylbenzene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
Vinyl chloride	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
1,3,5-Trimethylbenzene	ND		0.00650	1.03	08/21/2018 11:49	WG1155085
o-Xylene	ND		0.00325	1.03	08/21/2018 11:49	WG1155085
m&p-Xylene	ND		0.00515	1.02	08/23/2018 04:22	WG1156089
(S) Toluene-d8	112		80.0-120		08/21/2018 11:49	WG1155085
(S) Toluene-d8	116		80.0-120		08/23/2018 04:22	WG1156089
(S) Dibromofluoromethane	94.2		74.0-131		08/21/2018 11:49	WG1155085
(S) Dibromofluoromethane	100		74.0-131		08/23/2018 04:22	WG1156089
(S) 4-Bromofluorobenzene	99.7		64.0-132		08/21/2018 11:49	WG1155085
(S) 4-Bromofluorobenzene	104		64.0-132		08/23/2018 04:22	WG1156089

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.05	1	08/22/2018 22:13	WG1155921
Residual Range Organics (RRO)	ND		12.6	1	08/22/2018 22:13	WG1155921
(S) o-Terphenyl	52.5		18.0-148		08/22/2018 22:13	WG1155921

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Acenaphthene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Acenaphthylene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Benzo(a)anthracene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Benzo(a)pyrene	ND		0.00757	1	08/23/2018 19:38	WG1155953



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Benzo(g,h,i)perylene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Benzo(k)fluoranthene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Chrysene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Dibenz(a,h)anthracene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Fluoranthene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Fluorene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Naphthalene	ND		0.0252	1	08/23/2018 19:38	WG1155953
Phenanthrene	ND		0.00757	1	08/23/2018 19:38	WG1155953
Pyrene	ND		0.00757	1	08/23/2018 19:38	WG1155953
1-Methylnaphthalene	ND		0.0252	1	08/23/2018 19:38	WG1155953
2-Methylnaphthalene	ND		0.0252	1	08/23/2018 19:38	WG1155953
2-Chloronaphthalene	ND		0.0252	1	08/23/2018 19:38	WG1155953
(S) Nitrobenzene-d5	91.2		14.0-149		08/23/2018 19:38	WG1155953
(S) 2-Fluorobiphenyl	79.6		34.0-125		08/23/2018 19:38	WG1155953
(S) p-Terphenyl-d14	72.1		23.0-120		08/23/2018 19:38	WG1155953

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
Total Solids	82.7		1	08/23/2018 10:19	WG1155868

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	0.156		0.0242	1	08/24/2018 11:08	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.42	1	08/23/2018 16:34	WG1155924
Barium	106		0.604	1	08/23/2018 16:34	WG1155924
Cadmium	ND		0.604	1	08/23/2018 16:34	WG1155924
Chromium	14.9		1.21	1	08/23/2018 16:34	WG1155924
Lead	12.8		0.604	1	08/23/2018 16:34	WG1155924
Selenium	ND		2.42	1	08/23/2018 16:34	WG1155924
Silver	ND		1.21	1	08/23/2018 16:34	WG1155924

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0305	1.01	08/21/2018 12:08	WG1155085
Acrylonitrile	ND		0.0153	1.01	08/21/2018 12:08	WG1155085
Benzene	ND		0.00122	1.01	08/21/2018 12:08	WG1155085
Bromobenzene	ND		0.0153	1.01	08/21/2018 12:08	WG1155085
Bromodichloromethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
Bromoform	ND		0.0305	1.01	08/21/2018 12:08	WG1155085
Bromomethane	ND		0.0153	1.01	08/21/2018 12:08	WG1155085
n-Butylbenzene	ND		0.0153	1.01	08/21/2018 12:08	WG1155085
sec-Butylbenzene	ND		0.0153	1.01	08/21/2018 12:08	WG1155085
tert-Butylbenzene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
Carbon tetrachloride	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
Chlorobenzene	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
Chlorodibromomethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
Chloroethane	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
Chloroform	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
Chloromethane	ND		0.0153	1.01	08/21/2018 12:08	WG1155085
2-Chlorotoluene	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
4-Chlorotoluene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0305	1.01	08/21/2018 12:08	WG1155085
1,2-Dibromoethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
Dibromomethane	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
1,2-Dichlorobenzene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
1,3-Dichlorobenzene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
1,4-Dichlorobenzene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
Dichlorodifluoromethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
1,1-Dichloroethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
1,2-Dichloroethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
1,1-Dichloroethene	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
cis-1,2-Dichloroethene	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
trans-1,2-Dichloroethene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
1,2-Dichloropropane	ND		0.00610	1.01	08/23/2018 04:45	WG1156089
1,1-Dichloropropene	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
1,3-Dichloropropane	ND		0.00610	1.01	08/21/2018 12:08	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
trans-1,3-Dichloropropene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
2,2-Dichloropropane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
Di-isopropyl ether	ND		0.00122	1.01	08/21/2018 12:08	WG1155085
Ethylbenzene	0.00386		0.00305	1.01	08/21/2018 12:08	WG1155085
Hexachloro-1,3-butadiene	ND		0.0305	1.01	08/21/2018 12:08	WG1155085
Isopropylbenzene	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
p-Isopropyltoluene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
2-Butanone (MEK)	0.0469	JO	0.0305	1.01	08/21/2018 12:08	WG1155085
Methylene Chloride	ND		0.0305	1.01	08/21/2018 12:08	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0305	1.01	08/21/2018 12:08	WG1155085
Methyl tert-butyl ether	ND		0.00122	1.01	08/21/2018 12:08	WG1155085
Naphthalene	ND		0.0153	1.01	08/21/2018 12:08	WG1155085
n-Propylbenzene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
Styrene	ND		0.0153	1.01	08/21/2018 12:08	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
Tetrachloroethene	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
Toluene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
1,2,3-Trichlorobenzene	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
1,2,4-Trichlorobenzene	ND		0.0153	1.01	08/21/2018 12:08	WG1155085
1,1,1-Trichloroethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
1,1,2-Trichloroethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
Trichloroethene	ND		0.00122	1.01	08/23/2018 04:45	WG1156089
Trichlorofluoromethane	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
1,2,3-Trichloropropane	ND		0.0153	1.01	08/21/2018 12:08	WG1155085
1,2,4-Trimethylbenzene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
1,2,3-Trimethylbenzene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
Vinyl chloride	ND		0.00305	1.01	08/21/2018 12:08	WG1155085
1,3,5-Trimethylbenzene	ND		0.00610	1.01	08/21/2018 12:08	WG1155085
o-Xylene	0.00340		0.00305	1.01	08/21/2018 12:08	WG1155085
m&p-Xylene	ND		0.00488	1.01	08/23/2018 04:45	WG1156089
(S) Toluene-d8	108		80.0-120		08/21/2018 12:08	WG1155085
(S) Toluene-d8	115		80.0-120		08/23/2018 04:45	WG1156089
(S) Dibromofluoromethane	99.5		74.0-131		08/21/2018 12:08	WG1155085
(S) Dibromofluoromethane	100		74.0-131		08/23/2018 04:45	WG1156089
(S) 4-Bromofluorobenzene	95.6		64.0-132		08/21/2018 12:08	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 04:45	WG1156089

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.84	1	08/22/2018 22:26	WG1155921
Residual Range Organics (RRO)	ND		12.1	1	08/22/2018 22:26	WG1155921
(S) o-Terphenyl	53.8		18.0-148		08/22/2018 22:26	WG1155921

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00725	1	08/23/2018 19:59	WG1155953
Acenaphthene	ND		0.00725	1	08/23/2018 19:59	WG1155953
Acenaphthylene	ND		0.00725	1	08/23/2018 19:59	WG1155953
Benzo(a)anthracene	0.138		0.00725	1	08/23/2018 19:59	WG1155953
Benzo(a)pyrene	0.125		0.00725	1	08/23/2018 19:59	WG1155953



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	0.164		0.00725	1	08/23/2018 19:59	WG1155953
Benzo(g,h,i)perylene	0.0821		0.00725	1	08/23/2018 19:59	WG1155953
Benzo(k)fluoranthene	0.0742		0.00725	1	08/23/2018 19:59	WG1155953
Chrysene	0.117		0.00725	1	08/23/2018 19:59	WG1155953
Dibenz(a,h)anthracene	0.0253		0.00725	1	08/23/2018 19:59	WG1155953
Fluoranthene	0.249		0.00725	1	08/23/2018 19:59	WG1155953
Fluorene	ND		0.00725	1	08/23/2018 19:59	WG1155953
Indeno(1,2,3-cd)pyrene	0.0775		0.00725	1	08/23/2018 19:59	WG1155953
Naphthalene	ND		0.0242	1	08/23/2018 19:59	WG1155953
Phenanthrene	0.0175		0.00725	1	08/23/2018 19:59	WG1155953
Pyrene	0.187		0.00725	1	08/23/2018 19:59	WG1155953
1-Methylnaphthalene	ND		0.0242	1	08/23/2018 19:59	WG1155953
2-Methylnaphthalene	ND		0.0242	1	08/23/2018 19:59	WG1155953
2-Chloronaphthalene	ND		0.0242	1	08/23/2018 19:59	WG1155953
(S) Nitrobenzene-d5	91.5		14.0-149		08/23/2018 19:59	WG1155953
(S) 2-Fluorobiphenyl	78.1		34.0-125		08/23/2018 19:59	WG1155953
(S) p-Terphenyl-d14	72.0		23.0-120		08/23/2018 19:59	WG1155953

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



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.0250	1	08/21/2018 12:27	WG1155085
Acrylonitrile	ND		0.0125	1	08/21/2018 12:27	WG1155085
Benzene	ND		0.00100	1	08/21/2018 12:27	WG1155085
Bromobenzene	ND		0.0125	1	08/21/2018 12:27	WG1155085
Bromodichloromethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
Bromoform	ND		0.0250	1	08/21/2018 12:27	WG1155085
Bromomethane	ND		0.0125	1	08/21/2018 12:27	WG1155085
n-Butylbenzene	ND		0.0125	1	08/21/2018 12:27	WG1155085
sec-Butylbenzene	ND		0.0125	1	08/21/2018 12:27	WG1155085
tert-Butylbenzene	ND		0.00500	1	08/21/2018 12:27	WG1155085
Carbon tetrachloride	ND		0.00500	1	08/21/2018 12:27	WG1155085
Chlorobenzene	ND		0.00250	1	08/21/2018 12:27	WG1155085
Chlorodibromomethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
Chloroethane	ND		0.00500	1	08/21/2018 12:27	WG1155085
Chloroform	ND		0.00250	1	08/21/2018 12:27	WG1155085
Chloromethane	ND		0.0125	1	08/21/2018 12:27	WG1155085
2-Chlorotoluene	ND		0.00250	1	08/21/2018 12:27	WG1155085
4-Chlorotoluene	ND		0.00500	1	08/21/2018 12:27	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	08/21/2018 12:27	WG1155085
1,2-Dibromoethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
Dibromomethane	ND		0.00500	1	08/21/2018 12:27	WG1155085
1,2-Dichlorobenzene	ND		0.00500	1	08/21/2018 12:27	WG1155085
1,3-Dichlorobenzene	ND		0.00500	1	08/21/2018 12:27	WG1155085
1,4-Dichlorobenzene	ND		0.00500	1	08/21/2018 12:27	WG1155085
Dichlorodifluoromethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
1,1-Dichloroethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
1,2-Dichloroethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
1,1-Dichloroethene	ND		0.00250	1	08/21/2018 12:27	WG1155085
cis-1,2-Dichloroethene	ND		0.00250	1	08/21/2018 12:27	WG1155085
trans-1,2-Dichloroethene	ND		0.00500	1	08/21/2018 12:27	WG1155085
1,2-Dichloropropane	ND		0.00500	1	08/23/2018 05:09	WG1156089
1,1-Dichloropropene	ND		0.00250	1	08/21/2018 12:27	WG1155085
1,3-Dichloropropane	ND		0.00500	1	08/21/2018 12:27	WG1155085
cis-1,3-Dichloropropene	ND		0.00250	1	08/21/2018 12:27	WG1155085
trans-1,3-Dichloropropene	ND		0.00500	1	08/21/2018 12:27	WG1155085
2,2-Dichloropropane	ND		0.00250	1	08/21/2018 12:27	WG1155085
Di-isopropyl ether	ND		0.00100	1	08/21/2018 12:27	WG1155085
Ethylbenzene	ND		0.00250	1	08/21/2018 12:27	WG1155085
Hexachloro-1,3-butadiene	ND		0.0250	1	08/21/2018 12:27	WG1155085
Isopropylbenzene	ND		0.00250	1	08/21/2018 12:27	WG1155085
p-Isopropyltoluene	ND		0.00500	1	08/21/2018 12:27	WG1155085
2-Butanone (MEK)	0.0311	JO	0.0250	1	08/21/2018 12:27	WG1155085
Methylene Chloride	ND		0.0250	1	08/21/2018 12:27	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	08/21/2018 12:27	WG1155085
Methyl tert-butyl ether	ND		0.00100	1	08/21/2018 12:27	WG1155085
Naphthalene	ND		0.0125	1	08/21/2018 12:27	WG1155085
n-Propylbenzene	ND		0.00500	1	08/21/2018 12:27	WG1155085
Styrene	ND		0.0125	1	08/21/2018 12:27	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
Tetrachloroethene	ND		0.00250	1	08/21/2018 12:27	WG1155085
Toluene	ND		0.00500	1	08/21/2018 12:27	WG1155085
1,2,3-Trichlorobenzene	ND		0.00250	1	08/21/2018 12:27	WG1155085
1,2,4-Trichlorobenzene	ND		0.0125	1	08/21/2018 12:27	WG1155085
1,1,1-Trichloroethane	ND		0.00250	1	08/21/2018 12:27	WG1155085

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



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichloroethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
Trichloroethene	ND		0.00100	1	08/23/2018 05:09	WG1156089
Trichlorofluoromethane	ND		0.00250	1	08/21/2018 12:27	WG1155085
1,2,3-Trichloropropane	ND		0.0125	1	08/21/2018 12:27	WG1155085
1,2,4-Trimethylbenzene	ND		0.00500	1	08/21/2018 12:27	WG1155085
1,2,3-Trimethylbenzene	ND		0.00500	1	08/21/2018 12:27	WG1155085
Vinyl chloride	ND		0.00250	1	08/21/2018 12:27	WG1155085
1,3,5-Trimethylbenzene	ND		0.00500	1	08/21/2018 12:27	WG1155085
o-Xylene	ND		0.00250	1	08/21/2018 12:27	WG1155085
m&p-Xylene	ND		0.00400	1	08/23/2018 05:09	WG1156089
(S) Toluene-d8	116		80.0-120		08/21/2018 12:27	WG1155085
(S) Toluene-d8	115		80.0-120		08/23/2018 05:09	WG1156089
(S) Dibromofluoromethane	93.3		74.0-131		08/21/2018 12:27	WG1155085
(S) Dibromofluoromethane	97.2		74.0-131		08/23/2018 05:09	WG1156089
(S) 4-Bromofluorobenzene	99.2		64.0-132		08/21/2018 12:27	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 05:09	WG1156089

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	82.0		1	08/23/2018 10:33	WG1155864

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0244	1	08/24/2018 11:10	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.44	1	08/23/2018 16:36	WG1155924
Barium	82.9		0.610	1	08/23/2018 16:36	WG1155924
Cadmium	ND		0.610	1	08/23/2018 16:36	WG1155924
Chromium	13.0		1.22	1	08/23/2018 16:36	WG1155924
Lead	3.08	<u>B</u>	0.610	1	08/23/2018 16:36	WG1155924
Selenium	ND		2.44	1	08/23/2018 16:36	WG1155924
Silver	ND		1.22	1	08/23/2018 16:36	WG1155924

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	0.0782		0.0305	1	08/21/2018 12:46	WG1155085
Acrylonitrile	ND		0.0152	1	08/21/2018 12:46	WG1155085
Benzene	ND		0.00122	1	08/21/2018 12:46	WG1155085
Bromobenzene	ND		0.0152	1	08/21/2018 12:46	WG1155085
Bromodichloromethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
Bromoform	ND		0.0305	1	08/21/2018 12:46	WG1155085
Bromomethane	ND		0.0152	1	08/21/2018 12:46	WG1155085
n-Butylbenzene	ND		0.0152	1	08/21/2018 12:46	WG1155085
sec-Butylbenzene	ND		0.0152	1	08/21/2018 12:46	WG1155085
tert-Butylbenzene	ND		0.00610	1	08/21/2018 12:46	WG1155085
Carbon tetrachloride	ND		0.00610	1	08/21/2018 12:46	WG1155085
Chlorobenzene	ND		0.00305	1	08/21/2018 12:46	WG1155085
Chlorodibromomethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
Chloroethane	ND		0.00610	1	08/21/2018 12:46	WG1155085
Chloroform	ND		0.00305	1	08/21/2018 12:46	WG1155085
Chloromethane	ND		0.0152	1	08/21/2018 12:46	WG1155085
2-Chlorotoluene	ND		0.00305	1	08/21/2018 12:46	WG1155085
4-Chlorotoluene	ND		0.00610	1	08/21/2018 12:46	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0305	1	08/21/2018 12:46	WG1155085
1,2-Dibromoethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
Dibromomethane	ND		0.00610	1	08/21/2018 12:46	WG1155085
1,2-Dichlorobenzene	ND		0.00610	1	08/21/2018 12:46	WG1155085
1,3-Dichlorobenzene	ND		0.00610	1	08/21/2018 12:46	WG1155085
1,4-Dichlorobenzene	ND		0.00610	1	08/21/2018 12:46	WG1155085
Dichlorodifluoromethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
1,1-Dichloroethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
1,2-Dichloroethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
1,1-Dichloroethene	ND		0.00305	1	08/21/2018 12:46	WG1155085
cis-1,2-Dichloroethene	ND		0.00305	1	08/21/2018 12:46	WG1155085
trans-1,2-Dichloroethene	ND		0.00610	1	08/21/2018 12:46	WG1155085
1,2-Dichloropropane	ND		0.00610	1	08/23/2018 05:33	WG1156089
1,1-Dichloropropene	ND		0.00305	1	08/21/2018 12:46	WG1155085
1,3-Dichloropropane	ND		0.00610	1	08/21/2018 12:46	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00305	1	08/21/2018 12:46	WG1155085
trans-1,3-Dichloropropene	ND		0.00610	1	08/21/2018 12:46	WG1155085
2,2-Dichloropropane	ND		0.00305	1	08/21/2018 12:46	WG1155085
Di-isopropyl ether	ND		0.00122	1	08/21/2018 12:46	WG1155085
Ethylbenzene	ND		0.00305	1	08/21/2018 12:46	WG1155085
Hexachloro-1,3-butadiene	ND		0.0305	1	08/21/2018 12:46	WG1155085
Isopropylbenzene	ND		0.00305	1	08/21/2018 12:46	WG1155085
p-Isopropyltoluene	ND		0.00610	1	08/21/2018 12:46	WG1155085
2-Butanone (MEK)	0.0429	JO	0.0305	1	08/21/2018 12:46	WG1155085
Methylene Chloride	ND		0.0305	1	08/21/2018 12:46	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0305	1	08/21/2018 12:46	WG1155085
Methyl tert-butyl ether	ND		0.00122	1	08/21/2018 12:46	WG1155085
Naphthalene	ND		0.0152	1	08/21/2018 12:46	WG1155085
n-Propylbenzene	ND		0.00610	1	08/21/2018 12:46	WG1155085
Styrene	ND		0.0152	1	08/21/2018 12:46	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
Tetrachloroethene	ND		0.00305	1	08/21/2018 12:46	WG1155085
Toluene	ND		0.00610	1	08/21/2018 12:46	WG1155085
1,2,3-Trichlorobenzene	ND		0.00305	1	08/21/2018 12:46	WG1155085
1,2,4-Trichlorobenzene	ND		0.0152	1	08/21/2018 12:46	WG1155085
1,1,1-Trichloroethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
1,1,2-Trichloroethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
Trichloroethene	ND		0.00122	1	08/23/2018 05:33	WG1156089
Trichlorofluoromethane	ND		0.00305	1	08/21/2018 12:46	WG1155085
1,2,3-Trichloropropane	ND		0.0152	1	08/21/2018 12:46	WG1155085
1,2,4-Trimethylbenzene	ND		0.00610	1	08/21/2018 12:46	WG1155085
1,2,3-Trimethylbenzene	ND		0.00610	1	08/21/2018 12:46	WG1155085
Vinyl chloride	ND		0.00305	1	08/21/2018 12:46	WG1155085
1,3,5-Trimethylbenzene	ND		0.00610	1	08/21/2018 12:46	WG1155085
o-Xylene	ND		0.00305	1	08/21/2018 12:46	WG1155085
m&p-Xylene	ND		0.00488	1	08/23/2018 05:33	WG1156089
(S) Toluene-d8	110		80.0-120		08/21/2018 12:46	WG1155085
(S) Toluene-d8	114		80.0-120		08/23/2018 05:33	WG1156089
(S) Dibromofluoromethane	102		74.0-131		08/21/2018 12:46	WG1155085
(S) Dibromofluoromethane	101		74.0-131		08/23/2018 05:33	WG1156089
(S) 4-Bromofluorobenzene	96.2		64.0-132		08/21/2018 12:46	WG1155085
(S) 4-Bromofluorobenzene	104		64.0-132		08/23/2018 05:33	WG1156089

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.88	1	08/22/2018 22:38	WG1155921
Residual Range Organics (RRO)	ND		12.2	1	08/22/2018 22:38	WG1155921
(S) o-Terphenyl	47.7		18.0-148		08/22/2018 22:38	WG1155921

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Acenaphthene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Acenaphthylene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Benzo(a)anthracene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Benzo(a)pyrene	ND		0.00731	1	08/23/2018 20:21	WG1155953



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Benzo(g,h,i)perylene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Benzo(k)fluoranthene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Chrysene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Dibenz(a,h)anthracene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Fluoranthene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Fluorene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Naphthalene	ND		0.0244	1	08/23/2018 20:21	WG1155953
Phenanthrene	ND		0.00731	1	08/23/2018 20:21	WG1155953
Pyrene	ND		0.00731	1	08/23/2018 20:21	WG1155953
1-Methylnaphthalene	ND		0.0244	1	08/23/2018 20:21	WG1155953
2-Methylnaphthalene	ND		0.0244	1	08/23/2018 20:21	WG1155953
2-Chloronaphthalene	ND		0.0244	1	08/23/2018 20:21	WG1155953
(S) Nitrobenzene-d5	77.6		14.0-149		08/23/2018 20:21	WG1155953
(S) 2-Fluorobiphenyl	71.0		34.0-125		08/23/2018 20:21	WG1155953
(S) p-Terphenyl-d14	67.3		23.0-120		08/23/2018 20:21	WG1155953

- 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	80.5		1	08/23/2018 10:33	WG1155864

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0248	1	08/24/2018 11:13	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.48	1	08/23/2018 16:39	WG1155924
Barium	85.9		0.621	1	08/23/2018 16:39	WG1155924
Cadmium	ND		0.621	1	08/23/2018 16:39	WG1155924
Chromium	14.8		1.24	1	08/23/2018 16:39	WG1155924
Lead	3.39	<u>B</u>	0.621	1	08/23/2018 16:39	WG1155924
Selenium	ND		2.48	1	08/23/2018 16:39	WG1155924
Silver	ND		1.24	1	08/23/2018 16:39	WG1155924

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	0.0408		0.0311	1	08/21/2018 13:05	WG1155085
Acrylonitrile	ND		0.0155	1	08/21/2018 13:05	WG1155085
Benzene	ND		0.00124	1	08/21/2018 13:05	WG1155085
Bromobenzene	ND		0.0155	1	08/21/2018 13:05	WG1155085
Bromodichloromethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
Bromoform	ND		0.0311	1	08/21/2018 13:05	WG1155085
Bromomethane	ND		0.0155	1	08/21/2018 13:05	WG1155085
n-Butylbenzene	ND		0.0155	1	08/21/2018 13:05	WG1155085
sec-Butylbenzene	ND		0.0155	1	08/21/2018 13:05	WG1155085
tert-Butylbenzene	ND		0.00621	1	08/21/2018 13:05	WG1155085
Carbon tetrachloride	ND		0.00621	1	08/21/2018 13:05	WG1155085
Chlorobenzene	ND		0.00311	1	08/21/2018 13:05	WG1155085
Chlorodibromomethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
Chloroethane	ND		0.00621	1	08/21/2018 13:05	WG1155085
Chloroform	ND		0.00311	1	08/21/2018 13:05	WG1155085
Chloromethane	ND		0.0155	1	08/21/2018 13:05	WG1155085
2-Chlorotoluene	ND		0.00311	1	08/21/2018 13:05	WG1155085
4-Chlorotoluene	ND		0.00621	1	08/21/2018 13:05	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0311	1	08/21/2018 13:05	WG1155085
1,2-Dibromoethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
Dibromomethane	ND		0.00621	1	08/21/2018 13:05	WG1155085
1,2-Dichlorobenzene	ND		0.00621	1	08/21/2018 13:05	WG1155085
1,3-Dichlorobenzene	ND		0.00621	1	08/21/2018 13:05	WG1155085
1,4-Dichlorobenzene	ND		0.00621	1	08/21/2018 13:05	WG1155085
Dichlorodifluoromethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
1,1-Dichloroethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
1,2-Dichloroethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
1,1-Dichloroethene	ND		0.00311	1	08/21/2018 13:05	WG1155085
cis-1,2-Dichloroethene	ND		0.00311	1	08/21/2018 13:05	WG1155085
trans-1,2-Dichloroethene	ND		0.00621	1	08/21/2018 13:05	WG1155085
1,2-Dichloropropane	ND		0.00621	1	08/23/2018 05:57	WG1156089
1,1-Dichloropropene	ND		0.00311	1	08/21/2018 13:05	WG1155085
1,3-Dichloropropane	ND		0.00621	1	08/21/2018 13:05	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00311	1	08/21/2018 13:05	WG1155085
trans-1,3-Dichloropropene	ND		0.00621	1	08/21/2018 13:05	WG1155085
2,2-Dichloropropane	ND		0.00311	1	08/21/2018 13:05	WG1155085
Di-isopropyl ether	ND		0.00124	1	08/21/2018 13:05	WG1155085
Ethylbenzene	ND		0.00311	1	08/21/2018 13:05	WG1155085
Hexachloro-1,3-butadiene	ND		0.0311	1	08/21/2018 13:05	WG1155085
Isopropylbenzene	ND		0.00311	1	08/21/2018 13:05	WG1155085
p-Isopropyltoluene	ND		0.00621	1	08/21/2018 13:05	WG1155085
2-Butanone (MEK)	0.0380	JO	0.0311	1	08/21/2018 13:05	WG1155085
Methylene Chloride	ND		0.0311	1	08/21/2018 13:05	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0311	1	08/21/2018 13:05	WG1155085
Methyl tert-butyl ether	ND		0.00124	1	08/21/2018 13:05	WG1155085
Naphthalene	ND		0.0155	1	08/21/2018 13:05	WG1155085
n-Propylbenzene	ND		0.00621	1	08/21/2018 13:05	WG1155085
Styrene	ND		0.0155	1	08/21/2018 13:05	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
Tetrachloroethene	ND		0.00311	1	08/21/2018 13:05	WG1155085
Toluene	ND		0.00621	1	08/21/2018 13:05	WG1155085
1,2,3-Trichlorobenzene	ND		0.00311	1	08/21/2018 13:05	WG1155085
1,2,4-Trichlorobenzene	ND		0.0155	1	08/21/2018 13:05	WG1155085
1,1,1-Trichloroethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
1,1,2-Trichloroethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
Trichloroethene	ND		0.00124	1	08/23/2018 05:57	WG1156089
Trichlorofluoromethane	ND		0.00311	1	08/21/2018 13:05	WG1155085
1,2,3-Trichloropropane	ND		0.0155	1	08/21/2018 13:05	WG1155085
1,2,4-Trimethylbenzene	ND		0.00621	1	08/21/2018 13:05	WG1155085
1,2,3-Trimethylbenzene	ND		0.00621	1	08/21/2018 13:05	WG1155085
Vinyl chloride	ND		0.00311	1	08/21/2018 13:05	WG1155085
1,3,5-Trimethylbenzene	ND		0.00621	1	08/21/2018 13:05	WG1155085
o-Xylene	ND		0.00311	1	08/21/2018 13:05	WG1155085
m&p-Xylene	ND		0.00497	1	08/23/2018 05:57	WG1156089
(S) Toluene-d8	112		80.0-120		08/21/2018 13:05	WG1155085
(S) Toluene-d8	115		80.0-120		08/23/2018 05:57	WG1156089
(S) Dibromofluoromethane	93.9		74.0-131		08/21/2018 13:05	WG1155085
(S) Dibromofluoromethane	98.9		74.0-131		08/23/2018 05:57	WG1156089
(S) 4-Bromofluorobenzene	98.9		64.0-132		08/21/2018 13:05	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 05:57	WG1156089

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

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.97	1	08/22/2018 22:51	WG1155921
Residual Range Organics (RRO)	ND		12.4	1	08/22/2018 22:51	WG1155921
(S) o-Terphenyl	61.9		18.0-148		08/22/2018 22:51	WG1155921

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Acenaphthene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Acenaphthylene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Benzo(a)anthracene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Benzo(a)pyrene	ND		0.00745	1	08/23/2018 20:42	WG1155953



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Benzo(g,h,i)perylene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Benzo(k)fluoranthene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Chrysene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Dibenz(a,h)anthracene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Fluoranthene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Fluorene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Naphthalene	ND		0.0248	1	08/23/2018 20:42	WG1155953
Phenanthrene	ND		0.00745	1	08/23/2018 20:42	WG1155953
Pyrene	ND		0.00745	1	08/23/2018 20:42	WG1155953
1-Methylnaphthalene	ND		0.0248	1	08/23/2018 20:42	WG1155953
2-Methylnaphthalene	ND		0.0248	1	08/23/2018 20:42	WG1155953
2-Chloronaphthalene	ND		0.0248	1	08/23/2018 20:42	WG1155953
(S) Nitrobenzene-d5	90.6		14.0-149		08/23/2018 20:42	WG1155953
(S) 2-Fluorobiphenyl	72.4		34.0-125		08/23/2018 20:42	WG1155953
(S) p-Terphenyl-d14	68.7		23.0-120		08/23/2018 20:42	WG1155953

- 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	82.0		1	08/23/2018 10:33	WG1155864

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0244	1	08/24/2018 11:23	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.44	1	08/23/2018 16:42	WG1155924
Barium	78.2		0.609	1	08/23/2018 16:42	WG1155924
Cadmium	ND		0.609	1	08/23/2018 16:42	WG1155924
Chromium	12.1		1.22	1	08/23/2018 16:42	WG1155924
Lead	2.99	<u>B</u>	0.609	1	08/23/2018 16:42	WG1155924
Selenium	ND		2.44	1	08/23/2018 16:42	WG1155924
Silver	ND		1.22	1	08/23/2018 16:42	WG1155924

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	0.0317		0.0305	1	08/21/2018 13:24	WG1155085
Acrylonitrile	ND		0.0152	1	08/21/2018 13:24	WG1155085
Benzene	ND		0.00122	1	08/21/2018 13:24	WG1155085
Bromobenzene	ND		0.0152	1	08/21/2018 13:24	WG1155085
Bromodichloromethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
Bromoform	ND		0.0305	1	08/21/2018 13:24	WG1155085
Bromomethane	ND		0.0152	1	08/21/2018 13:24	WG1155085
n-Butylbenzene	ND		0.0152	1	08/21/2018 13:24	WG1155085
sec-Butylbenzene	ND		0.0152	1	08/21/2018 13:24	WG1155085
tert-Butylbenzene	ND		0.00609	1	08/21/2018 13:24	WG1155085
Carbon tetrachloride	ND		0.00609	1	08/21/2018 13:24	WG1155085
Chlorobenzene	ND		0.00305	1	08/21/2018 13:24	WG1155085
Chlorodibromomethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
Chloroethane	ND		0.00609	1	08/21/2018 13:24	WG1155085
Chloroform	ND		0.00305	1	08/21/2018 13:24	WG1155085
Chloromethane	ND		0.0152	1	08/21/2018 13:24	WG1155085
2-Chlorotoluene	ND		0.00305	1	08/21/2018 13:24	WG1155085
4-Chlorotoluene	ND		0.00609	1	08/21/2018 13:24	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0305	1	08/21/2018 13:24	WG1155085
1,2-Dibromoethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
Dibromomethane	ND		0.00609	1	08/21/2018 13:24	WG1155085
1,2-Dichlorobenzene	ND		0.00609	1	08/21/2018 13:24	WG1155085
1,3-Dichlorobenzene	ND		0.00609	1	08/21/2018 13:24	WG1155085
1,4-Dichlorobenzene	ND		0.00609	1	08/21/2018 13:24	WG1155085
Dichlorodifluoromethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
1,1-Dichloroethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
1,2-Dichloroethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
1,1-Dichloroethene	ND		0.00305	1	08/21/2018 13:24	WG1155085
cis-1,2-Dichloroethene	ND		0.00305	1	08/21/2018 13:24	WG1155085
trans-1,2-Dichloroethene	ND		0.00609	1	08/21/2018 13:24	WG1155085
1,2-Dichloropropane	ND		0.00609	1	08/23/2018 06:20	WG1156089
1,1-Dichloropropene	ND		0.00305	1	08/21/2018 13:24	WG1155085
1,3-Dichloropropane	ND		0.00609	1	08/21/2018 13:24	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/15/18 10:50

L1018742

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00305	1	08/21/2018 13:24	WG1155085
trans-1,3-Dichloropropene	ND		0.00609	1	08/21/2018 13:24	WG1155085
2,2-Dichloropropane	ND		0.00305	1	08/21/2018 13:24	WG1155085
Di-isopropyl ether	ND		0.00122	1	08/21/2018 13:24	WG1155085
Ethylbenzene	ND		0.00305	1	08/21/2018 13:24	WG1155085
Hexachloro-1,3-butadiene	ND		0.0305	1	08/21/2018 13:24	WG1155085
Isopropylbenzene	ND		0.00305	1	08/21/2018 13:24	WG1155085
p-Isopropyltoluene	ND		0.00609	1	08/21/2018 13:24	WG1155085
2-Butanone (MEK)	0.0316	JO	0.0305	1	08/21/2018 13:24	WG1155085
Methylene Chloride	ND		0.0305	1	08/21/2018 13:24	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0305	1	08/21/2018 13:24	WG1155085
Methyl tert-butyl ether	ND		0.00122	1	08/21/2018 13:24	WG1155085
Naphthalene	ND		0.0152	1	08/21/2018 13:24	WG1155085
n-Propylbenzene	ND		0.00609	1	08/21/2018 13:24	WG1155085
Styrene	ND		0.0152	1	08/21/2018 13:24	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
Tetrachloroethene	ND		0.00305	1	08/21/2018 13:24	WG1155085
Toluene	ND		0.00609	1	08/21/2018 13:24	WG1155085
1,2,3-Trichlorobenzene	ND		0.00305	1	08/21/2018 13:24	WG1155085
1,2,4-Trichlorobenzene	ND		0.0152	1	08/21/2018 13:24	WG1155085
1,1,1-Trichloroethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
1,1,2-Trichloroethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
Trichloroethene	ND		0.00122	1	08/23/2018 06:20	WG1156089
Trichlorofluoromethane	ND		0.00305	1	08/21/2018 13:24	WG1155085
1,2,3-Trichloropropane	ND		0.0152	1	08/21/2018 13:24	WG1155085
1,2,4-Trimethylbenzene	ND		0.00609	1	08/21/2018 13:24	WG1155085
1,2,3-Trimethylbenzene	ND		0.00609	1	08/21/2018 13:24	WG1155085
Vinyl chloride	ND		0.00305	1	08/21/2018 13:24	WG1155085
1,3,5-Trimethylbenzene	ND		0.00609	1	08/21/2018 13:24	WG1155085
o-Xylene	ND		0.00305	1	08/21/2018 13:24	WG1155085
m&p-Xylene	ND		0.00488	1	08/23/2018 06:20	WG1156089
(S) Toluene-d8	106		80.0-120		08/21/2018 13:24	WG1155085
(S) Toluene-d8	117		80.0-120		08/23/2018 06:20	WG1156089
(S) Dibromofluoromethane	99.4		74.0-131		08/21/2018 13:24	WG1155085
(S) Dibromofluoromethane	98.6		74.0-131		08/23/2018 06:20	WG1156089
(S) 4-Bromofluorobenzene	99.4		64.0-132		08/21/2018 13:24	WG1155085
(S) 4-Bromofluorobenzene	102		64.0-132		08/23/2018 06:20	WG1156089



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.88	1	08/22/2018 23:04	WG1155921
Residual Range Organics (RRO)	ND		12.2	1	08/22/2018 23:04	WG1155921
(S) o-Terphenyl	61.2		18.0-148		08/22/2018 23:04	WG1155921

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Acenaphthene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Acenaphthylene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Benzo(a)anthracene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Benzo(a)pyrene	ND		0.00731	1	08/23/2018 21:03	WG1155953



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Benzo(g,h,i)perylene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Benzo(k)fluoranthene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Chrysene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Dibenz(a,h)anthracene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Fluoranthene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Fluorene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Naphthalene	ND		0.0244	1	08/23/2018 21:03	WG1155953
Phenanthrene	ND		0.00731	1	08/23/2018 21:03	WG1155953
Pyrene	ND		0.00731	1	08/23/2018 21:03	WG1155953
1-Methylnaphthalene	ND		0.0244	1	08/23/2018 21:03	WG1155953
2-Methylnaphthalene	ND		0.0244	1	08/23/2018 21:03	WG1155953
2-Chloronaphthalene	ND		0.0244	1	08/23/2018 21:03	WG1155953
(S) Nitrobenzene-d5	98.1		14.0-149		08/23/2018 21:03	WG1155953
(S) 2-Fluorobiphenyl	79.8		34.0-125		08/23/2018 21:03	WG1155953
(S) p-Terphenyl-d14	75.1		23.0-120		08/23/2018 21:03	WG1155953

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	80.0		1	08/23/2018 10:48	WG1155862

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0250	1	08/24/2018 11:25	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.50	1	08/23/2018 16:44	WG1155924
Barium	75.5		0.625	1	08/23/2018 16:44	WG1155924
Cadmium	ND		0.625	1	08/23/2018 16:44	WG1155924
Chromium	12.4		1.25	1	08/23/2018 16:44	WG1155924
Lead	3.10	<u>B</u>	0.625	1	08/23/2018 16:44	WG1155924
Selenium	ND		2.50	1	08/23/2018 16:44	WG1155924
Silver	ND		1.25	1	08/23/2018 16:44	WG1155924

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0312	1	08/21/2018 13:43	WG1155085
Acrylonitrile	ND		0.0156	1	08/21/2018 13:43	WG1155085
Benzene	ND		0.00125	1	08/21/2018 13:43	WG1155085
Bromobenzene	ND		0.0156	1	08/21/2018 13:43	WG1155085
Bromodichloromethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
Bromoform	ND		0.0312	1	08/21/2018 13:43	WG1155085
Bromomethane	ND		0.0156	1	08/21/2018 13:43	WG1155085
n-Butylbenzene	ND		0.0156	1	08/21/2018 13:43	WG1155085
sec-Butylbenzene	ND		0.0156	1	08/21/2018 13:43	WG1155085
tert-Butylbenzene	ND		0.00625	1	08/21/2018 13:43	WG1155085
Carbon tetrachloride	ND		0.00625	1	08/21/2018 13:43	WG1155085
Chlorobenzene	ND		0.00312	1	08/21/2018 13:43	WG1155085
Chlorodibromomethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
Chloroethane	ND		0.00625	1	08/21/2018 13:43	WG1155085
Chloroform	ND		0.00312	1	08/21/2018 13:43	WG1155085
Chloromethane	ND		0.0156	1	08/21/2018 13:43	WG1155085
2-Chlorotoluene	ND		0.00312	1	08/21/2018 13:43	WG1155085
4-Chlorotoluene	ND		0.00625	1	08/21/2018 13:43	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0312	1	08/21/2018 13:43	WG1155085
1,2-Dibromoethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
Dibromomethane	ND		0.00625	1	08/21/2018 13:43	WG1155085
1,2-Dichlorobenzene	ND		0.00625	1	08/21/2018 13:43	WG1155085
1,3-Dichlorobenzene	ND		0.00625	1	08/21/2018 13:43	WG1155085
1,4-Dichlorobenzene	ND		0.00625	1	08/21/2018 13:43	WG1155085
Dichlorodifluoromethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
1,1-Dichloroethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
1,2-Dichloroethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
1,1-Dichloroethene	ND		0.00312	1	08/21/2018 13:43	WG1155085
cis-1,2-Dichloroethene	ND		0.00312	1	08/21/2018 13:43	WG1155085
trans-1,2-Dichloroethene	ND		0.00625	1	08/21/2018 13:43	WG1155085
1,2-Dichloropropane	ND		0.00625	1	08/23/2018 06:44	WG1156089
1,1-Dichloropropene	ND		0.00312	1	08/21/2018 13:43	WG1155085
1,3-Dichloropropane	ND		0.00625	1	08/21/2018 13:43	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

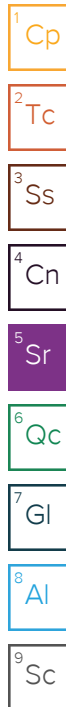


Collected date/time: 08/15/18 12:50

L1018742

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00312	1	08/21/2018 13:43	WG1155085
trans-1,3-Dichloropropene	ND		0.00625	1	08/21/2018 13:43	WG1155085
2,2-Dichloropropane	ND		0.00312	1	08/21/2018 13:43	WG1155085
Di-isopropyl ether	ND		0.00125	1	08/21/2018 13:43	WG1155085
Ethylbenzene	ND		0.00312	1	08/21/2018 13:43	WG1155085
Hexachloro-1,3-butadiene	ND		0.0312	1	08/21/2018 13:43	WG1155085
Isopropylbenzene	ND		0.00312	1	08/21/2018 13:43	WG1155085
p-Isopropyltoluene	ND		0.00625	1	08/21/2018 13:43	WG1155085
2-Butanone (MEK)	0.0332	JO	0.0312	1	08/21/2018 13:43	WG1155085
Methylene Chloride	ND		0.0312	1	08/21/2018 13:43	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0312	1	08/21/2018 13:43	WG1155085
Methyl tert-butyl ether	ND		0.00125	1	08/21/2018 13:43	WG1155085
Naphthalene	ND		0.0156	1	08/21/2018 13:43	WG1155085
n-Propylbenzene	ND		0.00625	1	08/21/2018 13:43	WG1155085
Styrene	ND		0.0156	1	08/21/2018 13:43	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
Tetrachloroethene	ND		0.00312	1	08/21/2018 13:43	WG1155085
Toluene	ND		0.00625	1	08/21/2018 13:43	WG1155085
1,2,3-Trichlorobenzene	ND		0.00312	1	08/21/2018 13:43	WG1155085
1,2,4-Trichlorobenzene	ND		0.0156	1	08/21/2018 13:43	WG1155085
1,1,1-Trichloroethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
1,1,2-Trichloroethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
Trichloroethene	ND		0.00125	1	08/23/2018 06:44	WG1156089
Trichlorofluoromethane	ND		0.00312	1	08/21/2018 13:43	WG1155085
1,2,3-Trichloropropane	ND		0.0156	1	08/21/2018 13:43	WG1155085
1,2,4-Trimethylbenzene	ND		0.00625	1	08/21/2018 13:43	WG1155085
1,2,3-Trimethylbenzene	ND		0.00625	1	08/21/2018 13:43	WG1155085
Vinyl chloride	ND		0.00312	1	08/21/2018 13:43	WG1155085
1,3,5-Trimethylbenzene	ND		0.00625	1	08/21/2018 13:43	WG1155085
o-Xylene	ND		0.00312	1	08/21/2018 13:43	WG1155085
m&p-Xylene	ND		0.00500	1	08/23/2018 06:44	WG1156089
(S) Toluene-d8	111		80.0-120		08/21/2018 13:43	WG1155085
(S) Toluene-d8	117		80.0-120		08/23/2018 06:44	WG1156089
(S) Dibromofluoromethane	97.9		74.0-131		08/21/2018 13:43	WG1155085
(S) Dibromofluoromethane	98.2		74.0-131		08/23/2018 06:44	WG1156089
(S) 4-Bromofluorobenzene	91.8		64.0-132		08/21/2018 13:43	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 06:44	WG1156089



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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.00	1	08/22/2018 23:16	WG1155921
Residual Range Organics (RRO)	ND		12.5	1	08/22/2018 23:16	WG1155921
(S) o-Terphenyl	58.3		18.0-148		08/22/2018 23:16	WG1155921

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Acenaphthene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Acenaphthylene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Benzo(a)anthracene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Benzo(a)pyrene	ND		0.00750	1	08/23/2018 21:24	WG1155953



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Benzo(g,h,i)perylene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Benzo(k)fluoranthene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Chrysene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Dibenz(a,h)anthracene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Fluoranthene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Fluorene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Naphthalene	ND		0.0250	1	08/23/2018 21:24	WG1155953
Phenanthrene	ND		0.00750	1	08/23/2018 21:24	WG1155953
Pyrene	ND		0.00750	1	08/23/2018 21:24	WG1155953
1-Methylnaphthalene	ND		0.0250	1	08/23/2018 21:24	WG1155953
2-Methylnaphthalene	ND		0.0250	1	08/23/2018 21:24	WG1155953
2-Chloronaphthalene	ND		0.0250	1	08/23/2018 21:24	WG1155953
(S) Nitrobenzene-d5	88.2		14.0-149		08/23/2018 21:24	WG1155953
(S) 2-Fluorobiphenyl	72.7		34.0-125		08/23/2018 21:24	WG1155953
(S) p-Terphenyl-d14	63.2		23.0-120		08/23/2018 21:24	WG1155953

- 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
Total Solids	81.9		1	08/23/2018 10:33	WG1155864

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0244	1	08/24/2018 11:28	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.44	1	08/23/2018 16:47	WG1155924
Barium	76.3		0.611	1	08/23/2018 16:47	WG1155924
Cadmium	ND		0.611	1	08/23/2018 16:47	WG1155924
Chromium	14.3		1.22	1	08/23/2018 16:47	WG1155924
Lead	3.35	<u>B</u>	0.611	1	08/23/2018 16:47	WG1155924
Selenium	ND		2.44	1	08/23/2018 16:47	WG1155924
Silver	ND		1.22	1	08/23/2018 16:47	WG1155924

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	0.0406		0.0305	1	08/21/2018 14:02	WG1155085
Acrylonitrile	ND		0.0153	1	08/21/2018 14:02	WG1155085
Benzene	ND		0.00122	1	08/21/2018 14:02	WG1155085
Bromobenzene	ND		0.0153	1	08/21/2018 14:02	WG1155085
Bromodichloromethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
Bromoform	ND		0.0305	1	08/21/2018 14:02	WG1155085
Bromomethane	ND		0.0153	1	08/21/2018 14:02	WG1155085
n-Butylbenzene	ND		0.0153	1	08/21/2018 14:02	WG1155085
sec-Butylbenzene	ND		0.0153	1	08/21/2018 14:02	WG1155085
tert-Butylbenzene	ND		0.00611	1	08/21/2018 14:02	WG1155085
Carbon tetrachloride	ND		0.00611	1	08/21/2018 14:02	WG1155085
Chlorobenzene	ND		0.00305	1	08/21/2018 14:02	WG1155085
Chlorodibromomethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
Chloroethane	ND		0.00611	1	08/21/2018 14:02	WG1155085
Chloroform	ND		0.00305	1	08/21/2018 14:02	WG1155085
Chloromethane	ND		0.0153	1	08/21/2018 14:02	WG1155085
2-Chlorotoluene	ND		0.00305	1	08/21/2018 14:02	WG1155085
4-Chlorotoluene	ND		0.00611	1	08/21/2018 14:02	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0305	1	08/21/2018 14:02	WG1155085
1,2-Dibromoethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
Dibromomethane	ND		0.00611	1	08/21/2018 14:02	WG1155085
1,2-Dichlorobenzene	ND		0.00611	1	08/21/2018 14:02	WG1155085
1,3-Dichlorobenzene	ND		0.00611	1	08/21/2018 14:02	WG1155085
1,4-Dichlorobenzene	ND		0.00611	1	08/21/2018 14:02	WG1155085
Dichlorodifluoromethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
1,1-Dichloroethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
1,2-Dichloroethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
1,1-Dichloroethene	ND		0.00305	1	08/21/2018 14:02	WG1155085
cis-1,2-Dichloroethene	ND		0.00305	1	08/21/2018 14:02	WG1155085
trans-1,2-Dichloroethene	ND		0.00611	1	08/21/2018 14:02	WG1155085
1,2-Dichloropropane	ND		0.00611	1	08/23/2018 07:07	WG1156089
1,1-Dichloropropene	ND		0.00305	1	08/21/2018 14:02	WG1155085
1,3-Dichloropropane	ND		0.00611	1	08/21/2018 14:02	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/15/18 14:35

L1018742

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00305	1	08/21/2018 14:02	WG1155085
trans-1,3-Dichloropropene	ND		0.00611	1	08/21/2018 14:02	WG1155085
2,2-Dichloropropane	ND		0.00305	1	08/21/2018 14:02	WG1155085
Di-isopropyl ether	ND		0.00122	1	08/21/2018 14:02	WG1155085
Ethylbenzene	ND		0.00305	1	08/21/2018 14:02	WG1155085
Hexachloro-1,3-butadiene	ND		0.0305	1	08/21/2018 14:02	WG1155085
Isopropylbenzene	ND		0.00305	1	08/21/2018 14:02	WG1155085
p-Isopropyltoluene	ND		0.00611	1	08/21/2018 14:02	WG1155085
2-Butanone (MEK)	0.0419	JO	0.0305	1	08/21/2018 14:02	WG1155085
Methylene Chloride	ND		0.0305	1	08/21/2018 14:02	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0305	1	08/21/2018 14:02	WG1155085
Methyl tert-butyl ether	ND		0.00122	1	08/21/2018 14:02	WG1155085
Naphthalene	ND		0.0153	1	08/21/2018 14:02	WG1155085
n-Propylbenzene	ND		0.00611	1	08/21/2018 14:02	WG1155085
Styrene	ND		0.0153	1	08/21/2018 14:02	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
Tetrachloroethene	ND		0.00305	1	08/21/2018 14:02	WG1155085
Toluene	ND		0.00611	1	08/21/2018 14:02	WG1155085
1,2,3-Trichlorobenzene	ND		0.00305	1	08/21/2018 14:02	WG1155085
1,2,4-Trichlorobenzene	ND		0.0153	1	08/21/2018 14:02	WG1155085
1,1,1-Trichloroethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
1,1,2-Trichloroethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
Trichloroethene	ND		0.00122	1	08/23/2018 07:07	WG1156089
Trichlorofluoromethane	ND		0.00305	1	08/21/2018 14:02	WG1155085
1,2,3-Trichloropropane	ND		0.0153	1	08/21/2018 14:02	WG1155085
1,2,4-Trimethylbenzene	ND		0.00611	1	08/21/2018 14:02	WG1155085
1,2,3-Trimethylbenzene	ND		0.00611	1	08/21/2018 14:02	WG1155085
Vinyl chloride	ND		0.00305	1	08/21/2018 14:02	WG1155085
1,3,5-Trimethylbenzene	ND		0.00611	1	08/21/2018 14:02	WG1155085
o-Xylene	ND		0.00305	1	08/21/2018 14:02	WG1155085
m&p-Xylene	ND		0.00489	1	08/23/2018 07:07	WG1156089
(S) Toluene-d8	108		80.0-120		08/21/2018 14:02	WG1155085
(S) Toluene-d8	118		80.0-120		08/23/2018 07:07	WG1156089
(S) Dibromofluoromethane	102		74.0-131		08/21/2018 14:02	WG1155085
(S) Dibromofluoromethane	94.8		74.0-131		08/23/2018 07:07	WG1156089
(S) 4-Bromofluorobenzene	109		64.0-132		08/21/2018 14:02	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 07:07	WG1156089

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.89	1	08/23/2018 06:27	WG1155921
Residual Range Organics (RRO)	ND		12.2	1	08/23/2018 06:27	WG1155921
(S) o-Terphenyl	68.2		18.0-148		08/23/2018 06:27	WG1155921

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Acenaphthene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Acenaphthylene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Benzo(a)anthracene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Benzo(a)pyrene	ND		0.00733	1	08/23/2018 21:45	WG1155953



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Benzo(g,h,i)perylene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Benzo(k)fluoranthene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Chrysene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Dibenz(a,h)anthracene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Fluoranthene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Fluorene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Naphthalene	ND		0.0244	1	08/23/2018 21:45	WG1155953
Phenanthrene	ND		0.00733	1	08/23/2018 21:45	WG1155953
Pyrene	ND		0.00733	1	08/23/2018 21:45	WG1155953
1-Methylnaphthalene	ND		0.0244	1	08/23/2018 21:45	WG1155953
2-Methylnaphthalene	ND		0.0244	1	08/23/2018 21:45	WG1155953
2-Chloronaphthalene	ND		0.0244	1	08/23/2018 21:45	WG1155953
(S) Nitrobenzene-d5	93.6		14.0-149		08/23/2018 21:45	WG1155953
(S) 2-Fluorobiphenyl	77.0		34.0-125		08/23/2018 21:45	WG1155953
(S) p-Terphenyl-d14	72.6		23.0-120		08/23/2018 21:45	WG1155953

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.0		1	08/23/2018 10:33	WG1155864

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0222	1	08/24/2018 11:30	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.88		2.22	1	08/23/2018 16:50	WG1155924
Barium	81.8		0.555	1	08/23/2018 16:50	WG1155924
Cadmium	ND		0.555	1	08/23/2018 16:50	WG1155924
Chromium	13.7		1.11	1	08/23/2018 16:50	WG1155924
Lead	4.47		0.555	1	08/23/2018 16:50	WG1155924
Selenium	ND		2.22	1	08/23/2018 16:50	WG1155924
Silver	ND		1.11	1	08/23/2018 16:50	WG1155924

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	0.0313		0.0278	1	08/21/2018 14:20	WG1155085
Acrylonitrile	ND		0.0139	1	08/21/2018 14:20	WG1155085
Benzene	ND		0.00111	1	08/21/2018 14:20	WG1155085
Bromobenzene	ND		0.0139	1	08/21/2018 14:20	WG1155085
Bromodichloromethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
Bromoform	ND		0.0278	1	08/21/2018 14:20	WG1155085
Bromomethane	ND		0.0139	1	08/21/2018 14:20	WG1155085
n-Butylbenzene	ND		0.0139	1	08/21/2018 14:20	WG1155085
sec-Butylbenzene	ND		0.0139	1	08/21/2018 14:20	WG1155085
tert-Butylbenzene	ND		0.00555	1	08/21/2018 14:20	WG1155085
Carbon tetrachloride	ND		0.00555	1	08/21/2018 14:20	WG1155085
Chlorobenzene	ND		0.00278	1	08/21/2018 14:20	WG1155085
Chlorodibromomethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
Chloroethane	ND		0.00555	1	08/21/2018 14:20	WG1155085
Chloroform	ND		0.00278	1	08/21/2018 14:20	WG1155085
Chloromethane	ND		0.0139	1	08/21/2018 14:20	WG1155085
2-Chlorotoluene	ND		0.00278	1	08/21/2018 14:20	WG1155085
4-Chlorotoluene	ND		0.00555	1	08/21/2018 14:20	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0278	1	08/21/2018 14:20	WG1155085
1,2-Dibromoethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
Dibromomethane	ND		0.00555	1	08/21/2018 14:20	WG1155085
1,2-Dichlorobenzene	ND		0.00555	1	08/21/2018 14:20	WG1155085
1,3-Dichlorobenzene	ND		0.00555	1	08/21/2018 14:20	WG1155085
1,4-Dichlorobenzene	ND		0.00555	1	08/21/2018 14:20	WG1155085
Dichlorodifluoromethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
1,1-Dichloroethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
1,2-Dichloroethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
1,1-Dichloroethene	ND		0.00278	1	08/21/2018 14:20	WG1155085
cis-1,2-Dichloroethene	ND		0.00278	1	08/21/2018 14:20	WG1155085
trans-1,2-Dichloroethene	ND		0.00555	1	08/21/2018 14:20	WG1155085
1,2-Dichloropropane	ND		0.00555	1	08/23/2018 07:30	WG1156089
1,1-Dichloropropene	ND		0.00278	1	08/21/2018 14:20	WG1155085
1,3-Dichloropropane	ND		0.00555	1	08/21/2018 14:20	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00278	1	08/21/2018 14:20	WG1155085
trans-1,3-Dichloropropene	ND		0.00555	1	08/21/2018 14:20	WG1155085
2,2-Dichloropropane	ND		0.00278	1	08/21/2018 14:20	WG1155085
Di-isopropyl ether	ND		0.00111	1	08/21/2018 14:20	WG1155085
Ethylbenzene	ND		0.00278	1	08/21/2018 14:20	WG1155085
Hexachloro-1,3-butadiene	ND		0.0278	1	08/21/2018 14:20	WG1155085
Isopropylbenzene	ND		0.00278	1	08/21/2018 14:20	WG1155085
p-Isopropyltoluene	ND		0.00555	1	08/21/2018 14:20	WG1155085
2-Butanone (MEK)	0.0292	JO	0.0278	1	08/21/2018 14:20	WG1155085
Methylene Chloride	ND		0.0278	1	08/21/2018 14:20	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0278	1	08/21/2018 14:20	WG1155085
Methyl tert-butyl ether	ND		0.00111	1	08/21/2018 14:20	WG1155085
Naphthalene	ND		0.0139	1	08/21/2018 14:20	WG1155085
n-Propylbenzene	ND		0.00555	1	08/21/2018 14:20	WG1155085
Styrene	ND		0.0139	1	08/21/2018 14:20	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
Tetrachloroethene	ND		0.00278	1	08/21/2018 14:20	WG1155085
Toluene	ND		0.00555	1	08/21/2018 14:20	WG1155085
1,2,3-Trichlorobenzene	ND		0.00278	1	08/21/2018 14:20	WG1155085
1,2,4-Trichlorobenzene	ND		0.0139	1	08/21/2018 14:20	WG1155085
1,1,1-Trichloroethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
1,1,2-Trichloroethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
Trichloroethene	ND		0.00111	1	08/23/2018 07:30	WG1156089
Trichlorofluoromethane	ND		0.00278	1	08/21/2018 14:20	WG1155085
1,2,3-Trichloropropane	ND		0.0139	1	08/21/2018 14:20	WG1155085
1,2,4-Trimethylbenzene	ND		0.00555	1	08/21/2018 14:20	WG1155085
1,2,3-Trimethylbenzene	ND		0.00555	1	08/21/2018 14:20	WG1155085
Vinyl chloride	ND		0.00278	1	08/21/2018 14:20	WG1155085
1,3,5-Trimethylbenzene	ND		0.00555	1	08/21/2018 14:20	WG1155085
o-Xylene	ND		0.00278	1	08/21/2018 14:20	WG1155085
m&p-Xylene	ND		0.00444	1	08/23/2018 07:30	WG1156089
(S) Toluene-d8	109		80.0-120		08/21/2018 14:20	WG1155085
(S) Toluene-d8	114		80.0-120		08/23/2018 07:30	WG1156089
(S) Dibromofluoromethane	98.5		74.0-131		08/21/2018 14:20	WG1155085
(S) Dibromofluoromethane	99.1		74.0-131		08/23/2018 07:30	WG1156089
(S) 4-Bromofluorobenzene	95.9		64.0-132		08/21/2018 14:20	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 07:30	WG1156089

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.44	1	08/23/2018 06:40	WG1155921
Residual Range Organics (RRO)	ND		11.1	1	08/23/2018 06:40	WG1155921
(S) o-Terphenyl	72.5		18.0-148		08/23/2018 06:40	WG1155921

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Acenaphthene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Acenaphthylene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Benzo(a)anthracene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Benzo(a)pyrene	ND		0.00666	1	08/23/2018 22:06	WG1155953



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Benzo(g,h,i)perylene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Benzo(k)fluoranthene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Chrysene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Dibenz(a,h)anthracene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Fluoranthene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Fluorene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Naphthalene	ND		0.0222	1	08/23/2018 22:06	WG1155953
Phenanthrene	ND		0.00666	1	08/23/2018 22:06	WG1155953
Pyrene	ND		0.00666	1	08/23/2018 22:06	WG1155953
1-Methylnaphthalene	ND		0.0222	1	08/23/2018 22:06	WG1155953
2-Methylnaphthalene	ND		0.0222	1	08/23/2018 22:06	WG1155953
2-Chloronaphthalene	ND		0.0222	1	08/23/2018 22:06	WG1155953
(S) Nitrobenzene-d5	101		14.0-149		08/23/2018 22:06	WG1155953
(S) 2-Fluorobiphenyl	81.7		34.0-125		08/23/2018 22:06	WG1155953
(S) p-Terphenyl-d14	80.4		23.0-120		08/23/2018 22:06	WG1155953

- 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	77.6		1	08/23/2018 10:33	WG1155864

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0258	1	08/24/2018 11:33	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.58	1	08/23/2018 16:52	WG1155924
Barium	83.0		0.645	1	08/23/2018 16:52	WG1155924
Cadmium	ND		0.645	1	08/23/2018 16:52	WG1155924
Chromium	13.2		1.29	1	08/23/2018 16:52	WG1155924
Lead	3.46	<u>B</u>	0.645	1	08/23/2018 16:52	WG1155924
Selenium	ND		2.58	1	08/23/2018 16:52	WG1155924
Silver	ND		1.29	1	08/23/2018 16:52	WG1155924

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0322	1	08/21/2018 14:40	WG1155085
Acrylonitrile	ND		0.0161	1	08/21/2018 14:40	WG1155085
Benzene	ND		0.00129	1	08/21/2018 14:40	WG1155085
Bromobenzene	ND		0.0161	1	08/21/2018 14:40	WG1155085
Bromodichloromethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
Bromoform	ND		0.0322	1	08/21/2018 14:40	WG1155085
Bromomethane	ND		0.0161	1	08/21/2018 14:40	WG1155085
n-Butylbenzene	ND		0.0161	1	08/21/2018 14:40	WG1155085
sec-Butylbenzene	ND		0.0161	1	08/21/2018 14:40	WG1155085
tert-Butylbenzene	ND		0.00645	1	08/21/2018 14:40	WG1155085
Carbon tetrachloride	ND		0.00645	1	08/21/2018 14:40	WG1155085
Chlorobenzene	ND		0.00322	1	08/21/2018 14:40	WG1155085
Chlorodibromomethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
Chloroethane	ND		0.00645	1	08/21/2018 14:40	WG1155085
Chloroform	ND		0.00322	1	08/21/2018 14:40	WG1155085
Chloromethane	ND		0.0161	1	08/21/2018 14:40	WG1155085
2-Chlorotoluene	ND		0.00322	1	08/21/2018 14:40	WG1155085
4-Chlorotoluene	ND		0.00645	1	08/21/2018 14:40	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0322	1	08/21/2018 14:40	WG1155085
1,2-Dibromoethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
Dibromomethane	ND		0.00645	1	08/21/2018 14:40	WG1155085
1,2-Dichlorobenzene	ND		0.00645	1	08/21/2018 14:40	WG1155085
1,3-Dichlorobenzene	ND		0.00645	1	08/21/2018 14:40	WG1155085
1,4-Dichlorobenzene	ND		0.00645	1	08/21/2018 14:40	WG1155085
Dichlorodifluoromethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
1,1-Dichloroethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
1,2-Dichloroethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
1,1-Dichloroethene	ND		0.00322	1	08/21/2018 14:40	WG1155085
cis-1,2-Dichloroethene	ND		0.00322	1	08/21/2018 14:40	WG1155085
trans-1,2-Dichloroethene	ND		0.00645	1	08/21/2018 14:40	WG1155085
1,2-Dichloropropane	ND		0.00645	1	08/23/2018 07:54	WG1156089
1,1-Dichloropropene	ND		0.00322	1	08/21/2018 14:40	WG1155085
1,3-Dichloropropane	ND		0.00645	1	08/21/2018 14:40	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/16/18 08:15

L1018742

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00322	1	08/21/2018 14:40	WG1155085
trans-1,3-Dichloropropene	ND		0.00645	1	08/21/2018 14:40	WG1155085
2,2-Dichloropropane	ND		0.00322	1	08/21/2018 14:40	WG1155085
Di-isopropyl ether	ND		0.00129	1	08/21/2018 14:40	WG1155085
Ethylbenzene	ND		0.00322	1	08/21/2018 14:40	WG1155085
Hexachloro-1,3-butadiene	ND		0.0322	1	08/21/2018 14:40	WG1155085
Isopropylbenzene	ND		0.00322	1	08/21/2018 14:40	WG1155085
p-Isopropyltoluene	ND		0.00645	1	08/21/2018 14:40	WG1155085
2-Butanone (MEK)	0.0442	JO	0.0322	1	08/21/2018 14:40	WG1155085
Methylene Chloride	ND		0.0322	1	08/21/2018 14:40	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0322	1	08/21/2018 14:40	WG1155085
Methyl tert-butyl ether	ND		0.00129	1	08/21/2018 14:40	WG1155085
Naphthalene	ND		0.0161	1	08/21/2018 14:40	WG1155085
n-Propylbenzene	ND		0.00645	1	08/21/2018 14:40	WG1155085
Styrene	ND		0.0161	1	08/21/2018 14:40	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
Tetrachloroethene	ND		0.00322	1	08/21/2018 14:40	WG1155085
Toluene	ND		0.00645	1	08/21/2018 14:40	WG1155085
1,2,3-Trichlorobenzene	ND		0.00322	1	08/21/2018 14:40	WG1155085
1,2,4-Trichlorobenzene	ND		0.0161	1	08/21/2018 14:40	WG1155085
1,1,1-Trichloroethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
1,1,2-Trichloroethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
Trichloroethene	ND		0.00129	1	08/23/2018 07:54	WG1156089
Trichlorofluoromethane	ND		0.00322	1	08/21/2018 14:40	WG1155085
1,2,3-Trichloropropane	ND		0.0161	1	08/21/2018 14:40	WG1155085
1,2,4-Trimethylbenzene	ND		0.00645	1	08/21/2018 14:40	WG1155085
1,2,3-Trimethylbenzene	ND		0.00645	1	08/21/2018 14:40	WG1155085
Vinyl chloride	ND		0.00322	1	08/21/2018 14:40	WG1155085
1,3,5-Trimethylbenzene	ND		0.00645	1	08/21/2018 14:40	WG1155085
o-Xylene	ND		0.00322	1	08/21/2018 14:40	WG1155085
m&p-Xylene	ND		0.00516	1	08/23/2018 07:54	WG1156089
(S) Toluene-d8	109		80.0-120		08/21/2018 14:40	WG1155085
(S) Toluene-d8	117		80.0-120		08/23/2018 07:54	WG1156089
(S) Dibromofluoromethane	112		74.0-131		08/21/2018 14:40	WG1155085
(S) Dibromofluoromethane	95.9		74.0-131		08/23/2018 07:54	WG1156089
(S) 4-Bromofluorobenzene	98.9		64.0-132		08/21/2018 14:40	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 07:54	WG1156089

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.16	1	08/23/2018 06:52	WG1155921
Residual Range Organics (RRO)	ND		12.9	1	08/23/2018 06:52	WG1155921
(S) o-Terphenyl	74.1		18.0-148		08/23/2018 06:52	WG1155921

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Acenaphthene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Acenaphthylene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Benzo(a)anthracene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Benzo(a)pyrene	ND		0.00773	1	08/23/2018 22:27	WG1155953



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Benzo(g,h,i)perylene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Benzo(k)fluoranthene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Chrysene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Dibenz(a,h)anthracene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Fluoranthene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Fluorene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Naphthalene	ND		0.0258	1	08/23/2018 22:27	WG1155953
Phenanthrene	ND		0.00773	1	08/23/2018 22:27	WG1155953
Pyrene	ND		0.00773	1	08/23/2018 22:27	WG1155953
1-Methylnaphthalene	ND		0.0258	1	08/23/2018 22:27	WG1155953
2-Methylnaphthalene	ND		0.0258	1	08/23/2018 22:27	WG1155953
2-Chloronaphthalene	ND		0.0258	1	08/23/2018 22:27	WG1155953
(S) Nitrobenzene-d5	91.8		14.0-149		08/23/2018 22:27	WG1155953
(S) 2-Fluorobiphenyl	72.6		34.0-125		08/23/2018 22:27	WG1155953
(S) p-Terphenyl-d14	64.5		23.0-120		08/23/2018 22:27	WG1155953

- 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	95.6		1	08/23/2018 10:33	WG1155864

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0209	1	08/24/2018 11:36	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	4.93		2.09	1	08/23/2018 16:55	WG1155924
Barium	79.0		0.523	1	08/23/2018 16:55	WG1155924
Cadmium	ND		0.523	1	08/23/2018 16:55	WG1155924
Chromium	10.9		1.05	1	08/23/2018 16:55	WG1155924
Lead	3.83		0.523	1	08/23/2018 16:55	WG1155924
Selenium	ND		2.09	1	08/23/2018 16:55	WG1155924
Silver	ND		1.05	1	08/23/2018 16:55	WG1155924

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0261	1	08/21/2018 14:58	WG1155085
Acrylonitrile	ND		0.0131	1	08/21/2018 14:58	WG1155085
Benzene	ND		0.00105	1	08/21/2018 14:58	WG1155085
Bromobenzene	ND		0.0131	1	08/21/2018 14:58	WG1155085
Bromodichloromethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
Bromoform	ND		0.0261	1	08/21/2018 14:58	WG1155085
Bromomethane	ND		0.0131	1	08/21/2018 14:58	WG1155085
n-Butylbenzene	ND		0.0131	1	08/21/2018 14:58	WG1155085
sec-Butylbenzene	ND		0.0131	1	08/21/2018 14:58	WG1155085
tert-Butylbenzene	ND		0.00523	1	08/21/2018 14:58	WG1155085
Carbon tetrachloride	ND		0.00523	1	08/21/2018 14:58	WG1155085
Chlorobenzene	ND		0.00261	1	08/21/2018 14:58	WG1155085
Chlorodibromomethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
Chloroethane	ND		0.00523	1	08/21/2018 14:58	WG1155085
Chloroform	ND		0.00261	1	08/21/2018 14:58	WG1155085
Chloromethane	ND		0.0131	1	08/21/2018 14:58	WG1155085
2-Chlorotoluene	ND		0.00261	1	08/21/2018 14:58	WG1155085
4-Chlorotoluene	ND		0.00523	1	08/21/2018 14:58	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0261	1	08/21/2018 14:58	WG1155085
1,2-Dibromoethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
Dibromomethane	ND		0.00523	1	08/21/2018 14:58	WG1155085
1,2-Dichlorobenzene	ND		0.00523	1	08/21/2018 14:58	WG1155085
1,3-Dichlorobenzene	ND		0.00523	1	08/21/2018 14:58	WG1155085
1,4-Dichlorobenzene	ND		0.00523	1	08/21/2018 14:58	WG1155085
Dichlorodifluoromethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
1,1-Dichloroethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
1,2-Dichloroethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
1,1-Dichloroethene	ND		0.00261	1	08/21/2018 14:58	WG1155085
cis-1,2-Dichloroethene	ND		0.00261	1	08/21/2018 14:58	WG1155085
trans-1,2-Dichloroethene	ND		0.00523	1	08/21/2018 14:58	WG1155085
1,2-Dichloropropane	ND		0.00523	1	08/23/2018 08:17	WG1156089
1,1-Dichloropropene	ND		0.00261	1	08/21/2018 14:58	WG1155085
1,3-Dichloropropane	ND		0.00523	1	08/21/2018 14:58	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00261	1	08/21/2018 14:58	WG1155085
trans-1,3-Dichloropropene	ND		0.00523	1	08/21/2018 14:58	WG1155085
2,2-Dichloropropane	ND		0.00261	1	08/21/2018 14:58	WG1155085
Di-isopropyl ether	ND		0.00105	1	08/21/2018 14:58	WG1155085
Ethylbenzene	ND		0.00261	1	08/21/2018 14:58	WG1155085
Hexachloro-1,3-butadiene	ND		0.0261	1	08/21/2018 14:58	WG1155085
Isopropylbenzene	ND		0.00261	1	08/21/2018 14:58	WG1155085
p-Isopropyltoluene	ND		0.00523	1	08/21/2018 14:58	WG1155085
2-Butanone (MEK)	0.0326	JO	0.0261	1	08/21/2018 14:58	WG1155085
Methylene Chloride	ND		0.0261	1	08/21/2018 14:58	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0261	1	08/21/2018 14:58	WG1155085
Methyl tert-butyl ether	ND		0.00105	1	08/21/2018 14:58	WG1155085
Naphthalene	ND		0.0131	1	08/21/2018 14:58	WG1155085
n-Propylbenzene	ND		0.00523	1	08/21/2018 14:58	WG1155085
Styrene	ND		0.0131	1	08/21/2018 14:58	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
Tetrachloroethene	ND		0.00261	1	08/21/2018 14:58	WG1155085
Toluene	ND		0.00523	1	08/21/2018 14:58	WG1155085
1,2,3-Trichlorobenzene	ND		0.00261	1	08/21/2018 14:58	WG1155085
1,2,4-Trichlorobenzene	ND		0.0131	1	08/21/2018 14:58	WG1155085
1,1,1-Trichloroethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
1,1,2-Trichloroethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
Trichloroethene	ND		0.00105	1	08/23/2018 08:17	WG1156089
Trichlorofluoromethane	ND		0.00261	1	08/21/2018 14:58	WG1155085
1,2,3-Trichloropropane	ND		0.0131	1	08/21/2018 14:58	WG1155085
1,2,4-Trimethylbenzene	ND		0.00523	1	08/21/2018 14:58	WG1155085
1,2,3-Trimethylbenzene	ND		0.00523	1	08/21/2018 14:58	WG1155085
Vinyl chloride	ND		0.00261	1	08/21/2018 14:58	WG1155085
1,3,5-Trimethylbenzene	ND		0.00523	1	08/21/2018 14:58	WG1155085
o-Xylene	ND		0.00261	1	08/21/2018 14:58	WG1155085
m&p-Xylene	ND		0.00418	1	08/23/2018 08:17	WG1156089
(S) Toluene-d8	115		80.0-120		08/21/2018 14:58	WG1155085
(S) Toluene-d8	115		80.0-120		08/23/2018 08:17	WG1156089
(S) Dibromofluoromethane	98.1		74.0-131		08/21/2018 14:58	WG1155085
(S) Dibromofluoromethane	97.3		74.0-131		08/23/2018 08:17	WG1156089
(S) 4-Bromofluorobenzene	99.9		64.0-132		08/21/2018 14:58	WG1155085
(S) 4-Bromofluorobenzene	102		64.0-132		08/23/2018 08:17	WG1156089

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.18	1	08/23/2018 07:05	WG1155921
Residual Range Organics (RRO)	ND		10.5	1	08/23/2018 07:05	WG1155921
(S) o-Terphenyl	69.5		18.0-148		08/23/2018 07:05	WG1155921

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Acenaphthene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Acenaphthylene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Benzo(a)anthracene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Benzo(a)pyrene	ND		0.00628	1	08/23/2018 23:31	WG1155953



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Benzo(g,h,i)perylene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Benzo(k)fluoranthene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Chrysene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Dibenz(a,h)anthracene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Fluoranthene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Fluorene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Naphthalene	ND		0.0209	1	08/23/2018 23:31	WG1155953
Phenanthrene	ND		0.00628	1	08/23/2018 23:31	WG1155953
Pyrene	ND		0.00628	1	08/23/2018 23:31	WG1155953
1-Methylnaphthalene	ND		0.0209	1	08/23/2018 23:31	WG1155953
2-Methylnaphthalene	ND		0.0209	1	08/23/2018 23:31	WG1155953
2-Chloronaphthalene	ND		0.0209	1	08/23/2018 23:31	WG1155953
<i>(S)</i> Nitrobenzene-d5	95.7		14.0-149		08/23/2018 23:31	WG1155953
<i>(S)</i> 2-Fluorobiphenyl	76.4		34.0-125		08/23/2018 23:31	WG1155953
<i>(S)</i> p-Terphenyl-d14	77.0		23.0-120		08/23/2018 23:31	WG1155953

- 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	79.0		1	08/23/2018 10:33	WG1155864

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0253	1	08/24/2018 11:38	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.53	1	08/23/2018 17:03	WG1155924
Barium	80.8		0.633	1	08/23/2018 17:03	WG1155924
Cadmium	ND		0.633	1	08/23/2018 17:03	WG1155924
Chromium	13.5		1.27	1	08/23/2018 17:03	WG1155924
Lead	3.29	<u>B</u>	0.633	1	08/23/2018 17:03	WG1155924
Selenium	ND		2.53	1	08/23/2018 17:03	WG1155924
Silver	ND		1.27	1	08/23/2018 17:03	WG1155924

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0316	1	08/21/2018 15:17	WG1155085
Acrylonitrile	ND		0.0158	1	08/21/2018 15:17	WG1155085
Benzene	ND		0.00127	1	08/21/2018 15:17	WG1155085
Bromobenzene	ND		0.0158	1	08/21/2018 15:17	WG1155085
Bromodichloromethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
Bromoform	ND		0.0316	1	08/21/2018 15:17	WG1155085
Bromomethane	ND		0.0158	1	08/21/2018 15:17	WG1155085
n-Butylbenzene	ND		0.0158	1	08/21/2018 15:17	WG1155085
sec-Butylbenzene	ND		0.0158	1	08/21/2018 15:17	WG1155085
tert-Butylbenzene	ND		0.00633	1	08/21/2018 15:17	WG1155085
Carbon tetrachloride	ND		0.00633	1	08/21/2018 15:17	WG1155085
Chlorobenzene	ND		0.00316	1	08/21/2018 15:17	WG1155085
Chlorodibromomethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
Chloroethane	ND		0.00633	1	08/21/2018 15:17	WG1155085
Chloroform	ND		0.00316	1	08/21/2018 15:17	WG1155085
Chloromethane	ND		0.0158	1	08/21/2018 15:17	WG1155085
2-Chlorotoluene	ND		0.00316	1	08/21/2018 15:17	WG1155085
4-Chlorotoluene	ND		0.00633	1	08/21/2018 15:17	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0316	1	08/21/2018 15:17	WG1155085
1,2-Dibromoethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
Dibromomethane	ND		0.00633	1	08/21/2018 15:17	WG1155085
1,2-Dichlorobenzene	ND		0.00633	1	08/21/2018 15:17	WG1155085
1,3-Dichlorobenzene	ND		0.00633	1	08/21/2018 15:17	WG1155085
1,4-Dichlorobenzene	ND		0.00633	1	08/21/2018 15:17	WG1155085
Dichlorodifluoromethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
1,1-Dichloroethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
1,2-Dichloroethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
1,1-Dichloroethene	ND		0.00316	1	08/21/2018 15:17	WG1155085
cis-1,2-Dichloroethene	ND		0.00316	1	08/21/2018 15:17	WG1155085
trans-1,2-Dichloroethene	ND		0.00633	1	08/21/2018 15:17	WG1155085
1,2-Dichloropropane	ND		0.00633	1	08/23/2018 08:41	WG1156089
1,1-Dichloropropene	ND		0.00316	1	08/21/2018 15:17	WG1155085
1,3-Dichloropropane	ND		0.00633	1	08/21/2018 15:17	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00316	1	08/21/2018 15:17	WG1155085
trans-1,3-Dichloropropene	ND		0.00633	1	08/21/2018 15:17	WG1155085
2,2-Dichloropropane	ND		0.00316	1	08/21/2018 15:17	WG1155085
Di-isopropyl ether	ND		0.00127	1	08/21/2018 15:17	WG1155085
Ethylbenzene	ND		0.00316	1	08/21/2018 15:17	WG1155085
Hexachloro-1,3-butadiene	ND		0.0316	1	08/21/2018 15:17	WG1155085
Isopropylbenzene	ND		0.00316	1	08/21/2018 15:17	WG1155085
p-Isopropyltoluene	ND		0.00633	1	08/21/2018 15:17	WG1155085
2-Butanone (MEK)	ND	<u>JO</u>	0.0316	1	08/21/2018 15:17	WG1155085
Methylene Chloride	ND		0.0316	1	08/21/2018 15:17	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0316	1	08/21/2018 15:17	WG1155085
Methyl tert-butyl ether	ND		0.00127	1	08/21/2018 15:17	WG1155085
Naphthalene	ND		0.0158	1	08/21/2018 15:17	WG1155085
n-Propylbenzene	ND		0.00633	1	08/21/2018 15:17	WG1155085
Styrene	ND		0.0158	1	08/21/2018 15:17	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
Tetrachloroethene	ND		0.00316	1	08/21/2018 15:17	WG1155085
Toluene	ND		0.00633	1	08/21/2018 15:17	WG1155085
1,2,3-Trichlorobenzene	ND		0.00316	1	08/21/2018 15:17	WG1155085
1,2,4-Trichlorobenzene	ND		0.0158	1	08/21/2018 15:17	WG1155085
1,1,1-Trichloroethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
1,1,2-Trichloroethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
Trichloroethene	ND		0.00127	1	08/23/2018 08:41	WG1156089
Trichlorofluoromethane	ND		0.00316	1	08/21/2018 15:17	WG1155085
1,2,3-Trichloropropane	ND		0.0158	1	08/21/2018 15:17	WG1155085
1,2,4-Trimethylbenzene	ND		0.00633	1	08/21/2018 15:17	WG1155085
1,2,3-Trimethylbenzene	ND		0.00633	1	08/21/2018 15:17	WG1155085
Vinyl chloride	ND		0.00316	1	08/21/2018 15:17	WG1155085
1,3,5-Trimethylbenzene	ND		0.00633	1	08/21/2018 15:17	WG1155085
o-Xylene	ND		0.00316	1	08/21/2018 15:17	WG1155085
m&p-Xylene	ND		0.00506	1	08/23/2018 08:41	WG1156089
(S) Toluene-d8	105		80.0-120		08/21/2018 15:17	WG1155085
(S) Toluene-d8	194	<u>J1</u>	80.0-120		08/23/2018 08:41	WG1156089
(S) Dibromofluoromethane	95.7		74.0-131		08/21/2018 15:17	WG1155085
(S) Dibromofluoromethane	69.9	<u>J2</u>	74.0-131		08/23/2018 08:41	WG1156089
(S) 4-Bromofluorobenzene	111		64.0-132		08/21/2018 15:17	WG1155085
(S) 4-Bromofluorobenzene	130		64.0-132		08/23/2018 08:41	WG1156089

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.06	1	08/23/2018 07:18	WG1155921
Residual Range Organics (RRO)	ND		12.7	1	08/23/2018 07:18	WG1155921
(S) o-Terphenyl	65.8		18.0-148		08/23/2018 07:18	WG1155921

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Acenaphthene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Acenaphthylene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Benzo(a)anthracene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Benzo(a)pyrene	ND		0.00759	1	08/23/2018 23:52	WG1155953



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Benzo(g,h,i)perylene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Benzo(k)fluoranthene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Chrysene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Dibenz(a,h)anthracene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Fluoranthene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Fluorene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Naphthalene	ND		0.0253	1	08/23/2018 23:52	WG1155953
Phenanthrene	ND		0.00759	1	08/23/2018 23:52	WG1155953
Pyrene	ND		0.00759	1	08/23/2018 23:52	WG1155953
1-Methylnaphthalene	ND		0.0253	1	08/23/2018 23:52	WG1155953
2-Methylnaphthalene	ND		0.0253	1	08/23/2018 23:52	WG1155953
2-Chloronaphthalene	ND		0.0253	1	08/23/2018 23:52	WG1155953
(S) Nitrobenzene-d5	90.3		14.0-149		08/23/2018 23:52	WG1155953
(S) 2-Fluorobiphenyl	73.4		34.0-125		08/23/2018 23:52	WG1155953
(S) p-Terphenyl-d14	61.3		23.0-120		08/23/2018 23:52	WG1155953

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	92.1		1	08/23/2018 10:33	WG1155864

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0217	1	08/24/2018 11:41	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.17	1	08/23/2018 17:06	WG1155924
Barium	94.4		0.543	1	08/23/2018 17:06	WG1155924
Cadmium	ND		0.543	1	08/23/2018 17:06	WG1155924
Chromium	28.8		1.09	1	08/23/2018 17:06	WG1155924
Lead	3.80	<u>B</u>	0.543	1	08/23/2018 17:06	WG1155924
Selenium	ND		2.17	1	08/23/2018 17:06	WG1155924
Silver	ND		1.09	1	08/23/2018 17:06	WG1155924

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0282	1.04	08/21/2018 15:36	WG1155085
Acrylonitrile	ND		0.0141	1.04	08/21/2018 15:36	WG1155085
Benzene	ND		0.00113	1.04	08/21/2018 15:36	WG1155085
Bromobenzene	ND		0.0141	1.04	08/21/2018 15:36	WG1155085
Bromodichloromethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
Bromoform	ND		0.0282	1.04	08/21/2018 15:36	WG1155085
Bromomethane	ND		0.0141	1.04	08/21/2018 15:36	WG1155085
n-Butylbenzene	ND		0.0141	1.04	08/21/2018 15:36	WG1155085
sec-Butylbenzene	ND		0.0141	1.04	08/21/2018 15:36	WG1155085
tert-Butylbenzene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
Carbon tetrachloride	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
Chlorobenzene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
Chlorodibromomethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
Chloroethane	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
Chloroform	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
Chloromethane	ND		0.0141	1.04	08/21/2018 15:36	WG1155085
2-Chlorotoluene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
4-Chlorotoluene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0282	1.04	08/21/2018 15:36	WG1155085
1,2-Dibromoethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
Dibromomethane	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
1,2-Dichlorobenzene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
1,3-Dichlorobenzene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
1,4-Dichlorobenzene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
Dichlorodifluoromethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
1,1-Dichloroethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
1,2-Dichloroethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
1,1-Dichloroethene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
cis-1,2-Dichloroethene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
trans-1,2-Dichloroethene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
1,2-Dichloropropane	ND		0.00564	1.04	08/23/2018 09:04	WG1156089
1,1-Dichloropropene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
1,3-Dichloropropane	ND		0.00564	1.04	08/21/2018 15:36	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
trans-1,3-Dichloropropene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
2,2-Dichloropropane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
Di-isopropyl ether	ND		0.00113	1.04	08/21/2018 15:36	WG1155085
Ethylbenzene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
Hexachloro-1,3-butadiene	ND		0.0282	1.04	08/21/2018 15:36	WG1155085
Isopropylbenzene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
p-Isopropyltoluene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
2-Butanone (MEK)	ND	<u>JO</u>	0.0282	1.04	08/21/2018 15:36	WG1155085
Methylene Chloride	ND		0.0282	1.04	08/21/2018 15:36	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0282	1.04	08/21/2018 15:36	WG1155085
Methyl tert-butyl ether	ND		0.00113	1.04	08/21/2018 15:36	WG1155085
Naphthalene	ND		0.0141	1.04	08/21/2018 15:36	WG1155085
n-Propylbenzene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
Styrene	ND		0.0141	1.04	08/21/2018 15:36	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
Tetrachloroethene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
Toluene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
1,2,3-Trichlorobenzene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
1,2,4-Trichlorobenzene	ND		0.0141	1.04	08/21/2018 15:36	WG1155085
1,1,1-Trichloroethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
1,1,2-Trichloroethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
Trichloroethene	ND		0.00113	1.04	08/23/2018 09:04	WG1156089
Trichlorofluoromethane	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
1,2,3-Trichloropropane	ND		0.0141	1.04	08/21/2018 15:36	WG1155085
1,2,4-Trimethylbenzene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
1,2,3-Trimethylbenzene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
Vinyl chloride	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
1,3,5-Trimethylbenzene	ND		0.00564	1.04	08/21/2018 15:36	WG1155085
o-Xylene	ND		0.00282	1.04	08/21/2018 15:36	WG1155085
m&p-Xylene	ND		0.00452	1.04	08/23/2018 09:04	WG1156089
(S) Toluene-d8	112		80.0-120		08/21/2018 15:36	WG1155085
(S) Toluene-d8	112		80.0-120		08/23/2018 09:04	WG1156089
(S) Dibromofluoromethane	87.1		74.0-131		08/21/2018 15:36	WG1155085
(S) Dibromofluoromethane	99.7		74.0-131		08/23/2018 09:04	WG1156089
(S) 4-Bromofluorobenzene	98.0		64.0-132		08/21/2018 15:36	WG1155085
(S) 4-Bromofluorobenzene	102		64.0-132		08/23/2018 09:04	WG1156089

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	990		868	200	08/24/2018 09:23	WG1155939
Residual Range Organics (RRO)	3790		2170	200	08/24/2018 09:23	WG1155939
(S) o-Terphenyl	0.000	<u>JZ</u>	18.0-148		08/24/2018 09:23	WG1155939

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Acenaphthene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Acenaphthylene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Benzo(a)anthracene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Benzo(a)pyrene	ND		0.0326	5	08/24/2018 01:59	WG1155953



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Benzo(g,h,i)perylene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Benzo(k)fluoranthene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Chrysene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Dibenz(a,h)anthracene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Fluoranthene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Fluorene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Naphthalene	ND		0.109	5	08/24/2018 01:59	WG1155953
Phenanthrene	ND		0.0326	5	08/24/2018 01:59	WG1155953
Pyrene	ND		0.0326	5	08/24/2018 01:59	WG1155953
1-Methylnaphthalene	ND		0.109	5	08/24/2018 01:59	WG1155953
2-Methylnaphthalene	ND		0.109	5	08/24/2018 01:59	WG1155953
2-Chloronaphthalene	ND		0.109	5	08/24/2018 01:59	WG1155953
(S) Nitrobenzene-d5	79.8		14.0-149		08/24/2018 01:59	WG1155953
(S) 2-Fluorobiphenyl	65.8		34.0-125		08/24/2018 01:59	WG1155953
(S) p-Terphenyl-d14	67.8		23.0-120		08/24/2018 01:59	WG1155953

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
Total Solids	82.0		1	08/23/2018 10:33	WG1155864

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0244	1	08/24/2018 11:43	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.44	1	08/23/2018 17:09	WG1155924
Barium	97.1		0.610	1	08/23/2018 17:09	WG1155924
Cadmium	ND		0.610	1	08/23/2018 17:09	WG1155924
Chromium	16.6		1.22	1	08/23/2018 17:09	WG1155924
Lead	3.94	<u>B</u>	0.610	1	08/23/2018 17:09	WG1155924
Selenium	ND		2.44	1	08/23/2018 17:09	WG1155924
Silver	ND		1.22	1	08/23/2018 17:09	WG1155924

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0305	1	08/21/2018 15:55	WG1155085
Acrylonitrile	ND		0.0153	1	08/21/2018 15:55	WG1155085
Benzene	ND		0.00122	1	08/21/2018 15:55	WG1155085
Bromobenzene	ND		0.0153	1	08/21/2018 15:55	WG1155085
Bromodichloromethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
Bromoform	ND		0.0305	1	08/21/2018 15:55	WG1155085
Bromomethane	ND		0.0153	1	08/21/2018 15:55	WG1155085
n-Butylbenzene	ND		0.0153	1	08/21/2018 15:55	WG1155085
sec-Butylbenzene	ND		0.0153	1	08/21/2018 15:55	WG1155085
tert-Butylbenzene	ND		0.00610	1	08/21/2018 15:55	WG1155085
Carbon tetrachloride	ND		0.00610	1	08/21/2018 15:55	WG1155085
Chlorobenzene	ND		0.00305	1	08/21/2018 15:55	WG1155085
Chlorodibromomethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
Chloroethane	ND		0.00610	1	08/21/2018 15:55	WG1155085
Chloroform	ND		0.00305	1	08/21/2018 15:55	WG1155085
Chloromethane	ND		0.0153	1	08/21/2018 15:55	WG1155085
2-Chlorotoluene	ND		0.00305	1	08/21/2018 15:55	WG1155085
4-Chlorotoluene	ND		0.00610	1	08/21/2018 15:55	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0305	1	08/21/2018 15:55	WG1155085
1,2-Dibromoethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
Dibromomethane	ND		0.00610	1	08/21/2018 15:55	WG1155085
1,2-Dichlorobenzene	ND		0.00610	1	08/21/2018 15:55	WG1155085
1,3-Dichlorobenzene	ND		0.00610	1	08/21/2018 15:55	WG1155085
1,4-Dichlorobenzene	ND		0.00610	1	08/21/2018 15:55	WG1155085
Dichlorodifluoromethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
1,1-Dichloroethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
1,2-Dichloroethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
1,1-Dichloroethene	ND		0.00305	1	08/21/2018 15:55	WG1155085
cis-1,2-Dichloroethene	ND		0.00305	1	08/21/2018 15:55	WG1155085
trans-1,2-Dichloroethene	ND		0.00610	1	08/21/2018 15:55	WG1155085
1,2-Dichloropropane	ND		0.00610	1	08/23/2018 09:28	WG1156089
1,1-Dichloropropene	ND		0.00305	1	08/21/2018 15:55	WG1155085
1,3-Dichloropropane	ND		0.00610	1	08/21/2018 15:55	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00305	1	08/21/2018 15:55	WG1155085
trans-1,3-Dichloropropene	ND		0.00610	1	08/21/2018 15:55	WG1155085
2,2-Dichloropropane	ND		0.00305	1	08/21/2018 15:55	WG1155085
Di-isopropyl ether	ND		0.00122	1	08/21/2018 15:55	WG1155085
Ethylbenzene	ND		0.00305	1	08/21/2018 15:55	WG1155085
Hexachloro-1,3-butadiene	ND		0.0305	1	08/21/2018 15:55	WG1155085
Isopropylbenzene	ND		0.00305	1	08/21/2018 15:55	WG1155085
p-Isopropyltoluene	ND		0.00610	1	08/21/2018 15:55	WG1155085
2-Butanone (MEK)	ND	JO	0.0305	1	08/21/2018 15:55	WG1155085
Methylene Chloride	ND		0.0305	1	08/21/2018 15:55	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0305	1	08/21/2018 15:55	WG1155085
Methyl tert-butyl ether	ND		0.00122	1	08/21/2018 15:55	WG1155085
Naphthalene	ND		0.0153	1	08/21/2018 15:55	WG1155085
n-Propylbenzene	ND		0.00610	1	08/21/2018 15:55	WG1155085
Styrene	ND		0.0153	1	08/21/2018 15:55	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
Tetrachloroethene	ND		0.00305	1	08/21/2018 15:55	WG1155085
Toluene	ND		0.00610	1	08/21/2018 15:55	WG1155085
1,2,3-Trichlorobenzene	ND		0.00305	1	08/21/2018 15:55	WG1155085
1,2,4-Trichlorobenzene	ND		0.0153	1	08/21/2018 15:55	WG1155085
1,1,1-Trichloroethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
1,1,2-Trichloroethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
Trichloroethene	ND		0.00122	1	08/23/2018 09:28	WG1156089
Trichlorofluoromethane	ND		0.00305	1	08/21/2018 15:55	WG1155085
1,2,3-Trichloropropane	ND		0.0153	1	08/21/2018 15:55	WG1155085
1,2,4-Trimethylbenzene	ND		0.00610	1	08/21/2018 15:55	WG1155085
1,2,3-Trimethylbenzene	ND		0.00610	1	08/21/2018 15:55	WG1155085
Vinyl chloride	ND		0.00305	1	08/21/2018 15:55	WG1155085
1,3,5-Trimethylbenzene	ND		0.00610	1	08/21/2018 15:55	WG1155085
o-Xylene	ND		0.00305	1	08/21/2018 15:55	WG1155085
m&p-Xylene	ND		0.00488	1	08/23/2018 09:28	WG1156089
(S) Toluene-d8	112		80.0-120		08/21/2018 15:55	WG1155085
(S) Toluene-d8	118		80.0-120		08/23/2018 09:28	WG1156089
(S) Dibromofluoromethane	96.1		74.0-131		08/21/2018 15:55	WG1155085
(S) Dibromofluoromethane	96.1		74.0-131		08/23/2018 09:28	WG1156089
(S) 4-Bromofluorobenzene	96.3		64.0-132		08/21/2018 15:55	WG1155085
(S) 4-Bromofluorobenzene	102		64.0-132		08/23/2018 09:28	WG1156089

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.88	1	08/24/2018 08:23	WG1155939
Residual Range Organics (RRO)	ND		12.2	1	08/24/2018 08:23	WG1155939
(S) o-Terphenyl	79.8		18.0-148		08/24/2018 08:23	WG1155939

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Acenaphthene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Acenaphthylene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Benzo(a)anthracene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Benzo(a)pyrene	ND		0.00732	1	08/24/2018 00:13	WG1155953



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Benzo(g,h,i)perylene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Benzo(k)fluoranthene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Chrysene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Dibenz(a,h)anthracene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Fluoranthene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Fluorene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Naphthalene	ND		0.0244	1	08/24/2018 00:13	WG1155953
Phenanthrene	ND		0.00732	1	08/24/2018 00:13	WG1155953
Pyrene	ND		0.00732	1	08/24/2018 00:13	WG1155953
1-Methylnaphthalene	ND		0.0244	1	08/24/2018 00:13	WG1155953
2-Methylnaphthalene	ND		0.0244	1	08/24/2018 00:13	WG1155953
2-Chloronaphthalene	ND		0.0244	1	08/24/2018 00:13	WG1155953
(S) Nitrobenzene-d5	94.6		14.0-149		08/24/2018 00:13	WG1155953
(S) 2-Fluorobiphenyl	74.0		34.0-125		08/24/2018 00:13	WG1155953
(S) p-Terphenyl-d14	68.4		23.0-120		08/24/2018 00:13	WG1155953

- 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	86.0		1	08/23/2018 10:48	WG1155862

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0233	1	08/24/2018 11:46	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.33	1	08/23/2018 17:11	WG1155924
Barium	139		0.581	1	08/23/2018 17:11	WG1155924
Cadmium	ND		0.581	1	08/23/2018 17:11	WG1155924
Chromium	11.1		1.16	1	08/23/2018 17:11	WG1155924
Lead	3.07	<u>B</u>	0.581	1	08/23/2018 17:11	WG1155924
Selenium	ND		2.33	1	08/23/2018 17:11	WG1155924
Silver	ND		1.16	1	08/23/2018 17:11	WG1155924

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0308	1.06	08/21/2018 16:14	WG1155085
Acrylonitrile	ND		0.0154	1.06	08/21/2018 16:14	WG1155085
Benzene	ND		0.00123	1.06	08/21/2018 16:14	WG1155085
Bromobenzene	ND		0.0154	1.06	08/21/2018 16:14	WG1155085
Bromodichloromethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
Bromoform	ND		0.0308	1.06	08/21/2018 16:14	WG1155085
Bromomethane	ND		0.0154	1.06	08/21/2018 16:14	WG1155085
n-Butylbenzene	ND		0.0154	1.06	08/21/2018 16:14	WG1155085
sec-Butylbenzene	ND		0.0154	1.06	08/21/2018 16:14	WG1155085
tert-Butylbenzene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
Carbon tetrachloride	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
Chlorobenzene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
Chlorodibromomethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
Chloroethane	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
Chloroform	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
Chloromethane	ND		0.0154	1.06	08/21/2018 16:14	WG1155085
2-Chlorotoluene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
4-Chlorotoluene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0308	1.06	08/21/2018 16:14	WG1155085
1,2-Dibromoethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
Dibromomethane	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
1,2-Dichlorobenzene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
1,3-Dichlorobenzene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
1,4-Dichlorobenzene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
Dichlorodifluoromethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
1,1-Dichloroethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
1,2-Dichloroethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
1,1-Dichloroethene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
cis-1,2-Dichloroethene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
trans-1,2-Dichloroethene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
1,2-Dichloropropane	ND		0.00616	1.06	08/23/2018 09:52	WG1156089
1,1-Dichloropropene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
1,3-Dichloropropane	ND		0.00616	1.06	08/21/2018 16:14	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
trans-1,3-Dichloropropene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
2,2-Dichloropropane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
Di-isopropyl ether	ND		0.00123	1.06	08/21/2018 16:14	WG1155085
Ethylbenzene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
Hexachloro-1,3-butadiene	ND		0.0308	1.06	08/21/2018 16:14	WG1155085
Isopropylbenzene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
p-Isopropyltoluene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
2-Butanone (MEK)	0.0416	JO	0.0308	1.06	08/21/2018 16:14	WG1155085
Methylene Chloride	ND		0.0308	1.06	08/21/2018 16:14	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0308	1.06	08/21/2018 16:14	WG1155085
Methyl tert-butyl ether	ND		0.00123	1.06	08/21/2018 16:14	WG1155085
Naphthalene	ND		0.0154	1.06	08/21/2018 16:14	WG1155085
n-Propylbenzene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
Styrene	ND		0.0154	1.06	08/21/2018 16:14	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
Tetrachloroethene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
Toluene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
1,2,3-Trichlorobenzene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
1,2,4-Trichlorobenzene	ND		0.0154	1.06	08/21/2018 16:14	WG1155085
1,1,1-Trichloroethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
1,1,2-Trichloroethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
Trichloroethene	ND		0.00123	1.06	08/23/2018 09:52	WG1156089
Trichlorofluoromethane	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
1,2,3-Trichloropropane	ND		0.0154	1.06	08/21/2018 16:14	WG1155085
1,2,4-Trimethylbenzene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
1,2,3-Trimethylbenzene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
Vinyl chloride	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
1,3,5-Trimethylbenzene	ND		0.00616	1.06	08/21/2018 16:14	WG1155085
o-Xylene	ND		0.00308	1.06	08/21/2018 16:14	WG1155085
m&p-Xylene	ND		0.00493	1.06	08/23/2018 09:52	WG1156089
(S) Toluene-d8	106		80.0-120		08/21/2018 16:14	WG1155085
(S) Toluene-d8	113		80.0-120		08/23/2018 09:52	WG1156089
(S) Dibromofluoromethane	106		74.0-131		08/21/2018 16:14	WG1155085
(S) Dibromofluoromethane	98.8		74.0-131		08/23/2018 09:52	WG1156089
(S) 4-Bromofluorobenzene	93.5		64.0-132		08/21/2018 16:14	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 09:52	WG1156089

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.65	1	08/24/2018 08:35	WG1155939
Residual Range Organics (RRO)	ND		11.6	1	08/24/2018 08:35	WG1155939
(S) o-Terphenyl	101		18.0-148		08/24/2018 08:35	WG1155939

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Acenaphthene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Acenaphthylene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Benzo(a)anthracene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Benzo(a)pyrene	ND		0.00698	1	08/24/2018 00:34	WG1155953



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Benzo(g,h,i)perylene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Benzo(k)fluoranthene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Chrysene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Dibenz(a,h)anthracene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Fluoranthene	0.00986		0.00698	1	08/24/2018 00:34	WG1155953
Fluorene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Naphthalene	ND		0.0233	1	08/24/2018 00:34	WG1155953
Phenanthrene	ND		0.00698	1	08/24/2018 00:34	WG1155953
Pyrene	0.00910		0.00698	1	08/24/2018 00:34	WG1155953
1-Methylnaphthalene	ND		0.0233	1	08/24/2018 00:34	WG1155953
2-Methylnaphthalene	ND		0.0233	1	08/24/2018 00:34	WG1155953
2-Chloronaphthalene	ND		0.0233	1	08/24/2018 00:34	WG1155953
(S) Nitrobenzene-d5	98.9		14.0-149		08/24/2018 00:34	WG1155953
(S) 2-Fluorobiphenyl	79.3		34.0-125		08/24/2018 00:34	WG1155953
(S) p-Terphenyl-d14	77.5		23.0-120		08/24/2018 00:34	WG1155953

- 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	80.4		1	08/23/2018 10:48	WG1155862

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0249	1	08/24/2018 11:54	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.49	1	08/23/2018 17:14	WG1155924
Barium	99.8		0.622	1	08/23/2018 17:14	WG1155924
Cadmium	ND		0.622	1	08/23/2018 17:14	WG1155924
Chromium	15.9		1.24	1	08/23/2018 17:14	WG1155924
Lead	4.30	<u>B</u>	0.622	1	08/23/2018 17:14	WG1155924
Selenium	ND		2.49	1	08/23/2018 17:14	WG1155924
Silver	ND		1.24	1	08/23/2018 17:14	WG1155924

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0311	1	08/21/2018 16:33	WG1155085
Acrylonitrile	ND	<u>J3</u>	0.0155	1	08/21/2018 16:33	WG1155085
Benzene	ND		0.00124	1	08/21/2018 16:33	WG1155085
Bromobenzene	ND		0.0155	1	08/21/2018 16:33	WG1155085
Bromodichloromethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
Bromoform	ND		0.0311	1	08/21/2018 16:33	WG1155085
Bromomethane	ND		0.0155	1	08/21/2018 16:33	WG1155085
n-Butylbenzene	ND		0.0155	1	08/21/2018 16:33	WG1155085
sec-Butylbenzene	ND		0.0155	1	08/21/2018 16:33	WG1155085
tert-Butylbenzene	ND		0.00622	1	08/21/2018 16:33	WG1155085
Carbon tetrachloride	ND		0.00622	1	08/21/2018 16:33	WG1155085
Chlorobenzene	ND		0.00311	1	08/21/2018 16:33	WG1155085
Chlorodibromomethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
Chloroethane	ND		0.00622	1	08/21/2018 16:33	WG1155085
Chloroform	ND		0.00311	1	08/21/2018 16:33	WG1155085
Chloromethane	ND		0.0155	1	08/21/2018 16:33	WG1155085
2-Chlorotoluene	ND		0.00311	1	08/21/2018 16:33	WG1155085
4-Chlorotoluene	ND		0.00622	1	08/21/2018 16:33	WG1155085
1,2-Dibromo-3-Chloropropane	ND		0.0311	1	08/21/2018 16:33	WG1155085
1,2-Dibromoethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
Dibromomethane	ND		0.00622	1	08/21/2018 16:33	WG1155085
1,2-Dichlorobenzene	ND		0.00622	1	08/21/2018 16:33	WG1155085
1,3-Dichlorobenzene	ND		0.00622	1	08/21/2018 16:33	WG1155085
1,4-Dichlorobenzene	ND		0.00622	1	08/21/2018 16:33	WG1155085
Dichlorodifluoromethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
1,1-Dichloroethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
1,2-Dichloroethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
1,1-Dichloroethene	ND		0.00311	1	08/21/2018 16:33	WG1155085
cis-1,2-Dichloroethene	ND		0.00311	1	08/21/2018 16:33	WG1155085
trans-1,2-Dichloroethene	ND		0.00622	1	08/21/2018 16:33	WG1155085
1,2-Dichloropropane	ND		0.00622	1	08/23/2018 12:56	WG1156340
1,1-Dichloropropene	ND		0.00311	1	08/21/2018 16:33	WG1155085
1,3-Dichloropropane	ND		0.00622	1	08/21/2018 16:33	WG1155085

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00311	1	08/21/2018 16:33	WG1155085
trans-1,3-Dichloropropene	ND		0.00622	1	08/21/2018 16:33	WG1155085
2,2-Dichloropropane	ND		0.00311	1	08/21/2018 16:33	WG1155085
Di-isopropyl ether	ND		0.00124	1	08/21/2018 16:33	WG1155085
Ethylbenzene	ND		0.00311	1	08/21/2018 16:33	WG1155085
Hexachloro-1,3-butadiene	ND		0.0311	1	08/21/2018 16:33	WG1155085
Isopropylbenzene	ND		0.00311	1	08/21/2018 16:33	WG1155085
p-Isopropyltoluene	ND		0.00622	1	08/21/2018 16:33	WG1155085
2-Butanone (MEK)	ND	JO	0.0311	1	08/21/2018 16:33	WG1155085
Methylene Chloride	ND		0.0311	1	08/21/2018 16:33	WG1155085
4-Methyl-2-pentanone (MIBK)	ND		0.0311	1	08/21/2018 16:33	WG1155085
Methyl tert-butyl ether	ND		0.00124	1	08/21/2018 16:33	WG1155085
Naphthalene	ND		0.0155	1	08/21/2018 16:33	WG1155085
n-Propylbenzene	ND		0.00622	1	08/21/2018 16:33	WG1155085
Styrene	ND		0.0155	1	08/21/2018 16:33	WG1155085
1,1,1,2-Tetrachloroethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
1,1,2,2-Tetrachloroethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
1,1,2-Trichlorotrifluoroethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
Tetrachloroethene	ND		0.00311	1	08/21/2018 16:33	WG1155085
Toluene	ND		0.00622	1	08/21/2018 16:33	WG1155085
1,2,3-Trichlorobenzene	ND		0.00311	1	08/21/2018 16:33	WG1155085
1,2,4-Trichlorobenzene	ND		0.0155	1	08/21/2018 16:33	WG1155085
1,1,1-Trichloroethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
1,1,2-Trichloroethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
Trichloroethene	ND		0.00124	1	08/23/2018 12:56	WG1156340
Trichlorofluoromethane	ND		0.00311	1	08/21/2018 16:33	WG1155085
1,2,3-Trichloropropane	ND		0.0155	1	08/21/2018 16:33	WG1155085
1,2,4-Trimethylbenzene	ND		0.00622	1	08/21/2018 16:33	WG1155085
1,2,3-Trimethylbenzene	ND		0.00622	1	08/21/2018 16:33	WG1155085
Vinyl chloride	ND		0.00311	1	08/21/2018 16:33	WG1155085
1,3,5-Trimethylbenzene	ND		0.00622	1	08/21/2018 16:33	WG1155085
o-Xylene	ND		0.00311	1	08/21/2018 16:33	WG1155085
m&p-Xylene	ND		0.00497	1	08/23/2018 12:56	WG1156340
(S) Toluene-d8	110		80.0-120		08/21/2018 16:33	WG1155085
(S) Toluene-d8	119		80.0-120		08/23/2018 12:56	WG1156340
(S) Dibromofluoromethane	92.2		74.0-131		08/21/2018 16:33	WG1155085
(S) Dibromofluoromethane	89.2		74.0-131		08/23/2018 12:56	WG1156340
(S) 4-Bromofluorobenzene	94.2		64.0-132		08/21/2018 16:33	WG1155085
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 12:56	WG1156340

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.97	1	08/24/2018 08:47	WG1155939
Residual Range Organics (RRO)	ND		12.4	1	08/24/2018 08:47	WG1155939
(S) o-Terphenyl	83.8		18.0-148		08/24/2018 08:47	WG1155939

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Acenaphthene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Acenaphthylene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Benzo(a)anthracene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Benzo(a)pyrene	ND		0.00746	1	08/24/2018 00:55	WG1155953



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Benzo(g,h,i)perylene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Benzo(k)fluoranthene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Chrysene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Dibenz(a,h)anthracene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Fluoranthene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Fluorene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Naphthalene	ND		0.0249	1	08/24/2018 00:55	WG1155953
Phenanthrene	ND		0.00746	1	08/24/2018 00:55	WG1155953
Pyrene	ND		0.00746	1	08/24/2018 00:55	WG1155953
1-Methylnaphthalene	ND		0.0249	1	08/24/2018 00:55	WG1155953
2-Methylnaphthalene	ND		0.0249	1	08/24/2018 00:55	WG1155953
2-Chloronaphthalene	ND		0.0249	1	08/24/2018 00:55	WG1155953
(S) Nitrobenzene-d5	96.4		14.0-149		08/24/2018 00:55	WG1155953
(S) 2-Fluorobiphenyl	77.4		34.0-125		08/24/2018 00:55	WG1155953
(S) p-Terphenyl-d14	71.4		23.0-120		08/24/2018 00:55	WG1155953

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.0250	1	08/21/2018 11:34	WG1155097
Acrylonitrile	ND		0.0125	1	08/21/2018 11:34	WG1155097
Benzene	ND		0.00100	1	08/21/2018 11:34	WG1155097
Bromobenzene	ND		0.0125	1	08/21/2018 11:34	WG1155097
Bromodichloromethane	ND		0.00250	1	08/21/2018 11:34	WG1155097
Bromoform	ND		0.0250	1	08/21/2018 11:34	WG1155097
Bromomethane	ND		0.0125	1	08/21/2018 11:34	WG1155097
n-Butylbenzene	ND		0.0125	1	08/21/2018 20:04	WG1155250
sec-Butylbenzene	ND		0.0125	1	08/21/2018 20:04	WG1155250
tert-Butylbenzene	ND		0.00500	1	08/21/2018 11:34	WG1155097
Carbon tetrachloride	ND		0.00500	1	08/21/2018 11:34	WG1155097
Chlorobenzene	ND		0.00250	1	08/21/2018 11:34	WG1155097
Chlorodibromomethane	ND		0.00250	1	08/21/2018 11:34	WG1155097
Chloroethane	ND		0.00500	1	08/21/2018 11:34	WG1155097
Chloroform	ND		0.00250	1	08/21/2018 11:34	WG1155097
Chloromethane	ND		0.0125	1	08/21/2018 11:34	WG1155097
2-Chlorotoluene	ND		0.00250	1	08/21/2018 11:34	WG1155097
4-Chlorotoluene	ND		0.00500	1	08/21/2018 11:34	WG1155097
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	08/21/2018 11:34	WG1155097
1,2-Dibromoethane	ND		0.00250	1	08/21/2018 11:34	WG1155097
Dibromomethane	ND		0.00500	1	08/21/2018 11:34	WG1155097
1,2-Dichlorobenzene	ND		0.00500	1	08/21/2018 11:34	WG1155097
1,3-Dichlorobenzene	ND		0.00500	1	08/21/2018 11:34	WG1155097
1,4-Dichlorobenzene	ND		0.00500	1	08/21/2018 11:34	WG1155097
Dichlorodifluoromethane	ND		0.00250	1	08/21/2018 11:34	WG1155097
1,1-Dichloroethane	ND		0.00250	1	08/21/2018 11:34	WG1155097
1,2-Dichloroethane	ND		0.00250	1	08/21/2018 11:34	WG1155097
1,1-Dichloroethene	ND		0.00250	1	08/21/2018 11:34	WG1155097
cis-1,2-Dichloroethene	ND		0.00250	1	08/21/2018 11:34	WG1155097
trans-1,2-Dichloroethene	ND		0.00500	1	08/21/2018 11:34	WG1155097
1,2-Dichloropropane	ND		0.00500	1	08/22/2018 13:07	WG1155705
1,1-Dichloropropene	ND		0.00250	1	08/21/2018 11:34	WG1155097
1,3-Dichloropropane	ND		0.00500	1	08/21/2018 11:34	WG1155097
cis-1,3-Dichloropropene	ND		0.00250	1	08/21/2018 11:34	WG1155097
trans-1,3-Dichloropropene	ND		0.00500	1	08/21/2018 11:34	WG1155097
2,2-Dichloropropane	ND		0.00250	1	08/21/2018 11:34	WG1155097
Di-isopropyl ether	ND		0.00100	1	08/21/2018 11:34	WG1155097
Ethylbenzene	ND		0.00250	1	08/21/2018 20:04	WG1155250
Hexachloro-1,3-butadiene	ND		0.0250	1	08/21/2018 11:34	WG1155097
Isopropylbenzene	ND		0.00250	1	08/21/2018 11:34	WG1155097
p-Isopropyltoluene	ND		0.00500	1	08/21/2018 11:34	WG1155097
2-Butanone (MEK)	0.0435		0.0250	1	08/21/2018 20:04	WG1155250
Methylene Chloride	ND		0.0250	1	08/21/2018 11:34	WG1155097
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	08/21/2018 11:34	WG1155097
Methyl tert-butyl ether	ND		0.00100	1	08/21/2018 11:34	WG1155097
Naphthalene	ND		0.0125	1	08/21/2018 11:34	WG1155097
n-Propylbenzene	ND	J3	0.00500	1	08/21/2018 20:04	WG1155250
Styrene	ND		0.0125	1	08/21/2018 11:34	WG1155097
1,1,1,2-Tetrachloroethane	ND		0.00250	1	08/21/2018 11:34	WG1155097
1,1,2,2-Tetrachloroethane	ND	J4	0.00250	1	08/21/2018 11:34	WG1155097
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	08/21/2018 11:34	WG1155097
Tetrachloroethene	ND		0.00250	1	08/21/2018 11:34	WG1155097
Toluene	ND		0.00500	1	08/21/2018 20:04	WG1155250
1,2,3-Trichlorobenzene	ND		0.00250	1	08/21/2018 11:34	WG1155097
1,2,4-Trichlorobenzene	ND		0.0125	1	08/21/2018 11:34	WG1155097
1,1,1-Trichloroethane	ND		0.00250	1	08/21/2018 11:34	WG1155097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichloroethane	ND		0.00250	1	08/21/2018 11:34	WG1155097
Trichloroethene	ND		0.00100	1	08/21/2018 11:34	WG1155097
Trichlorofluoromethane	ND		0.00250	1	08/21/2018 11:34	WG1155097
1,2,3-Trichloropropane	ND		0.0125	1	08/21/2018 11:34	WG1155097
1,2,4-Trimethylbenzene	ND		0.00500	1	08/21/2018 20:04	WG1155250
1,2,3-Trimethylbenzene	ND		0.00500	1	08/21/2018 20:04	WG1155250
Vinyl chloride	ND	<u>J3</u>	0.00250	1	08/21/2018 20:04	WG1155250
1,3,5-Trimethylbenzene	ND		0.00500	1	08/21/2018 20:04	WG1155250
o-Xylene	ND		0.00250	1	08/21/2018 20:04	WG1155250
m&p-Xylene	0.00482	<u>B</u>	0.00400	1	08/22/2018 13:07	WG1155705
(S) Toluene-d8	109		80.0-120		08/21/2018 11:34	WG1155097
(S) Toluene-d8	106		80.0-120		08/21/2018 20:04	WG1155250
(S) Toluene-d8	118		80.0-120		08/22/2018 13:07	WG1155705
(S) Dibromofluoromethane	98.6		74.0-131		08/21/2018 11:34	WG1155097
(S) Dibromofluoromethane	103		74.0-131		08/21/2018 20:04	WG1155250
(S) Dibromofluoromethane	84.8		74.0-131		08/22/2018 13:07	WG1155705
(S) 4-Bromofluorobenzene	103		64.0-132		08/21/2018 11:34	WG1155097
(S) 4-Bromofluorobenzene	97.7		64.0-132		08/21/2018 20:04	WG1155250
(S) 4-Bromofluorobenzene	94.4		64.0-132		08/22/2018 13:07	WG1155705

- 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	96.0		1	08/23/2018 10:48	WG1155862

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0208	1	08/24/2018 11:56	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.08	1	08/23/2018 17:17	WG1155924
Barium	81.5		0.521	1	08/23/2018 17:17	WG1155924
Cadmium	ND		0.521	1	08/23/2018 17:17	WG1155924
Chromium	11.6		1.04	1	08/23/2018 17:17	WG1155924
Lead	3.05	<u>B</u>	0.521	1	08/23/2018 17:17	WG1155924
Selenium	ND		2.08	1	08/23/2018 17:17	WG1155924
Silver	ND		1.04	1	08/23/2018 17:17	WG1155924

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0284	1.09	08/21/2018 15:17	WG1155097
Acrylonitrile	ND		0.0142	1.09	08/21/2018 15:17	WG1155097
Benzene	ND		0.00114	1.09	08/21/2018 15:17	WG1155097
Bromobenzene	ND		0.0142	1.09	08/21/2018 15:17	WG1155097
Bromodichloromethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
Bromoform	ND		0.0284	1.09	08/21/2018 15:17	WG1155097
Bromomethane	ND		0.0142	1.09	08/21/2018 15:17	WG1155097
n-Butylbenzene	ND		0.0130	1	08/23/2018 00:25	WG1155519
sec-Butylbenzene	ND		0.0130	1	08/23/2018 00:25	WG1155519
tert-Butylbenzene	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
Carbon tetrachloride	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
Chlorobenzene	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
Chlorodibromomethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
Chloroethane	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
Chloroform	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
Chloromethane	ND		0.0142	1.09	08/21/2018 15:17	WG1155097
2-Chlorotoluene	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
4-Chlorotoluene	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
1,2-Dibromo-3-Chloropropane	ND		0.0284	1.09	08/21/2018 15:17	WG1155097
1,2-Dibromoethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
Dibromomethane	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
1,2-Dichlorobenzene	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
1,3-Dichlorobenzene	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
1,4-Dichlorobenzene	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
Dichlorodifluoromethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
1,1-Dichloroethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
1,2-Dichloroethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
1,1-Dichloroethene	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
cis-1,2-Dichloroethene	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
trans-1,2-Dichloroethene	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
1,2-Dichloropropane	ND		0.00521	1	08/23/2018 00:25	WG1155519
1,1-Dichloropropene	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
1,3-Dichloropropane	ND		0.00568	1.09	08/21/2018 15:17	WG1155097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
trans-1,3-Dichloropropene	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
2,2-Dichloropropane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
Di-isopropyl ether	ND		0.00114	1.09	08/21/2018 15:17	WG1155097
Ethylbenzene	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
Hexachloro-1,3-butadiene	ND		0.0284	1.09	08/21/2018 15:17	WG1155097
Isopropylbenzene	ND		0.00261	1	08/23/2018 00:25	WG1155519
p-Isopropyltoluene	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
2-Butanone (MEK)	ND		0.0261	1	08/23/2018 00:25	WG1155519
Methylene Chloride	ND		0.0284	1.09	08/21/2018 15:17	WG1155097
4-Methyl-2-pentanone (MIBK)	ND		0.0284	1.09	08/21/2018 15:17	WG1155097
Methyl tert-butyl ether	ND		0.00114	1.09	08/21/2018 15:17	WG1155097
Naphthalene	ND		0.0130	1	08/23/2018 00:25	WG1155519
n-Propylbenzene	ND		0.00521	1	08/23/2018 00:25	WG1155519
Styrene	ND		0.0142	1.09	08/21/2018 15:17	WG1155097
1,1,1,2-Tetrachloroethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
1,1,2,2-Tetrachloroethane	ND	J4	0.00284	1.09	08/21/2018 15:17	WG1155097
1,1,2-Trichlorotrifluoroethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
Tetrachloroethene	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
Toluene	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
1,2,3-Trichlorobenzene	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
1,2,4-Trichlorobenzene	ND		0.0142	1.09	08/21/2018 15:17	WG1155097
1,1,1-Trichloroethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
1,1,2-Trichloroethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
Trichloroethene	ND		0.00114	1.09	08/21/2018 15:17	WG1155097
Trichlorofluoromethane	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
1,2,3-Trichloropropane	ND		0.0142	1.09	08/21/2018 15:17	WG1155097
1,2,4-Trimethylbenzene	ND		0.00521	1	08/23/2018 00:25	WG1155519
1,2,3-Trimethylbenzene	ND		0.00521	1	08/23/2018 00:25	WG1155519
Vinyl chloride	ND		0.00261	1	08/23/2018 00:25	WG1155519
1,3,5-Trimethylbenzene	ND		0.00568	1.09	08/21/2018 15:17	WG1155097
o-Xylene	ND		0.00284	1.09	08/21/2018 15:17	WG1155097
m&p-Xylene	ND		0.00454	1.09	08/21/2018 15:17	WG1155097
(S) Toluene-d8	107		80.0-120		08/21/2018 15:17	WG1155097
(S) Toluene-d8	114		80.0-120		08/23/2018 00:25	WG1155519
(S) Dibromofluoromethane	97.4		74.0-131		08/21/2018 15:17	WG1155097
(S) Dibromofluoromethane	98.6		74.0-131		08/23/2018 00:25	WG1155519
(S) 4-Bromofluorobenzene	102		64.0-132		08/21/2018 15:17	WG1155097
(S) 4-Bromofluorobenzene	104		64.0-132		08/23/2018 00:25	WG1155519

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.17	1	08/24/2018 08:59	WG1155939
Residual Range Organics (RRO)	ND		10.4	1	08/24/2018 08:59	WG1155939
(S) o-Terphenyl	87.5		18.0-148		08/24/2018 08:59	WG1155939

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.17	1	08/23/2018 14:24	WG1155941
Residual Range Organics (RRO)	ND		10.4	1	08/23/2018 14:24	WG1155941
(S) o-Terphenyl	90.0		18.0-148		08/23/2018 14:24	WG1155941



Collected date/time: 08/16/18 09:20

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Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Acenaphthene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Acenaphthylene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Benzo(a)anthracene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Benzo(a)pyrene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Benzo(b)fluoranthene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Benzo(g,h,i)perylene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Benzo(k)fluoranthene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Chrysene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Dibenz(a,h)anthracene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Fluoranthene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Fluorene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Naphthalene	ND		0.0208	1	08/24/2018 01:16	WG1155953
Phenanthrene	ND		0.00625	1	08/24/2018 01:16	WG1155953
Pyrene	ND		0.00625	1	08/24/2018 01:16	WG1155953
1-Methylnaphthalene	ND		0.0208	1	08/24/2018 01:16	WG1155953
2-Methylnaphthalene	ND		0.0208	1	08/24/2018 01:16	WG1155953
2-Chloronaphthalene	ND		0.0208	1	08/24/2018 01:16	WG1155953
(S) Nitrobenzene-d5	84.5		14.0-149		08/24/2018 01:16	WG1155953
(S) 2-Fluorobiphenyl	74.3		34.0-125		08/24/2018 01:16	WG1155953
(S) p-Terphenyl-d14	73.0		23.0-120		08/24/2018 01:16	WG1155953

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
Total Solids	83.0		1	08/23/2018 10:48	WG1155862

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0241	1	08/24/2018 11:59	WG1155814

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.41	1	08/23/2018 10:00	WG1156076
Barium	85.4		0.602	1	08/23/2018 10:00	WG1156076
Cadmium	ND		0.602	1	08/23/2018 10:00	WG1156076
Chromium	11.4		1.20	1	08/23/2018 10:00	WG1156076
Lead	3.22		0.602	1	08/23/2018 10:00	WG1156076
Selenium	ND		2.41	1	08/23/2018 10:00	WG1156076
Silver	ND		1.20	1	08/23/2018 10:00	WG1156076

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0301	1	08/21/2018 15:37	WG1155097
Acrylonitrile	ND		0.0151	1	08/21/2018 15:37	WG1155097
Benzene	ND		0.00120	1	08/21/2018 15:37	WG1155097
Bromobenzene	ND		0.0151	1	08/21/2018 15:37	WG1155097
Bromodichloromethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
Bromoform	ND		0.0301	1	08/21/2018 15:37	WG1155097
Bromomethane	ND		0.0151	1	08/21/2018 15:37	WG1155097
n-Butylbenzene	ND		0.0164	1.09	08/23/2018 00:49	WG1155519
sec-Butylbenzene	ND		0.0164	1.09	08/23/2018 00:49	WG1155519
tert-Butylbenzene	ND		0.00602	1	08/21/2018 15:37	WG1155097
Carbon tetrachloride	ND		0.00602	1	08/21/2018 15:37	WG1155097
Chlorobenzene	ND		0.00301	1	08/21/2018 15:37	WG1155097
Chlorodibromomethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
Chloroethane	ND		0.00602	1	08/21/2018 15:37	WG1155097
Chloroform	ND		0.00301	1	08/21/2018 15:37	WG1155097
Chloromethane	ND		0.0151	1	08/21/2018 15:37	WG1155097
2-Chlorotoluene	ND		0.00301	1	08/21/2018 15:37	WG1155097
4-Chlorotoluene	ND		0.00602	1	08/21/2018 15:37	WG1155097
1,2-Dibromo-3-Chloropropane	ND		0.0301	1	08/21/2018 15:37	WG1155097
1,2-Dibromoethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
Dibromomethane	ND		0.00602	1	08/21/2018 15:37	WG1155097
1,2-Dichlorobenzene	ND		0.00602	1	08/21/2018 15:37	WG1155097
1,3-Dichlorobenzene	ND		0.00602	1	08/21/2018 15:37	WG1155097
1,4-Dichlorobenzene	ND		0.00602	1	08/21/2018 15:37	WG1155097
Dichlorodifluoromethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
1,1-Dichloroethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
1,2-Dichloroethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
1,1-Dichloroethene	ND		0.00301	1	08/21/2018 15:37	WG1155097
cis-1,2-Dichloroethene	ND		0.00301	1	08/21/2018 15:37	WG1155097
trans-1,2-Dichloroethene	ND		0.00602	1	08/21/2018 15:37	WG1155097
1,2-Dichloropropane	ND		0.00656	1.09	08/23/2018 00:49	WG1155519
1,1-Dichloropropene	ND		0.00301	1	08/21/2018 15:37	WG1155097
1,3-Dichloropropane	ND		0.00602	1	08/21/2018 15:37	WG1155097

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00301	1	08/21/2018 15:37	WG1155097
trans-1,3-Dichloropropene	ND		0.00602	1	08/21/2018 15:37	WG1155097
2,2-Dichloropropane	ND		0.00301	1	08/21/2018 15:37	WG1155097
Di-isopropyl ether	ND		0.00120	1	08/21/2018 15:37	WG1155097
Ethylbenzene	ND		0.00301	1	08/21/2018 15:37	WG1155097
Hexachloro-1,3-butadiene	ND		0.0301	1	08/21/2018 15:37	WG1155097
Isopropylbenzene	ND		0.00301	1	08/21/2018 15:37	WG1155097
p-Isopropyltoluene	ND		0.00602	1	08/21/2018 15:37	WG1155097
2-Butanone (MEK)	ND		0.0328	1.09	08/23/2018 00:49	WG1155519
Methylene Chloride	ND		0.0301	1	08/21/2018 15:37	WG1155097
4-Methyl-2-pentanone (MIBK)	ND		0.0301	1	08/21/2018 15:37	WG1155097
Methyl tert-butyl ether	ND		0.00120	1	08/21/2018 15:37	WG1155097
Naphthalene	ND		0.0164	1.09	08/23/2018 00:49	WG1155519
n-Propylbenzene	ND		0.00656	1.09	08/23/2018 00:49	WG1155519
Styrene	ND		0.0151	1	08/21/2018 15:37	WG1155097
1,1,1,2-Tetrachloroethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
1,1,2,2-Tetrachloroethane	ND	J4	0.00301	1	08/21/2018 15:37	WG1155097
1,1,2-Trichlorotrifluoroethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
Tetrachloroethene	ND		0.00301	1	08/21/2018 15:37	WG1155097
Toluene	ND		0.00602	1	08/21/2018 15:37	WG1155097
1,2,3-Trichlorobenzene	ND		0.00301	1	08/21/2018 15:37	WG1155097
1,2,4-Trichlorobenzene	ND		0.0151	1	08/21/2018 15:37	WG1155097
1,1,1-Trichloroethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
1,1,2-Trichloroethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
Trichloroethene	ND		0.00120	1	08/21/2018 15:37	WG1155097
Trichlorofluoromethane	ND		0.00301	1	08/21/2018 15:37	WG1155097
1,2,3-Trichloropropane	ND		0.0151	1	08/21/2018 15:37	WG1155097
1,2,4-Trimethylbenzene	ND		0.00656	1.09	08/23/2018 00:49	WG1155519
1,2,3-Trimethylbenzene	ND		0.00656	1.09	08/23/2018 00:49	WG1155519
Vinyl chloride	ND		0.00328	1.09	08/23/2018 00:49	WG1155519
1,3,5-Trimethylbenzene	ND		0.00602	1	08/21/2018 15:37	WG1155097
o-Xylene	ND		0.00301	1	08/21/2018 15:37	WG1155097
m&p-Xylene	ND		0.00482	1	08/21/2018 15:37	WG1155097
(S) Toluene-d8	107		80.0-120		08/21/2018 15:37	WG1155097
(S) Toluene-d8	116		80.0-120		08/23/2018 00:49	WG1155519
(S) Dibromofluoromethane	99.0		74.0-131		08/21/2018 15:37	WG1155097
(S) Dibromofluoromethane	100		74.0-131		08/23/2018 00:49	WG1155519
(S) 4-Bromofluorobenzene	103		64.0-132		08/21/2018 15:37	WG1155097
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 00:49	WG1155519

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.82	1	08/24/2018 09:11	WG1155939
Residual Range Organics (RRO)	ND		12.0	1	08/24/2018 09:11	WG1155939
(S) o-Terphenyl	82.8		18.0-148		08/24/2018 09:11	WG1155939

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Acenaphthene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Acenaphthylene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Benzo(a)anthracene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Benzo(a)pyrene	ND		0.00722	1	08/24/2018 01:38	WG1155953



Collected date/time: 08/16/18 00:00

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Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Benzo(g,h,i)perylene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Benzo(k)fluoranthene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Chrysene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Dibenz(a,h)anthracene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Fluoranthene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Fluorene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Indeno(1,2,3-cd)pyrene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Naphthalene	ND		0.0241	1	08/24/2018 01:38	WG1155953
Phenanthrene	ND		0.00722	1	08/24/2018 01:38	WG1155953
Pyrene	ND		0.00722	1	08/24/2018 01:38	WG1155953
1-Methylnaphthalene	ND		0.0241	1	08/24/2018 01:38	WG1155953
2-Methylnaphthalene	ND		0.0241	1	08/24/2018 01:38	WG1155953
2-Chloronaphthalene	ND		0.0241	1	08/24/2018 01:38	WG1155953
(S) Nitrobenzene-d5	94.8		14.0-149		08/24/2018 01:38	WG1155953
(S) 2-Fluorobiphenyl	75.0		34.0-125		08/24/2018 01:38	WG1155953
(S) p-Terphenyl-d14	73.0		23.0-120		08/24/2018 01:38	WG1155953

- 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
Total Solids	84.7		1	08/23/2018 10:48	WG1155862

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0236	1	08/23/2018 13:13	WG1155818

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.36	1	08/23/2018 10:03	WG1156076
Barium	78.9		0.591	1	08/23/2018 10:03	WG1156076
Cadmium	ND		0.591	1	08/23/2018 10:03	WG1156076
Chromium	9.52		1.18	1	08/23/2018 10:03	WG1156076
Lead	7.46		0.591	1	08/23/2018 10:03	WG1156076
Selenium	ND		2.36	1	08/23/2018 10:03	WG1156076
Silver	ND		1.18	1	08/23/2018 10:03	WG1156076

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0295	1	08/21/2018 15:57	WG1155097
Acrylonitrile	ND		0.0148	1	08/21/2018 15:57	WG1155097
Benzene	ND		0.00118	1	08/21/2018 15:57	WG1155097
Bromobenzene	ND		0.0148	1	08/21/2018 15:57	WG1155097
Bromodichloromethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
Bromoform	ND		0.0295	1	08/21/2018 15:57	WG1155097
Bromomethane	ND		0.0148	1	08/21/2018 15:57	WG1155097
n-Butylbenzene	ND		0.0148	1	08/23/2018 01:13	WG1155519
sec-Butylbenzene	ND		0.0148	1	08/21/2018 15:57	WG1155097
tert-Butylbenzene	ND		0.00591	1	08/21/2018 15:57	WG1155097
Carbon tetrachloride	ND		0.00591	1	08/21/2018 15:57	WG1155097
Chlorobenzene	ND		0.00295	1	08/21/2018 15:57	WG1155097
Chlorodibromomethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
Chloroethane	ND		0.00591	1	08/21/2018 15:57	WG1155097
Chloroform	ND		0.00295	1	08/21/2018 15:57	WG1155097
Chloromethane	ND		0.0148	1	08/21/2018 15:57	WG1155097
2-Chlorotoluene	ND		0.00295	1	08/21/2018 15:57	WG1155097
4-Chlorotoluene	ND		0.00591	1	08/21/2018 15:57	WG1155097
1,2-Dibromo-3-Chloropropane	ND		0.0295	1	08/21/2018 15:57	WG1155097
1,2-Dibromoethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
Dibromomethane	ND		0.00591	1	08/21/2018 15:57	WG1155097
1,2-Dichlorobenzene	ND		0.00591	1	08/21/2018 15:57	WG1155097
1,3-Dichlorobenzene	ND		0.00591	1	08/21/2018 15:57	WG1155097
1,4-Dichlorobenzene	ND		0.00591	1	08/21/2018 15:57	WG1155097
Dichlorodifluoromethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
1,1-Dichloroethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
1,2-Dichloroethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
1,1-Dichloroethene	ND		0.00295	1	08/21/2018 15:57	WG1155097
cis-1,2-Dichloroethene	ND		0.00295	1	08/21/2018 15:57	WG1155097
trans-1,2-Dichloroethene	ND		0.00591	1	08/21/2018 15:57	WG1155097
1,2-Dichloropropane	ND		0.00591	1	08/23/2018 01:13	WG1155519
1,1-Dichloropropene	ND		0.00295	1	08/21/2018 15:57	WG1155097
1,3-Dichloropropane	ND		0.00591	1	08/21/2018 15:57	WG1155097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00295	1	08/21/2018 15:57	WG1155097
trans-1,3-Dichloropropene	ND		0.00591	1	08/21/2018 15:57	WG1155097
2,2-Dichloropropane	ND		0.00295	1	08/21/2018 15:57	WG1155097
Di-isopropyl ether	ND		0.00118	1	08/21/2018 15:57	WG1155097
Ethylbenzene	ND		0.00295	1	08/21/2018 15:57	WG1155097
Hexachloro-1,3-butadiene	ND		0.0295	1	08/21/2018 15:57	WG1155097
Isopropylbenzene	ND		0.00295	1	08/21/2018 15:57	WG1155097
p-Isopropyltoluene	ND		0.00591	1	08/21/2018 15:57	WG1155097
2-Butanone (MEK)	ND		0.0295	1	08/23/2018 01:13	WG1155519
Methylene Chloride	ND		0.0295	1	08/21/2018 15:57	WG1155097
4-Methyl-2-pentanone (MIBK)	ND		0.0295	1	08/21/2018 15:57	WG1155097
Methyl tert-butyl ether	ND		0.00118	1	08/21/2018 15:57	WG1155097
Naphthalene	ND		0.0148	1	08/23/2018 01:13	WG1155519
n-Propylbenzene	ND		0.00591	1	08/23/2018 01:13	WG1155519
Styrene	ND		0.0148	1	08/21/2018 15:57	WG1155097
1,1,1-Tetrachloroethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
1,1,2,2-Tetrachloroethane	ND	J4	0.00295	1	08/21/2018 15:57	WG1155097
1,1,2-Trichlorotrifluoroethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
Tetrachloroethene	ND		0.00295	1	08/21/2018 15:57	WG1155097
Toluene	ND		0.00591	1	08/21/2018 15:57	WG1155097
1,2,3-Trichlorobenzene	ND		0.00295	1	08/21/2018 15:57	WG1155097
1,2,4-Trichlorobenzene	ND		0.0148	1	08/21/2018 15:57	WG1155097
1,1,1-Trichloroethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
1,1,2-Trichloroethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
Trichloroethene	ND		0.00118	1	08/21/2018 15:57	WG1155097
Trichlorofluoromethane	ND		0.00295	1	08/21/2018 15:57	WG1155097
1,2,3-Trichloropropane	ND		0.0148	1	08/21/2018 15:57	WG1155097
1,2,4-Trimethylbenzene	ND		0.00591	1	08/23/2018 01:13	WG1155519
1,2,3-Trimethylbenzene	ND		0.00591	1	08/23/2018 01:13	WG1155519
Vinyl chloride	ND		0.00295	1	08/23/2018 01:13	WG1155519
1,3,5-Trimethylbenzene	ND		0.00591	1	08/21/2018 15:57	WG1155097
o-Xylene	ND		0.00295	1	08/21/2018 15:57	WG1155097
m&p-Xylene	ND		0.00472	1	08/21/2018 15:57	WG1155097
(S) Toluene-d8	109		80.0-120		08/21/2018 15:57	WG1155097
(S) Toluene-d8	114		80.0-120		08/23/2018 01:13	WG1155519
(S) Dibromofluoromethane	99.1		74.0-131		08/21/2018 15:57	WG1155097
(S) Dibromofluoromethane	99.6		74.0-131		08/23/2018 01:13	WG1155519
(S) 4-Bromofluorobenzene	101		64.0-132		08/21/2018 15:57	WG1155097
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 01:13	WG1155519

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.72	1	08/23/2018 17:14	WG1156163
Residual Range Organics (RRO)	ND		11.8	1	08/23/2018 17:14	WG1156163
(S) o-Terphenyl	53.9		18.0-148		08/23/2018 17:14	WG1156163

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.72	1	08/23/2018 14:37	WG1155941
Residual Range Organics (RRO)	ND		11.8	1	08/23/2018 14:37	WG1155941
(S) o-Terphenyl	86.9		18.0-148		08/23/2018 14:37	WG1155941



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Acenaphthene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Acenaphthylene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Benzo(a)anthracene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Benzo(a)pyrene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Benzo(b)fluoranthene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Benzo(g,h,i)perylene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Benzo(k)fluoranthene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Chrysene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Dibenz(a,h)anthracene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Fluoranthene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Fluorene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Indeno(1,2,3-cd)pyrene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Naphthalene	ND		0.0236	1	08/24/2018 02:56	WG1155959
Phenanthrene	ND		0.00709	1	08/24/2018 02:56	WG1155959
Pyrene	ND		0.00709	1	08/24/2018 02:56	WG1155959
1-Methylnaphthalene	ND		0.0236	1	08/24/2018 02:56	WG1155959
2-Methylnaphthalene	ND		0.0236	1	08/24/2018 02:56	WG1155959
2-Chloronaphthalene	ND		0.0236	1	08/24/2018 02:56	WG1155959
(S) Nitrobenzene-d5	64.9		14.0-149		08/24/2018 02:56	WG1155959
(S) 2-Fluorobiphenyl	77.6		34.0-125		08/24/2018 02:56	WG1155959
(S) p-Terphenyl-d14	88.4		23.0-120		08/24/2018 02:56	WG1155959

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	94.0		1	08/23/2018 10:48	WG1155862

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0213	1	08/23/2018 13:16	WG1155818

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.13	1	08/23/2018 10:11	WG1156076
Barium	62.0		0.532	1	08/23/2018 10:11	WG1156076
Cadmium	ND		0.532	1	08/23/2018 10:11	WG1156076
Chromium	7.10		1.06	1	08/23/2018 10:11	WG1156076
Lead	33.1		0.532	1	08/23/2018 10:11	WG1156076
Selenium	ND		2.13	1	08/23/2018 10:11	WG1156076
Silver	ND		1.06	1	08/23/2018 10:11	WG1156076

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0266	1	08/21/2018 16:18	WG1155097
Acrylonitrile	ND		0.0133	1	08/21/2018 16:18	WG1155097
Benzene	ND		0.00106	1	08/21/2018 16:18	WG1155097
Bromobenzene	ND		0.0133	1	08/21/2018 16:18	WG1155097
Bromodichloromethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
Bromoform	ND		0.0266	1	08/21/2018 16:18	WG1155097
Bromomethane	ND		0.0133	1	08/21/2018 16:18	WG1155097
n-Butylbenzene	ND		0.0133	1	08/21/2018 16:18	WG1155097
sec-Butylbenzene	ND		0.0133	1	08/21/2018 16:18	WG1155097
tert-Butylbenzene	ND		0.00532	1	08/21/2018 16:18	WG1155097
Carbon tetrachloride	ND		0.00532	1	08/21/2018 16:18	WG1155097
Chlorobenzene	ND		0.00266	1	08/21/2018 16:18	WG1155097
Chlorodibromomethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
Chloroethane	ND		0.00532	1	08/21/2018 16:18	WG1155097
Chloroform	ND		0.00266	1	08/21/2018 16:18	WG1155097
Chloromethane	ND		0.0133	1	08/21/2018 16:18	WG1155097
2-Chlorotoluene	ND		0.00266	1	08/21/2018 16:18	WG1155097
4-Chlorotoluene	ND		0.00532	1	08/21/2018 16:18	WG1155097
1,2-Dibromo-3-Chloropropane	ND		0.0266	1	08/21/2018 16:18	WG1155097
1,2-Dibromoethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
Dibromomethane	ND		0.00532	1	08/21/2018 16:18	WG1155097
1,2-Dichlorobenzene	ND		0.00532	1	08/21/2018 16:18	WG1155097
1,3-Dichlorobenzene	ND		0.00532	1	08/21/2018 16:18	WG1155097
1,4-Dichlorobenzene	ND		0.00532	1	08/21/2018 16:18	WG1155097
Dichlorodifluoromethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
1,1-Dichloroethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
1,2-Dichloroethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
1,1-Dichloroethene	ND		0.00266	1	08/21/2018 16:18	WG1155097
cis-1,2-Dichloroethene	ND		0.00266	1	08/21/2018 16:18	WG1155097
trans-1,2-Dichloroethene	ND		0.00532	1	08/21/2018 16:18	WG1155097
1,2-Dichloropropane	ND		0.00532	1	08/23/2018 01:36	WG1155519
1,1-Dichloropropene	ND		0.00266	1	08/21/2018 16:18	WG1155097
1,3-Dichloropropane	ND		0.00532	1	08/21/2018 16:18	WG1155097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00266	1	08/21/2018 16:18	WG1155097
trans-1,3-Dichloropropene	ND		0.00532	1	08/21/2018 16:18	WG1155097
2,2-Dichloropropane	ND		0.00266	1	08/21/2018 16:18	WG1155097
Di-isopropyl ether	ND		0.00106	1	08/21/2018 16:18	WG1155097
Ethylbenzene	ND		0.00266	1	08/21/2018 16:18	WG1155097
Hexachloro-1,3-butadiene	ND		0.0266	1	08/21/2018 16:18	WG1155097
Isopropylbenzene	ND		0.00266	1	08/21/2018 16:18	WG1155097
p-Isopropyltoluene	ND		0.00532	1	08/21/2018 16:18	WG1155097
2-Butanone (MEK)	ND		0.0266	1	08/23/2018 01:36	WG1155519
Methylene Chloride	ND		0.0266	1	08/21/2018 16:18	WG1155097
4-Methyl-2-pentanone (MIBK)	ND		0.0266	1	08/21/2018 16:18	WG1155097
Methyl tert-butyl ether	ND		0.00106	1	08/21/2018 16:18	WG1155097
Naphthalene	ND		0.0133	1	08/21/2018 16:18	WG1155097
n-Propylbenzene	ND		0.00532	1	08/23/2018 01:36	WG1155519
Styrene	ND		0.0133	1	08/21/2018 16:18	WG1155097
1,1,1-Tetrachloroethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
1,1,2,2-Tetrachloroethane	ND	J4	0.00266	1	08/21/2018 16:18	WG1155097
1,1,2-Trichlorotrifluoroethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
Tetrachloroethene	ND		0.00266	1	08/21/2018 16:18	WG1155097
Toluene	ND		0.00532	1	08/21/2018 16:18	WG1155097
1,2,3-Trichlorobenzene	ND		0.00266	1	08/21/2018 16:18	WG1155097
1,2,4-Trichlorobenzene	ND		0.0133	1	08/21/2018 16:18	WG1155097
1,1,1-Trichloroethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
1,1,2-Trichloroethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
Trichloroethene	ND		0.00106	1	08/21/2018 16:18	WG1155097
Trichlorofluoromethane	ND		0.00266	1	08/21/2018 16:18	WG1155097
1,2,3-Trichloropropane	ND		0.0133	1	08/21/2018 16:18	WG1155097
1,2,4-Trimethylbenzene	ND		0.00532	1	08/23/2018 01:36	WG1155519
1,2,3-Trimethylbenzene	ND		0.00532	1	08/23/2018 01:36	WG1155519
Vinyl chloride	ND		0.00266	1	08/23/2018 01:36	WG1155519
1,3,5-Trimethylbenzene	ND		0.00532	1	08/21/2018 16:18	WG1155097
o-Xylene	ND		0.00266	1	08/21/2018 16:18	WG1155097
m&p-Xylene	ND		0.00425	1	08/21/2018 16:18	WG1155097
(S) Toluene-d8	105		80.0-120		08/21/2018 16:18	WG1155097
(S) Toluene-d8	118		80.0-120		08/23/2018 01:36	WG1155519
(S) Dibromofluoromethane	99.3		74.0-131		08/21/2018 16:18	WG1155097
(S) Dibromofluoromethane	98.7		74.0-131		08/23/2018 01:36	WG1155519
(S) 4-Bromofluorobenzene	103		64.0-132		08/21/2018 16:18	WG1155097
(S) 4-Bromofluorobenzene	103		64.0-132		08/23/2018 01:36	WG1155519

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.25	1	08/25/2018 02:41	WG1156163
Residual Range Organics (RRO)	20.5		10.6	1	08/25/2018 02:41	WG1156163
(S) o-Terphenyl	74.6		18.0-148		08/25/2018 02:41	WG1156163

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Acenaphthene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Acenaphthylene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Benzo(a)anthracene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Benzo(a)pyrene	ND		0.00638	1	08/24/2018 03:18	WG1155959



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Benzo(g,h,i)perylene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Benzo(k)fluoranthene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Chrysene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Dibenz(a,h)anthracene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Fluoranthene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Fluorene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Indeno(1,2,3-cd)pyrene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Naphthalene	ND		0.0213	1	08/24/2018 03:18	WG1155959
Phenanthrene	ND		0.00638	1	08/24/2018 03:18	WG1155959
Pyrene	ND		0.00638	1	08/24/2018 03:18	WG1155959
1-Methylnaphthalene	ND		0.0213	1	08/24/2018 03:18	WG1155959
2-Methylnaphthalene	ND		0.0213	1	08/24/2018 03:18	WG1155959
2-Chloronaphthalene	ND		0.0213	1	08/24/2018 03:18	WG1155959
<i>(S)</i> Nitrobenzene-d5	68.8		14.0-149		08/24/2018 03:18	WG1155959
<i>(S)</i> 2-Fluorobiphenyl	78.8		34.0-125		08/24/2018 03:18	WG1155959
<i>(S)</i> p-Terphenyl-d14	85.4		23.0-120		08/24/2018 03:18	WG1155959

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3336347-1 08/23/18 12:28

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

L1018748-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1018748-01 08/23/18 12:28 • (DUP) R3336347-3 08/23/18 12:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	94.5	94.6	1	0.0731		10

⁴Cn

⁵Sr

Laboratory Control Sample (LCS)

(LCS) R3336347-2 08/23/18 12:28

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3336351-1 08/23/18 10:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1018742-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1018742-23 08/23/18 10:48 • (DUP) R3336351-3 08/23/18 10:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	84.7	84.6	1	0.105		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3336351-2 08/23/18 10:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3336346-1 08/23/18 10:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1018742-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1018742-14 08/23/18 10:33 • (DUP) R3336346-3 08/23/18 10:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	95.6	95.0	1	0.686		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3336346-2 08/23/18 10:33

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	99.9	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3336343-1 08/23/18 10:19

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1019346-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1019346-01 08/23/18 10:19 • (DUP) R3336343-3 08/23/18 10:19

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	92.0	90.3	1	1.88		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3336343-2 08/23/18 10:19

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	99.9	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3336506-1 08/24/18 10:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.00280	0.0200

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336506-2 08/24/18 10:42 • (LCSD) R3336506-3 08/24/18 10:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.281	0.280	93.7	93.2	80.0-120			0.514	20

7 Gl

8 Al

L1018742-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018742-01 08/24/18 10:52 • (MS) R3336506-4 08/24/18 10:55 • (MSD) R3336506-5 08/24/18 10:57

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
Mercury	0.365	ND	0.374	0.394	102	108	1	75.0-125			5.16	20

9 Sc



Method Blank (MB)

(MB) R3336318-1 08/23/18 12:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.00280	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336318-2 08/23/18 12:53 • (LCSD) R3336318-3 08/23/18 12:55

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 %
Mercury	0.300	0.326	0.322	109	107	80.0-120			1.40	20

L1018911-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018911-23 08/23/18 12:58 • (MS) R3336318-4 08/23/18 13:01 • (MSD) R3336318-5 08/23/18 13:11

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.366	0.142	0.471	0.482	89.7	92.6	1	75.0-125			2.23	20



Method Blank (MB)

(MB) R3336300-1 08/23/18 15:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Arsenic	U		0.650	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	0.198	↓	0.140	1.00
Lead	0.360	↓	0.190	0.500
Selenium	U		0.740	2.00
Silver	0.561	↓	0.280	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336300-2 08/23/18 16:02 • (LCSD) R3336300-3 08/23/18 16:04

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	%	%	%			%	%
Arsenic	100	97.3	93.9	97.3	93.9	80.0-120			3.63	20
Barium	100	104	100	104	100	80.0-120			3.14	20
Cadmium	100	97.8	94.3	97.8	94.3	80.0-120			3.62	20
Chromium	100	98.8	95.7	98.8	95.7	80.0-120			3.15	20
Lead	100	98.3	95.3	98.3	95.3	80.0-120			3.12	20
Selenium	100	97.6	93.4	97.6	93.4	80.0-120			4.45	20
Silver	20.0	18.7	18.1	93.6	90.3	80.0-120			3.55	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1018742-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018742-01 08/23/18 16:07 • (MS) R3336300-6 08/23/18 16:15 • (MSD) R3336300-7 08/23/18 16:18

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	%	%		%			%	%
Arsenic	122	ND	121	117	98.4	94.7	1	75.0-125			3.80	20
Barium	122	75.0	204	203	106	105	1	75.0-125			0.261	20
Cadmium	122	ND	122	117	100	96.1	1	75.0-125			4.22	20
Chromium	122	14.1	135	130	99.2	95.1	1	75.0-125			3.82	20
Lead	122	3.93	129	123	102	98.1	1	75.0-125			4.19	20
Selenium	122	ND	121	115	99.1	94.9	1	75.0-125			4.37	20
Silver	24.4	ND	22.8	21.8	93.5	89.4	1	75.0-125			4.44	20



Method Blank (MB)

(MB) R3336034-1 08/23/18 09:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.740	2.00
Silver	U		0.280	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336034-2 08/23/18 09:43 • (LCSD) R3336034-3 08/23/18 09:46

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	93.5	94.6	93.5	94.6	80.0-120			1.26	20
Barium	100	97.6	98.1	97.6	98.1	80.0-120			0.501	20
Cadmium	100	94.1	94.5	94.1	94.5	80.0-120			0.391	20
Chromium	100	97.0	97.5	97.0	97.5	80.0-120			0.467	20
Lead	100	98.7	98.2	98.7	98.2	80.0-120			0.443	20
Selenium	100	93.1	93.5	93.1	93.5	80.0-120			0.436	20
Silver	20.0	18.1	18.0	90.4	90.1	80.0-120			0.399	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1018985-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018985-01 08/23/18 09:48 • (MS) R3336034-6 08/23/18 09:56 • (MSD) R3336034-7 08/23/18 09:58

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 %
Arsenic	100	1.07	99.5	98.7	98.4	97.6	1	75.0-125			0.782	20
Barium	100	56.2	164	160	108	104	1	75.0-125			2.71	20
Cadmium	100	0.141	100	99.1	99.9	99.0	1	75.0-125			0.971	20
Chromium	100	6.74	108	107	101	99.8	1	75.0-125			1.16	20
Lead	100	11.1	114	112	103	101	1	75.0-125			1.44	20
Selenium	100	U	96.8	95.8	96.8	95.8	1	75.0-125			1.05	20
Silver	20.0	U	18.9	18.9	94.6	94.6	1	75.0-125			0.0238	20



Method Blank (MB)

(MB) R3335875-2 08/21/18 10:07

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
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250
p-Isopropyltoluene	U		0.00233	0.00500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3335875-2 08/21/18 10:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichlorofluoromethane	U		0.000500	0.00250
1,2,3-Trichloropropane	U		0.00510	0.0125
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
Vinyl chloride	U		0.000683	0.00250
o-Xylene	U		0.00100	0.00250
(S) Toluene-d8	109			80.0-120
(S) Dibromofluoromethane	100			74.0-131
(S) 4-Bromofluorobenzene	97.6			64.0-132

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS)

(LCS) R3335875-1 08/21/18 09:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.874	140	25.3-178	
Acrylonitrile	0.625	0.651	104	57.8-143	
Benzene	0.125	0.121	97.1	72.6-120	
Bromobenzene	0.125	0.116	92.7	80.3-115	
Bromodichloromethane	0.125	0.127	102	75.3-119	
Bromoform	0.125	0.117	93.9	69.1-135	
Bromomethane	0.125	0.115	92.1	23.0-191	



Laboratory Control Sample (LCS)

(LCS) R3335875-1 08/21/18 09:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
n-Butylbenzene	0.125	0.124	99.1	74.2-134	
sec-Butylbenzene	0.125	0.111	89.0	77.8-129	
tert-Butylbenzene	0.125	0.109	86.8	77.2-129	
Carbon tetrachloride	0.125	0.130	104	69.4-129	
Chlorobenzene	0.125	0.116	93.1	78.9-122	
Chlorodibromomethane	0.125	0.121	96.9	76.4-126	
Chloroethane	0.125	0.120	96.0	47.2-147	
Chloroform	0.125	0.126	100	73.3-122	
Chloromethane	0.125	0.119	95.2	53.1-135	
2-Chlorotoluene	0.125	0.117	93.2	74.6-127	
4-Chlorotoluene	0.125	0.116	92.8	79.5-123	
1,2-Dibromo-3-Chloropropane	0.125	0.129	103	64.9-131	
1,2-Dibromoethane	0.125	0.116	92.5	78.7-123	
Dibromomethane	0.125	0.138	110	78.5-117	
1,2-Dichlorobenzene	0.125	0.126	100	83.6-119	
1,3-Dichlorobenzene	0.125	0.123	98.4	75.9-129	
1,4-Dichlorobenzene	0.125	0.120	96.4	81.0-115	
Dichlorodifluoromethane	0.125	0.127	102	50.9-139	
1,1-Dichloroethane	0.125	0.116	92.6	71.7-125	
1,2-Dichloroethane	0.125	0.120	96.3	67.2-121	
1,1-Dichloroethene	0.125	0.123	98.1	60.6-133	
cis-1,2-Dichloroethene	0.125	0.119	95.3	76.1-121	
trans-1,2-Dichloroethene	0.125	0.124	98.9	70.7-124	
1,1-Dichloropropene	0.125	0.120	95.7	71.2-126	
1,3-Dichloropropane	0.125	0.119	95.0	80.3-114	
cis-1,3-Dichloropropene	0.125	0.121	97.1	77.3-123	
trans-1,3-Dichloropropene	0.125	0.116	93.1	73.0-127	
2,2-Dichloropropane	0.125	0.118	94.1	61.9-132	
Di-isopropyl ether	0.125	0.116	92.6	67.2-131	
Ethylbenzene	0.125	0.114	91.4	78.6-124	
Hexachloro-1,3-butadiene	0.125	0.130	104	69.2-136	
Isopropylbenzene	0.125	0.111	88.7	79.4-126	
p-Isopropyltoluene	0.125	0.110	88.0	75.4-132	
2-Butanone (MEK)	0.625	0.756	121	44.5-154	
Methylene Chloride	0.125	0.121	97.1	68.2-119	
4-Methyl-2-pentanone (MIBK)	0.625	0.693	111	61.1-138	
Methyl tert-butyl ether	0.125	0.125	100	70.2-122	
Naphthalene	0.125	0.125	99.9	69.9-132	
n-Propylbenzene	0.125	0.108	86.5	80.2-124	
Styrene	0.125	0.117	93.9	79.4-124	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3335875-1 08/21/18 09:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
1,1,1,2-Tetrachloroethane	0.125	0.102	81.9	76.7-127	
1,1,2,2-Tetrachloroethane	0.125	0.116	92.8	78.8-124	
Tetrachloroethene	0.125	0.102	81.6	71.1-133	
Toluene	0.125	0.120	96.1	76.7-116	
1,1,2-Trichlorotrifluoroethane	0.125	0.118	94.6	62.6-138	
1,2,3-Trichlorobenzene	0.125	0.121	96.6	72.5-137	
1,2,4-Trichlorobenzene	0.125	0.120	96.1	74.0-137	
1,1,1-Trichloroethane	0.125	0.121	96.7	69.9-127	
1,1,2-Trichloroethane	0.125	0.118	94.7	81.9-119	
Trichlorofluoromethane	0.125	0.118	94.7	51.5-151	
1,2,3-Trichloropropane	0.125	0.126	101	74.0-124	
1,2,3-Trimethylbenzene	0.125	0.113	90.1	79.4-118	
1,2,4-Trimethylbenzene	0.125	0.121	97.1	77.1-124	
1,3,5-Trimethylbenzene	0.125	0.114	91.0	79.0-125	
Vinyl chloride	0.125	0.117	93.8	58.4-134	
o-Xylene	0.125	0.118	94.1	78.5-124	
(S) Toluene-d8			103	80.0-120	
(S) Dibromofluoromethane			105	74.0-131	
(S) 4-Bromofluorobenzene			92.4	64.0-132	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

L1018742-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018742-19 08/21/18 16:33 • (MS) R3335875-3 08/21/18 16:52 • (MSD) R3335875-4 08/21/18 17:11

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	0.777	ND	0.431	0.561	55.5	72.2	1	10.0-130			26.2	31.5
Acrylonitrile	0.777	ND	0.393	0.536	50.6	69.0	1	39.3-152	J3		30.8	27.2
Benzene	0.155	ND	0.110	0.130	70.5	83.6	1	47.8-131			17.0	22.8
Bromobenzene	0.155	ND	0.108	0.117	69.2	75.4	1	40.0-130			8.60	27.4
Bromodichloromethane	0.155	ND	0.121	0.126	77.8	81.1	1	50.6-128			4.13	22.8
Bromoform	0.155	ND	0.106	0.126	68.4	81.4	1	43.3-139			17.3	25.9
Bromomethane	0.155	ND	0.0858	0.0745	55.2	47.9	1	5.00-189			14.2	26.7
n-Butylbenzene	0.155	ND	0.108	0.117	69.8	75.5	1	23.6-146			7.91	39.2
sec-Butylbenzene	0.155	ND	0.109	0.120	69.9	77.5	1	31.0-142			10.3	34.7
tert-Butylbenzene	0.155	ND	0.101	0.120	64.9	77.4	1	36.9-142			17.5	31.7
Carbon tetrachloride	0.155	ND	0.130	0.128	83.8	82.4	1	46.0-140			1.67	27.2
Chlorobenzene	0.155	ND	0.120	0.121	77.4	77.7	1	44.1-134			0.412	25.7
Chlorodibromomethane	0.155	ND	0.107	0.103	69.0	66.5	1	49.7-134			3.76	24
Chloroethane	0.155	ND	0.0880	0.0721	56.6	46.4	1	5.00-164			19.9	28.4



L1018742-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018742-19 08/21/18 16:33 • (MS) R3335875-3 08/21/18 16:52 • (MSD) R3335875-4 08/21/18 17:11

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloroform	0.155	ND	0.115	0.126	74.2	81.2	1	51.2-133			8.96	22.8
Chloromethane	0.155	ND	0.132	0.116	85.1	74.6	1	31.4-141			13.2	24.6
2-Chlorotoluene	0.155	ND	0.102	0.114	65.7	73.3	1	36.1-137			10.8	28.9
4-Chlorotoluene	0.155	ND	0.105	0.119	67.6	76.8	1	35.4-137			12.7	29.8
1,2-Dibromo-3-Chloropropane	0.155	ND	0.0811	0.103	52.1	66.3	1	40.4-138			23.9	30.8
1,2-Dibromoethane	0.155	ND	0.103	0.103	66.3	66.0	1	50.2-133			0.369	23.6
Dibromomethane	0.155	ND	0.129	0.131	82.9	84.0	1	52.4-128			1.27	23
1,2-Dichlorobenzene	0.155	ND	0.107	0.115	68.7	74.1	1	34.6-139			7.54	29.9
1,3-Dichlorobenzene	0.155	ND	0.112	0.122	72.1	78.2	1	28.4-142			8.08	31.2
1,4-Dichlorobenzene	0.155	ND	0.100	0.110	64.6	70.7	1	35.0-133			9.06	31.1
Dichlorodifluoromethane	0.155	ND	0.202	0.173	130	111	1	31.2-144			15.4	30.2
1,1-Dichloroethane	0.155	ND	0.107	0.121	68.7	77.7	1	49.1-136			12.3	22.9
1,2-Dichloroethane	0.155	ND	0.119	0.116	76.5	74.7	1	47.1-129			2.49	22.7
1,1-Dichloroethene	0.155	ND	0.130	0.118	83.6	76.2	1	36.1-142			9.24	25.6
cis-1,2-Dichloroethene	0.155	ND	0.101	0.122	65.2	78.2	1	50.6-133			18.1	23
trans-1,2-Dichloroethene	0.155	ND	0.134	0.114	86.2	73.6	1	43.8-135			15.8	24.8
1,1-Dichloropropene	0.155	ND	0.0990	0.116	63.7	74.3	1	43.0-137			15.4	26.4
1,3-Dichloropropane	0.155	ND	0.115	0.118	74.1	76.0	1	51.4-127			2.50	23.1
cis-1,3-Dichloropropene	0.155	ND	0.100	0.108	64.4	69.5	1	48.4-134			7.67	23.6
trans-1,3-Dichloropropene	0.155	ND	0.103	0.107	66.2	68.7	1	46.6-135			3.68	25.3
2,2-Dichloropropane	0.155	ND	0.120	0.126	77.1	81.3	1	45.2-141			5.21	26.6
Di-isopropyl ether	0.155	ND	0.0965	0.122	62.1	78.4	1	46.7-140			23.2	23.5
Ethylbenzene	0.155	ND	0.114	0.120	73.4	77.0	1	44.8-135			4.90	26.9
Hexachloro-1,3-butadiene	0.155	ND	0.111	0.138	71.4	89.1	1	10.0-149			22.1	40
Isopropylbenzene	0.155	ND	0.110	0.124	70.6	80.0	1	41.9-139			12.4	29.3
p-Isopropyltoluene	0.155	ND	0.102	0.117	65.4	74.9	1	27.3-146			13.6	35.1
2-Butanone (MEK)	0.777	ND	0.637	0.731	78.7	90.8	1	23.9-170			13.7	28.3
Methylene Chloride	0.155	ND	0.111	0.119	71.6	76.4	1	46.7-125			6.47	22.2
4-Methyl-2-pentanone (MIBK)	0.777	ND	0.524	0.584	67.4	75.2	1	42.4-146			10.9	26.7
Methyl tert-butyl ether	0.155	ND	0.100	0.113	64.5	72.4	1	50.4-131			11.5	24.8
Naphthalene	0.155	ND	0.0975	0.108	62.7	69.5	1	18.4-145			10.3	34
n-Propylbenzene	0.155	ND	0.102	0.110	65.7	71.0	1	35.2-139			7.67	31.9
Styrene	0.155	ND	0.107	0.130	68.8	83.9	1	39.7-137			19.8	28.2
1,1,1,2-Tetrachloroethane	0.155	ND	0.115	0.107	74.1	68.8	1	48.8-136			7.49	25.5
1,1,2,2-Tetrachloroethane	0.155	ND	0.0968	0.0977	62.3	62.8	1	45.7-140			0.937	26.4
Tetrachloroethene	0.155	ND	0.101	0.0991	65.0	63.7	1	37.7-140			1.92	29.2
Toluene	0.155	ND	0.109	0.117	68.4	73.3	1	47.8-127			6.72	24.3
1,1,2-Trichlorotrifluoroethane	0.155	ND	0.128	0.114	82.1	73.3	1	35.7-146			11.3	28.8
1,2,3-Trichlorobenzene	0.155	ND	0.109	0.122	70.0	78.6	1	10.0-150			11.6	38.5

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1018742-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018742-19 08/21/18 16:33 • (MS) R3335875-3 08/21/18 16:52 • (MSD) R3335875-4 08/21/18 17:11

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,2,4-Trichlorobenzene	0.155	ND	0.0942	0.118	60.6	76.2	1	10.0-153			22.7	39.3
1,1,1-Trichloroethane	0.155	ND	0.121	0.119	78.1	76.7	1	49.0-138			1.75	25.3
1,1,2-Trichloroethane	0.155	ND	0.108	0.116	69.3	74.5	1	52.3-132			7.27	23.4
Trichlorofluoromethane	0.155	ND	0.103	0.0886	66.1	57.0	1	12.8-169			14.8	29.7
1,2,3-Trichloropropane	0.155	ND	0.114	0.118	73.6	76.2	1	44.4-138			3.40	26.3
1,2,3-Trimethylbenzene	0.155	ND	0.0948	0.108	61.0	69.2	1	41.0-133			12.7	27.6
1,2,4-Trimethylbenzene	0.155	ND	0.109	0.116	70.2	74.9	1	32.9-139			6.45	30.6
1,3,5-Trimethylbenzene	0.155	ND	0.102	0.117	65.7	75.1	1	37.1-138			13.3	30.6
Vinyl chloride	0.155	ND	0.144	0.113	92.5	72.6	1	32.0-146			24.1	26.3
o-Xylene	0.155	ND	0.116	0.109	74.6	70.1	1	43.2-136			6.19	26.2
(S) Toluene-d8					103	98.4		80.0-120				
(S) Dibromofluoromethane					100	104		74.0-131				
(S) 4-Bromofluorobenzene					95.5	92.4		64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335327-3 08/21/18 10:04

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
1,1-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	0.0133	U	0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250
p-Isopropyltoluene	U		0.00233	0.00500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3335327-3 08/21/18 10:04

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
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
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	0.00160	↓	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
1,3,5-Trimethylbenzene	U		0.00108	0.00500
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	106			80.0-120
(S) Dibromofluoromethane	95.7			74.0-131
(S) 4-Bromofluorobenzene	104			64.0-132

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) R3335327-1 08/21/18 08:44 • (LCSD) R3335327-2 08/21/18 09:04

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	%	%	%			%	%
Acetone	0.625	0.629	0.645	101	103	25.3-178			2.56	22.9
Acrylonitrile	0.625	0.592	0.634	94.6	101	57.8-143			6.98	20
Benzene	0.125	0.113	0.115	90.5	92.0	72.6-120			1.63	20
Bromobenzene	0.125	0.118	0.117	94.0	93.5	80.3-115			0.534	20
Bromodichloromethane	0.125	0.122	0.124	97.6	98.9	75.3-119			1.34	20
Bromoform	0.125	0.120	0.128	95.7	102	69.1-135			6.80	20
Bromomethane	0.125	0.116	0.126	92.8	101	23.0-191			8.48	20
n-Butylbenzene	0.125	0.137	0.144	110	115	74.2-134			4.77	20
sec-Butylbenzene	0.125	0.117	0.125	93.8	100	77.8-129			6.41	20
tert-Butylbenzene	0.125	0.118	0.122	94.3	97.8	77.2-129			3.63	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335327-1 08/21/18 08:44 • (LCSD) R3335327-2 08/21/18 09:04

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 %
Carbon tetrachloride	0.125	0.128	0.127	102	102	69.4-129			0.499	20
Chlorobenzene	0.125	0.118	0.125	94.5	99.9	78.9-122			5.61	20
Chlorodibromomethane	0.125	0.110	0.125	88.3	99.8	76.4-126			12.2	20
Chloroethane	0.125	0.114	0.118	91.2	94.7	47.2-147			3.79	20
Chloroform	0.125	0.118	0.120	94.7	95.8	73.3-122			1.11	20
Chloromethane	0.125	0.135	0.141	108	113	53.1-135			4.27	20
2-Chlorotoluene	0.125	0.137	0.139	109	111	74.6-127			1.34	20
4-Chlorotoluene	0.125	0.121	0.125	97.0	99.8	79.5-123			2.85	20
1,2-Dibromo-3-Chloropropane	0.125	0.115	0.131	92.4	105	64.9-131			12.5	20
1,2-Dibromoethane	0.125	0.116	0.122	93.0	97.5	78.7-123			4.69	20
Dibromomethane	0.125	0.127	0.130	102	104	78.5-117			2.35	20
1,2-Dichlorobenzene	0.125	0.113	0.118	90.5	94.0	83.6-119			3.83	20
1,3-Dichlorobenzene	0.125	0.119	0.117	94.8	93.5	75.9-129			1.42	20
1,4-Dichlorobenzene	0.125	0.118	0.120	94.6	96.3	81.0-115			1.87	20
Dichlorodifluoromethane	0.125	0.123	0.124	98.6	99.0	50.9-139			0.496	20
1,1-Dichloroethane	0.125	0.123	0.132	98.6	105	71.7-125			6.50	20
1,2-Dichloroethane	0.125	0.125	0.130	100	104	67.2-121			3.56	20
1,1-Dichloroethene	0.125	0.130	0.131	104	105	60.6-133			0.604	20
cis-1,2-Dichloroethene	0.125	0.0963	0.0981	77.1	78.5	76.1-121			1.81	20
trans-1,2-Dichloroethene	0.125	0.117	0.121	93.6	97.1	70.7-124			3.65	20
1,1-Dichloropropene	0.125	0.135	0.136	108	109	71.2-126			0.708	20
1,3-Dichloropropane	0.125	0.125	0.129	100	103	80.3-114			3.33	20
cis-1,3-Dichloropropene	0.125	0.108	0.108	86.0	86.8	77.3-123			0.864	20
trans-1,3-Dichloropropene	0.125	0.120	0.139	96.2	111	73.0-127			14.2	20
2,2-Dichloropropane	0.125	0.125	0.127	100	102	61.9-132			1.52	20
Di-isopropyl ether	0.125	0.116	0.119	92.5	95.2	67.2-131			2.91	20
Ethylbenzene	0.125	0.129	0.132	103	106	78.6-124			2.58	20
Hexachloro-1,3-butadiene	0.125	0.127	0.141	101	113	69.2-136			10.4	20
Isopropylbenzene	0.125	0.113	0.115	90.6	92.1	79.4-126			1.65	20
p-Isopropyltoluene	0.125	0.121	0.128	97.1	103	75.4-132			5.71	20
Methylene Chloride	0.125	0.118	0.121	94.2	96.5	68.2-119			2.39	20
4-Methyl-2-pentanone (MIBK)	0.625	0.619	0.659	99.0	105	61.1-138			6.25	20
Methyl tert-butyl ether	0.125	0.130	0.139	104	111	70.2-122			7.00	20
Naphthalene	0.125	0.126	0.136	100	109	69.9-132			7.96	20
Styrene	0.125	0.122	0.127	98.0	102	79.4-124			3.59	20
1,1,1,2-Tetrachloroethane	0.125	0.106	0.114	85.0	90.9	76.7-127			6.66	20
1,1,2,2-Tetrachloroethane	0.125	0.0933	0.0976	74.7	78.1	78.8-124	J4	J4	4.49	20
Tetrachloroethene	0.125	0.129	0.137	103	110	71.1-133			5.95	20
Toluene	0.125	0.121	0.125	96.8	100	76.7-116			3.28	20
1,1,2-Trichlorotrifluoroethane	0.125	0.132	0.139	106	112	62.6-138			5.50	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) R3335327-1 08/21/18 08:44 • (LCSD) R3335327-2 08/21/18 09:04

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 %
1,2,3-Trichlorobenzene	0.125	0.141	0.153	113	122	72.5-137			7.87	20
1,2,4-Trichlorobenzene	0.125	0.117	0.131	93.9	105	74.0-137			11.3	20
1,1,1-Trichloroethane	0.125	0.129	0.131	103	104	69.9-127			1.53	20
1,1,2-Trichloroethane	0.125	0.107	0.111	85.4	88.8	81.9-119			3.88	20
Trichloroethene	0.125	0.142	0.145	113	116	77.2-122			2.45	20
Trichlorofluoromethane	0.125	0.130	0.132	104	106	51.5-151			1.90	20
1,2,3-Trichloropropane	0.125	0.132	0.128	105	103	74.0-124			2.65	20
1,3,5-Trimethylbenzene	0.125	0.117	0.119	93.4	95.5	79.0-125			2.17	20
o-Xylene	0.125	0.121	0.124	97.0	98.8	78.5-124			1.88	20
m&p-Xylenes	0.250	0.226	0.232	90.5	93.0	77.3-124			2.72	20
(S) Toluene-d8				102	104	80.0-120				
(S) Dibromofluoromethane				98.4	98.5	74.0-131				
(S) 4-Bromofluorobenzene				102	99.9	64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1018824-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018824-02 08/21/18 16:58 • (MS) R3335327-4 08/21/18 18:38 • (MSD) R3335327-5 08/21/18 18:58

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	0.625	U	0.316	0.346	50.6	55.3	1	10.0-130			8.80	31.5
Acrylonitrile	0.625	U	0.471	0.482	75.3	77.1	1	39.3-152			2.36	27.2
Benzene	0.125	U	0.0925	0.0641	74.0	51.3	1	47.8-131		J3	36.3	22.8
Bromobenzene	0.125	U	0.115	0.0977	92.0	78.2	1	40.0-130			16.2	27.4
Bromodichloromethane	0.125	U	0.114	0.0926	90.9	74.1	1	50.6-128			20.3	22.8
Bromoform	0.125	U	0.121	0.116	96.9	92.7	1	43.3-139			4.44	25.9
Bromomethane	0.125	U	0.0691	0.0438	55.3	35.0	1	5.00-189		J3	44.9	26.7
n-Butylbenzene	0.125	U	0.146	0.118	117	94.6	1	23.6-146			21.1	39.2
sec-Butylbenzene	0.125	U	0.121	0.0976	97.1	78.0	1	31.0-142			21.8	34.7
tert-Butylbenzene	0.125	0.00172	0.118	0.0928	93.1	72.8	1	36.9-142			24.1	31.7
Carbon tetrachloride	0.125	U	0.0988	0.0635	79.0	50.8	1	46.0-140		J3	43.5	27.2
Chlorobenzene	0.125	U	0.118	0.0864	94.3	69.1	1	44.1-134		J3	30.7	25.7
Chlorodibromomethane	0.125	U	0.118	0.103	94.1	82.5	1	49.7-134			13.1	24
Chloroethane	0.125	0.00887	0.0768	0.0546	54.4	36.6	1	5.00-164		J3	33.8	28.4
Chloroform	0.125	U	0.108	0.0780	86.6	62.4	1	51.2-133		J3	32.5	22.8
Chloromethane	0.125	0.00720	0.0763	0.0466	55.3	31.5	1	31.4-141		J3	48.4	24.6
2-Chlorotoluene	0.125	U	0.127	0.0980	102	78.4	1	36.1-137			26.1	28.9
4-Chlorotoluene	0.125	U	0.103	0.0845	82.4	67.6	1	35.4-137			19.7	29.8
1,2-Dibromo-3-Chloropropane	0.125	U	0.103	0.105	82.3	84.3	1	40.4-138			2.43	30.8
1,2-Dibromoethane	0.125	U	0.119	0.104	95.3	83.6	1	50.2-133			13.1	23.6



L1018824-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018824-02 08/21/18 16:58 • (MS) R3335327-4 08/21/18 18:38 • (MSD) R3335327-5 08/21/18 18:58

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 %
Dibromomethane	0.125	U	0.114	0.0990	91.0	79.2	1	52.4-128			13.8	23
1,2-Dichlorobenzene	0.125	U	0.118	0.103	94.2	82.3	1	34.6-139			13.4	29.9
1,3-Dichlorobenzene	0.125	U	0.120	0.101	95.8	80.7	1	28.4-142			17.2	31.2
1,4-Dichlorobenzene	0.125	U	0.118	0.101	94.5	80.9	1	35.0-133			15.5	31.1
Dichlorodifluoromethane	0.125	U	0.0717	0.0445	57.3	35.6	1	31.2-144		J3	46.8	30.2
1,1-Dichloroethane	0.125	U	0.106	0.0733	85.2	58.6	1	49.1-136		J3	36.9	22.9
1,2-Dichloroethane	0.125	U	0.109	0.0998	87.3	79.9	1	47.1-129			8.87	22.7
1,1-Dichloroethene	0.125	U	0.0826	0.0518	66.1	41.4	1	36.1-142		J3	45.9	25.6
cis-1,2-Dichloroethene	0.125	U	0.0823	0.0598	65.9	47.8	1	50.6-133		J3 J6	31.7	23
trans-1,2-Dichloroethene	0.125	0.00157	0.0805	0.0528	63.2	41.0	1	43.8-135		J3 J6	41.6	24.8
1,1-Dichloropropene	0.125	U	0.0977	0.0605	78.1	48.4	1	43.0-137		J3	47.0	26.4
1,3-Dichloropropane	0.125	U	0.132	0.116	105	93.1	1	51.4-127			12.3	23.1
cis-1,3-Dichloropropene	0.125	0.00110	0.104	0.0861	82.7	68.0	1	48.4-134			19.3	23.6
trans-1,3-Dichloropropene	0.125	0.00884	0.132	0.115	98.7	85.0	1	46.6-135			13.8	25.3
2,2-Dichloropropane	0.125	U	0.0707	0.0465	56.6	37.2	1	45.2-141		J3 J6	41.4	26.6
Di-isopropyl ether	0.125	U	0.105	0.0927	84.4	74.1	1	46.7-140			12.9	23.5
Ethylbenzene	0.125	U	0.124	0.0839	99.6	67.1	1	44.8-135		J3	38.9	26.9
Hexachloro-1,3-butadiene	0.125	U	0.119	0.118	95.3	94.6	1	10.0-149			0.649	40
Isopropylbenzene	0.125	U	0.110	0.0781	87.7	62.5	1	41.9-139		J3	33.5	29.3
p-Isopropyltoluene	0.125	U	0.128	0.0991	102	79.3	1	27.3-146			25.2	35.1
Methylene Chloride	0.125	U	0.0966	0.0782	77.3	62.5	1	46.7-125			21.1	22.2
4-Methyl-2-pentanone (MIBK)	0.625	U	0.563	0.555	90.0	88.8	1	42.4-146			1.31	26.7
Methyl tert-butyl ether	0.125	U	0.0966	0.106	77.3	84.8	1	50.4-131			9.27	24.8
Naphthalene	0.125	0.0132	0.124	0.125	88.5	89.3	1	18.4-145			0.730	34
Styrene	0.125	U	0.123	0.0957	98.1	76.5	1	39.7-137			24.6	28.2
1,1,1,2-Tetrachloroethane	0.125	U	0.107	0.0823	85.8	65.9	1	48.8-136		J3	26.3	25.5
1,1,2,2-Tetrachloroethane	0.125	0.00131	0.0885	0.0879	69.8	69.3	1	45.7-140			0.695	26.4
Tetrachloroethene	0.125	U	0.110	0.0687	87.8	54.9	1	37.7-140		J3	46.1	29.2
Toluene	0.125	U	0.111	0.0753	88.4	60.2	1	47.8-127		J3	37.9	24.3
1,1,2-Trichlorotrifluoroethane	0.125	U	0.0965	0.0596	77.2	47.7	1	35.7-146		J3	47.3	28.8
1,2,3-Trichlorobenzene	0.125	0.00170	0.132	0.151	104	119	1	10.0-150			13.6	38.5
1,2,4-Trichlorobenzene	0.125	U	0.124	0.129	98.8	103	1	10.0-153			3.95	39.3
1,1,1-Trichloroethane	0.125	U	0.102	0.0689	81.7	55.1	1	49.0-138		J3	39.0	25.3
1,1,2-Trichloroethane	0.125	U	0.117	0.102	93.7	81.7	1	52.3-132			13.7	23.4
Trichloroethene	0.125	U	0.116	0.0779	92.7	62.3	1	48.0-132		J3	39.2	24.8
Trichlorofluoromethane	0.125	U	0.0823	0.0418	65.8	33.5	1	12.8-169		J3	65.2	29.7
1,2,3-Trichloropropane	0.125	U	0.119	0.120	95.4	95.8	1	44.4-138			0.496	26.3
1,3,5-Trimethylbenzene	0.125	U	0.126	0.0905	101	72.4	1	37.1-138		J3	32.7	30.6
o-Xylene	0.125	U	0.122	0.0855	97.2	68.4	1	43.2-136		J3	34.8	26.2
m&p-Xylenes	0.250	U	0.222	0.154	88.8	61.6	1	42.2-134		J3	36.2	27.1

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



L1018824-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018824-02 08/21/18 16:58 • (MS) R3335327-4 08/21/18 18:38 • (MSD) R3335327-5 08/21/18 18:58

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 %
(S) Toluene-d8					109	107		80.0-120				
(S) Dibromofluoromethane					97.0	99.6		74.0-131				
(S) 4-Bromofluorobenzene					103	104		64.0-132				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3335581-3 08/21/18 19:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
n-Butylbenzene	U		0.00384	0.0125
sec-Butylbenzene	U		0.00253	0.0125
Ethylbenzene	U		0.000530	0.00250
2-Butanone (MEK)	U		0.0125	0.0250
n-Propylbenzene	U		0.00118	0.00500
Toluene	U		0.00125	0.00500
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
o-Xylene	U		0.00100	0.00250
(S) Toluene-d8	104			80.0-120
(S) Dibromofluoromethane	109			74.0-131
(S) 4-Bromofluorobenzene	97.6			64.0-132

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) R3335581-1 08/21/18 17:48 • (LCSD) R3335581-2 08/21/18 18:07

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 %
n-Butylbenzene	0.125	0.113	0.117	90.5	93.4	74.2-134			3.13	20
sec-Butylbenzene	0.125	0.124	0.114	99.1	91.2	77.8-129			8.27	20
Ethylbenzene	0.125	0.125	0.132	100	105	78.6-124			5.11	20
2-Butanone (MEK)	0.625	0.807	0.669	129	107	44.5-154			18.7	21.3
n-Propylbenzene	0.125	0.138	0.112	110	89.6	80.2-124		J3	20.7	20
Toluene	0.125	0.118	0.119	94.6	94.9	76.7-116			0.321	20
1,2,3-Trimethylbenzene	0.125	0.118	0.117	94.2	93.6	79.4-118			0.638	20
1,2,4-Trimethylbenzene	0.125	0.136	0.122	108	97.8	77.1-124			10.3	20
1,3,5-Trimethylbenzene	0.125	0.137	0.120	110	96.3	79.0-125			13.0	20
Vinyl chloride	0.125	0.111	0.140	88.9	112	58.4-134		J3	22.9	20
o-Xylene	0.125	0.126	0.128	101	102	78.5-124			1.03	20
(S) Toluene-d8				101	105	80.0-120				
(S) Dibromofluoromethane				104	99.3	74.0-131				
(S) 4-Bromofluorobenzene				118	95.1	64.0-132				



Method Blank (MB)

(MB) R3336007-2 08/23/18 00:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
n-Butylbenzene	U		0.00384	0.0125
sec-Butylbenzene	U		0.00253	0.0125
1,2-Dichloropropane	U		0.00127	0.00500
Isopropylbenzene	U		0.000863	0.00250
2-Butanone (MEK)	U		0.0125	0.0250
Naphthalene	U		0.00312	0.0125
n-Propylbenzene	U		0.00118	0.00500
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
Vinyl chloride	U		0.000683	0.00250
(S) Toluene-d8	116			80.0-120
(S) Dibromofluoromethane	101			74.0-131
(S) 4-Bromofluorobenzene	102			64.0-132

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3336007-1 08/22/18 22:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
n-Butylbenzene	0.125	0.124	99.4	74.2-134	
sec-Butylbenzene	0.125	0.122	97.6	77.8-129	
1,2-Dichloropropane	0.125	0.146	117	76.9-123	
Isopropylbenzene	0.125	0.129	103	79.4-126	
2-Butanone (MEK)	0.625	0.819	131	44.5-154	
Naphthalene	0.125	0.112	89.9	69.9-132	
n-Propylbenzene	0.125	0.127	102	80.2-124	
1,2,3-Trimethylbenzene	0.125	0.144	115	79.4-118	
1,2,4-Trimethylbenzene	0.125	0.105	84.4	77.1-124	
Vinyl chloride	0.125	0.152	122	58.4-134	
(S) Toluene-d8			108	80.0-120	
(S) Dibromofluoromethane			93.8	74.0-131	
(S) 4-Bromofluorobenzene			105	64.0-132	



Method Blank (MB)

(MB) R3335938-2 08/22/18 10:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
1,2-Dichloropropane	U		0.00127	0.00500
m&p-Xylenes	0.00169	↓	0.00150	0.00400
(S) Toluene-d8	117			80.0-120
(S) Dibromofluoromethane	85.2			74.0-131
(S) 4-Bromofluorobenzene	109			64.0-132

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3335938-1 08/22/18 09:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
1,2-Dichloropropane	0.125	0.108	86.6	76.9-123	
m&p-Xylenes	0.250	0.226	90.5	77.3-124	
(S) Toluene-d8			109	80.0-120	
(S) Dibromofluoromethane			92.9	74.0-131	
(S) 4-Bromofluorobenzene			108	64.0-132	

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336008-2 08/23/18 00:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
1,2-Dichloropropane	U		0.00127	0.00500
Trichloroethene	U		0.000400	0.00100
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	116			80.0-120
(S) Dibromofluoromethane	101			74.0-131
(S) 4-Bromofluorobenzene	102			64.0-132

Laboratory Control Sample (LCS)

(LCS) R3336008-1 08/22/18 22:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2-Dichloropropane	0.125	0.146	117	76.9-123	
Trichloroethene	0.125	0.112	89.7	77.2-122	
m&p-Xylenes	0.250	0.230	92.0	77.3-124	
(S) Toluene-d8			108	80.0-120	
(S) Dibromofluoromethane			93.8	74.0-131	
(S) 4-Bromofluorobenzene			105	64.0-132	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336214-2 08/23/18 10:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
1,2-Dichloropropane	U		0.00127	0.00500
Trichloroethene	U		0.000400	0.00100
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	115			80.0-120
(S) Dibromofluoromethane	89.8			74.0-131
(S) 4-Bromofluorobenzene	102			64.0-132

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS)

(LCS) R3336214-1 08/23/18 09:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2-Dichloropropane	0.125	0.113	90.6	76.9-123	
Trichloroethene	0.125	0.134	107	77.2-122	
m&p-Xylenes	0.250	0.239	95.8	77.3-124	
(S) Toluene-d8			107	80.0-120	
(S) Dibromofluoromethane			97.4	74.0-131	
(S) 4-Bromofluorobenzene			99.9	64.0-132	

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT [L1018742-01,02,03,04,05,07,08,09,10,11,12,13,14,15](#)

Method Blank (MB)

(MB) R3335975-1 08/22/18 18:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	71.0			18.0-148

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335975-2 08/22/18 19:12 • (LCSD) R3335975-3 08/22/18 19:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	17.9	19.4	71.6	77.6	50.0-150			8.04	20
Residual Range Organics (RRO)	25.0	14.9	16.6	59.6	66.4	50.0-150			10.8	20
(S) o-Terphenyl				68.3	73.1	18.0-148				

5 Sr

6 Qc

7 Gl

L1018742-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018742-03 08/23/18 07:31 • (MS) R3335975-4 08/23/18 07:44 • (MSD) R3335975-5 08/23/18 07:56

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	30.5	ND	23.1	21.8	75.9	71.4	1	50.0-150			6.09	20
Residual Range Organics (RRO)	30.5	ND	19.9	18.7	65.3	61.2	1	50.0-150			6.45	20
(S) o-Terphenyl					64.2	62.4		18.0-148				

8 Al

9 Sc



Method Blank (MB)

(MB) R3336486-1 08/23/18 23:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	90.2			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336486-2 08/23/18 23:12 • (LCSD) R3336486-3 08/23/18 23:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	17.5	20.2	70.0	80.8	50.0-150			14.3	20
Residual Range Organics (RRO)	25.0	16.1	18.1	64.4	72.4	50.0-150			11.7	20
(S) o-Terphenyl				79.7	92.0	18.0-148				

L1018911-24 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018911-24 08/23/18 23:36 • (MS) R3336486-4 08/23/18 23:48 • (MSD) R3336486-5 08/24/18 00:01

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	29.8	40.2	67.1	28.0	90.4	0.000	2	50.0-150		J3 J6	82.2	20
Residual Range Organics (RRO)	29.8	75.2	104	33.4	96.8	0.000	2	50.0-150		J3 J6	103	20
(S) o-Terphenyl					90.1	106		18.0-148				

Sample Narrative:

OS: Matrix effect

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336487-1 08/23/18 15:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	68.2			18.0-148

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336487-2 08/23/18 15:31 • (LCSD) R3336487-3 08/23/18 15:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	16.5	16.1	66.0	64.4	50.0-150			2.45	20
Residual Range Organics (RRO)	25.0	14.9	13.4	59.6	53.6	50.0-150			10.6	20
(S) o-Terphenyl				76.6	74.6	18.0-148				

5 Sr

6 Qc

7 Gl

L1018744-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018744-17 08/24/18 12:45 • (MS) R3336487-4 08/24/18 12:57 • (MSD) R3336487-5 08/24/18 13:09

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	26.0	6.32	20.5	20.4	54.4	54.0	1	50.0-150			0.509	20
Residual Range Organics (RRO)	26.0	11.1	25.6	23.4	56.0	47.2	1	50.0-150		J6	9.32	20
(S) o-Terphenyl					83.0	84.2		18.0-148				

8 Al

9 Sc



Method Blank (MB)

(MB) R3336230-1 08/23/18 11:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	91.7			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336230-2 08/23/18 11:23 • (LCSD) R3336230-3 08/23/18 11:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	20.8	22.5	83.2	90.0	50.0-150			7.85	20
Residual Range Organics (RRO)	25.0	17.7	19.4	70.8	77.6	50.0-150			9.16	20
(S) o-Terphenyl				73.9	81.2	18.0-148				

L1018384-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018384-04 08/23/18 12:54 • (MS) R3336230-4 08/23/18 13:07 • (MSD) R3336230-5 08/23/18 13:20

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	30.5	5.59	27.6	43.0	72.1	122	1	50.0-150		J3	43.6	20
Residual Range Organics (RRO)	30.5	17.1	40.8	92.7	77.6	248	1	50.0-150		J3 J5	77.8	20
(S) o-Terphenyl					58.4	78.2		18.0-148				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3336424-3 08/23/18 18:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	92.8			14.0-149
(S) 2-Fluorobiphenyl	79.0			34.0-125
(S) p-Terphenyl-d14	78.9			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336424-1 08/23/18 17:32 • (LCSD) R3336424-2 08/23/18 17:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0585	0.0573	73.1	71.6	50.0-125			2.07	20
Acenaphthene	0.0800	0.0636	0.0626	79.5	78.3	52.0-120			1.58	20
Acenaphthylene	0.0800	0.0662	0.0647	82.8	80.9	51.0-120			2.29	20
Benzo(a)anthracene	0.0800	0.0643	0.0633	80.4	79.1	46.0-121			1.57	20
Benzo(a)pyrene	0.0800	0.0569	0.0541	71.1	67.6	42.0-121			5.05	20
Benzo(b)fluoranthene	0.0800	0.0669	0.0683	83.6	85.4	42.0-123			2.07	20
Benzo(g,h,i)perylene	0.0800	0.0679	0.0670	84.9	83.8	43.0-128			1.33	20
Benzo(k)fluoranthene	0.0800	0.0705	0.0668	88.1	83.5	45.0-128			5.39	20
Chrysene	0.0800	0.0642	0.0628	80.3	78.5	48.0-127			2.20	20
Dibenz(a,h)anthracene	0.0800	0.0704	0.0696	88.0	87.0	43.0-132			1.14	20
Fluoranthene	0.0800	0.0697	0.0689	87.1	86.1	49.0-129			1.15	20



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SUM18742-01,02,03,04,05,07,08,09,10,11,12,13,14,15,16,17,18,19,21,22

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336424-1 08/23/18 17:32 • (LCSD) R3336424-2 08/23/18 17:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	0.0800	0.0652	0.0647	81.5	80.9	50.0-120			0.770	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0691	0.0680	86.4	85.0	44.0-131			1.60	20
Naphthalene	0.0800	0.0657	0.0640	82.1	80.0	50.0-120			2.62	20
Phenanthrene	0.0800	0.0591	0.0585	73.9	73.1	48.0-120			1.02	20
Pyrene	0.0800	0.0625	0.0615	78.1	76.9	48.0-135			1.61	20
1-Methylnaphthalene	0.0800	0.0722	0.0740	90.3	92.5	52.0-122			2.46	20
2-Methylnaphthalene	0.0800	0.0700	0.0708	87.5	88.5	52.0-120			1.14	20
2-Chloronaphthalene	0.0800	0.0635	0.0621	79.4	77.6	50.0-120			2.23	20
(S) Nitrobenzene-d5				101	107	14.0-149				
(S) 2-Fluorobiphenyl				91.0	88.4	34.0-125				
(S) p-Terphenyl-d14				87.5	86.1	23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1018742-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018742-13 08/23/18 22:27 • (MS) R3336424-4 08/23/18 22:48 • (MSD) R3336424-5 08/23/18 23:10

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 %
Anthracene	0.103	ND	0.0637	0.0624	61.8	60.5	1	20.0-136			2.04	24
Acenaphthene	0.103	ND	0.0670	0.0691	65.0	67.0	1	29.0-124			3.03	20
Acenaphthylene	0.103	ND	0.0695	0.0686	67.4	66.5	1	35.0-120			1.31	20
Benzo(a)anthracene	0.103	ND	0.0620	0.0579	60.1	56.1	1	13.0-132			6.88	27
Benzo(a)pyrene	0.103	ND	0.0666	0.0598	64.6	58.0	1	14.0-138			10.8	27
Benzo(b)fluoranthene	0.103	ND	0.0627	0.0566	60.8	54.9	1	10.0-129			10.2	31
Benzo(g,h,i)perylene	0.103	ND	0.0652	0.0578	63.3	56.0	1	10.0-133			12.2	30
Benzo(k)fluoranthene	0.103	ND	0.0679	0.0599	65.9	58.1	1	15.0-131			12.5	27
Chrysene	0.103	ND	0.0634	0.0590	61.5	57.3	1	15.0-137			7.16	25
Dibenz(a,h)anthracene	0.103	ND	0.0677	0.0596	65.6	57.8	1	15.0-132			12.8	27
Fluoranthene	0.103	ND	0.0692	0.0694	67.1	67.3	1	13.0-139			0.186	28
Fluorene	0.103	ND	0.0673	0.0677	65.3	65.6	1	27.0-122			0.573	22
Indeno(1,2,3-cd)pyrene	0.103	ND	0.0659	0.0578	63.9	56.0	1	11.0-133			13.1	29
Naphthalene	0.103	ND	0.0722	0.0835	70.0	81.0	1	18.0-136			14.6	21
Phenanthrene	0.103	ND	0.0608	0.0657	59.0	63.8	1	15.0-133			7.74	25
Pyrene	0.103	ND	0.0616	0.0610	59.8	59.1	1	11.0-146			1.05	29
1-Methylnaphthalene	0.103	ND	0.0812	0.0806	78.8	78.1	1	24.0-137			0.797	22
2-Methylnaphthalene	0.103	ND	0.0781	0.0793	75.8	76.9	1	23.0-136			1.47	22
2-Chloronaphthalene	0.103	ND	0.0672	0.0657	65.1	63.8	1	36.0-120			2.13	20
(S) Nitrobenzene-d5					97.8	98.0		14.0-149				
(S) 2-Fluorobiphenyl					77.1	76.9		34.0-125				
(S) p-Terphenyl-d14					72.4	68.9		23.0-120				



Method Blank (MB)

(MB) R3336363-3 08/24/18 00:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	72.7			14.0-149
(S) 2-Fluorobiphenyl	78.1			34.0-125
(S) p-Terphenyl-d14	79.5			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336363-1 08/23/18 23:16 • (LCSD) R3336363-2 08/23/18 23:38

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 %
Anthracene	0.0800	0.0539	0.0538	67.4	67.3	50.0-125			0.186	20
Acenaphthene	0.0800	0.0577	0.0558	72.1	69.8	52.0-120			3.35	20
Acenaphthylene	0.0800	0.0546	0.0539	68.3	67.4	51.0-120			1.29	20
Benzo(a)anthracene	0.0800	0.0600	0.0578	75.0	72.3	46.0-121			3.74	20
Benzo(a)pyrene	0.0800	0.0479	0.0442	59.9	55.3	42.0-121			8.03	20
Benzo(b)fluoranthene	0.0800	0.0542	0.0518	67.8	64.8	42.0-123			4.53	20
Benzo(g,h,i)perylene	0.0800	0.0569	0.0543	71.1	67.9	43.0-128			4.68	20
Benzo(k)fluoranthene	0.0800	0.0626	0.0597	78.3	74.6	45.0-128			4.74	20
Chrysene	0.0800	0.0641	0.0615	80.1	76.9	48.0-127			4.14	20
Dibenz(a,h)anthracene	0.0800	0.0620	0.0588	77.5	73.5	43.0-132			5.30	20
Fluoranthene	0.0800	0.0684	0.0671	85.5	83.9	49.0-129			1.92	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336363-1 08/23/18 23:16 • (LCSD) R3336363-2 08/23/18 23:38

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 %
Fluorene	0.0800	0.0608	0.0590	76.0	73.8	50.0-120			3.01	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0599	0.0566	74.9	70.8	44.0-131			5.67	20
Naphthalene	0.0800	0.0596	0.0568	74.5	71.0	50.0-120			4.81	20
Phenanthrene	0.0800	0.0570	0.0542	71.3	67.8	48.0-120			5.04	20
Pyrene	0.0800	0.0641	0.0601	80.1	75.1	48.0-135			6.44	20
1-Methylnaphthalene	0.0800	0.0724	0.0673	90.5	84.1	52.0-122			7.30	20
2-Methylnaphthalene	0.0800	0.0684	0.0634	85.5	79.3	52.0-120			7.59	20
2-Chloronaphthalene	0.0800	0.0567	0.0556	70.9	69.5	50.0-120			1.96	20
<i>(S) Nitrobenzene-d5</i>				71.7	69.9	14.0-149				
<i>(S) 2-Fluorobiphenyl</i>				79.9	82.1	34.0-125				
<i>(S) p-Terphenyl-d14</i>				84.4	82.7	23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1018780-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018780-06 08/24/18 05:07 • (MS) R3336363-4 08/24/18 05:29 • (MSD) R3336363-5 08/24/18 05:51

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0333	0.0360	41.6	45.0	1	20.0-136			7.79	24
Acenaphthene	0.0800	ND	0.0349	0.0369	43.6	46.1	1	29.0-124			5.57	20
Acenaphthylene	0.0800	ND	0.0336	0.0357	42.0	44.6	1	35.0-120			6.06	20
Benzo(a)anthracene	0.0800	ND	0.0342	0.0350	42.8	43.8	1	13.0-132			2.31	27
Benzo(a)pyrene	0.0800	ND	0.0311	0.0324	38.9	40.5	1	14.0-138			4.09	27
Benzo(b)fluoranthene	0.0800	ND	0.0289	0.0291	36.1	36.4	1	10.0-129			0.690	31
Benzo(g,h,i)perylene	0.0800	ND	0.0311	0.0312	38.9	39.0	1	10.0-133			0.321	30
Benzo(k)fluoranthene	0.0800	ND	0.0345	0.0354	43.1	44.3	1	15.0-131			2.58	27
Chrysene	0.0800	ND	0.0369	0.0371	46.1	46.4	1	15.0-137			0.541	25
Dibenz(a,h)anthracene	0.0800	ND	0.0342	0.0351	42.8	43.9	1	15.0-132			2.60	27
Fluoranthene	0.0800	ND	0.0376	0.0391	47.0	48.9	1	13.0-139			3.91	28
Fluorene	0.0800	ND	0.0369	0.0377	46.1	47.1	1	27.0-122			2.14	22
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0332	0.0332	41.5	41.5	1	11.0-133			0.000	29
Naphthalene	0.0800	ND	0.0383	0.0397	47.9	49.6	1	18.0-136			3.59	21
Phenanthrene	0.0800	ND	0.0333	0.0345	41.6	43.1	1	15.0-133			3.54	25
Pyrene	0.0800	ND	0.0361	0.0365	45.1	45.6	1	11.0-146			1.10	29
1-Methylnaphthalene	0.0800	ND	0.0437	0.0455	54.6	56.9	1	24.0-137			4.04	22
2-Methylnaphthalene	0.0800	ND	0.0412	0.0429	51.5	53.6	1	23.0-136			4.04	22
2-Chloronaphthalene	0.0800	ND	0.0355	0.0378	44.4	47.3	1	36.0-120			6.28	20
<i>(S) Nitrobenzene-d5</i>					47.6	45.8		14.0-149				
<i>(S) 2-Fluorobiphenyl</i>					48.0	51.1		34.0-125				
<i>(S) p-Terphenyl-d14</i>					45.1	46.6		23.0-120				



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.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
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.



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

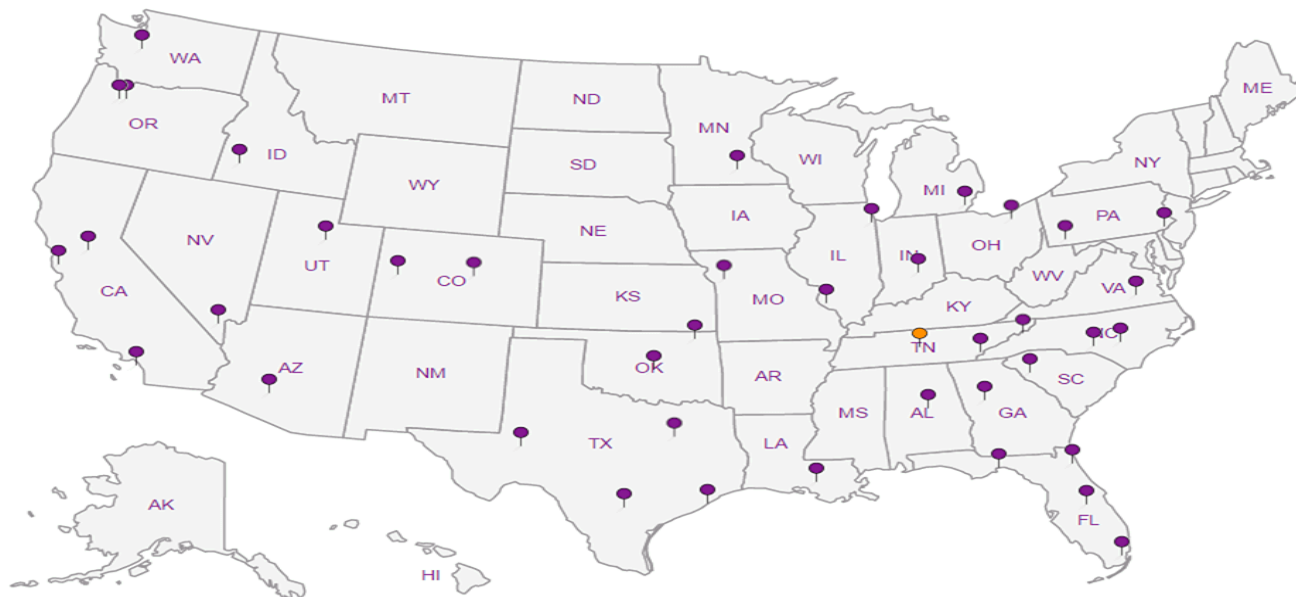
Third Party Federal Accreditations

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.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Accounts Payable
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Chain of Custody Page ___ of ___

Face Analytical®
 National Center for Testing & Innovation

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
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 Fax: 615-758-5859

Report to:
Ryan Hultgren

Email To: **Ryan.Hultgren@kennedyjenks.com, Katie.Teague@kennedyjenks.com**

Project Description: **BNSF - Wishram Railyard, WA**

City/State Collected: **Wishram, WA**

Phone: **253-835-6400**

Fax:

Client Project # **1896120-04**

Lab Project # **BNSF1KEN-WISHRAM**

Collected by (print): **K Teague**

Site/Facility ID #

P.O. #

Collected by (signature): *[Signature]*

Rush? (Lab MUST Be Notified)

___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice: N ___ Y **X**

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	MRCRAB, TS 4ozClr-NoPres	NWTPHG 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	Remarks	Sample # (lab only)
B-18-29(2.0-2.5)	Grab	SS	2-2.5	8/14/18	1405	3	X	X	X	X			01
B-18-28(2.0-2.5)	Grab	SS	2-2.5		1420	3	X	X	X	X			02
B-18-27(2.0-2.5)	Grab	SS	2-2.5		1440	3	X	X	X	X			03
B-18-26(2.0-2.5)	Grab	SS	2-2.5		1450	3	X	X	X	X			04
B-18-30(2.0-2.5)	Grab	SS	2-2.5		1540	3	X	X	X	X			05
TB-09-201808110	---	SS	2-2.5	8/16/18	---	4					X		06
B-18-29(9.5-10.0)	Grab	SS	9.5-10	8/15/18	0815	3	X	X	X	X			07
B-18-28(7.5-8.0)	Grab	SS	7.5-8	8/15/18	0900	3	X	X	X	X			08
B-18-27(8.0-8.5)	Grab	SS	8-8.5	8/15/18	1050	3	X	X	X	X			09
B-18-26(7.5-8.0)	Grab	SS	7.5-8	8/15/18	1250	3	X	X	X	X			10

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: **Include Dx and Gx chromatograms**
No spaces in sample names

pH _____ Temp _____
 Flow _____ Other _____

Samples returned via:
 ___ UPS **X** FedEx ___ Courier _____

Tracking # **4492 6218 1881/1892/1907/11870**

Sample Receipt Checklist

COC Seal Present/Intact: **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) *[Signature]* Date: **8/16/18** Time: **1405**

Received by: (Signature) *[Signature]* Trip Blank Received: **3** Yes/No HCL MeOH TBR

Relinquished by: (Signature) Date: Time: Received by: (Signature) Temp: **16.7** °C Bottles Received: **74**

Relinquished by: (Signature) Date: Time: Received for lab by: (Signature) *[Signature]* Date: **8/16/18** Time: **0900** Hold: Condition: **NCF 1 OK**

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
Katie.Teague@kennedyjenks.com,

Project
Description: BNSF - Wishram Railyard, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1896120-04

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)

Quote #

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Date Results Needed

No.
of
Cntrs

Immediately
Packed on ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	Remarks	Sample # (lab only)
B-18-30(9.5-10.0)	Grab	SS	9.5-10	8/15/18	1435	3	X	X	X	X			21
B-18-05(2.0-2.5)		SS	2-2.5	8/16/18	0745	3	X	X	X	X			22
B-18-05(9.5-10.0)		SS	9.5-10		0815	3	X	X	X	X			23
B-18-04(2.0-2.5)		SS	2-2.5		0750	3	X	X	X	X			24
B-18-04(9.5-10.0)		SS	9.5-10		0900	3	X	X	X	X			25
B-18-03(2.0-2.5)		SS	2-2.5		0805	3	X	X	X	X			26
B-18-03(9.5-10.0)		SS	9.5-10		1000	3	X	X	X	X			27
B-18-02(2.0-2.5)		SS	2-2.5		0825	3	X	X	X	X			28
B-18-02(9.5-10.0)	✓	SS	9.5-10	✓	1040	3	X	X	X	X			29
B-11-20180816	—	SS	—	8/16/18	—	1					X		30

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: Include Dx and Gx chromatograms
No spaces in sample names

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist
COC Seal Present/Intact: 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

Samples returned via:
 UPS FedEx Courier

Tracking # 4492 6218 1881/1892/1907/1870

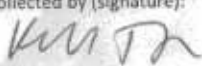
Relinquished by: (Signature) <i>[Signature]</i>	Date: 8/16/18	Time: 1400	Received by: (Signature) FedEx	Trip Blank Received: Yes/No 3 HCL/MeOH TAB	Temp: 74	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 74		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 8/17/18	Time: 0900	Hold: Condition: NCF 10X

Kennedy/Jenks Con-BNSF Region 1 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001	Billing Information: Accounts Payable 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001	Pres Chk	Analysis / Container / Preservative							Chain of Custody Page ___ of ___
	Report to: Ryan Hultgren		Email To: RyanHultgren@kennedyjenks.com, KatieTeague@kennedyjenks.com,	MRCRA8, TS 4ozClr-NoPres NWTPHGX 40ml/NaHSO4/Syr/MeOH TPHDX no SGT, PAHs 4ozClr-NoPres TPHDX with SGT 4ozClr-NoPres V8260C 40mlAmb/MeOH5ml/Syr						

Project Description: BNSF - Wishram Railyard, WA	City/State Collected: Wishram, WA
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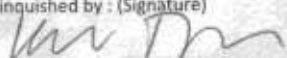
Phone: 253-835-6400 Fax:	Client Project # 1896120.04	Lab Project # BNSF1KEN-WISHRAM
------------------------------------	---------------------------------------	--

Collected by (print): K. Teague	Site/Facility ID #	P.O. #
---	--------------------	--------

Collected by (signature): 	Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day	Quote #	Date Results Needed	No. of Cntrs
--	--	---------	---------------------	-----------------

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDX no SGT, PAHs 4ozClr-NoPres	TPHDX with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	Remarks	Sample # (lab only)
B-18-01(3.0-3.5)	Gwab	SS	3-3.5	8/16/18	0920	4	X		X	X	X		21
DUP-03-20180816	↓	SS	-	↓	-	3	X		X		X		22
B-18-01(9.5-10.0)	↓	SS	9.5-10	↓	1120	4	X		X	X	X		23
B-18-23(2.0-2.5)	↓	SS	2-2.5	↓	1105	6	X	X	X	X	X		24
B-18-22(2.0-2.5)	↓	SS	2-2.5	↓	1145	3	X		X		X		25
		SS											
		SS											
		SS											
		SS											

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other	Remarks: Include Dx and Gx chromatograms No spaces in sample names	pH _____ Temp _____ Flow _____ Other _____	Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N IF Applicable VOA Zero Headpace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input type="checkbox"/> Y <input type="checkbox"/> N
--	---	---	---

Relinquished by: (Signature) 	Date: 8/16/18	Time: 1400	Received by: (Signature) FedEx	Trip Blank Received: (Yes/No) 3 HCL (MeOH) TBR	Temp: _____ °C 16.3	Bottles Received: 74	If preservation required by Login: Date/Time	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: _____ °C	Bottles Received:	If preservation required by Login: Date/Time	Hold:	Condition: NCF / OK

Andy Vann

From: Mark Beasley
Sent: Monday, August 20, 2018 1:20 PM
To: Login
Subject: L1018742-24 *BNSF1KEN*

Remove all analysis and delete L1018742-24.

Thanks
Mark

From: Katie Teague [<mailto:KatieTeague@kennedyjenks.com>]
Sent: Friday, August 17, 2018 10:06 AM
To: Mark Beasley; Ryan Hultgren
Subject: Re: L1017868 BNSF1KEN NCF MIL

Mark -

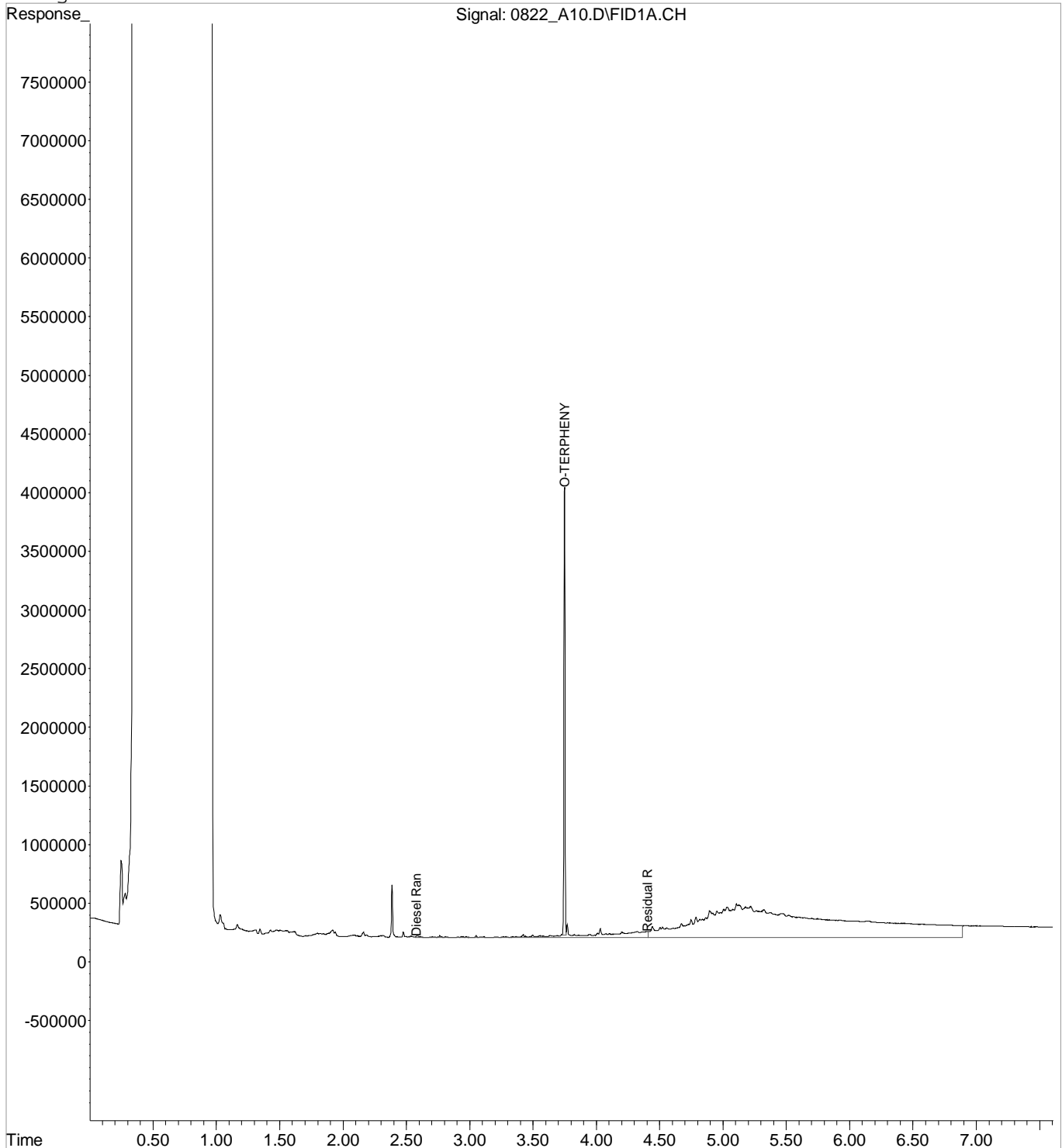
We shipped 4 coolers of wishram samples yesterday. When they arrive, please place sample B-18-23(2.0-2.5) @1105 on hold. Thanks!

Katie

Data File : C:\MSDCHEM\1\DATA\082218\0822 A10.D Vial: 66
Acq On : 23 Aug 2018 2:24 pm Operator: 647
Sample : L1018742-21 1x WG1155941 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 20:56 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

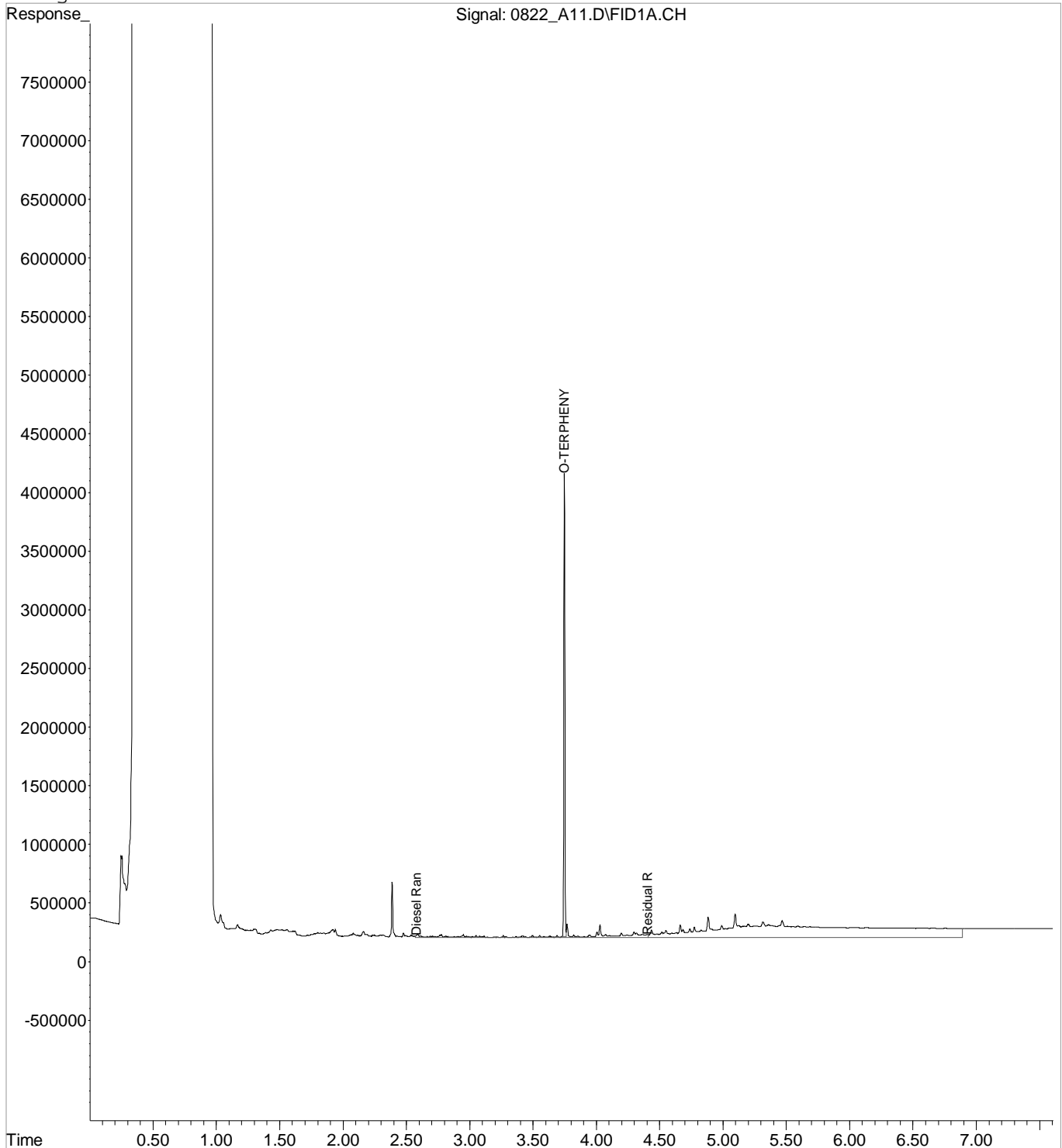
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 A11.D Vial: 67
Acq On : 23 Aug 2018 2:37 pm Operator: 647
Sample : L1018742-23 1x WG1155941 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 20:57 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

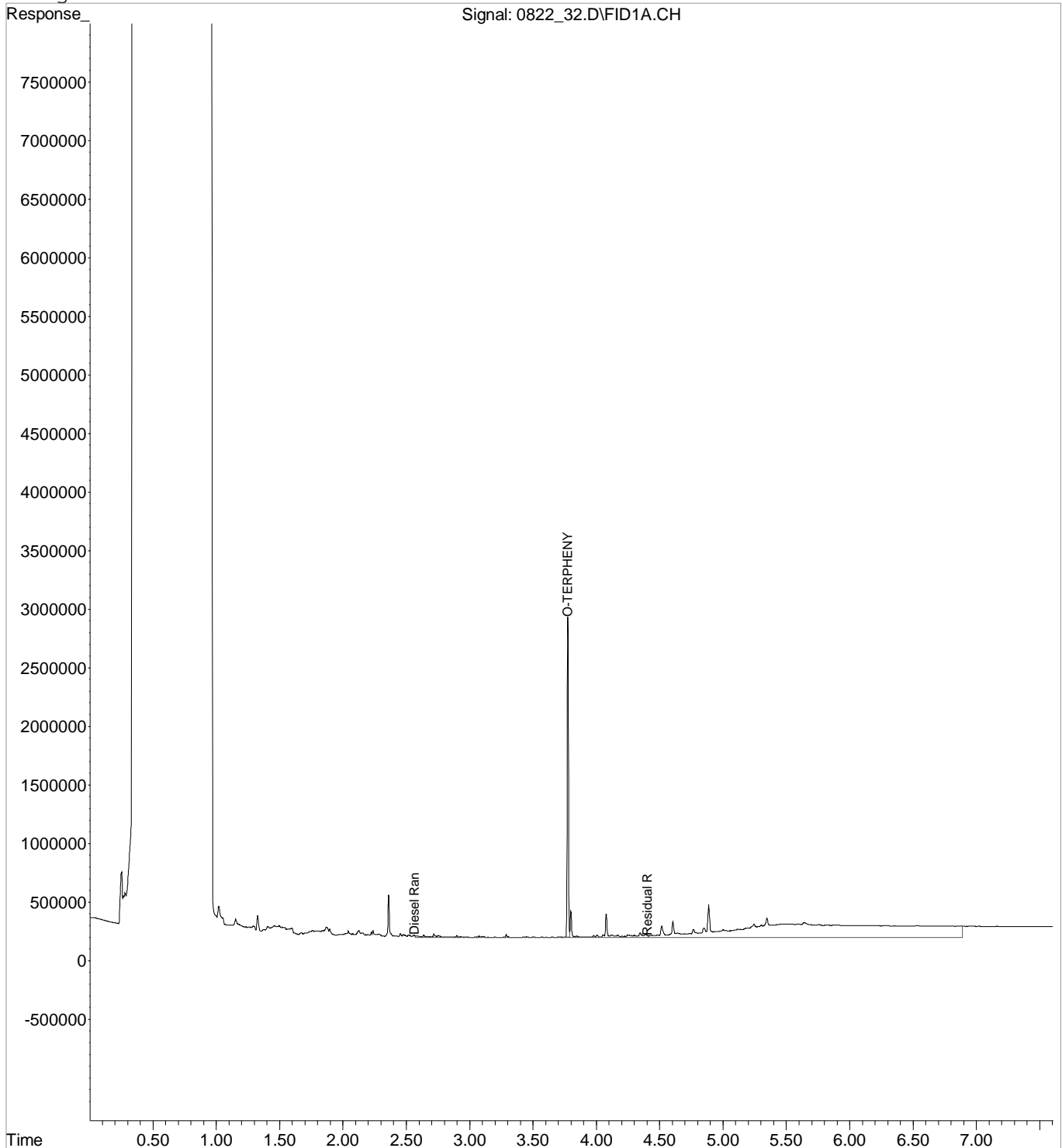
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 32.D Vial: 12
 Acq On : 22 Aug 2018 9:46 pm Operator: 647
 Sample : L1018742-01 1x WG1155921 Inst : SVG13
 Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Aug 23 8:56 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
 Title :
 Last Update : Mon Aug 13 23:06:30 2018
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

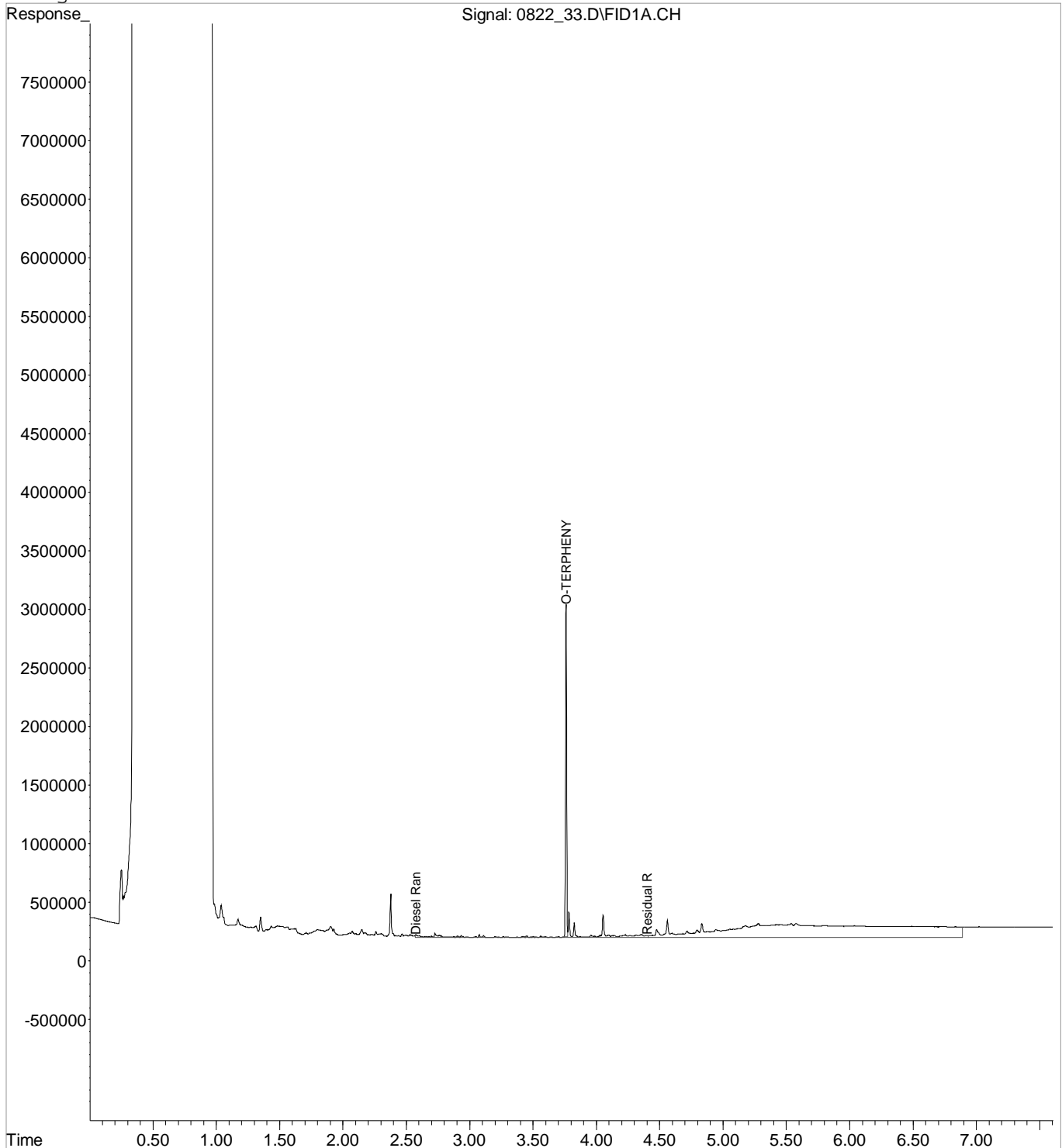
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 33.D Vial: 13
Acq On : 22 Aug 2018 10:00 pm Operator: 647
Sample : L1018742-02 1x WG1155921 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 8:57 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

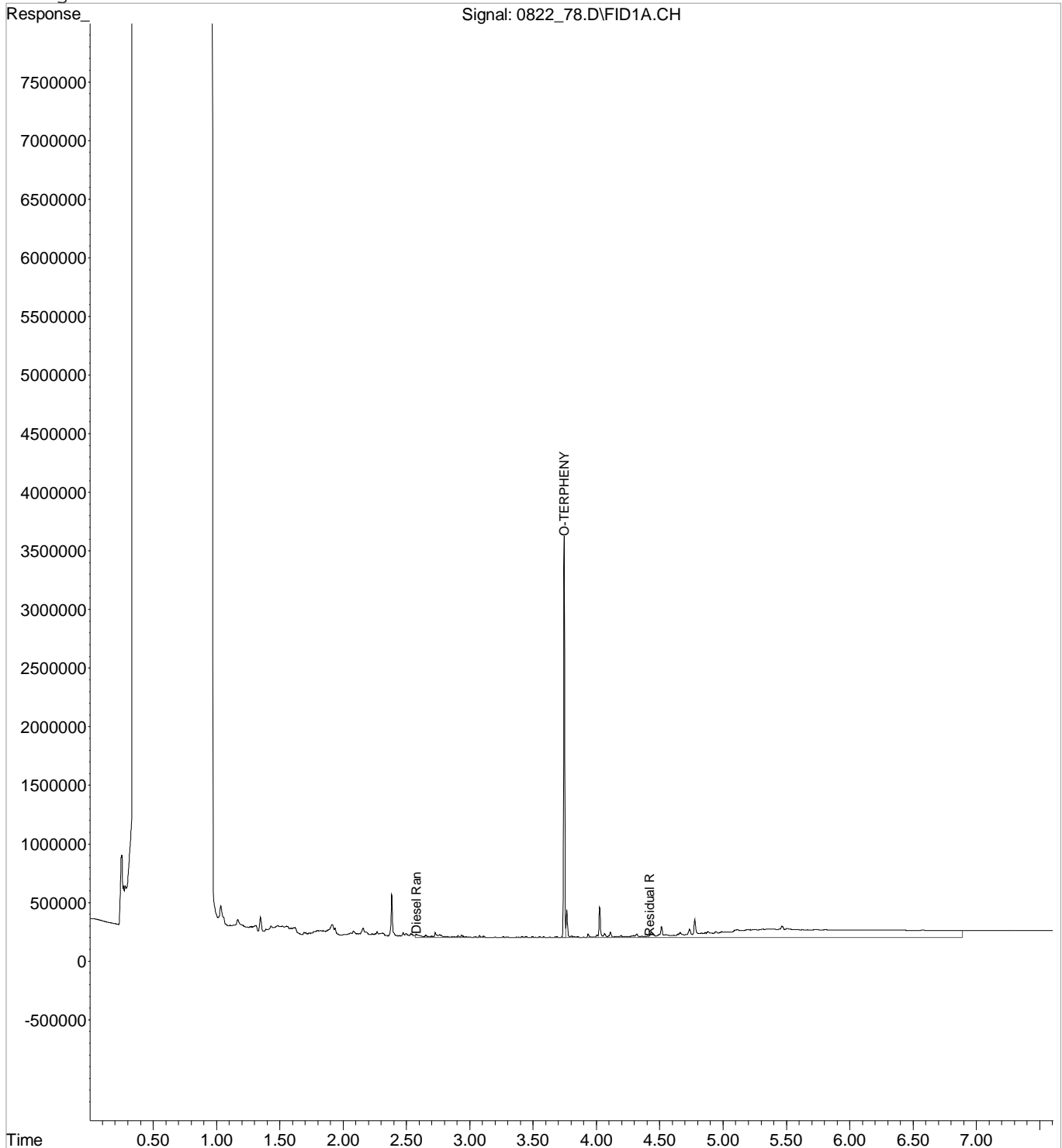
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 78.D Vial: 25
Acq On : 23 Aug 2018 7:31 am Operator: 647
Sample : L1018742-03 1x WG1155921 Inst : SVG13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 9:39 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

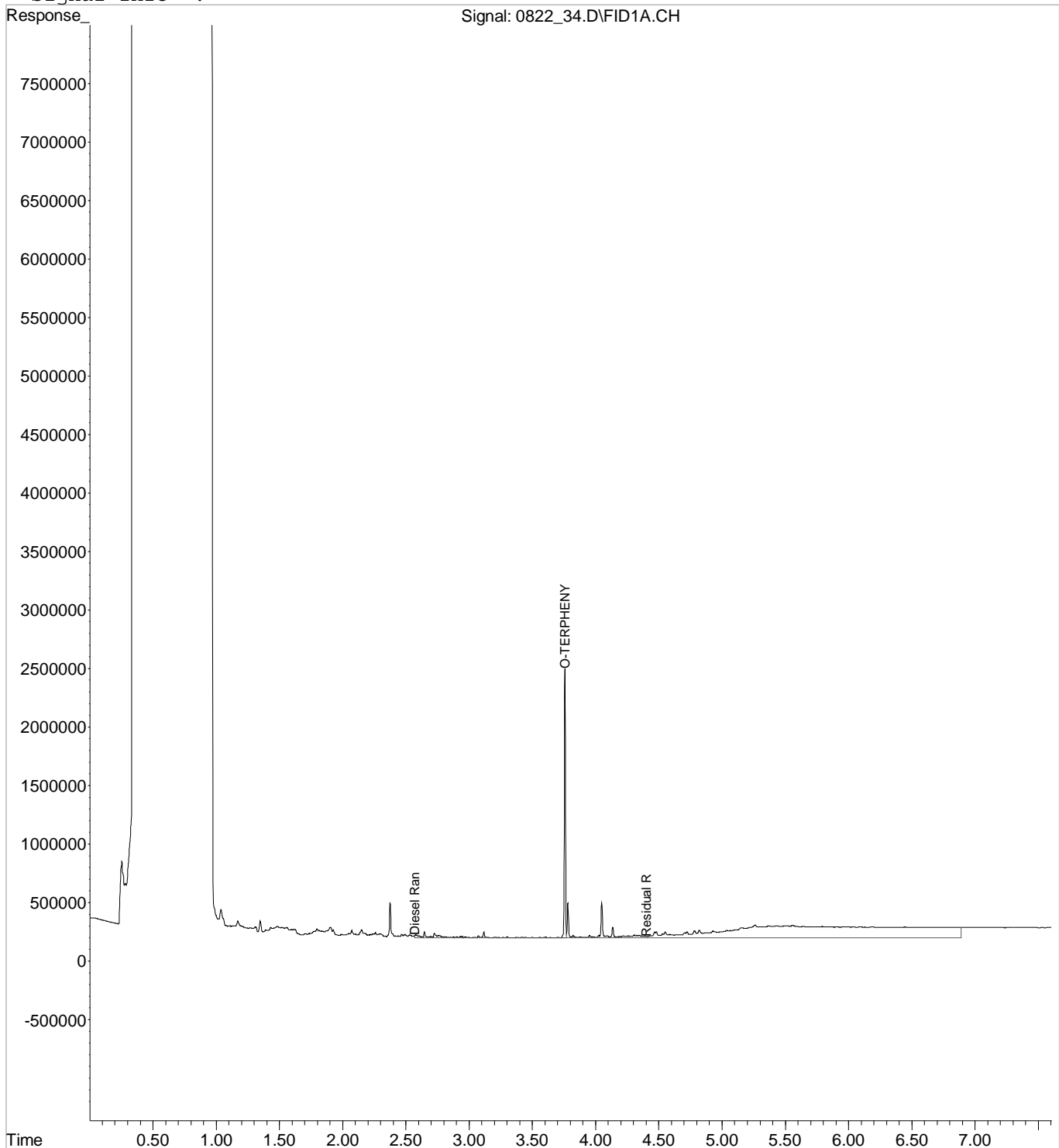
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 34.D Vial: 14
 Acq On : 22 Aug 2018 10:13 pm Operator: 647
 Sample : L1018742-04 1x WG1155921 Inst : SVG13
 Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Aug 23 8:57 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
 Title :
 Last Update : Mon Aug 13 23:06:30 2018
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

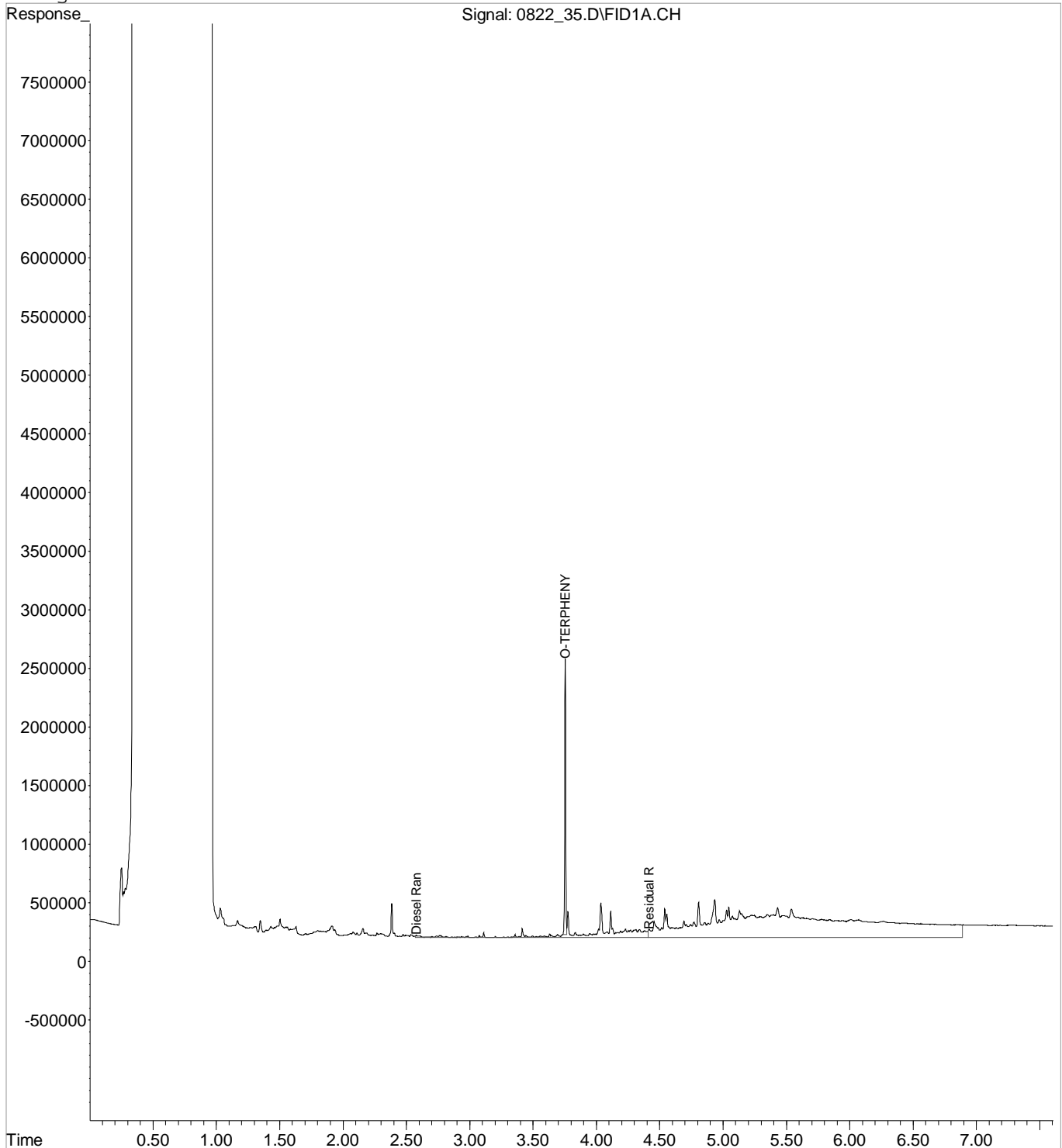
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 35.D Vial: 15
Acq On : 22 Aug 2018 10:26 pm Operator: 647
Sample : L1018742-05 1x WG1155921 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 8:58 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

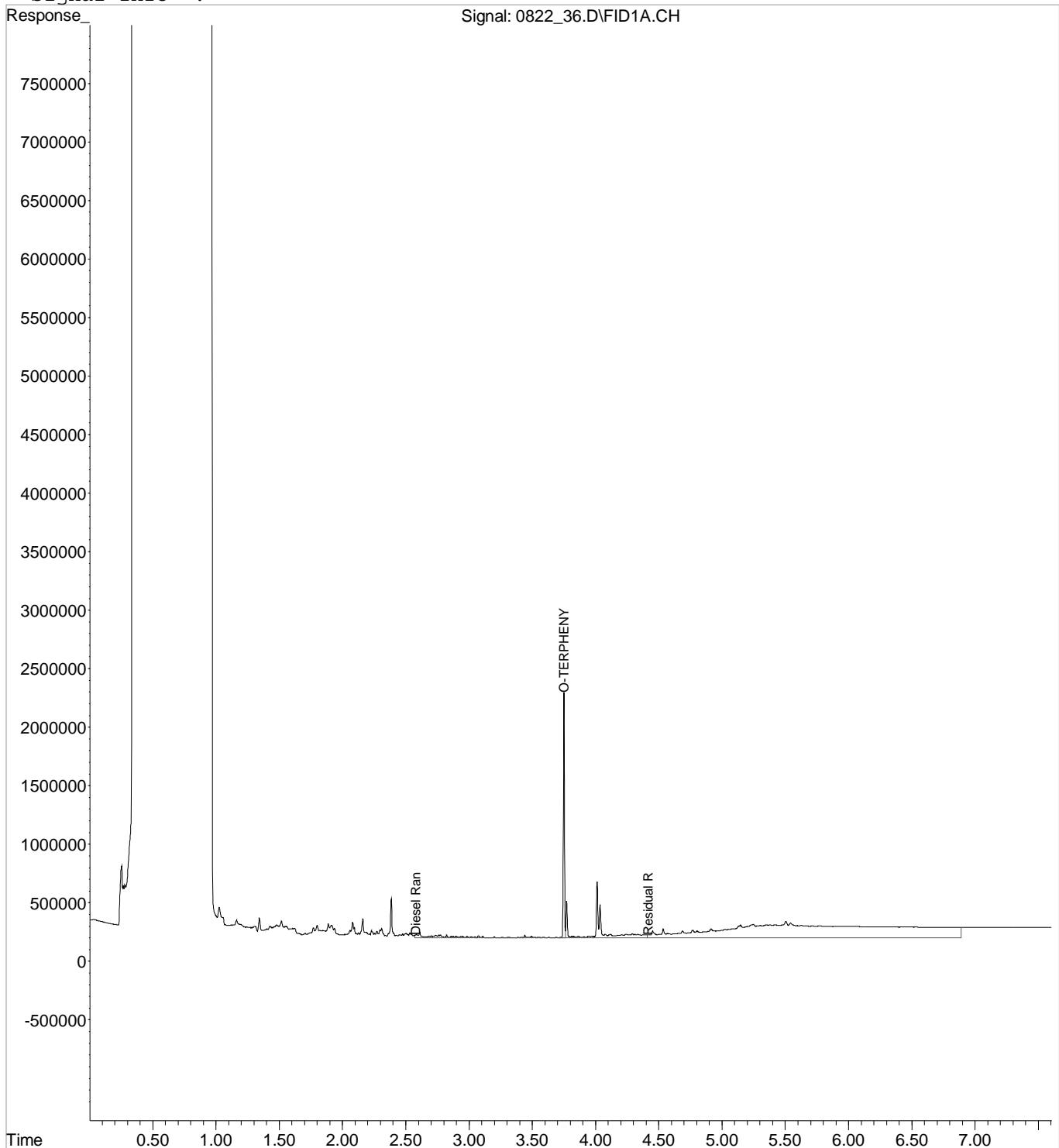
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 36.D Vial: 16
 Acq On : 22 Aug 2018 10:38 pm Operator: 647
 Sample : L1018742-07 1x WG1155921 Inst : SVG13
 Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Aug 23 8:58 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
 Title :
 Last Update : Mon Aug 13 23:06:30 2018
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

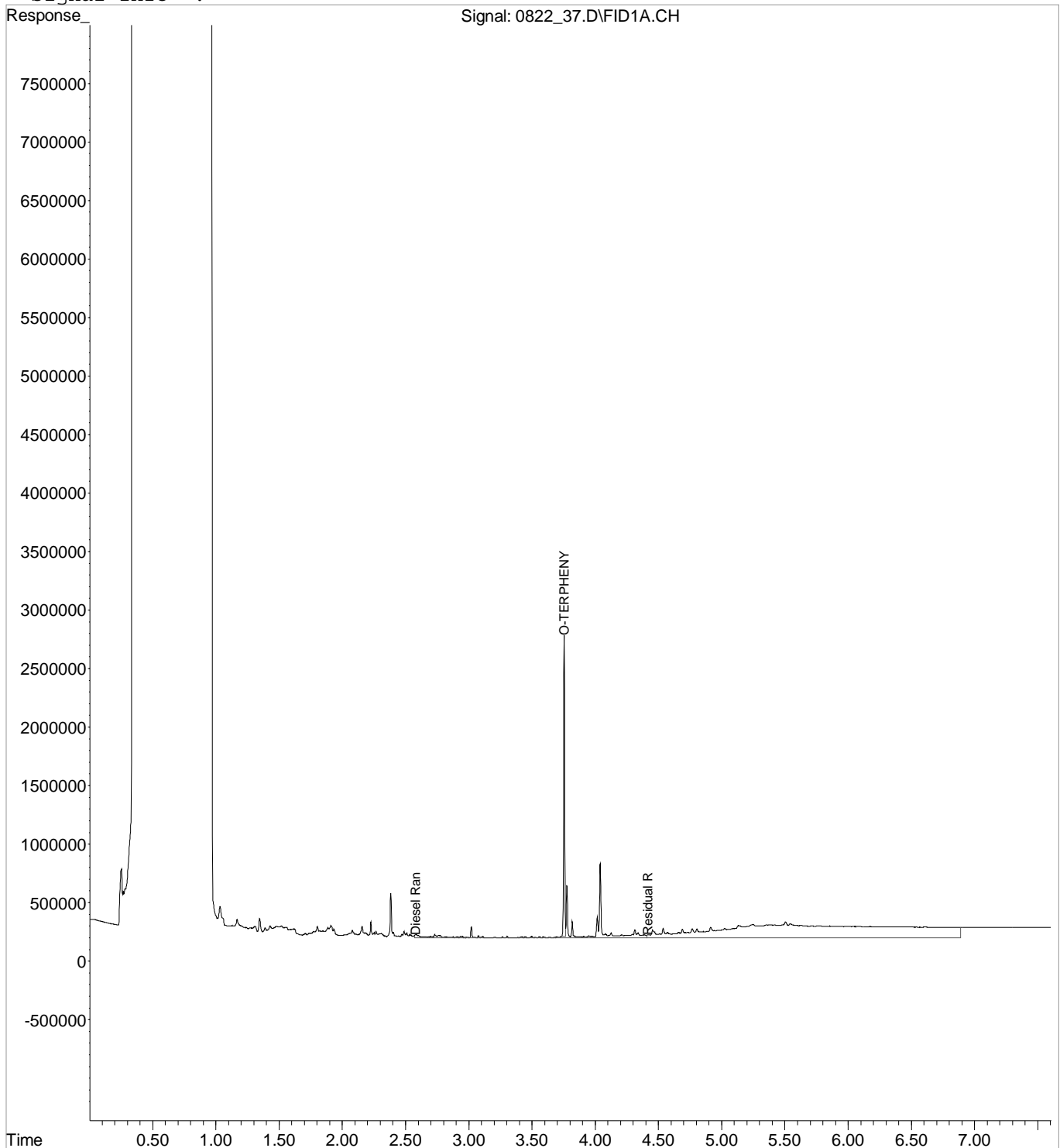
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 37.D Vial: 17
Acq On : 22 Aug 2018 10:51 pm Operator: 647
Sample : L1018742-08 1x WG1155921 Inst : SVG13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 8:59 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

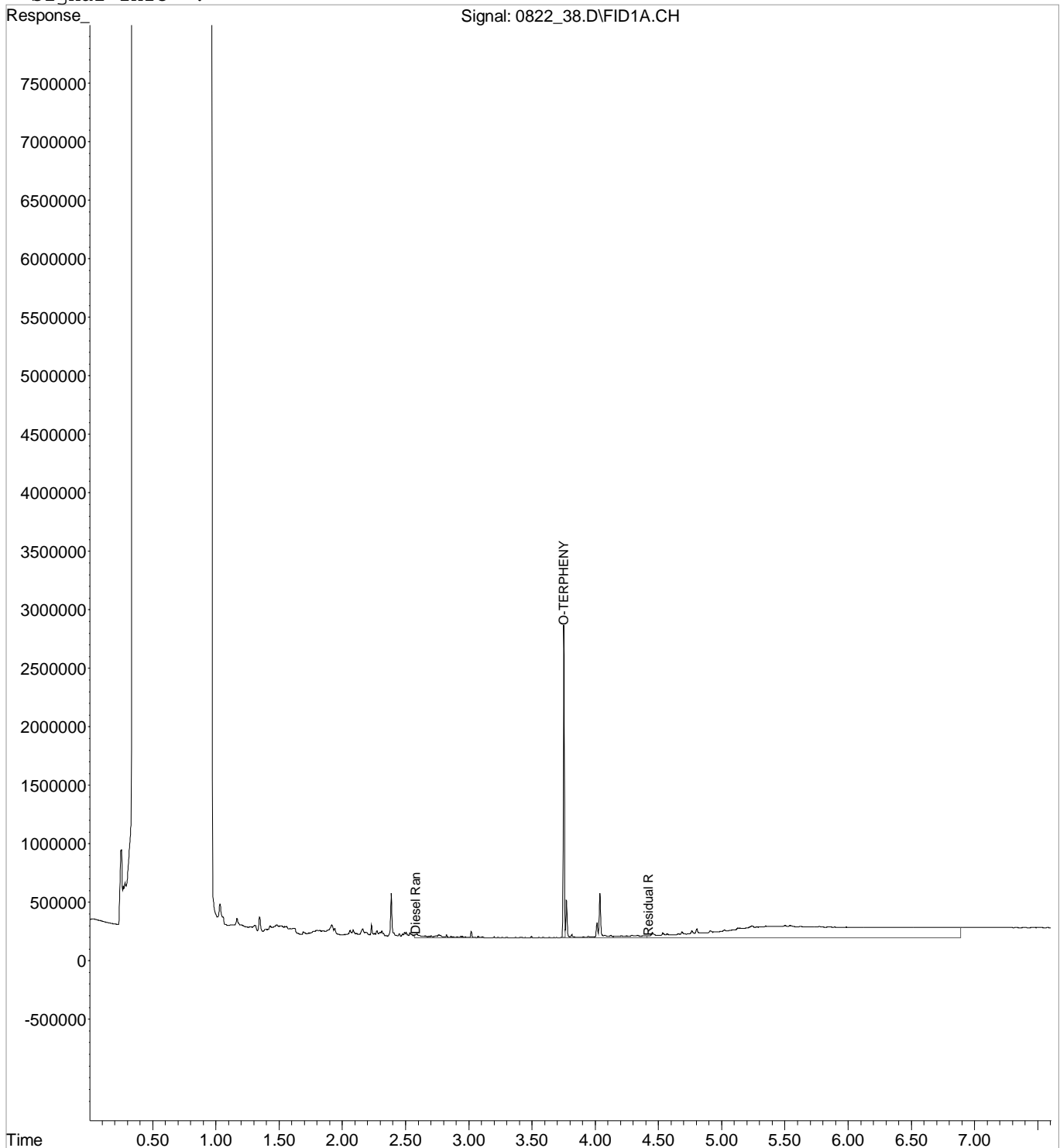
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 38.D Vial: 18
Acq On : 22 Aug 2018 11:04 pm Operator: 647
Sample : L1018742-09 1x WG1155921 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 8:59 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

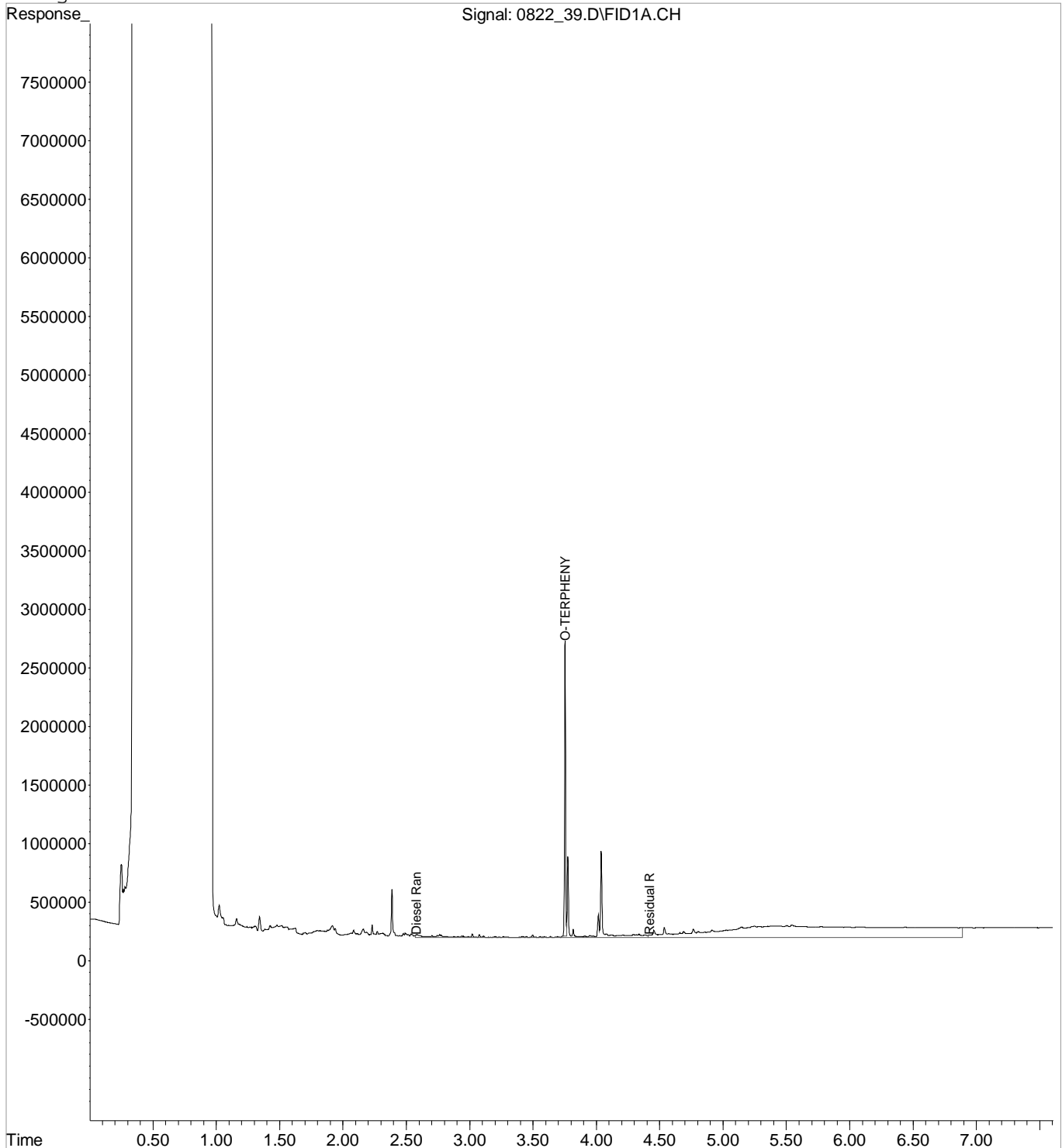
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 39.D Vial: 19
 Acq On : 22 Aug 2018 11:16 pm Operator: 647
 Sample : L1018742-10 1x WG1155921 Inst : SVG13
 Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Aug 23 9:00 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
 Title :
 Last Update : Mon Aug 13 23:06:30 2018
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

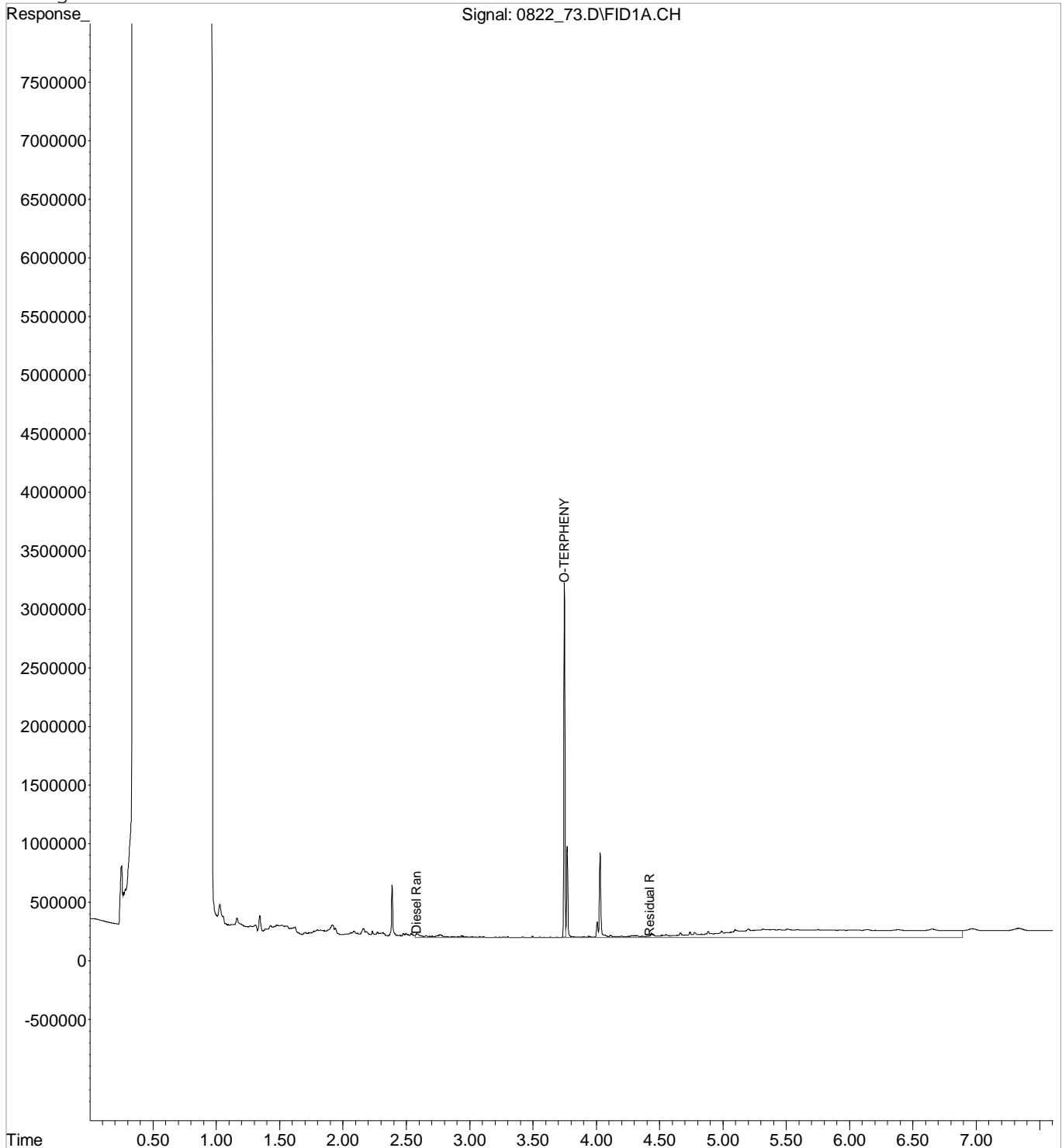
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 73.D Vial: 20
Acq On : 23 Aug 2018 6:27 am Operator: 647
Sample : L1018742-11 1x WG1155921 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 9:35 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

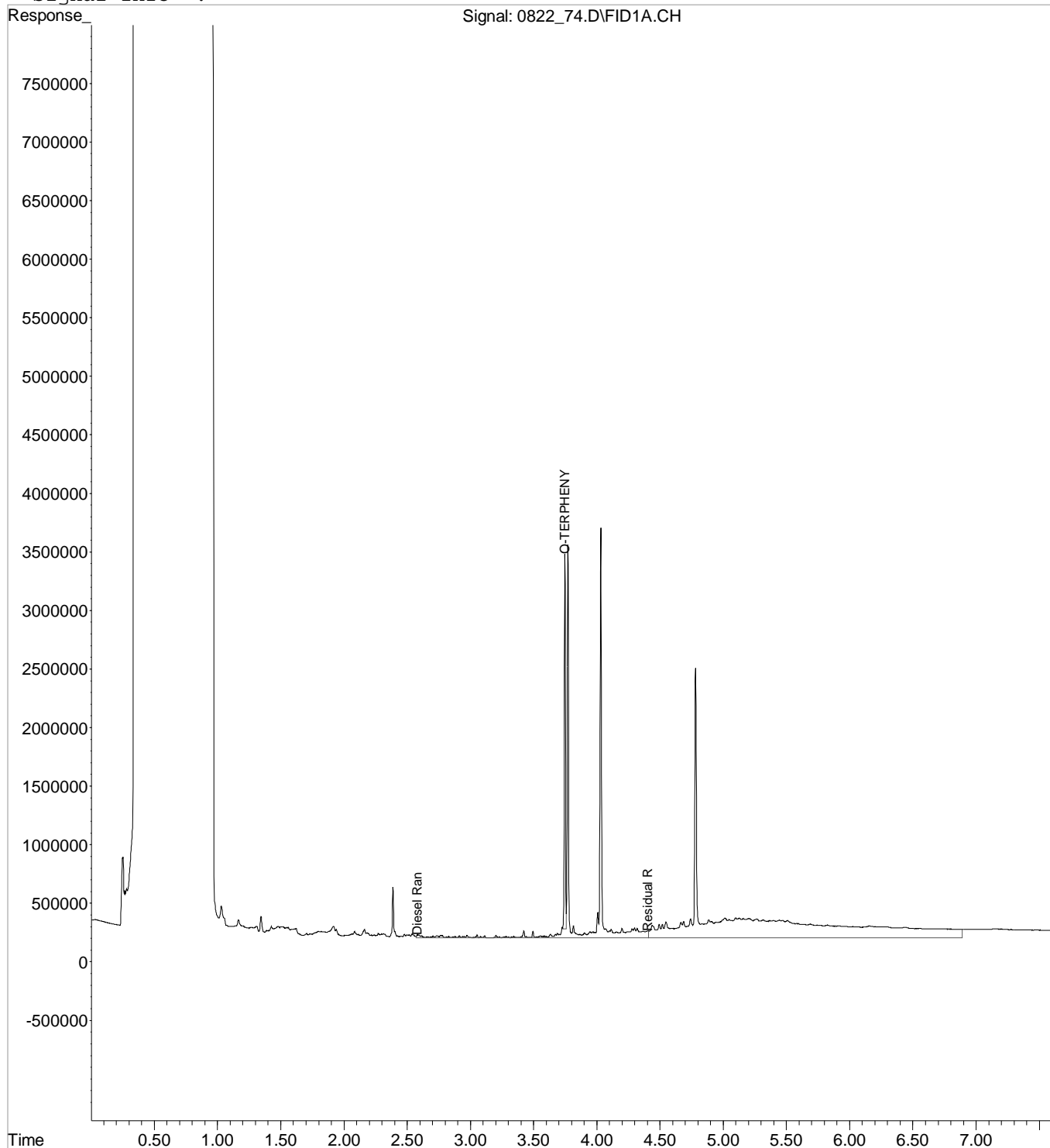
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 74.D Vial: 21
Acq On : 23 Aug 2018 6:40 am Operator: 647
Sample : L1018742-12 1x WG1155921 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 9:37 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

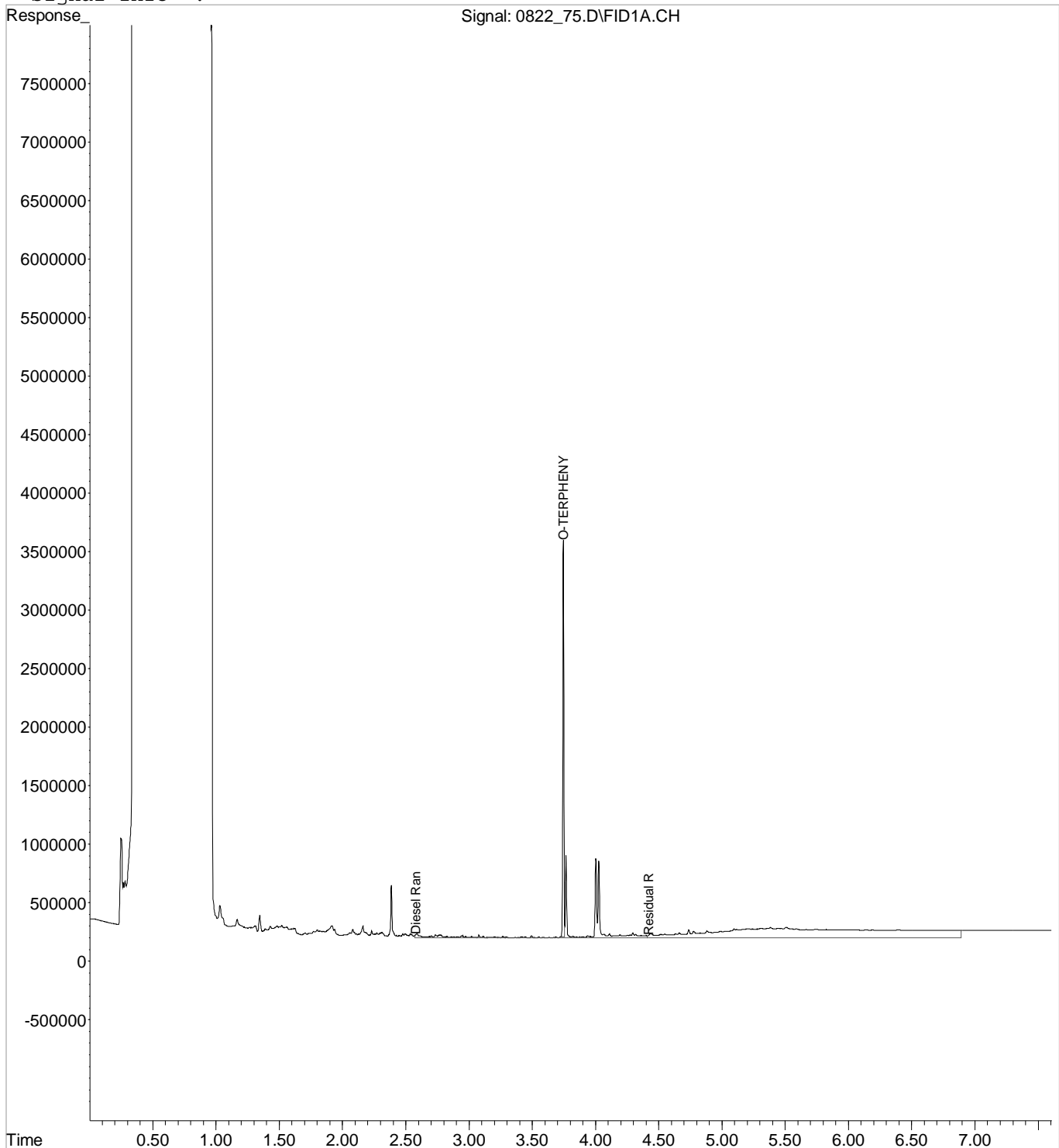
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 75.D Vial: 22
Acq On : 23 Aug 2018 6:52 am Operator: 647
Sample : L1018742-13 1x WG1155921 Inst : SVG13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 9:36 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

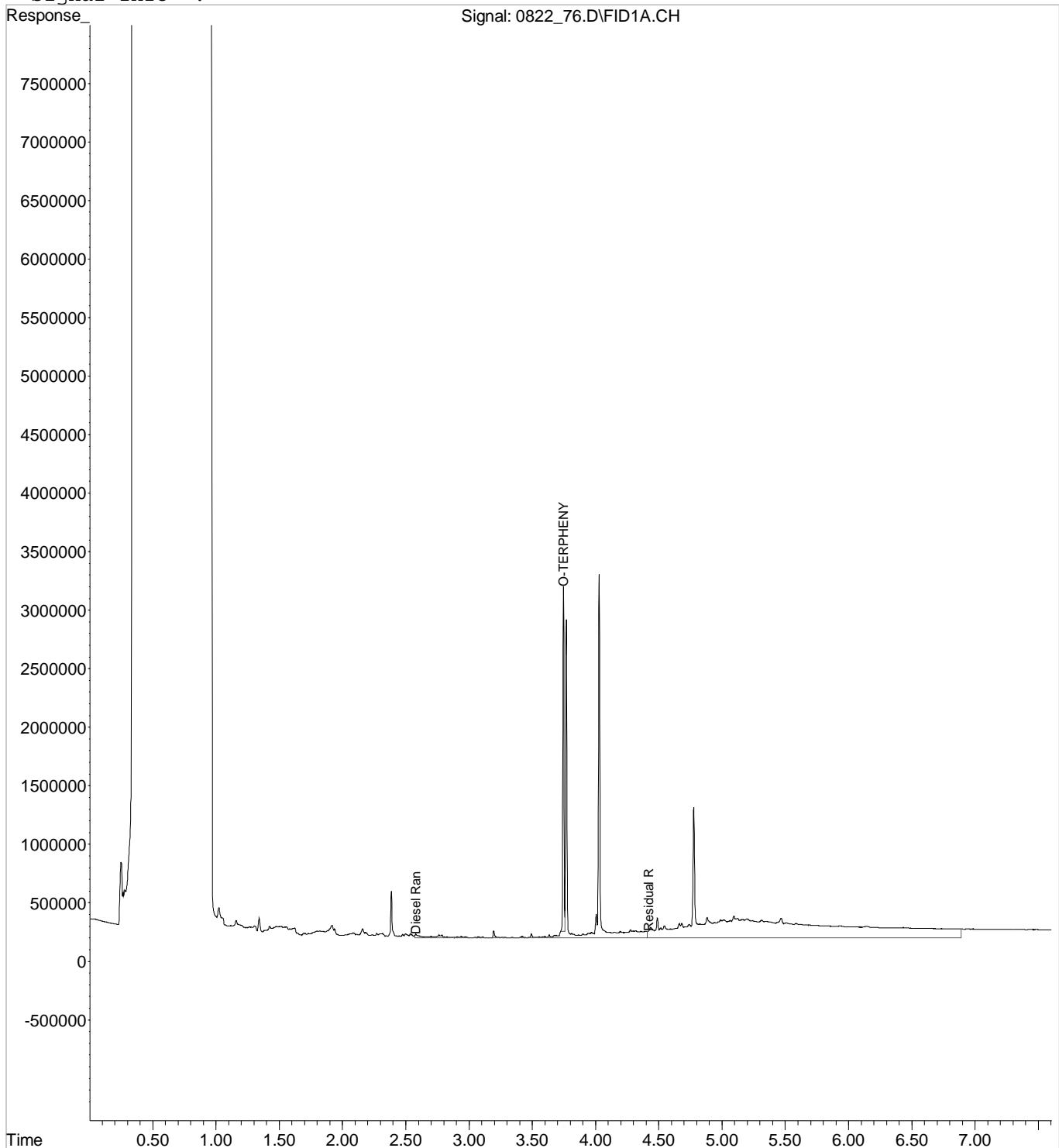
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 76.D Vial: 23
 Acq On : 23 Aug 2018 7:05 am Operator: 647
 Sample : L1018742-14 1x WG1155921 Inst : SVG13
 Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Aug 23 9:38 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
 Title :
 Last Update : Mon Aug 13 23:06:30 2018
 Response via : Single Level Calibration
 DataAcq Meth : OA10.M

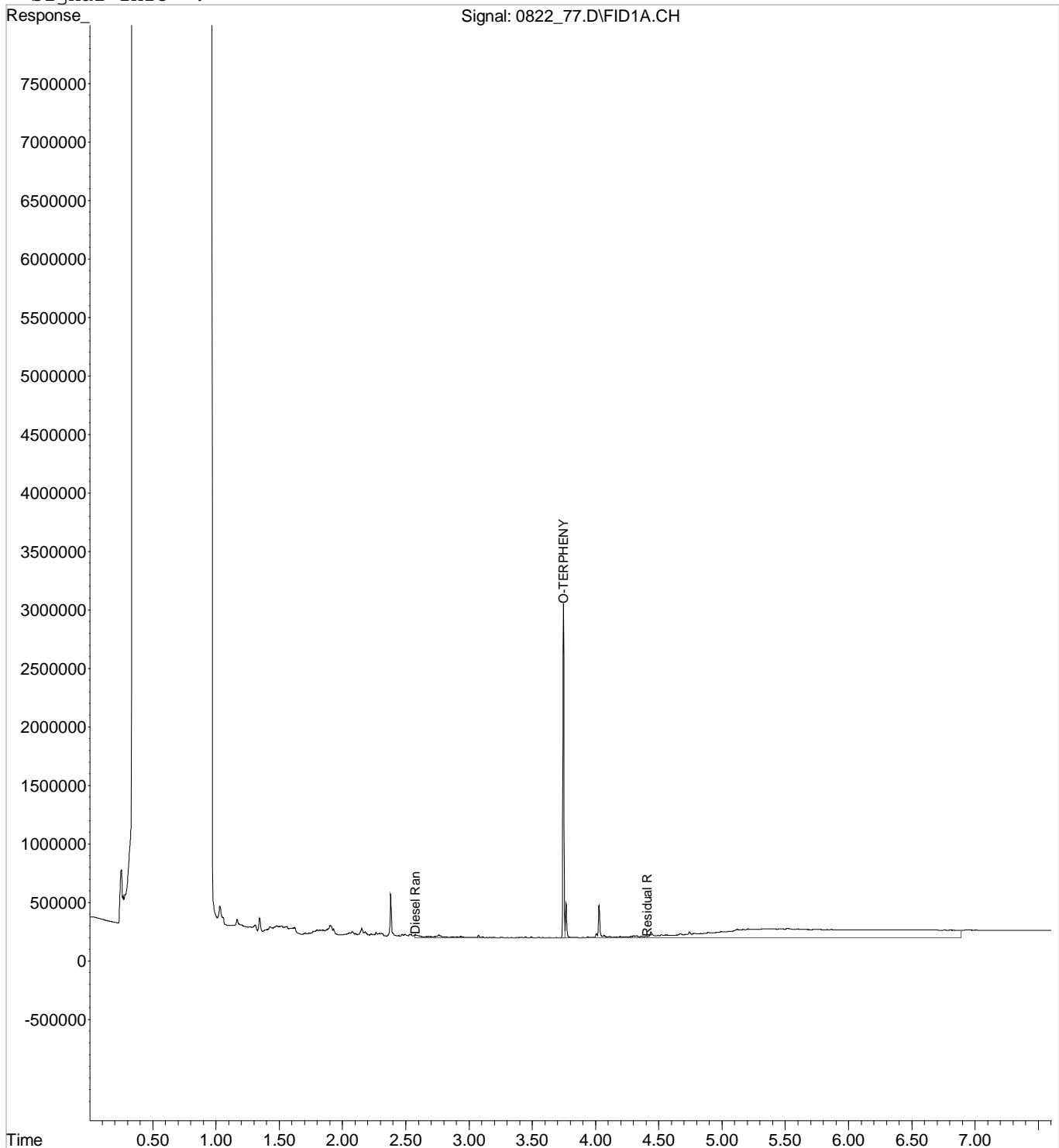
Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\MSDCHEM\1\DATA\082218\0822 77.D Vial: 24
Acq On : 23 Aug 2018 7:18 am Operator: 647
Sample : L1018742-15 1x WG1155921 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 23 9:38 2018 Quant Results File: EP13H13AR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H13AR.M (Chemstation Integrator)
Title :
Last Update : Mon Aug 13 23:06:30 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

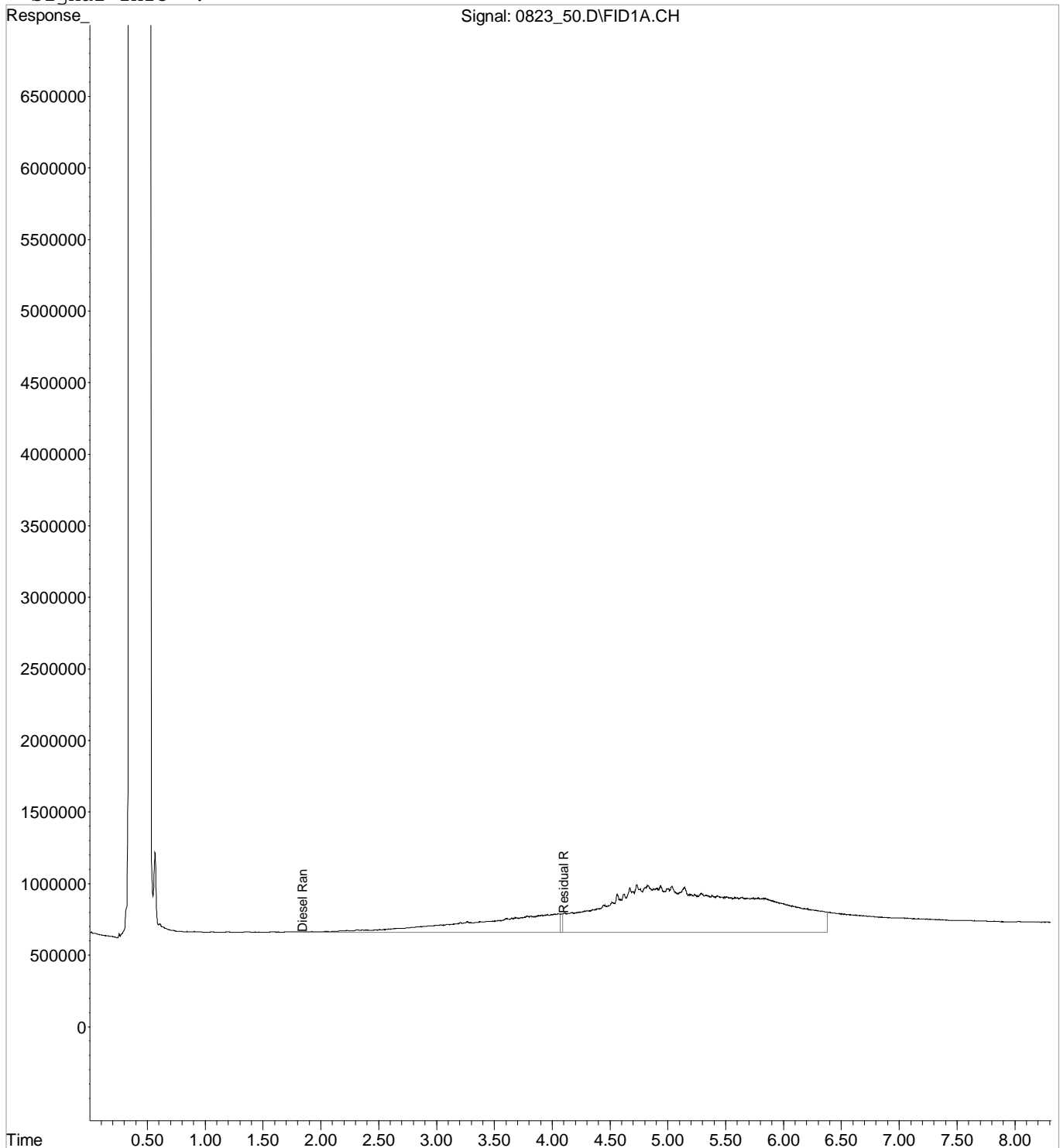
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082318\0823 50.D Vial: 76
Acq On : 8-24-2018 09:23:19 AM Operator: 851
Sample : L1018742-16 20x WG1155939 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 24 10:45 2018 Quant Results File: EP16H23R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16H23R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 23 17:13:42 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

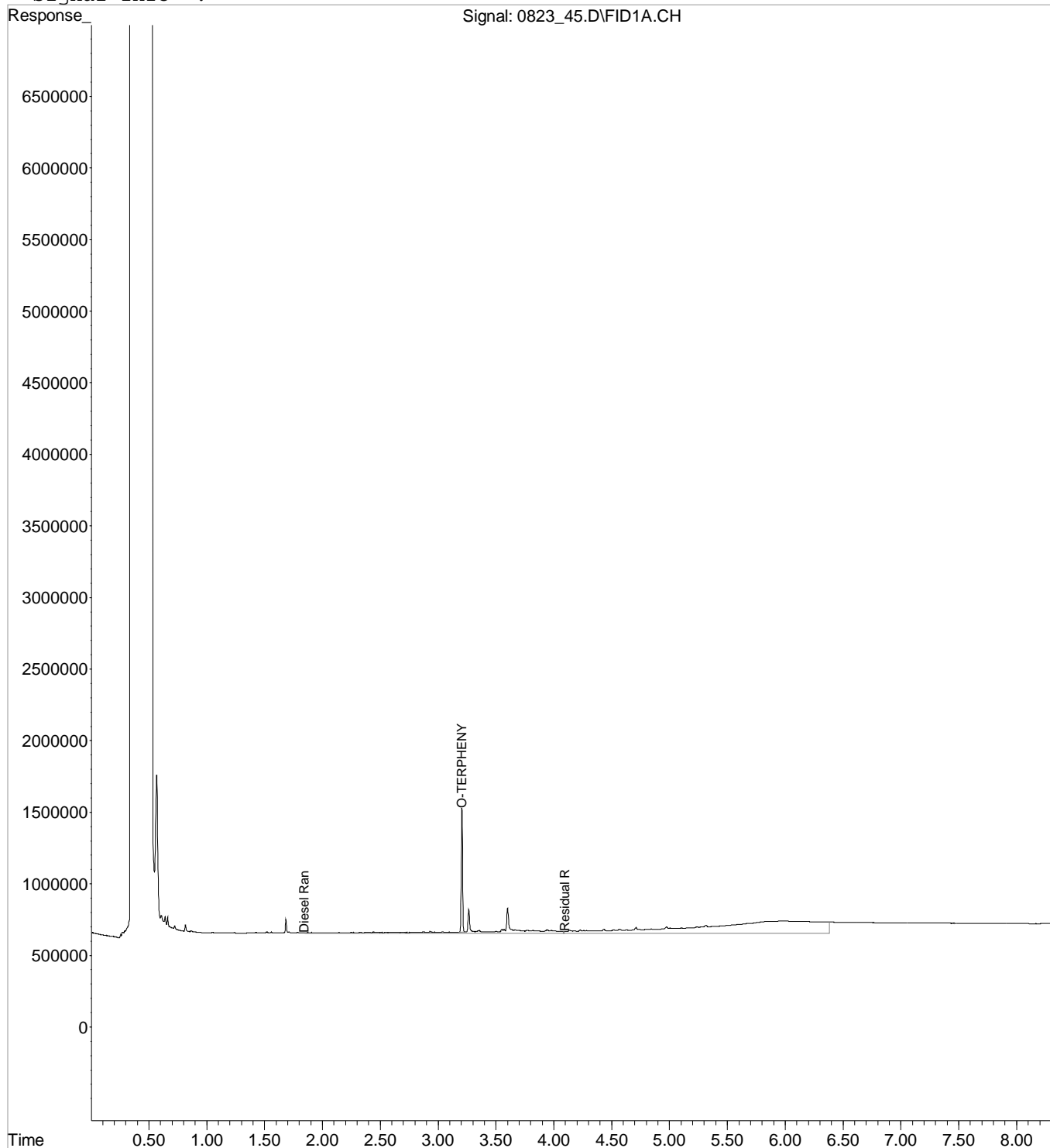
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082318\0823 45.D Vial: 71
Acq On : 8-24-2018 08:23:06 AM Operator: 851
Sample : L1018742-17 1x WG1155939 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 24 10:42 2018 Quant Results File: EP16H23R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16H23R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 23 17:13:42 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

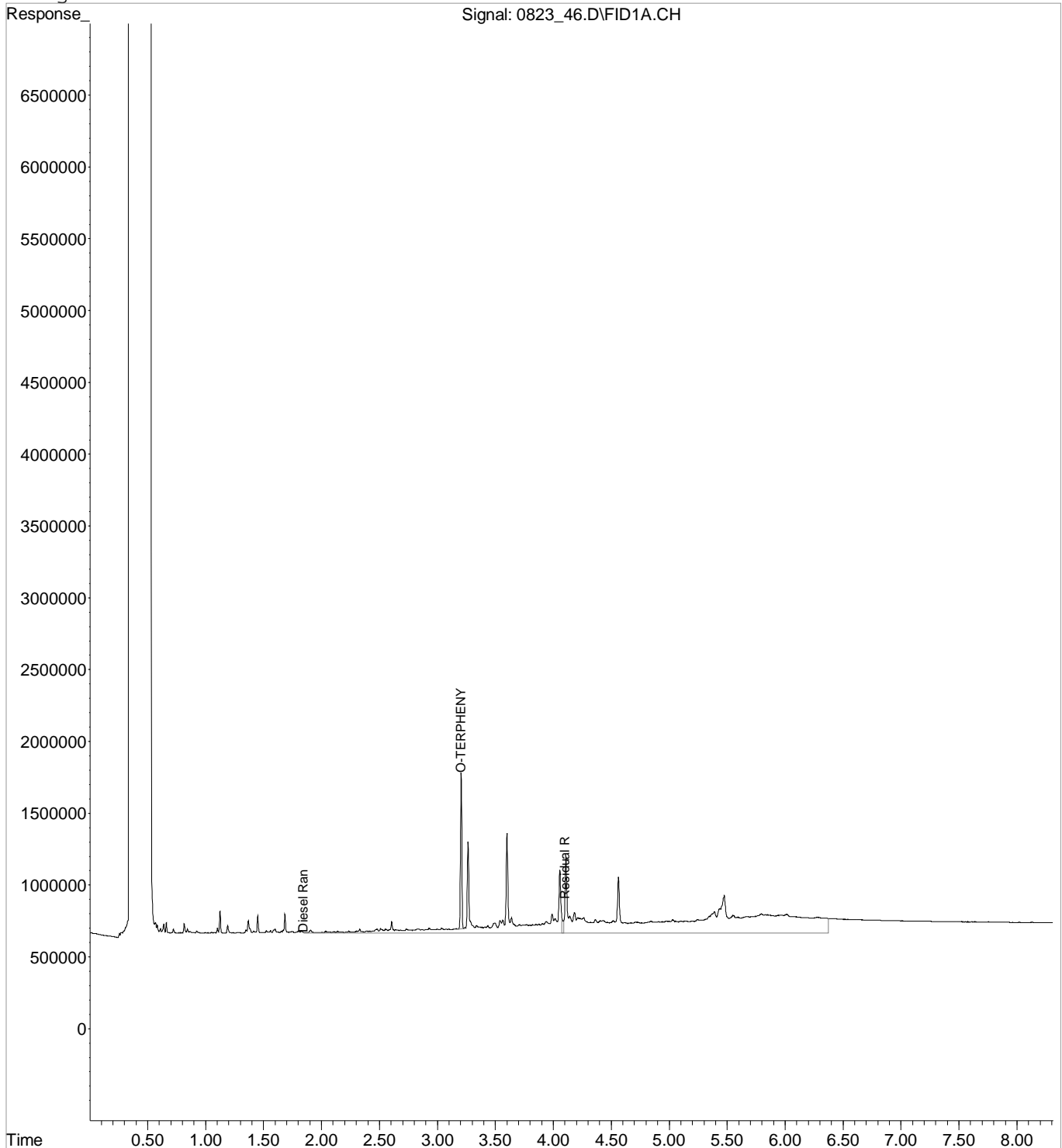
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082318\0823 46.D Vial: 72
Acq On : 8-24-2018 08:35:34 AM Operator: 851
Sample : L1018742-18 1x WG1155939 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 24 10:43 2018 Quant Results File: EP16H23R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16H23R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 23 17:13:42 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

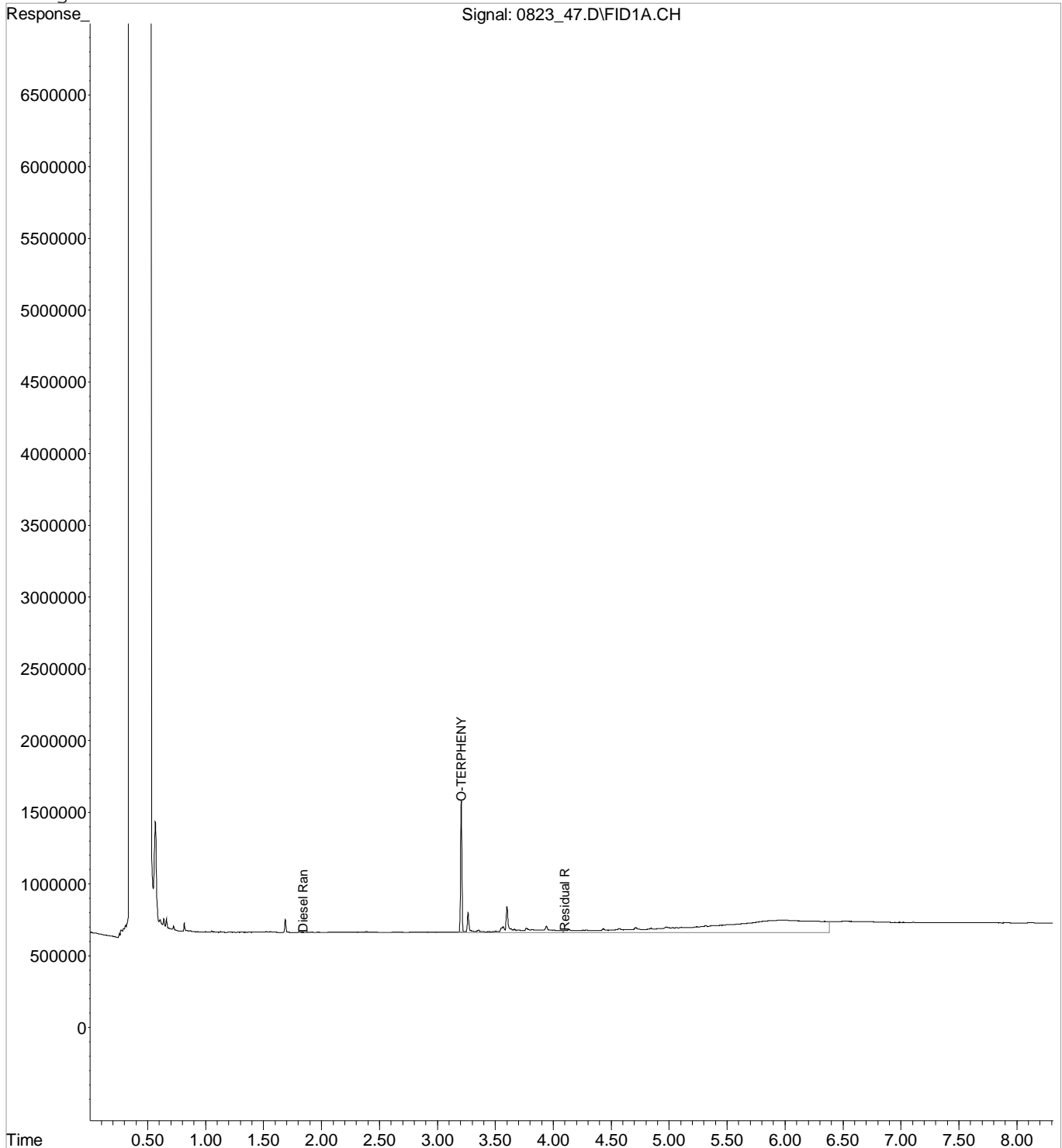
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082318\0823 47.D Vial: 73
Acq On : 8-24-2018 08:47:35 AM Operator: 851
Sample : L1018742-19 1x WG1155939 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 24 10:44 2018 Quant Results File: EP16H23R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16H23R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 23 17:13:42 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

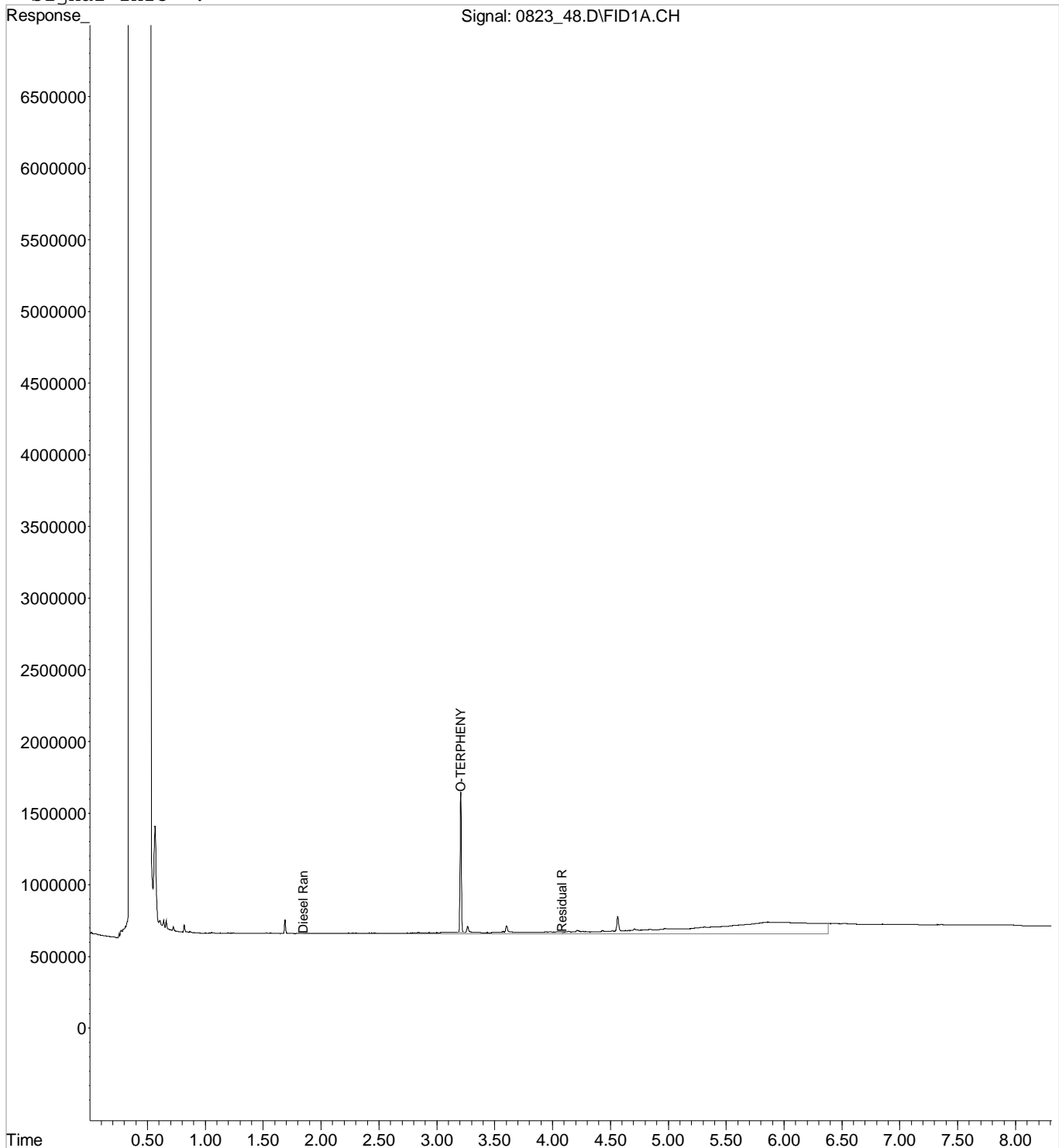
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082318\0823 48.D Vial: 74
Acq On : 8-24-2018 08:59:31 AM Operator: 851
Sample : L1018742-21 1x WG1155939 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 24 10:44 2018 Quant Results File: EP16H23R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16H23R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 23 17:13:42 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

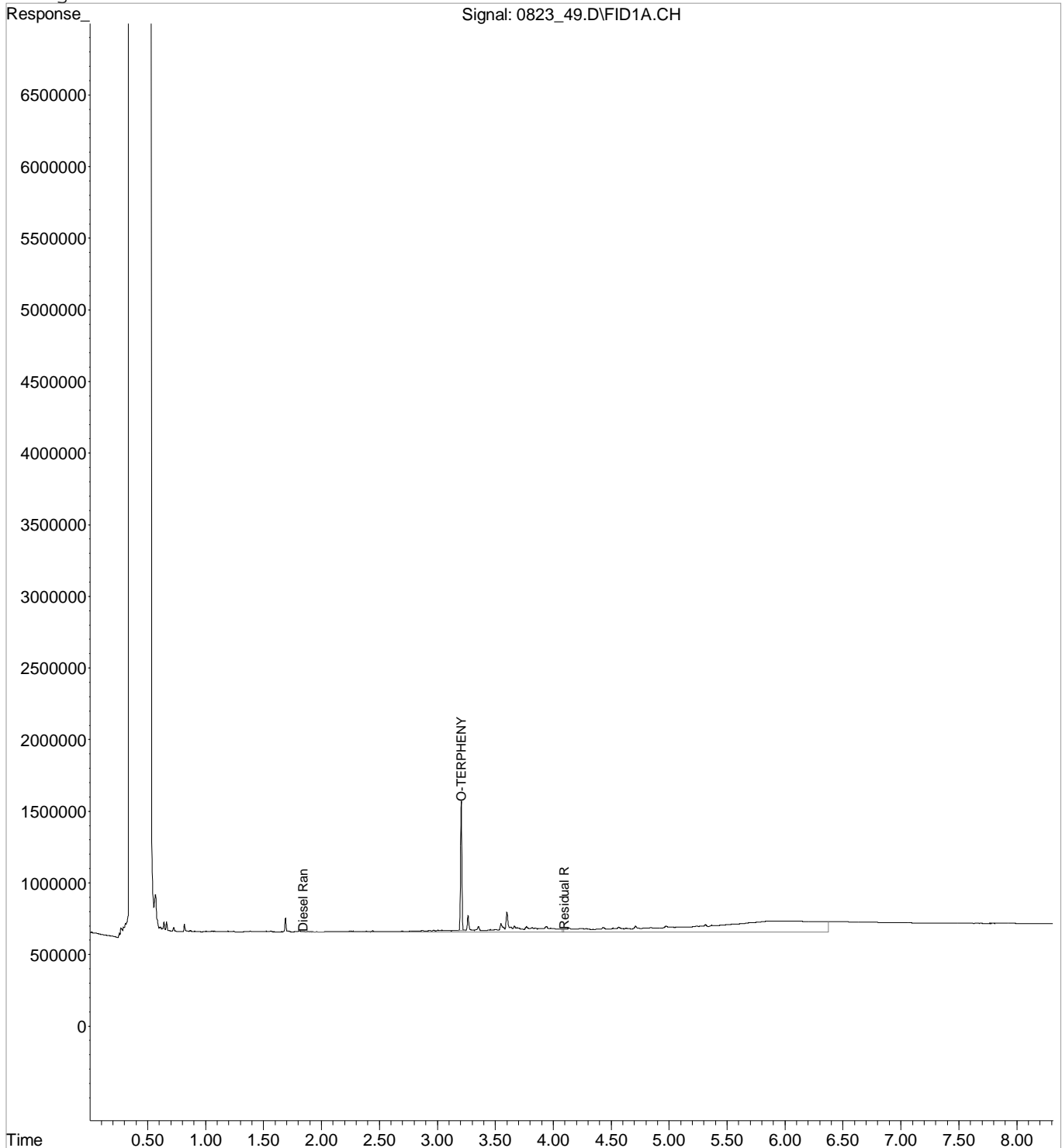
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082318\0823 49.D Vial: 75
Acq On : 8-24-2018 09:11:25 AM Operator: 851
Sample : L1018742-22 1x WG1155939 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 24 10:45 2018 Quant Results File: EP16H23R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16H23R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 23 17:13:42 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

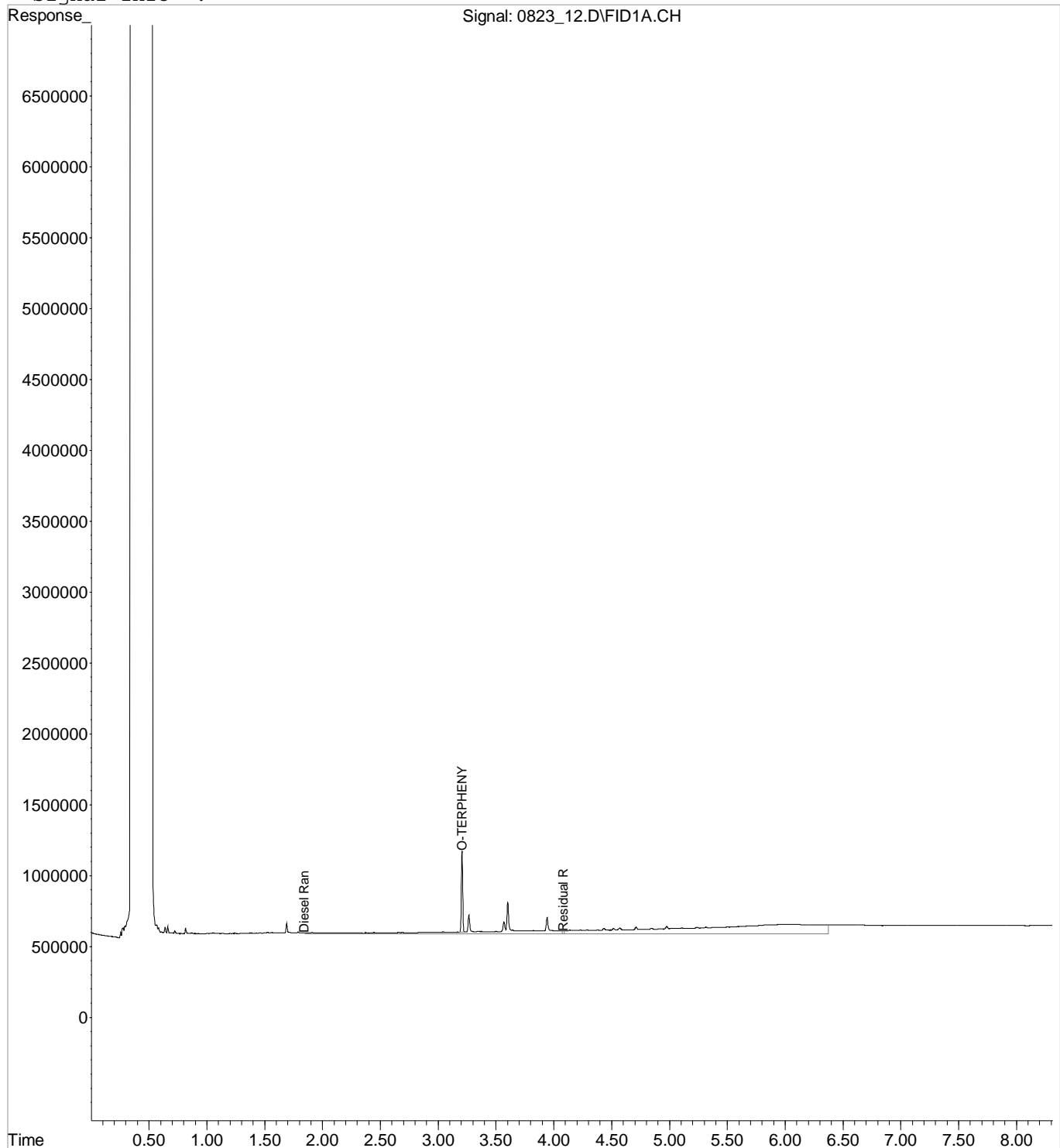
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082318\0823 12.D Vial: 11
Acq On : 8-23-2018 05:14:13 PM Operator: 851
Sample : L1018742-23 1x WG1156163 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 24 10:22 2018 Quant Results File: EP16H23R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16H23R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 23 17:13:42 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

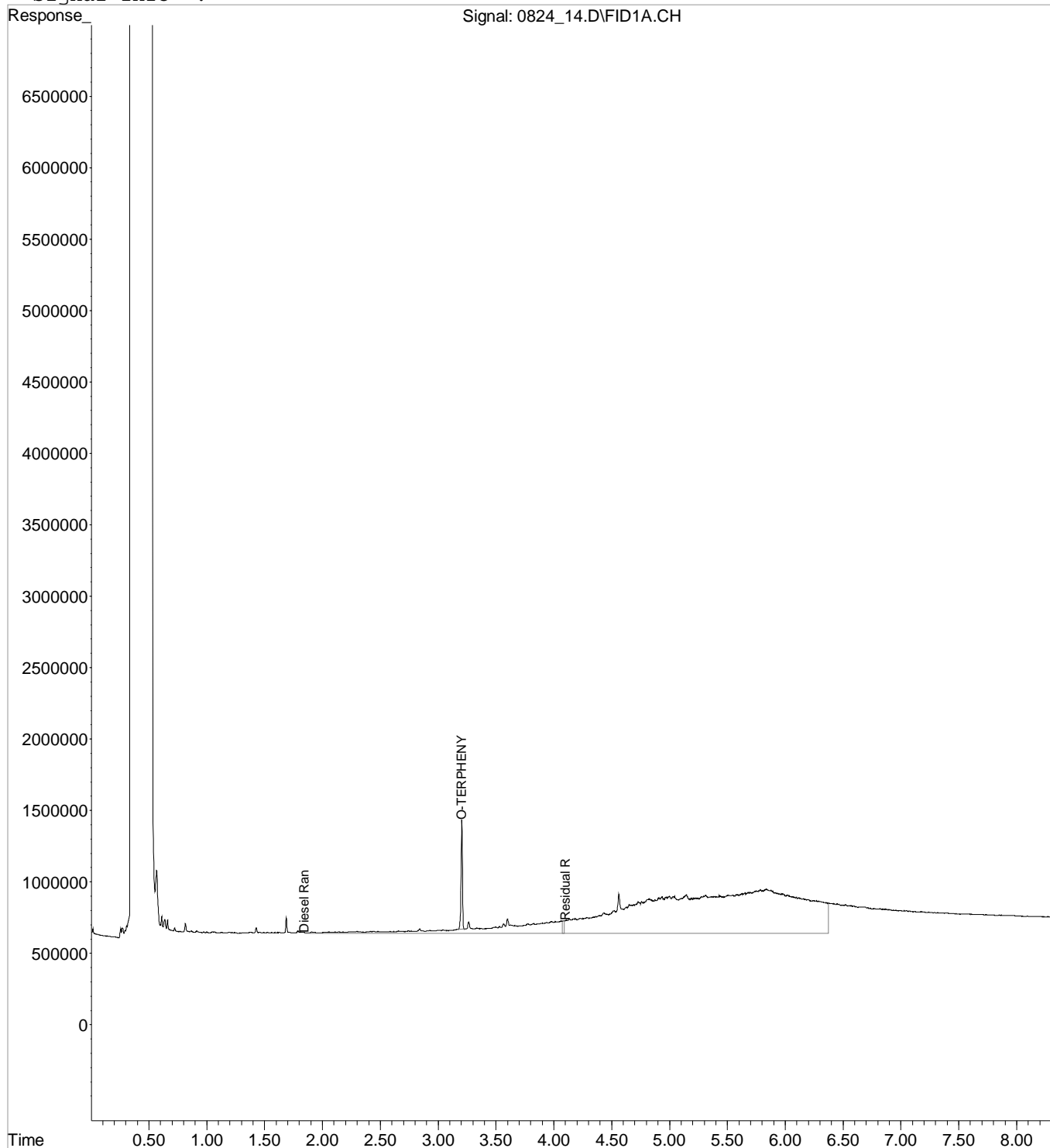
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082418\0824 14.D Vial: 31
Acq On : 8-25-2018 02:41:53 AM Operator: 647
Sample : L1018742-25 1x WG1156163 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 25 8:31 2018 Quant Results File: EP16H23R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16H23R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 23 17:13:42 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

Volume Inj. :
Signal Phase :
Signal Info :



August 24, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1018764
Samples Received: 08/17/2018
Project Number: 1896120 04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001









Entire Report Reviewed By:



Mark W. Beasley
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



RB-03-20180815 L1018764-01 GW

Collected by
K. Teague
Collected date/time
08/15/18 08:50
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1155580	1	08/22/18 09:32	08/23/18 09:15	EL
Metals (ICPMS) by Method 6020A	WG1155541	1	08/22/18 17:22	08/22/18 23:47	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 01:37	08/18/18 01:37	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/19/18 15:44	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/19/18 23:08	JNJ

1
Cp

2
Tc

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Ss

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Cn

B-18-29 L1018764-02 GW

Collected by
K. Teague
Collected date/time
08/15/18 09:15
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:19	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 18:59	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 11:59	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 01:57	08/18/18 01:57	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/19/18 16:03	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/19/18 23:31	JNJ

5
Sr

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Qc

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Gl

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Al

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Sc

B-18-08 L1018764-03 GW

Collected by
K. Teague
Collected date/time
08/15/18 07:45
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:25	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 19:04	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 12:03	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 02:18	08/18/18 02:18	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/19/18 16:21	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	2	08/19/18 16:43	08/19/18 23:54	JNJ

B-18-28 L1018764-04 GW

Collected by
K. Teague
Collected date/time
08/15/18 10:50
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:27	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 19:09	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 12:08	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 02:38	08/18/18 02:38	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/19/18 16:39	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/20/18 00:18	JNJ

B-18-27 L1018764-05 GW

Collected by
K. Teague
Collected date/time
08/15/18 11:45
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:29	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 19:15	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 12:12	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 02:58	08/18/18 02:58	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/20/18 07:48	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/20/18 00:41	JNJ

SAMPLE SUMMARY



TB-10-20180816 L1018764-06 GW

Collected by
K. Teague
Collected date/time
08/16/18 00:00
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/17/18 23:58	08/17/18 23:58	ACG

1
Cp

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Tc

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Ss

B-18-26 L1018764-07 GW

Collected by
K. Teague
Collected date/time
08/15/18 13:45
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:31	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 19:20	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 12:17	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 03:18	08/18/18 03:18	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/20/18 08:06	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/20/18 01:04	JNJ

4
Cn

5
Sr

6
Qc

7
Gl

B-18-30 L1018764-08 GW

Collected by
K. Teague
Collected date/time
08/15/18 15:55
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:34	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 19:25	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 12:31	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 03:38	08/18/18 03:38	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/20/18 12:01	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/20/18 01:27	JNJ

8
Al

9
Sc

B-18-05 L1018764-09 GW

Collected by
K. Teague
Collected date/time
08/16/18 09:15
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:36	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 19:44	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 12:35	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 03:57	08/18/18 03:57	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/20/18 12:19	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/20/18 01:50	JNJ

B-18-04 L1018764-10 GW

Collected by
K. Teague
Collected date/time
08/16/18 10:00
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:38	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 19:50	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 12:40	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 04:18	08/18/18 04:18	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/20/18 12:36	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/20/18 02:13	JNJ

SAMPLE SUMMARY



B-18-03 L1018764-11 GW

Collected by
K. Teague
Collected date/time
08/16/18 11:00
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:40	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 19:55	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 12:44	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 04:38	08/18/18 04:38	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/20/18 12:54	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/20/18 02:36	JNJ

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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

B-18-02 L1018764-12 GW

Collected by
K. Teague
Collected date/time
08/16/18 11:45
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:42	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 20:00	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 12:49	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 04:59	08/18/18 04:59	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/20/18 13:12	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/20/18 03:00	JNJ

B-18-01 L1018764-13 GW

Collected by
K. Teague
Collected date/time
08/16/18 12:30
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:44	EL
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/20/18 20:06	LD
Metals (ICPMS) by Method 6020A	WG1154114	1	08/18/18 11:23	08/21/18 12:54	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 05:19	08/18/18 05:19	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1154198	1	08/18/18 12:48	08/20/18 13:29	CLG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1154242	1	08/19/18 16:46	08/20/18 18:14	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1154613	1	08/19/18 16:43	08/20/18 03:23	JNJ

TB-12-20180816 L1018764-14 GW

Collected by
K. Teague
Collected date/time
08/16/18 00:00
Received date/time
08/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154074	1	08/18/18 00:18	08/18/18 00:18	ACG



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.

Mark W. Beasley
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/23/2018 09:15	WG1155580

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		2.00	1	08/22/2018 23:47	WG1155541
Barium	ND		5.00	1	08/22/2018 23:47	WG1155541
Cadmium	ND		1.00	1	08/22/2018 23:47	WG1155541
Chromium	ND		2.00	1	08/22/2018 23:47	WG1155541
Lead	ND		2.00	1	08/22/2018 23:47	WG1155541
Selenium	ND		2.00	1	08/22/2018 23:47	WG1155541
Silver	ND		2.00	1	08/22/2018 23:47	WG1155541

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 01:37	WG1154074
Acrolein	ND		50.0	1	08/18/2018 01:37	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 01:37	WG1154074
Benzene	ND		1.00	1	08/18/2018 01:37	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 01:37	WG1154074
Bromoform	ND		1.00	1	08/18/2018 01:37	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 01:37	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 01:37	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 01:37	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 01:37	WG1154074
Chloroform	ND		5.00	1	08/18/2018 01:37	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 01:37	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 01:37	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 01:37	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 01:37	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 01:37	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 01:37	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 01:37	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 01:37	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 01:37	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 01:37	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 01:37	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 01:37	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 01:37	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 01:37	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 01:37	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 01:37	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 01:37	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 01:37	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 01:37	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 01:37	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 01:37	WG1154074

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 01:37	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 01:37	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 01:37	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 01:37	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 01:37	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 01:37	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 01:37	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
Styrene	ND		1.00	1	08/18/2018 01:37	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 01:37	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 01:37	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 01:37	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 01:37	WG1154074
Toluene	ND		1.00	1	08/18/2018 01:37	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 01:37	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 01:37	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 01:37	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 01:37	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 01:37	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 01:37	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 01:37	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 01:37	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 01:37	WG1154074
(S) Toluene-d8	98.9		80.0-120		08/18/2018 01:37	WG1154074
(S) Dibromofluoromethane	103		76.0-123		08/18/2018 01:37	WG1154074
(S) 4-Bromofluorobenzene	97.4		80.0-120		08/18/2018 01:37	WG1154074

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/19/2018 15:44	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/19/2018 15:44	WG1154198
(S) o-Terphenyl	104		52.0-156		08/19/2018 15:44	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Acenaphthene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Acenaphthylene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Benzo(g,h,i)perylene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Chrysene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Fluoranthene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Fluorene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/19/2018 23:08	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/19/2018 23:08	WG1154613
Phenanthrene	ND		0.0500	1	08/19/2018 23:08	WG1154613
Pyrene	ND		0.0500	1	08/19/2018 23:08	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/19/2018 23:08	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/19/2018 23:08	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/19/2018 23:08	WG1154613
(S) Nitrobenzene-d5	158		31.0-160		08/19/2018 23:08	WG1154613
(S) 2-Fluorobiphenyl	113		48.0-148		08/19/2018 23:08	WG1154613
(S) p-Terphenyl-d14	103		37.0-146		08/19/2018 23:08	WG1154613

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:19	WG154478

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	10.5		2.00	1	08/20/2018 18:59	WG1154114
Barium,Dissolved	63.1		5.00	1	08/20/2018 18:59	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 18:59	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 11:59	WG1154114
Lead,Dissolved	2.52		2.00	1	08/20/2018 18:59	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 18:59	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 18:59	WG1154114

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 01:57	WG1154074
Acrolein	ND		50.0	1	08/18/2018 01:57	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 01:57	WG1154074
Benzene	ND		1.00	1	08/18/2018 01:57	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 01:57	WG1154074
Bromoform	ND		1.00	1	08/18/2018 01:57	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 01:57	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 01:57	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 01:57	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 01:57	WG1154074
Chloroform	ND		5.00	1	08/18/2018 01:57	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 01:57	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 01:57	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 01:57	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 01:57	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 01:57	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 01:57	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 01:57	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 01:57	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 01:57	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 01:57	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 01:57	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 01:57	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 01:57	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 01:57	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 01:57	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 01:57	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 01:57	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 01:57	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 01:57	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 01:57	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 01:57	WG1154074



Collected date/time: 08/15/18 09:15

L1018764

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 01:57	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 01:57	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 01:57	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 01:57	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 01:57	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 01:57	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 01:57	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
Styrene	ND		1.00	1	08/18/2018 01:57	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 01:57	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 01:57	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 01:57	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 01:57	WG1154074
Toluene	ND		1.00	1	08/18/2018 01:57	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 01:57	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 01:57	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 01:57	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 01:57	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 01:57	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 01:57	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 01:57	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 01:57	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 01:57	WG1154074
(S) Toluene-d8	98.5		80.0-120		08/18/2018 01:57	WG1154074
(S) Dibromofluoromethane	109		76.0-123		08/18/2018 01:57	WG1154074
(S) 4-Bromofluorobenzene	101		80.0-120		08/18/2018 01:57	WG1154074

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/19/2018 16:03	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/19/2018 16:03	WG1154198
(S) o-Terphenyl	108		52.0-156		08/19/2018 16:03	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Acenaphthene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Acenaphthylene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Benzo(g,h,i)perylene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Chrysene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Fluoranthene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Fluorene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/19/2018 23:31	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/19/2018 23:31	WG1154613
Phenanthrene	ND		0.0500	1	08/19/2018 23:31	WG1154613
Pyrene	ND		0.0500	1	08/19/2018 23:31	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/19/2018 23:31	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/19/2018 23:31	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/19/2018 23:31	WG1154613
(S) Nitrobenzene-d5	161	J1	31.0-160		08/19/2018 23:31	WG1154613
(S) 2-Fluorobiphenyl	116		48.0-148		08/19/2018 23:31	WG1154613
(S) p-Terphenyl-d14	114		37.0-146		08/19/2018 23:31	WG1154613

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:25	WG1154478

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	4.02		2.00	1	08/20/2018 19:04	WG1154114
Barium,Dissolved	39.4		5.00	1	08/20/2018 19:04	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 19:04	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 12:03	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 19:04	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 19:04	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 19:04	WG1154114

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 02:18	WG1154074
Acrolein	ND		50.0	1	08/18/2018 02:18	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 02:18	WG1154074
Benzene	ND		1.00	1	08/18/2018 02:18	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 02:18	WG1154074
Bromoform	ND		1.00	1	08/18/2018 02:18	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 02:18	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 02:18	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 02:18	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 02:18	WG1154074
Chloroform	ND		5.00	1	08/18/2018 02:18	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 02:18	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 02:18	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 02:18	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 02:18	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 02:18	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 02:18	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 02:18	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 02:18	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 02:18	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 02:18	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 02:18	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 02:18	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 02:18	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 02:18	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 02:18	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 02:18	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 02:18	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 02:18	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 02:18	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 02:18	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 02:18	WG1154074



Collected date/time: 08/15/18 07:45

L1018764

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 02:18	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 02:18	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 02:18	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 02:18	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 02:18	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 02:18	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 02:18	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
Styrene	ND		1.00	1	08/18/2018 02:18	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 02:18	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 02:18	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 02:18	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 02:18	WG1154074
Toluene	ND		1.00	1	08/18/2018 02:18	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 02:18	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 02:18	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 02:18	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 02:18	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 02:18	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 02:18	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 02:18	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 02:18	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 02:18	WG1154074
(S) Toluene-d8	96.6		80.0-120		08/18/2018 02:18	WG1154074
(S) Dibromofluoromethane	105		76.0-123		08/18/2018 02:18	WG1154074
(S) 4-Bromofluorobenzene	99.9		80.0-120		08/18/2018 02:18	WG1154074

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	387		200	1	08/19/2018 16:21	WG1154198
Residual Range Organics (RRO)	946		250	1	08/19/2018 16:21	WG1154198
(S) o-Terphenyl	111		52.0-156		08/19/2018 16:21	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.100	2	08/19/2018 23:54	WG1154613
Acenaphthene	ND		0.100	2	08/19/2018 23:54	WG1154613
Acenaphthylene	ND		0.100	2	08/19/2018 23:54	WG1154613
Benzo(a)anthracene	ND		0.100	2	08/19/2018 23:54	WG1154613
Benzo(a)pyrene	ND		0.100	2	08/19/2018 23:54	WG1154613
Benzo(b)fluoranthene	ND		0.100	2	08/19/2018 23:54	WG1154613
Benzo(g,h,i)perylene	ND		0.100	2	08/19/2018 23:54	WG1154613
Benzo(k)fluoranthene	ND		0.100	2	08/19/2018 23:54	WG1154613
Chrysene	ND		0.100	2	08/19/2018 23:54	WG1154613
Dibenz(a,h)anthracene	ND		0.100	2	08/19/2018 23:54	WG1154613
Fluoranthene	ND		0.100	2	08/19/2018 23:54	WG1154613
Fluorene	ND		0.100	2	08/19/2018 23:54	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.100	2	08/19/2018 23:54	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.500	2	08/19/2018 23:54	WG1154613
Phenanthrene	ND		0.100	2	08/19/2018 23:54	WG1154613
Pyrene	ND		0.100	2	08/19/2018 23:54	WG1154613
1-Methylnaphthalene	ND		0.500	2	08/19/2018 23:54	WG1154613
2-Methylnaphthalene	ND		0.500	2	08/19/2018 23:54	WG1154613
2-Chloronaphthalene	ND		0.500	2	08/19/2018 23:54	WG1154613
(S) Nitrobenzene-d5	140		31.0-160		08/19/2018 23:54	WG1154613
(S) 2-Fluorobiphenyl	98.9		48.0-148		08/19/2018 23:54	WG1154613
(S) p-Terphenyl-d14	86.8		37.0-146		08/19/2018 23:54	WG1154613

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:27	WG1154478

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	6.35		2.00	1	08/20/2018 19:09	WG1154114
Barium,Dissolved	52.7		5.00	1	08/20/2018 19:09	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 19:09	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 12:08	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 19:09	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 19:09	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 19:09	WG1154114

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 02:38	WG1154074
Acrolein	ND		50.0	1	08/18/2018 02:38	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 02:38	WG1154074
Benzene	ND		1.00	1	08/18/2018 02:38	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 02:38	WG1154074
Bromoform	ND		1.00	1	08/18/2018 02:38	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 02:38	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 02:38	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 02:38	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 02:38	WG1154074
Chloroform	ND		5.00	1	08/18/2018 02:38	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 02:38	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 02:38	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 02:38	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 02:38	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 02:38	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 02:38	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 02:38	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 02:38	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 02:38	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 02:38	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 02:38	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 02:38	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 02:38	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 02:38	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 02:38	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 02:38	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 02:38	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 02:38	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 02:38	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 02:38	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 02:38	WG1154074

7 Gl

8 Al

9 Sc



Collected date/time: 08/15/18 10:50

L1018764

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 02:38	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 02:38	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 02:38	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 02:38	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 02:38	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 02:38	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 02:38	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
Styrene	ND		1.00	1	08/18/2018 02:38	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 02:38	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 02:38	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 02:38	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 02:38	WG1154074
Toluene	ND		1.00	1	08/18/2018 02:38	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 02:38	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 02:38	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 02:38	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 02:38	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 02:38	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 02:38	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 02:38	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 02:38	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 02:38	WG1154074
(S) Toluene-d8	99.7		80.0-120		08/18/2018 02:38	WG1154074
(S) Dibromofluoromethane	108		76.0-123		08/18/2018 02:38	WG1154074
(S) 4-Bromofluorobenzene	99.9		80.0-120		08/18/2018 02:38	WG1154074

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	281		200	1	08/19/2018 16:39	WG1154198
Residual Range Organics (RRO)	323		250	1	08/19/2018 16:39	WG1154198
(S) o-Terphenyl	111		52.0-156		08/19/2018 16:39	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Acenaphthene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Acenaphthylene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Benzo(g,h,i)perylene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Chrysene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Fluoranthene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Fluorene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/20/2018 00:18	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	0.312		0.250	1	08/20/2018 00:18	WG1154613
Phenanthrene	ND		0.0500	1	08/20/2018 00:18	WG1154613
Pyrene	ND		0.0500	1	08/20/2018 00:18	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/20/2018 00:18	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/20/2018 00:18	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/20/2018 00:18	WG1154613
(S) Nitrobenzene-d5	161	<u>J1</u>	31.0-160		08/20/2018 00:18	WG1154613
(S) 2-Fluorobiphenyl	120		48.0-148		08/20/2018 00:18	WG1154613
(S) p-Terphenyl-d14	117		37.0-146		08/20/2018 00:18	WG1154613

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:29	WG1154478

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	11.8		2.00	1	08/20/2018 19:15	WG1154114
Barium,Dissolved	49.7		5.00	1	08/20/2018 19:15	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 19:15	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 12:12	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 19:15	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 19:15	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 19:15	WG1154114

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 02:58	WG1154074
Acrolein	ND		50.0	1	08/18/2018 02:58	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 02:58	WG1154074
Benzene	ND		1.00	1	08/18/2018 02:58	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 02:58	WG1154074
Bromoform	ND		1.00	1	08/18/2018 02:58	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 02:58	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 02:58	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 02:58	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 02:58	WG1154074
Chloroform	ND		5.00	1	08/18/2018 02:58	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 02:58	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 02:58	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 02:58	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 02:58	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 02:58	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 02:58	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 02:58	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 02:58	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 02:58	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 02:58	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 02:58	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 02:58	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 02:58	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 02:58	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 02:58	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 02:58	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 02:58	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 02:58	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 02:58	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 02:58	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 02:58	WG1154074

7 Gl

8 Al

9 Sc



Collected date/time: 08/15/18 11:45

L1018764

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 02:58	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 02:58	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 02:58	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 02:58	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 02:58	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 02:58	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 02:58	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
Styrene	ND		1.00	1	08/18/2018 02:58	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 02:58	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 02:58	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 02:58	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 02:58	WG1154074
Toluene	ND		1.00	1	08/18/2018 02:58	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 02:58	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 02:58	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 02:58	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 02:58	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 02:58	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 02:58	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 02:58	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 02:58	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 02:58	WG1154074
(S) Toluene-d8	99.6		80.0-120		08/18/2018 02:58	WG1154074
(S) Dibromofluoromethane	106		76.0-123		08/18/2018 02:58	WG1154074
(S) 4-Bromofluorobenzene	95.0		80.0-120		08/18/2018 02:58	WG1154074

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/20/2018 07:48	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/20/2018 07:48	WG1154198
(S) o-Terphenyl	114		52.0-156		08/20/2018 07:48	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Acenaphthene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Acenaphthylene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Benzo(g,h,i)perylene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Chrysene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Fluoranthene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Fluorene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/20/2018 00:41	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/20/2018 00:41	WG1154613
Phenanthrene	ND		0.0500	1	08/20/2018 00:41	WG1154613
Pyrene	ND		0.0500	1	08/20/2018 00:41	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/20/2018 00:41	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/20/2018 00:41	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/20/2018 00:41	WG1154613
(S) Nitrobenzene-d5	156		31.0-160		08/20/2018 00:41	WG1154613
(S) 2-Fluorobiphenyl	114		48.0-148		08/20/2018 00:41	WG1154613
(S) p-Terphenyl-d14	111		37.0-146		08/20/2018 00:41	WG1154613

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/17/2018 23:58	WG1154074
Acrolein	ND		50.0	1	08/17/2018 23:58	WG1154074
Acrylonitrile	ND		10.0	1	08/17/2018 23:58	WG1154074
Benzene	ND		1.00	1	08/17/2018 23:58	WG1154074
Bromobenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
Bromodichloromethane	ND		1.00	1	08/17/2018 23:58	WG1154074
Bromoform	ND		1.00	1	08/17/2018 23:58	WG1154074
Bromomethane	ND		5.00	1	08/17/2018 23:58	WG1154074
n-Butylbenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
sec-Butylbenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
tert-Butylbenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
Carbon tetrachloride	ND		1.00	1	08/17/2018 23:58	WG1154074
Chlorobenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
Chlorodibromomethane	ND		1.00	1	08/17/2018 23:58	WG1154074
Chloroethane	ND		5.00	1	08/17/2018 23:58	WG1154074
Chloroform	ND		5.00	1	08/17/2018 23:58	WG1154074
Chloromethane	ND		2.50	1	08/17/2018 23:58	WG1154074
2-Chlorotoluene	ND		1.00	1	08/17/2018 23:58	WG1154074
4-Chlorotoluene	ND		1.00	1	08/17/2018 23:58	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/17/2018 23:58	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/17/2018 23:58	WG1154074
Dibromomethane	ND		1.00	1	08/17/2018 23:58	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
1,3-Dichlorobenzene	ND	J4	1.00	1	08/17/2018 23:58	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/17/2018 23:58	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/17/2018 23:58	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/17/2018 23:58	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/17/2018 23:58	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/17/2018 23:58	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/17/2018 23:58	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/17/2018 23:58	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/17/2018 23:58	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/17/2018 23:58	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/17/2018 23:58	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/17/2018 23:58	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/17/2018 23:58	WG1154074
Di-isopropyl ether	ND		1.00	1	08/17/2018 23:58	WG1154074
Ethylbenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
Hexachloro-1,3-butadiene	ND		1.00	1	08/17/2018 23:58	WG1154074
Isopropylbenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/17/2018 23:58	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/17/2018 23:58	WG1154074
Methylene Chloride	ND		5.00	1	08/17/2018 23:58	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/17/2018 23:58	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/17/2018 23:58	WG1154074
Naphthalene	ND		5.00	1	08/17/2018 23:58	WG1154074
n-Propylbenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
Styrene	ND		1.00	1	08/17/2018 23:58	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/17/2018 23:58	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/17/2018 23:58	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/17/2018 23:58	WG1154074
Tetrachloroethene	ND		1.00	1	08/17/2018 23:58	WG1154074
Toluene	ND		1.00	1	08/17/2018 23:58	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/17/2018 23:58	WG1154074

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/17/2018 23:58	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/17/2018 23:58	WG1154074
Trichloroethene	ND		1.00	1	08/17/2018 23:58	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/17/2018 23:58	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/17/2018 23:58	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/17/2018 23:58	WG1154074
Vinyl chloride	ND		1.00	1	08/17/2018 23:58	WG1154074
o-Xylene	ND		1.00	1	08/17/2018 23:58	WG1154074
m&p-Xylene	ND		2.00	1	08/17/2018 23:58	WG1154074
(S) Toluene-d8	103		80.0-120		08/17/2018 23:58	WG1154074
(S) Dibromofluoromethane	109		76.0-123		08/17/2018 23:58	WG1154074
(S) 4-Bromofluorobenzene	100		80.0-120		08/17/2018 23:58	WG1154074

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:31	WG1154478

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	9.04		2.00	1	08/20/2018 19:20	WG1154114
Barium,Dissolved	64.8		5.00	1	08/20/2018 19:20	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 19:20	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 12:17	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 19:20	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 19:20	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 19:20	WG1154114

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 03:18	WG1154074
Acrolein	ND		50.0	1	08/18/2018 03:18	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 03:18	WG1154074
Benzene	ND		1.00	1	08/18/2018 03:18	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 03:18	WG1154074
Bromoform	ND		1.00	1	08/18/2018 03:18	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 03:18	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 03:18	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 03:18	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 03:18	WG1154074
Chloroform	ND		5.00	1	08/18/2018 03:18	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 03:18	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 03:18	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 03:18	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 03:18	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 03:18	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 03:18	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 03:18	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 03:18	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 03:18	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 03:18	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 03:18	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 03:18	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 03:18	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 03:18	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 03:18	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 03:18	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 03:18	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 03:18	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 03:18	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 03:18	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 03:18	WG1154074

7 Gl

8 Al

9 Sc



Collected date/time: 08/15/18 13:45

L1018764

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 03:18	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 03:18	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 03:18	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 03:18	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 03:18	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 03:18	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 03:18	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
Styrene	ND		1.00	1	08/18/2018 03:18	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 03:18	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 03:18	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 03:18	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 03:18	WG1154074
Toluene	ND		1.00	1	08/18/2018 03:18	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 03:18	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 03:18	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 03:18	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 03:18	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 03:18	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 03:18	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 03:18	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 03:18	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 03:18	WG1154074
(S) Toluene-d8	98.3		80.0-120		08/18/2018 03:18	WG1154074
(S) Dibromofluoromethane	104		76.0-123		08/18/2018 03:18	WG1154074
(S) 4-Bromofluorobenzene	98.3		80.0-120		08/18/2018 03:18	WG1154074

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	248		200	1	08/20/2018 08:06	WG1154198
Residual Range Organics (RRO)	302		250	1	08/20/2018 08:06	WG1154198
(S) o-Terphenyl	109		52.0-156		08/20/2018 08:06	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Acenaphthene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Acenaphthylene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Benzo(g,h,i)perylene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Chrysene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Fluoranthene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Fluorene	ND		0.0500	1	08/20/2018 01:04	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/20/2018 01:04	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/20/2018 01:04	WG1154613
Phenanthrene	0.0539		0.0500	1	08/20/2018 01:04	WG1154613
Pyrene	ND		0.0500	1	08/20/2018 01:04	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/20/2018 01:04	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/20/2018 01:04	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/20/2018 01:04	WG1154613
(S) Nitrobenzene-d5	158		31.0-160		08/20/2018 01:04	WG1154613
(S) 2-Fluorobiphenyl	117		48.0-148		08/20/2018 01:04	WG1154613
(S) p-Terphenyl-d14	115		37.0-146		08/20/2018 01:04	WG1154613

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:34	WG1154478

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	14.1		2.00	1	08/20/2018 19:25	WG1154114
Barium,Dissolved	38.4		5.00	1	08/20/2018 19:25	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 19:25	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 12:31	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 19:25	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 19:25	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 19:25	WG1154114

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 03:38	WG1154074
Acrolein	ND		50.0	1	08/18/2018 03:38	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 03:38	WG1154074
Benzene	ND		1.00	1	08/18/2018 03:38	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 03:38	WG1154074
Bromoform	ND		1.00	1	08/18/2018 03:38	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 03:38	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 03:38	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 03:38	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 03:38	WG1154074
Chloroform	ND		5.00	1	08/18/2018 03:38	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 03:38	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 03:38	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 03:38	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 03:38	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 03:38	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 03:38	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 03:38	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 03:38	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 03:38	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 03:38	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 03:38	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 03:38	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 03:38	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 03:38	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 03:38	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 03:38	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 03:38	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 03:38	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 03:38	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 03:38	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 03:38	WG1154074

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 03:38	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 03:38	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 03:38	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 03:38	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 03:38	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 03:38	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 03:38	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
Styrene	ND		1.00	1	08/18/2018 03:38	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 03:38	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 03:38	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 03:38	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 03:38	WG1154074
Toluene	ND		1.00	1	08/18/2018 03:38	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 03:38	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 03:38	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 03:38	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 03:38	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 03:38	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 03:38	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 03:38	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 03:38	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 03:38	WG1154074
(S) Toluene-d8	104		80.0-120		08/18/2018 03:38	WG1154074
(S) Dibromofluoromethane	104		76.0-123		08/18/2018 03:38	WG1154074
(S) 4-Bromofluorobenzene	99.7		80.0-120		08/18/2018 03:38	WG1154074

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	427		200	1	08/20/2018 12:01	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/20/2018 12:01	WG1154198
(S) o-Terphenyl	116		52.0-156		08/20/2018 12:01	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Acenaphthene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Acenaphthylene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Benzo(g,h,i)perylene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Chrysene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Fluoranthene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Fluorene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/20/2018 01:27	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/20/2018 01:27	WG1154613
Phenanthrene	ND		0.0500	1	08/20/2018 01:27	WG1154613
Pyrene	ND		0.0500	1	08/20/2018 01:27	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/20/2018 01:27	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/20/2018 01:27	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/20/2018 01:27	WG1154613
(S) Nitrobenzene-d5	158		31.0-160		08/20/2018 01:27	WG1154613
(S) 2-Fluorobiphenyl	112		48.0-148		08/20/2018 01:27	WG1154613
(S) p-Terphenyl-d14	112		37.0-146		08/20/2018 01:27	WG1154613

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:36	WG1154478

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	2.64		2.00	1	08/20/2018 19:44	WG1154114
Barium,Dissolved	65.7		5.00	1	08/20/2018 19:44	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 19:44	WG1154114
Chromium,Dissolved	2.19		2.00	1	08/21/2018 12:35	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 19:44	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 19:44	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 19:44	WG1154114

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 03:57	WG1154074
Acrolein	ND		50.0	1	08/18/2018 03:57	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 03:57	WG1154074
Benzene	ND		1.00	1	08/18/2018 03:57	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 03:57	WG1154074
Bromoform	ND		1.00	1	08/18/2018 03:57	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 03:57	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 03:57	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 03:57	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 03:57	WG1154074
Chloroform	ND		5.00	1	08/18/2018 03:57	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 03:57	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 03:57	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 03:57	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 03:57	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 03:57	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 03:57	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 03:57	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 03:57	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 03:57	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 03:57	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 03:57	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 03:57	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 03:57	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 03:57	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 03:57	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 03:57	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 03:57	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 03:57	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 03:57	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 03:57	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 03:57	WG1154074

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 03:57	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 03:57	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 03:57	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 03:57	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 03:57	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 03:57	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 03:57	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
Styrene	ND		1.00	1	08/18/2018 03:57	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 03:57	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 03:57	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 03:57	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 03:57	WG1154074
Toluene	ND		1.00	1	08/18/2018 03:57	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 03:57	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 03:57	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 03:57	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 03:57	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 03:57	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 03:57	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 03:57	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 03:57	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 03:57	WG1154074
(S) Toluene-d8	103		80.0-120		08/18/2018 03:57	WG1154074
(S) Dibromofluoromethane	103		76.0-123		08/18/2018 03:57	WG1154074
(S) 4-Bromofluorobenzene	98.4		80.0-120		08/18/2018 03:57	WG1154074

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/20/2018 12:19	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/20/2018 12:19	WG1154198
(S) o-Terphenyl	111		52.0-156		08/20/2018 12:19	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Acenaphthene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Acenaphthylene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Benzo(g,h,i)perylene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Chrysene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Fluoranthene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Fluorene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/20/2018 01:50	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/20/2018 01:50	WG1154613
Phenanthrene	ND		0.0500	1	08/20/2018 01:50	WG1154613
Pyrene	ND		0.0500	1	08/20/2018 01:50	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/20/2018 01:50	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/20/2018 01:50	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/20/2018 01:50	WG1154613
(S) Nitrobenzene-d5	152		31.0-160		08/20/2018 01:50	WG1154613
(S) 2-Fluorobiphenyl	115		48.0-148		08/20/2018 01:50	WG1154613
(S) p-Terphenyl-d14	105		37.0-146		08/20/2018 01:50	WG1154613

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:38	WG1154478

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	3.06		2.00	1	08/20/2018 19:50	WG1154114
Barium,Dissolved	77.5		5.00	1	08/20/2018 19:50	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 19:50	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 12:40	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 19:50	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 19:50	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 19:50	WG1154114

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 04:18	WG1154074
Acrolein	ND		50.0	1	08/18/2018 04:18	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 04:18	WG1154074
Benzene	ND		1.00	1	08/18/2018 04:18	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 04:18	WG1154074
Bromoform	ND		1.00	1	08/18/2018 04:18	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 04:18	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 04:18	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 04:18	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 04:18	WG1154074
Chloroform	ND		5.00	1	08/18/2018 04:18	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 04:18	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 04:18	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 04:18	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 04:18	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 04:18	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 04:18	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 04:18	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 04:18	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 04:18	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 04:18	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 04:18	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 04:18	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 04:18	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 04:18	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 04:18	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 04:18	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 04:18	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 04:18	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 04:18	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 04:18	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 04:18	WG1154074

7 Gl

8 Al

9 Sc



Collected date/time: 08/16/18 10:00

L1018764

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 04:18	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 04:18	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 04:18	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 04:18	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 04:18	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 04:18	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 04:18	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
Styrene	ND		1.00	1	08/18/2018 04:18	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 04:18	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 04:18	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 04:18	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 04:18	WG1154074
Toluene	ND		1.00	1	08/18/2018 04:18	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 04:18	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 04:18	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 04:18	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 04:18	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 04:18	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 04:18	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 04:18	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 04:18	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 04:18	WG1154074
(S) Toluene-d8	102		80.0-120		08/18/2018 04:18	WG1154074
(S) Dibromofluoromethane	101		76.0-123		08/18/2018 04:18	WG1154074
(S) 4-Bromofluorobenzene	98.1		80.0-120		08/18/2018 04:18	WG1154074

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/20/2018 12:36	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/20/2018 12:36	WG1154198
(S) o-Terphenyl	113		52.0-156		08/20/2018 12:36	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Acenaphthene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Acenaphthylene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Benzo(g,h,i)perylene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Chrysene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Fluoranthene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Fluorene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/20/2018 02:13	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/20/2018 02:13	WG1154613
Phenanthrene	ND		0.0500	1	08/20/2018 02:13	WG1154613
Pyrene	ND		0.0500	1	08/20/2018 02:13	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/20/2018 02:13	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/20/2018 02:13	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/20/2018 02:13	WG1154613
(S) Nitrobenzene-d5	155		31.0-160		08/20/2018 02:13	WG1154613
(S) 2-Fluorobiphenyl	113		48.0-148		08/20/2018 02:13	WG1154613
(S) p-Terphenyl-d14	109		37.0-146		08/20/2018 02:13	WG1154613

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:40	WG1154478

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	ND		2.00	1	08/20/2018 19:55	WG1154114
Barium,Dissolved	115		5.00	1	08/20/2018 19:55	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 19:55	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 12:44	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 19:55	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 19:55	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 19:55	WG1154114

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 04:38	WG1154074
Acrolein	ND		50.0	1	08/18/2018 04:38	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 04:38	WG1154074
Benzene	ND		1.00	1	08/18/2018 04:38	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 04:38	WG1154074
Bromoform	ND		1.00	1	08/18/2018 04:38	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 04:38	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 04:38	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 04:38	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 04:38	WG1154074
Chloroform	ND		5.00	1	08/18/2018 04:38	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 04:38	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 04:38	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 04:38	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 04:38	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 04:38	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 04:38	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 04:38	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 04:38	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 04:38	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 04:38	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 04:38	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 04:38	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 04:38	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 04:38	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 04:38	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 04:38	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 04:38	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 04:38	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 04:38	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 04:38	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 04:38	WG1154074

7 Gl

8 Al

9 Sc



Collected date/time: 08/16/18 11:00

L1018764

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 04:38	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 04:38	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 04:38	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 04:38	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 04:38	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 04:38	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 04:38	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
Styrene	ND		1.00	1	08/18/2018 04:38	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 04:38	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 04:38	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 04:38	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 04:38	WG1154074
Toluene	ND		1.00	1	08/18/2018 04:38	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 04:38	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 04:38	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 04:38	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 04:38	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 04:38	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 04:38	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 04:38	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 04:38	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 04:38	WG1154074
(S) Toluene-d8	100		80.0-120		08/18/2018 04:38	WG1154074
(S) Dibromofluoromethane	103		76.0-123		08/18/2018 04:38	WG1154074
(S) 4-Bromofluorobenzene	101		80.0-120		08/18/2018 04:38	WG1154074

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/20/2018 12:54	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/20/2018 12:54	WG1154198
(S) o-Terphenyl	103		52.0-156		08/20/2018 12:54	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Acenaphthene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Acenaphthylene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Benzo(g,h,i)perylene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Chrysene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Fluoranthene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Fluorene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/20/2018 02:36	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/20/2018 02:36	WG1154613
Phenanthrene	ND		0.0500	1	08/20/2018 02:36	WG1154613
Pyrene	ND		0.0500	1	08/20/2018 02:36	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/20/2018 02:36	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/20/2018 02:36	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/20/2018 02:36	WG1154613
(S) Nitrobenzene-d5	158		31.0-160		08/20/2018 02:36	WG1154613
(S) 2-Fluorobiphenyl	116		48.0-148		08/20/2018 02:36	WG1154613
(S) p-Terphenyl-d14	115		37.0-146		08/20/2018 02:36	WG1154613

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:42	WG154478

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	4.08		2.00	1	08/20/2018 20:00	WG1154114
Barium,Dissolved	51.9		5.00	1	08/20/2018 20:00	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 20:00	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 12:49	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 20:00	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 20:00	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 20:00	WG1154114

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 04:59	WG1154074
Acrolein	ND		50.0	1	08/18/2018 04:59	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 04:59	WG1154074
Benzene	ND		1.00	1	08/18/2018 04:59	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 04:59	WG1154074
Bromoform	ND		1.00	1	08/18/2018 04:59	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 04:59	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 04:59	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 04:59	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 04:59	WG1154074
Chloroform	ND		5.00	1	08/18/2018 04:59	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 04:59	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 04:59	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 04:59	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 04:59	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 04:59	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 04:59	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 04:59	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 04:59	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 04:59	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 04:59	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 04:59	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 04:59	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 04:59	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 04:59	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 04:59	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 04:59	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 04:59	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 04:59	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 04:59	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 04:59	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 04:59	WG1154074

7 Gl

8 Al

9 Sc



Collected date/time: 08/16/18 11:45

L1018764

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 04:59	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 04:59	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 04:59	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 04:59	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 04:59	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 04:59	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 04:59	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
Styrene	ND		1.00	1	08/18/2018 04:59	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 04:59	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 04:59	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 04:59	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 04:59	WG1154074
Toluene	ND		1.00	1	08/18/2018 04:59	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 04:59	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 04:59	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 04:59	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 04:59	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 04:59	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 04:59	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 04:59	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 04:59	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 04:59	WG1154074
(S) Toluene-d8	102		80.0-120		08/18/2018 04:59	WG1154074
(S) Dibromofluoromethane	104		76.0-123		08/18/2018 04:59	WG1154074
(S) 4-Bromofluorobenzene	102		80.0-120		08/18/2018 04:59	WG1154074

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	252		200	1	08/20/2018 13:12	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/20/2018 13:12	WG1154198
(S) o-Terphenyl	113		52.0-156		08/20/2018 13:12	WG1154198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Acenaphthene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Acenaphthylene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Benzo(g,h,i)perylene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Chrysene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Fluoranthene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Fluorene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/20/2018 03:00	WG1154613



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/20/2018 03:00	WG1154613
Phenanthrene	ND		0.0500	1	08/20/2018 03:00	WG1154613
Pyrene	ND		0.0500	1	08/20/2018 03:00	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/20/2018 03:00	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/20/2018 03:00	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/20/2018 03:00	WG1154613
(S) Nitrobenzene-d5	158		31.0-160		08/20/2018 03:00	WG1154613
(S) 2-Fluorobiphenyl	118		48.0-148		08/20/2018 03:00	WG1154613
(S) p-Terphenyl-d14	116		37.0-146		08/20/2018 03:00	WG1154613

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:44	WG1154478

1 Cp

2 Tc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	2.38		2.00	1	08/20/2018 20:06	WG1154114
Barium,Dissolved	47.1		5.00	1	08/20/2018 20:06	WG1154114
Cadmium,Dissolved	ND		1.00	1	08/20/2018 20:06	WG1154114
Chromium,Dissolved	ND		2.00	1	08/21/2018 12:54	WG1154114
Lead,Dissolved	ND		2.00	1	08/20/2018 20:06	WG1154114
Selenium,Dissolved	ND		2.00	1	08/20/2018 20:06	WG1154114
Silver,Dissolved	ND		2.00	1	08/20/2018 20:06	WG1154114

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 05:19	WG1154074
Acrolein	ND		50.0	1	08/18/2018 05:19	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 05:19	WG1154074
Benzene	ND		1.00	1	08/18/2018 05:19	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 05:19	WG1154074
Bromoform	ND		1.00	1	08/18/2018 05:19	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 05:19	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 05:19	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 05:19	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 05:19	WG1154074
Chloroform	ND		5.00	1	08/18/2018 05:19	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 05:19	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 05:19	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 05:19	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 05:19	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 05:19	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 05:19	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
1,3-Dichlorobenzene	ND	<u>J4</u>	1.00	1	08/18/2018 05:19	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 05:19	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 05:19	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 05:19	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 05:19	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 05:19	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 05:19	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 05:19	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 05:19	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 05:19	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 05:19	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 05:19	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 05:19	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 05:19	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 05:19	WG1154074

7 Gl

8 Al

9 Sc



Collected date/time: 08/16/18 12:30

L1018764

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 05:19	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 05:19	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 05:19	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 05:19	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 05:19	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 05:19	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 05:19	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
Styrene	ND		1.00	1	08/18/2018 05:19	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 05:19	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 05:19	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 05:19	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 05:19	WG1154074
Toluene	ND		1.00	1	08/18/2018 05:19	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 05:19	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 05:19	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 05:19	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 05:19	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 05:19	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 05:19	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 05:19	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 05:19	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 05:19	WG1154074
(S) Toluene-d8	102		80.0-120		08/18/2018 05:19	WG1154074
(S) Dibromofluoromethane	105		76.0-123		08/18/2018 05:19	WG1154074
(S) 4-Bromofluorobenzene	103		80.0-120		08/18/2018 05:19	WG1154074

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	267		200	1	08/20/2018 13:29	WG1154198
Residual Range Organics (RRO)	ND		250	1	08/20/2018 13:29	WG1154198
(S) o-Terphenyl	111		52.0-156		08/20/2018 13:29	WG1154198

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/20/2018 18:14	WG1154242
Residual Range Organics (RRO)	ND		250	1	08/20/2018 18:14	WG1154242
(S) o-Terphenyl	91.6		52.0-156		08/20/2018 18:14	WG1154242

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Acenaphthene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Acenaphthylene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Benzo(a)anthracene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Benzo(a)pyrene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Benzo(b)fluoranthene	ND		0.0500	1	08/20/2018 03:23	WG1154613



Collected date/time: 08/16/18 12:30

L1018764

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Benzo(k)fluoranthene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Chrysene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Dibenz(a,h)anthracene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Fluoranthene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Fluorene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Naphthalene	ND		0.250	1	08/20/2018 03:23	WG1154613
Phenanthrene	ND		0.0500	1	08/20/2018 03:23	WG1154613
Pyrene	ND		0.0500	1	08/20/2018 03:23	WG1154613
1-Methylnaphthalene	ND		0.250	1	08/20/2018 03:23	WG1154613
2-Methylnaphthalene	ND		0.250	1	08/20/2018 03:23	WG1154613
2-Chloronaphthalene	ND		0.250	1	08/20/2018 03:23	WG1154613
(S) Nitrobenzene-d5	154		31.0-160		08/20/2018 03:23	WG1154613
(S) 2-Fluorobiphenyl	114		48.0-148		08/20/2018 03:23	WG1154613
(S) p-Terphenyl-d14	111		37.0-146		08/20/2018 03:23	WG1154613

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/18/2018 00:18	WG1154074
Acrolein	ND		50.0	1	08/18/2018 00:18	WG1154074
Acrylonitrile	ND		10.0	1	08/18/2018 00:18	WG1154074
Benzene	ND		1.00	1	08/18/2018 00:18	WG1154074
Bromobenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
Bromodichloromethane	ND		1.00	1	08/18/2018 00:18	WG1154074
Bromoform	ND		1.00	1	08/18/2018 00:18	WG1154074
Bromomethane	ND		5.00	1	08/18/2018 00:18	WG1154074
n-Butylbenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
sec-Butylbenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
tert-Butylbenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
Carbon tetrachloride	ND		1.00	1	08/18/2018 00:18	WG1154074
Chlorobenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
Chlorodibromomethane	ND		1.00	1	08/18/2018 00:18	WG1154074
Chloroethane	ND		5.00	1	08/18/2018 00:18	WG1154074
Chloroform	ND		5.00	1	08/18/2018 00:18	WG1154074
Chloromethane	ND		2.50	1	08/18/2018 00:18	WG1154074
2-Chlorotoluene	ND		1.00	1	08/18/2018 00:18	WG1154074
4-Chlorotoluene	ND		1.00	1	08/18/2018 00:18	WG1154074
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/18/2018 00:18	WG1154074
1,2-Dibromoethane	ND		1.00	1	08/18/2018 00:18	WG1154074
Dibromomethane	ND		1.00	1	08/18/2018 00:18	WG1154074
1,2-Dichlorobenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
1,3-Dichlorobenzene	ND	J4	1.00	1	08/18/2018 00:18	WG1154074
1,4-Dichlorobenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
Dichlorodifluoromethane	ND		5.00	1	08/18/2018 00:18	WG1154074
1,1-Dichloroethane	ND		1.00	1	08/18/2018 00:18	WG1154074
1,2-Dichloroethane	ND		1.00	1	08/18/2018 00:18	WG1154074
1,1-Dichloroethene	ND		1.00	1	08/18/2018 00:18	WG1154074
cis-1,2-Dichloroethene	ND		1.00	1	08/18/2018 00:18	WG1154074
trans-1,2-Dichloroethene	ND		1.00	1	08/18/2018 00:18	WG1154074
1,2-Dichloropropane	ND		1.00	1	08/18/2018 00:18	WG1154074
1,1-Dichloropropene	ND		1.00	1	08/18/2018 00:18	WG1154074
1,3-Dichloropropane	ND		1.00	1	08/18/2018 00:18	WG1154074
cis-1,3-Dichloropropene	ND		1.00	1	08/18/2018 00:18	WG1154074
trans-1,3-Dichloropropene	ND		1.00	1	08/18/2018 00:18	WG1154074
2,2-Dichloropropane	ND		1.00	1	08/18/2018 00:18	WG1154074
Di-isopropyl ether	ND		1.00	1	08/18/2018 00:18	WG1154074
Ethylbenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
Hexachloro-1,3-butadiene	ND		1.00	1	08/18/2018 00:18	WG1154074
Isopropylbenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
p-Isopropyltoluene	ND		1.00	1	08/18/2018 00:18	WG1154074
2-Butanone (MEK)	ND		10.0	1	08/18/2018 00:18	WG1154074
Methylene Chloride	ND		5.00	1	08/18/2018 00:18	WG1154074
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/18/2018 00:18	WG1154074
Methyl tert-butyl ether	ND		1.00	1	08/18/2018 00:18	WG1154074
Naphthalene	ND		5.00	1	08/18/2018 00:18	WG1154074
n-Propylbenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
Styrene	ND		1.00	1	08/18/2018 00:18	WG1154074
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/18/2018 00:18	WG1154074
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/18/2018 00:18	WG1154074
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/18/2018 00:18	WG1154074
Tetrachloroethene	ND		1.00	1	08/18/2018 00:18	WG1154074
Toluene	ND		1.00	1	08/18/2018 00:18	WG1154074
1,2,3-Trichlorobenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
1,2,4-Trichlorobenzene	ND		1.00	1	08/18/2018 00:18	WG1154074

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/18/2018 00:18	WG1154074
1,1,2-Trichloroethane	ND		1.00	1	08/18/2018 00:18	WG1154074
Trichloroethene	ND		1.00	1	08/18/2018 00:18	WG1154074
Trichlorofluoromethane	ND		5.00	1	08/18/2018 00:18	WG1154074
1,2,3-Trichloropropane	ND	J4	2.50	1	08/18/2018 00:18	WG1154074
1,2,4-Trimethylbenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
1,2,3-Trimethylbenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
1,3,5-Trimethylbenzene	ND		1.00	1	08/18/2018 00:18	WG1154074
Vinyl chloride	ND		1.00	1	08/18/2018 00:18	WG1154074
o-Xylene	ND		1.00	1	08/18/2018 00:18	WG1154074
m&p-Xylene	ND		2.00	1	08/18/2018 00:18	WG1154074
(S) Toluene-d8	100		80.0-120		08/18/2018 00:18	WG1154074
(S) Dibromofluoromethane	106		76.0-123		08/18/2018 00:18	WG1154074
(S) 4-Bromofluorobenzene	101		80.0-120		08/18/2018 00:18	WG1154074

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3335083-1 08/20/18 14:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	0.0702	J	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) R3335083-2 08/20/18 14:51 • (LCSD) R3335083-3 08/20/18 14:53

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 %
Mercury,Dissolved	3.00	3.32	3.20	111	107	80.0-120			3.46	20

L1019065-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019065-12 08/20/18 15:00 • (MS) R3335083-4 08/20/18 15:02 • (MSD) R3335083-5 08/20/18 15:04

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 %
Mercury,Dissolved	3.00	ND	3.28	3.19	109	106	1	75.0-125			2.68	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336036-1 08/23/18 09:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.0490	0.200

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336036-2 08/23/18 09:11 • (LCSD) R3336036-3 08/23/18 09:13

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 %
Mercury	3.00	3.07	2.95	102	98.4	80.0-120			3.82	20

⁷Gl

⁸Al

L1018764-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018764-01 08/23/18 09:15 • (MS) R3336036-4 08/23/18 09:17 • (MSD) R3336036-5 08/23/18 09:20

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 %
Mercury	3.00	ND	3.24	2.98	108	99.4	1	75.0-125			8.14	20

⁹Sc



Method Blank (MB)

(MB) R3335151-1 08/20/18 17:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		0.250	2.00
Barium,Dissolved	U		0.360	5.00
Cadmium,Dissolved	U		0.160	1.00
Chromium,Dissolved	U		0.540	2.00
Lead,Dissolved	U		0.240	2.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335151-2 08/20/18 17:40 • (LCSD) R3335151-3 08/20/18 17:46

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,Dissolved	50.0	50.3	50.2	101	100	80.0-120			0.0416	20
Barium,Dissolved	50.0	45.5	45.6	91.1	91.2	80.0-120			0.126	20
Cadmium,Dissolved	50.0	50.7	50.8	101	102	80.0-120			0.134	20
Chromium,Dissolved	50.0	49.3	50.6	98.6	101	80.0-120			2.60	20
Lead,Dissolved	50.0	49.9	50.5	99.8	101	80.0-120			1.18	20
Selenium,Dissolved	50.0	50.2	53.0	100	106	80.0-120			5.35	20
Silver,Dissolved	50.0	49.6	50.0	99.2	100	80.0-120			0.799	20

L1018718-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018718-05 08/20/18 17:51 • (MS) R3335151-5 08/20/18 18:02 • (MSD) R3335151-6 08/20/18 18:07

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,Dissolved	50.0	9.47	57.9	57.6	96.8	96.4	1	75.0-125			0.375	20
Barium,Dissolved	50.0	240	286	287	92.3	94.2	1	75.0-125			0.345	20
Cadmium,Dissolved	50.0	ND	50.4	51.5	100	103	1	75.0-125			2.30	20
Chromium,Dissolved	50.0	ND	48.5	48.8	95.2	96.0	1	75.0-125			0.761	20
Lead,Dissolved	50.0	ND	48.8	49.8	96.2	98.1	1	75.0-125			1.92	20
Selenium,Dissolved	50.0	ND	51.3	53.6	103	107	1	75.0-125			4.35	20
Silver,Dissolved	50.0	ND	49.5	49.8	99.1	99.7	1	75.0-125			0.625	20



Method Blank (MB)

(MB) R3335962-1 08/22/18 23:19

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		0.250	2.00
Barium	U		0.360	5.00
Cadmium	U		0.160	1.00
Chromium	U		0.540	2.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Silver	U		0.310	2.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335962-2 08/22/18 23:23 • (LCSD) R3335962-3 08/22/18 23:27

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	50.0	46.6	45.5	93.2	91.1	80.0-120			2.31	20
Barium	50.0	44.6	46.4	89.2	92.9	80.0-120			4.09	20
Cadmium	50.0	46.9	47.3	93.8	94.6	80.0-120			0.837	20
Chromium	50.0	48.0	46.3	96.0	92.6	80.0-120			3.65	20
Lead	50.0	46.5	46.4	93.1	92.8	80.0-120			0.316	20
Selenium	50.0	47.3	46.8	94.6	93.5	80.0-120			1.11	20
Silver	50.0	49.3	49.3	98.6	98.7	80.0-120			0.109	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1019055-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019055-16 08/22/18 23:31 • (MS) R3335962-5 08/22/18 23:39 • (MSD) R3335962-6 08/22/18 23:43

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	50.0	0.958	48.2	48.1	94.4	94.3	1	75.0-125			0.109	20
Barium	50.0	143	45.3	46.2	0.000	0.000	1	75.0-125	J6	J6	1.80	20
Cadmium	50.0	U	47.0	48.5	94.0	96.9	1	75.0-125			3.04	20
Chromium	50.0	0.632	48.8	48.5	96.3	95.8	1	75.0-125			0.571	20
Lead	50.0	U	46.3	47.2	92.7	94.3	1	75.0-125			1.76	20
Selenium	50.0	U	49.5	49.8	98.9	99.5	1	75.0-125			0.616	20
Silver	50.0	U	49.8	50.0	99.6	100	1	75.0-125			0.400	20



Method Blank (MB)

(MB) R3334848-3 08/17/18 22:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	U		0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3334848-3 08/17/18 22:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
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		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	0.336	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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	95.7			80.0-120
(S) Dibromofluoromethane	110			76.0-123
(S) 4-Bromofluorobenzene	96.7			80.0-120

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3334848-1 08/17/18 21:18 • (LCSD) R3334848-2 08/17/18 21:38

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	149	139	120	111	10.0-160			7.13	23
Acrolein	125	190	163	152	130	10.0-160			15.4	20
Acrylonitrile	125	134	131	107	105	60.0-142			2.63	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3334848-1 08/17/18 21:18 • (LCSD) R3334848-2 08/17/18 21:38

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	28.9	27.4	115	110	69.0-123			5.15	20
Bromobenzene	25.0	29.0	26.0	116	104	79.0-120			11.1	20
Bromodichloromethane	25.0	27.9	27.5	111	110	76.0-120			1.29	20
Bromoform	25.0	32.4	28.9	130	115	67.0-132			11.6	20
Bromomethane	25.0	28.9	29.0	116	116	18.0-160			0.225	20
n-Butylbenzene	25.0	27.9	24.7	112	98.8	72.0-126			12.1	20
sec-Butylbenzene	25.0	28.1	26.5	112	106	74.0-121			5.79	20
tert-Butylbenzene	25.0	28.4	25.4	113	102	75.0-122			10.9	20
Carbon tetrachloride	25.0	27.5	26.5	110	106	63.0-122			3.89	20
Chlorobenzene	25.0	29.5	28.7	118	115	79.0-121			2.86	20
Chlorodibromomethane	25.0	29.4	28.4	118	113	75.0-125			3.55	20
Chloroethane	25.0	26.0	25.5	104	102	47.0-152			2.00	20
Chloroform	25.0	29.0	27.4	116	110	72.0-121			5.68	20
Chloromethane	25.0	23.5	23.0	94.1	92.1	48.0-139			2.11	20
2-Chlorotoluene	25.0	29.6	26.3	118	105	74.0-122			11.5	20
4-Chlorotoluene	25.0	29.2	26.0	117	104	79.0-120			11.9	20
1,2-Dibromo-3-Chloropropane	25.0	29.3	27.0	117	108	64.0-127			8.03	20
1,2-Dibromoethane	25.0	29.9	29.2	120	117	77.0-123			2.61	20
Dibromomethane	25.0	29.4	27.6	118	111	78.0-120			6.15	20
1,2-Dichlorobenzene	25.0	29.6	27.1	118	109	80.0-120			8.69	20
1,3-Dichlorobenzene	25.0	31.9	29.1	128	116	72.0-123	J4		9.37	20
1,4-Dichlorobenzene	25.0	25.9	25.2	103	101	77.0-120			2.49	20
Dichlorodifluoromethane	25.0	32.7	30.0	131	120	49.0-155			8.51	20
1,1-Dichloroethane	25.0	26.0	25.5	104	102	70.0-126			2.13	20
1,2-Dichloroethane	25.0	29.5	29.3	118	117	67.0-126			0.471	20
1,1-Dichloroethene	25.0	28.2	26.6	113	106	64.0-129			5.67	20
cis-1,2-Dichloroethene	25.0	27.2	27.5	109	110	73.0-120			0.802	20
trans-1,2-Dichloroethene	25.0	28.3	27.3	113	109	71.0-121			3.51	20
1,2-Dichloropropane	25.0	26.4	25.7	105	103	75.0-125			2.69	20
1,1-Dichloropropene	25.0	28.6	27.7	114	111	71.0-129			2.93	20
1,3-Dichloropropane	25.0	29.3	29.4	117	118	80.0-121			0.509	20
cis-1,3-Dichloropropene	25.0	30.0	29.4	120	118	79.0-123			1.91	20
trans-1,3-Dichloropropene	25.0	30.4	29.5	122	118	74.0-127			3.04	20
2,2-Dichloropropane	25.0	30.5	29.4	122	118	60.0-125			3.60	20
Di-isopropyl ether	25.0	25.6	25.4	102	102	59.0-133			0.672	20
Ethylbenzene	25.0	29.1	27.6	117	111	77.0-120			5.32	20
Hexachloro-1,3-butadiene	25.0	30.3	26.1	121	104	64.0-131			15.0	20
Isopropylbenzene	25.0	28.1	25.6	112	102	75.0-120			9.23	20
p-Isopropyltoluene	25.0	29.3	26.0	117	104	74.0-126			12.0	20
2-Butanone (MEK)	125	145	138	116	110	37.0-158			4.72	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) R3334848-1 08/17/18 21:18 • (LCSD) R3334848-2 08/17/18 21:38

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 %
Methylene Chloride	25.0	28.2	27.7	113	111	66.0-121			1.81	20
4-Methyl-2-pentanone (MIBK)	125	137	132	109	106	59.0-143			3.17	20
Methyl tert-butyl ether	25.0	29.2	30.3	117	121	64.0-123			3.86	20
Naphthalene	25.0	28.3	26.0	113	104	62.0-128			8.50	20
n-Propylbenzene	25.0	30.0	26.6	120	106	79.0-120			12.0	20
Styrene	25.0	28.7	26.2	115	105	78.0-124			9.05	20
1,1,1,2-Tetrachloroethane	25.0	29.1	27.5	117	110	75.0-122			5.89	20
1,1,2,2-Tetrachloroethane	25.0	29.6	27.9	118	112	71.0-122			5.64	20
Tetrachloroethene	25.0	30.0	28.1	120	112	70.0-127			6.64	20
Toluene	25.0	28.7	26.6	115	107	77.0-120			7.35	20
1,1,2-Trichlorotrifluoroethane	25.0	33.3	32.0	133	128	61.0-136			4.05	20
1,2,3-Trichlorobenzene	25.0	29.9	27.1	120	108	61.0-133			9.86	20
1,2,4-Trichlorobenzene	25.0	30.4	28.2	122	113	69.0-129			7.47	20
1,1,1-Trichloroethane	25.0	29.4	27.8	118	111	68.0-122			5.62	20
1,1,2-Trichloroethane	25.0	29.4	28.5	117	114	78.0-120			3.15	20
Trichloroethene	25.0	26.9	25.6	108	102	78.0-120			4.98	20
Trichlorofluoromethane	25.0	31.0	28.7	124	115	56.0-137			7.96	20
1,2,3-Trichloropropane	25.0	31.6	28.9	126	116	72.0-124	J4		8.83	20
1,2,3-Trimethylbenzene	25.0	28.1	26.3	112	105	75.0-120			6.63	20
1,2,4-Trimethylbenzene	25.0	29.0	26.1	116	104	75.0-120			10.7	20
1,3,5-Trimethylbenzene	25.0	29.2	24.2	117	96.9	75.0-120			18.7	20
Vinyl chloride	25.0	25.7	24.4	103	97.4	64.0-133			5.54	20
o-Xylene	25.0	30.0	28.5	120	114	78.0-120			5.26	20
m&p-Xylenes	50.0	56.4	54.5	113	109	77.0-120			3.55	20
(S) Toluene-d8				101	101	80.0-120				
(S) Dibromofluoromethane				101	107	76.0-123				
(S) 4-Bromofluorobenzene				98.8	95.5	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3334996-1 08/19/18 13:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	89.0			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3334996-2 08/19/18 13:18 • (LCSD) R3334996-3 08/19/18 13:37

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	770	731	103	97.5	50.0-150			5.20	20
Residual Range Organics (RRO)	750	805	773	107	103	50.0-150			4.06	20
<i>(S) o-Terphenyl</i>				108	111	52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335303-1 08/20/18 15:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	87.5			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335303-2 08/20/18 15:34 • (LCSD) R3335303-3 08/20/18 15:52

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 %
Diesel Range Organics (DRO)	750	682	692	90.9	92.3	50.0-150			1.46	20
Residual Range Organics (RRO)	750	710	688	94.7	91.7	50.0-150			3.15	20
<i>(S) o-Terphenyl</i>				99.5	96.5	52.0-156				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3335311-3 08/19/18 22:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	U		0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	U		0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	155			31.0-160
(S) 2-Fluorobiphenyl	102			48.0-148
(S) p-Terphenyl-d14	117			37.0-146

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) R3335311-1 08/19/18 21:59 • (LCSD) R3335311-2 08/19/18 22:22

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 %
Anthracene	2.00	2.19	2.29	109	114	64.0-142			4.46	20
Acenaphthene	2.00	2.15	2.25	108	112	66.0-132			4.55	20
Acenaphthylene	2.00	2.28	2.39	114	119	65.0-132			4.71	20
Benzo(a)anthracene	2.00	2.51	2.57	125	129	59.0-134			2.36	20
Benzo(a)pyrene	2.00	2.48	2.50	124	125	61.0-145			0.803	20
Benzo(b)fluoranthene	2.00	2.61	2.48	131	124	57.0-136			5.11	20
Benzo(g,h,i)perylene	2.00	2.55	2.53	128	126	54.0-140			0.787	20
Benzo(k)fluoranthene	2.00	2.24	2.40	112	120	57.0-141			6.90	20
Chrysene	2.00	2.38	2.42	119	121	63.0-140			1.67	20
Dibenz(a,h)anthracene	2.00	2.50	2.46	125	123	49.0-141			1.61	20
Fluoranthene	2.00	2.43	2.56	122	128	65.0-143			5.21	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335311-1 08/19/18 21:59 • (LCSD) R3335311-2 08/19/18 22:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	2.24	2.37	112	118	64.0-129			5.64	20
Indeno(1,2,3-cd)pyrene	2.00	2.51	2.50	125	125	53.0-141			0.399	20
Naphthalene	2.00	1.95	2.01	97.5	100	68.0-129			3.03	20
Phenanthrene	2.00	2.30	2.38	115	119	62.0-132			3.42	20
Pyrene	2.00	2.40	2.51	120	125	58.0-156			4.48	20
1-Methylnaphthalene	2.00	2.00	2.08	100	104	68.0-137			3.92	20
2-Methylnaphthalene	2.00	1.87	1.95	93.5	97.5	68.0-134			4.19	20
2-Chloronaphthalene	2.00	2.05	2.15	102	108	65.0-129			4.76	20
<i>(S) Nitrobenzene-d5</i>				158	156	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				102	103	48.0-148				
<i>(S) p-Terphenyl-d14</i>				111	113	37.0-146				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J4	The associated batch QC was outside the established quality control range for accuracy.
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

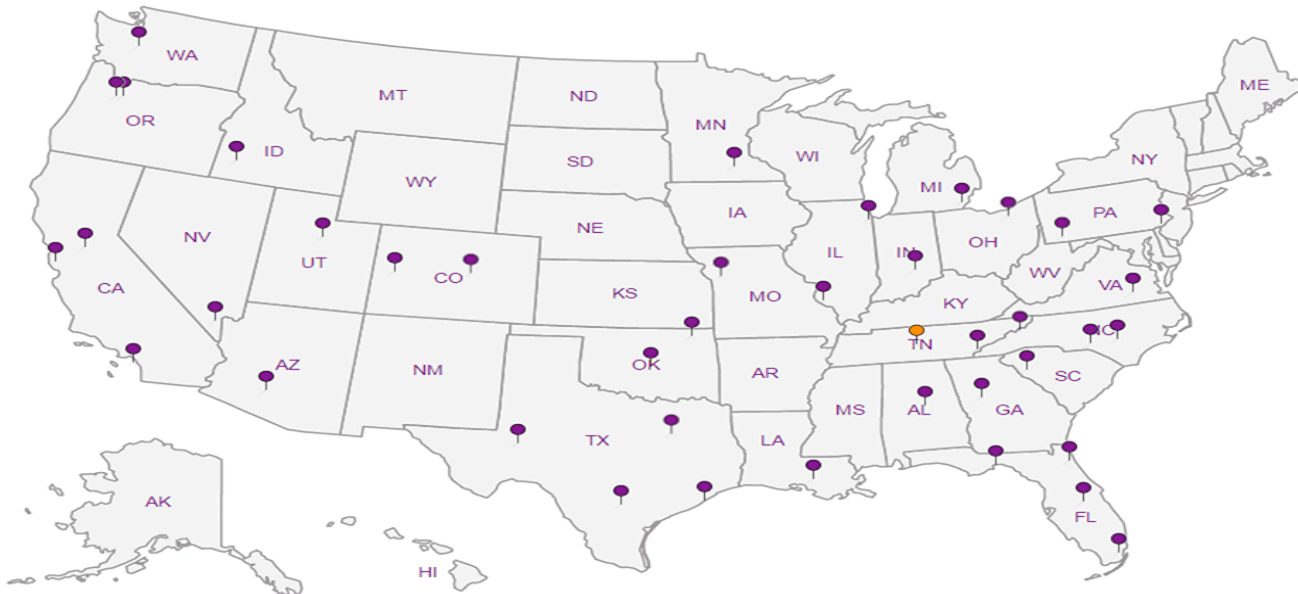
Third Party Federal Accreditations

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.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1			Billing Information:			Analysis / Container / Preservative							Chain of Custody Page ___ of ___			
32001 32nd Avenue South, Ste 100 Federal Way, WA 98001			Accounts Payable 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001			Pres Chk	C2									
Report to: Ryan Hultgren			Email To: RyanHultgren@kennedyjenks.com, KatieTeague@kennedyjenks.com,													
Project Description: BNSF - Wishram Railyard, WA			City/State Collected: Wishram, WA													
Phone: 253-835-6400		Client Project # 1896120-04		Lab Project # BNSF1KEN-WISHRAM												
Fax:		Site/Facility ID #		P.O. #												
Collected by (print): K Teague		Rush? (Lab MUST Be Notified)		Quote #												
Collected by (signature): <i>[Signature]</i>		Same Day <input type="checkbox"/> Five Day <input type="checkbox"/>		Date Results Needed												
Immediately Packed on Ice N <input checked="" type="checkbox"/>		Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/>														
Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/>		Three Day <input type="checkbox"/>														
No. of Cntrs																
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	Diss M6020RCRA8-D 250mlHDPE-HNO3	NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT	NWTPHDXLVI-NoSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	V8260C 40mlAmb-HCl	TOTAL RCRA 8 METALS			
RB-03-20180815		---	GW	---	8/15/18	0850	7	X	X	X	X	X	X		21	
B-18-29		Grab	GW	---	8/15/18	0915	7	X	X	X	X	X	X		22	
B-18-08		Grab	GW	---	8/15/18	0745	8	X	X	X	X	X	X		23	
B-18-28		Grab	GW	---	8/15/18	1050	7	X	X	X	X	X	X		24	
B-18-27		Grab	GW	---	8/15/18	1145	7	X	X	X	X	X	X		25	
TB-10-20180816		---	GW	---	8/16/18	---	24					X			26	
B-18-26		Grab	GW	---	8/15/18	1345	7	X	X	X	X	X	X		27	
B-18-30		Grab	GW	---	8/15/18	1555	7	X	X	X	X	X	X		28	
B-18-05		Grab	GW	---	8/16/18	0915	7	X	X	X	X	X	X		29	
B-18-04		Grab	GW	---	8/16/18	1000	7	X	X	X	X	X	X		30	
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Remarks: Include NWTPHDX and Gx chromatograms Diss samples field filtered. No spaces in sample names.			pH _____ Temp _____		Flow _____ Other _____		Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> NP COC Signed/Accurate: <input checked="" type="checkbox"/> H Bottles arrive intact: <input checked="" type="checkbox"/> H Correct bottles used: <input checked="" type="checkbox"/> H Sufficient volume sent: <input checked="" type="checkbox"/> H If Applicable VQA Zero Headspace: <input checked="" type="checkbox"/> H Preservation Correct/Checked: <input checked="" type="checkbox"/> H		Tracking # 4492 6218 1881/1892/1901		Trip Blank Received: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No MeOH/TBR		10.5 ml/LR	
Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier		Relinquished by: (Signature) <i>[Signature]</i>	Date: 8/16/18	Time: 1400	Received by: (Signature) FedEx		Temp: 0.9 0.2 0.9		Bottles Received: 87		If preservation required by Login: Date/Time		Date: 8/17/18		Time: 0900	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Date:		Time:		Hold:		Condition: NCF / OK				



L# **1018764**
G055

Acctnum: **BNSF1KEN**
Template: **T138674**
Prelogin: **P663892**
TSR: **134 - Mark W. Beasley**
PB: **7-23-186**
Shipped Via: **FedEX Ground**

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Pres
Chk

Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
Katie.Teague@kennedyjenks.com,

Project
Description: BNSF - Wishram Railyard, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1890120-04

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Quote #

Date Results Needed

Immediately
Packed on Ice N Y X

No.
of
Entrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Entrs	Diss M6020RCRA8-D 250mlHDPE-HNO3	NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT	NWTPHDXLVI-NoSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	VS260C 40mlAmb-HCl	Remarks	Sample # (lab only)
B-18-03	Grab	GW	—	8/16/18	1100	7	X		X		X	X		11
B-18-02	↓	GW	—	↓	1145	7	X		X		X	X		12
B-18-01	↓	GW	—	↓	1230	9	X	X	X		X	X		13
B-18-23		GW												
IB-12-20180816	—	GW	—	8/16/18	—	1						X		14
		GW												
		GW												
		GW												
		GW												
		GW												

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: Include NWTPHDx and Gx chromatograms

No spaces in sample names. Diss. Metals field filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
UPS FedEx Courier

Tracking # 4492 6218 1581 / 1892 / 1907

Sample Receipt Checklist
COC Seal Present/intact: 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 Headpace: Y N
Preservation Correct/Checked: Y N
LU 5 ml/HR

Relinquished by: (Signature)
[Signature]

Date: 8/16/18
Time: 1400

Received by: (Signature)
FedEx

Trip Blank Received: Yes No
4 HCL MeOH TBK

Relinquished by: (Signature)

Date: _____
Time: _____

Received by: (Signature)

Temp: 0.5
0.2
0.7
1.63 °C
Bottles Received: 87

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: _____
Time: _____

Received for lab by: (Signature)
[Signature]

Date: 8/17/18
Time: 0900

Hold: _____
Condition: NCF / OK

Chain of Custody Page ___ of ___



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

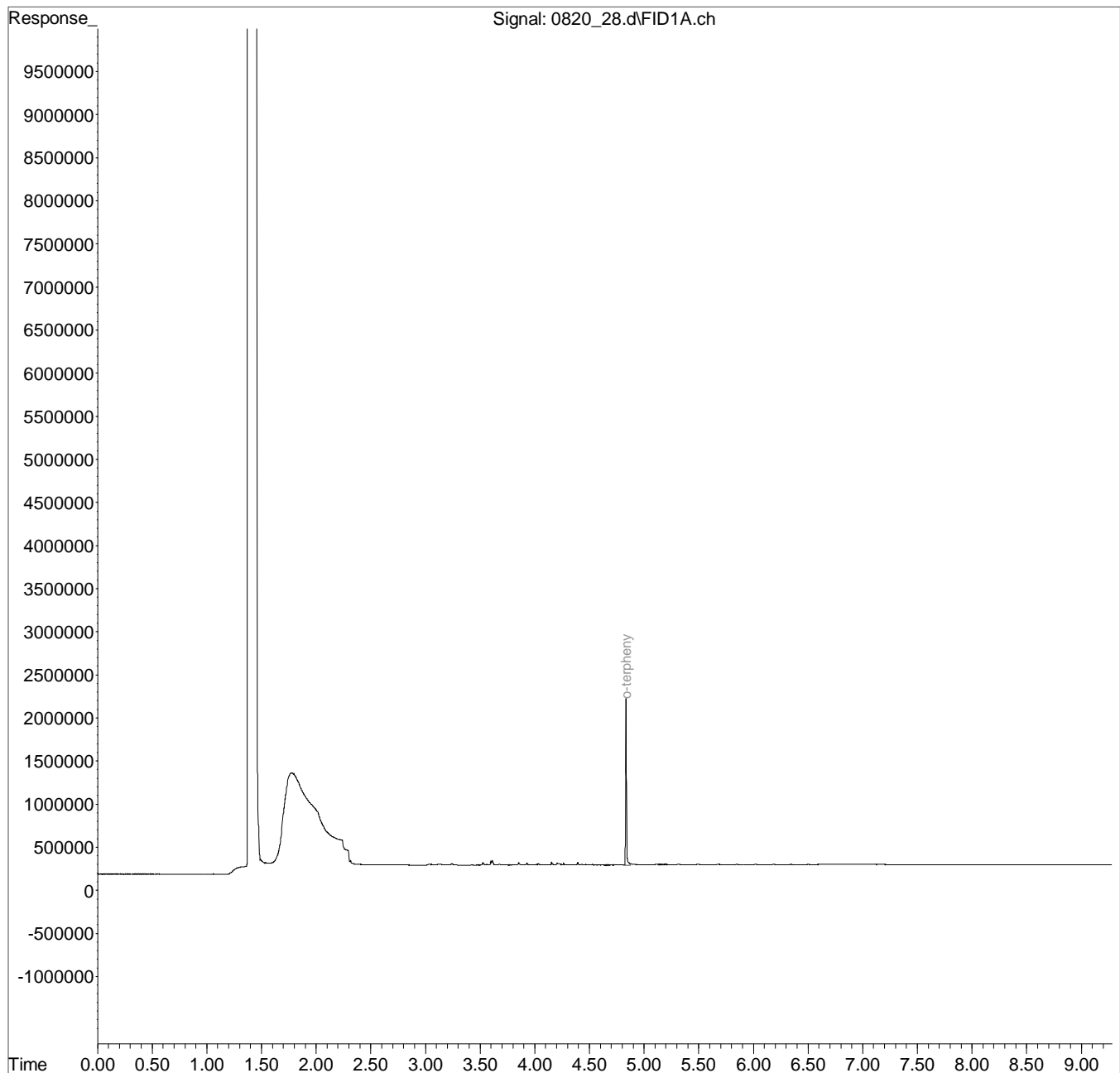


L# 1018764
Table #
Acctnum: BNSF1KEN
Template: T138674
Prelogin: P663892
TSR: 134 - Mark W. Beasley
PB: 7-23-18
Shipped Via: FedEX Ground

Data Path : C:\msdchem\1\data\082018\
Data File : 0820 28.d
Signal(s) : FID1A.ch
Acq On : 20 Aug 2018 6:14 pm
Operator : 773
Sample : L1018764-13 1x WG1154242
Misc : water M.I.s on ranges are corrections
ALS Vial : 20 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 21 11:05:44 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

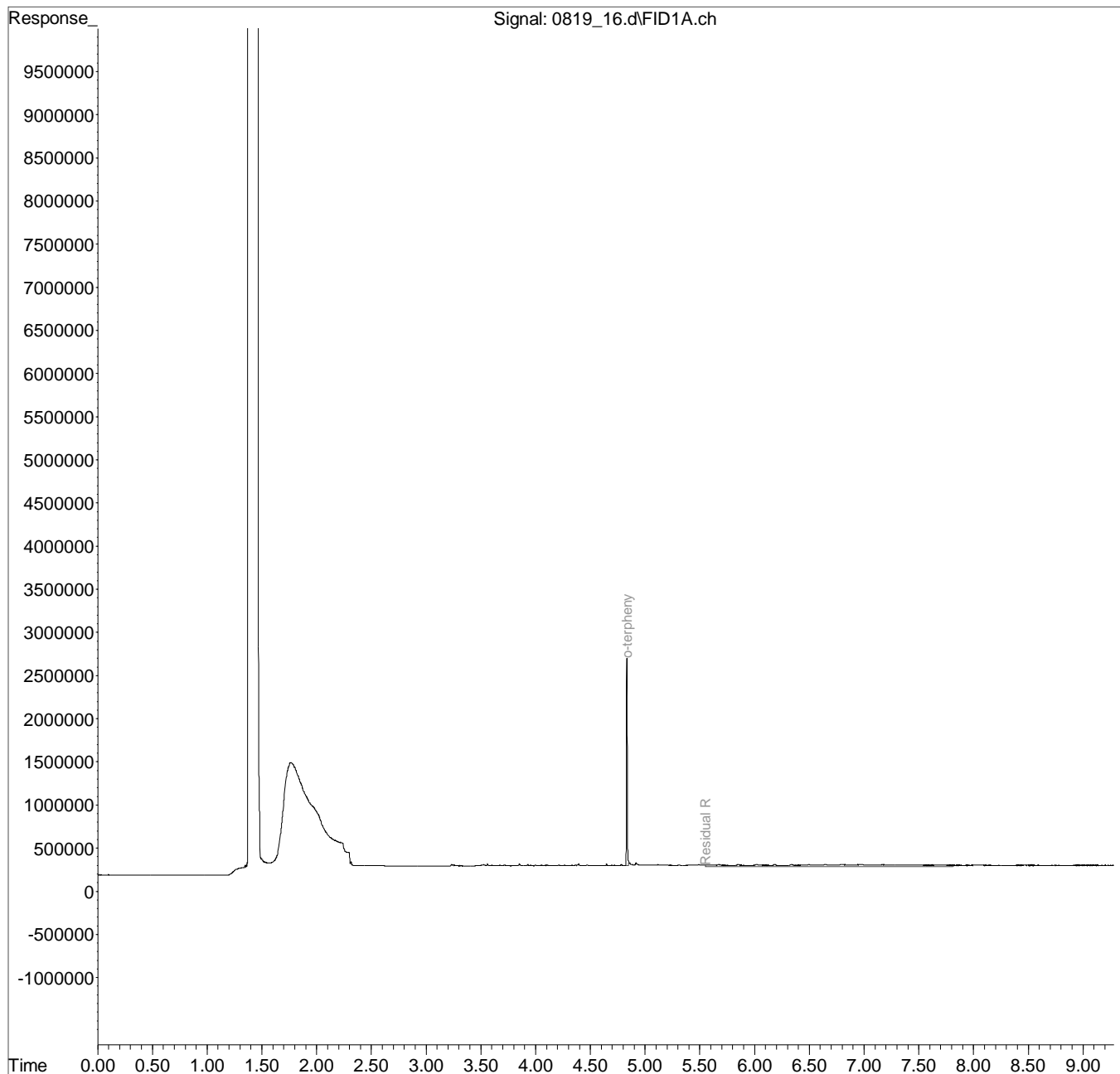
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081918\
 Data File : 0819_16.d
 Signal(s) : FID1A.ch
 Acq On : 19 Aug 2018 3:44 pm
 Operator : 773
 Sample : L1018764-01 1x WG1154198
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 11 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 20 15:16:43 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

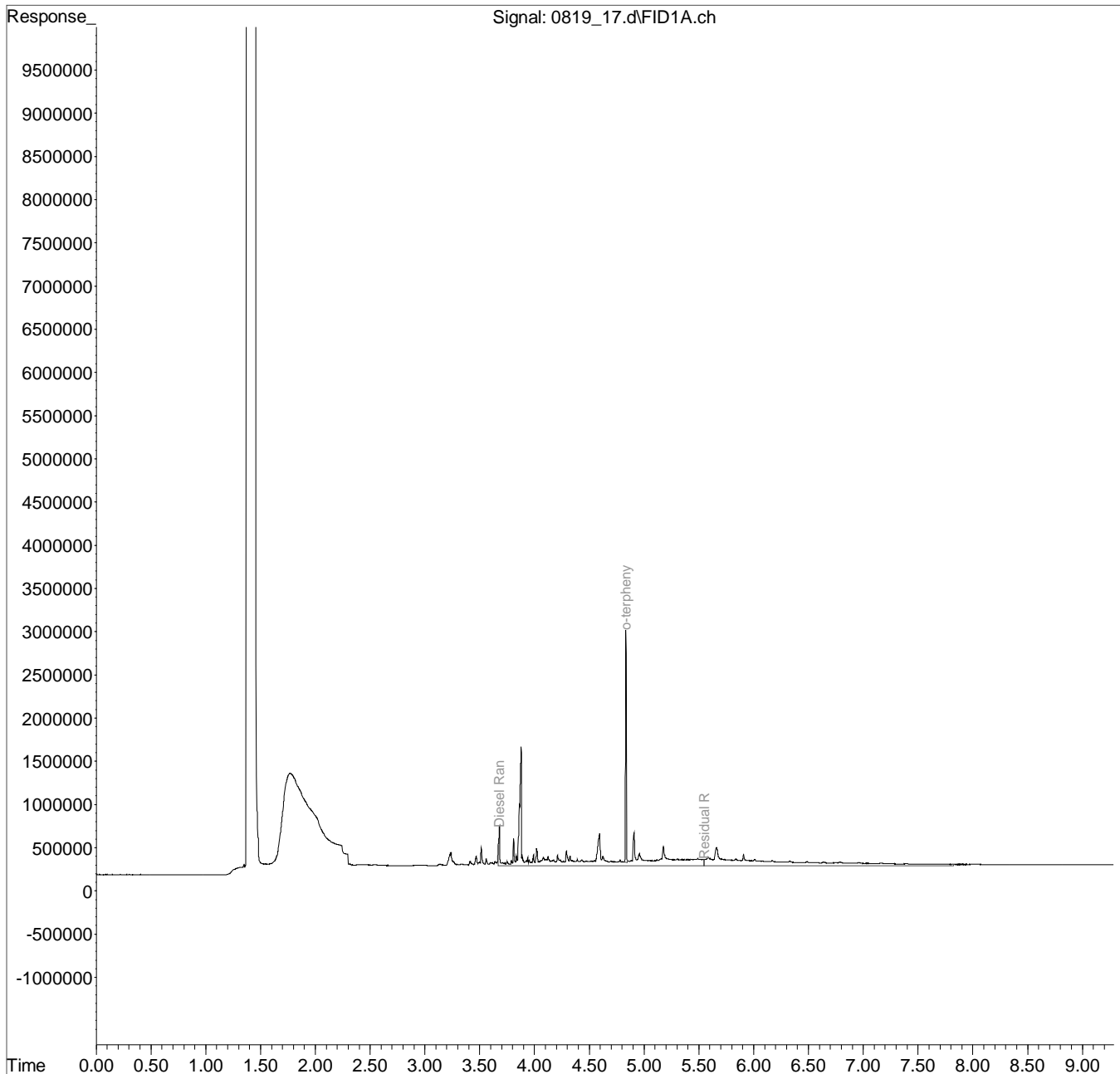
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081918\
 Data File : 0819 17.d
 Signal(s) : FID1A.ch
 Acq On : 19 Aug 2018 4:03 pm
 Operator : 773
 Sample : L1018764-02 1x WG1154198
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 12 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 20 15:17:16 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

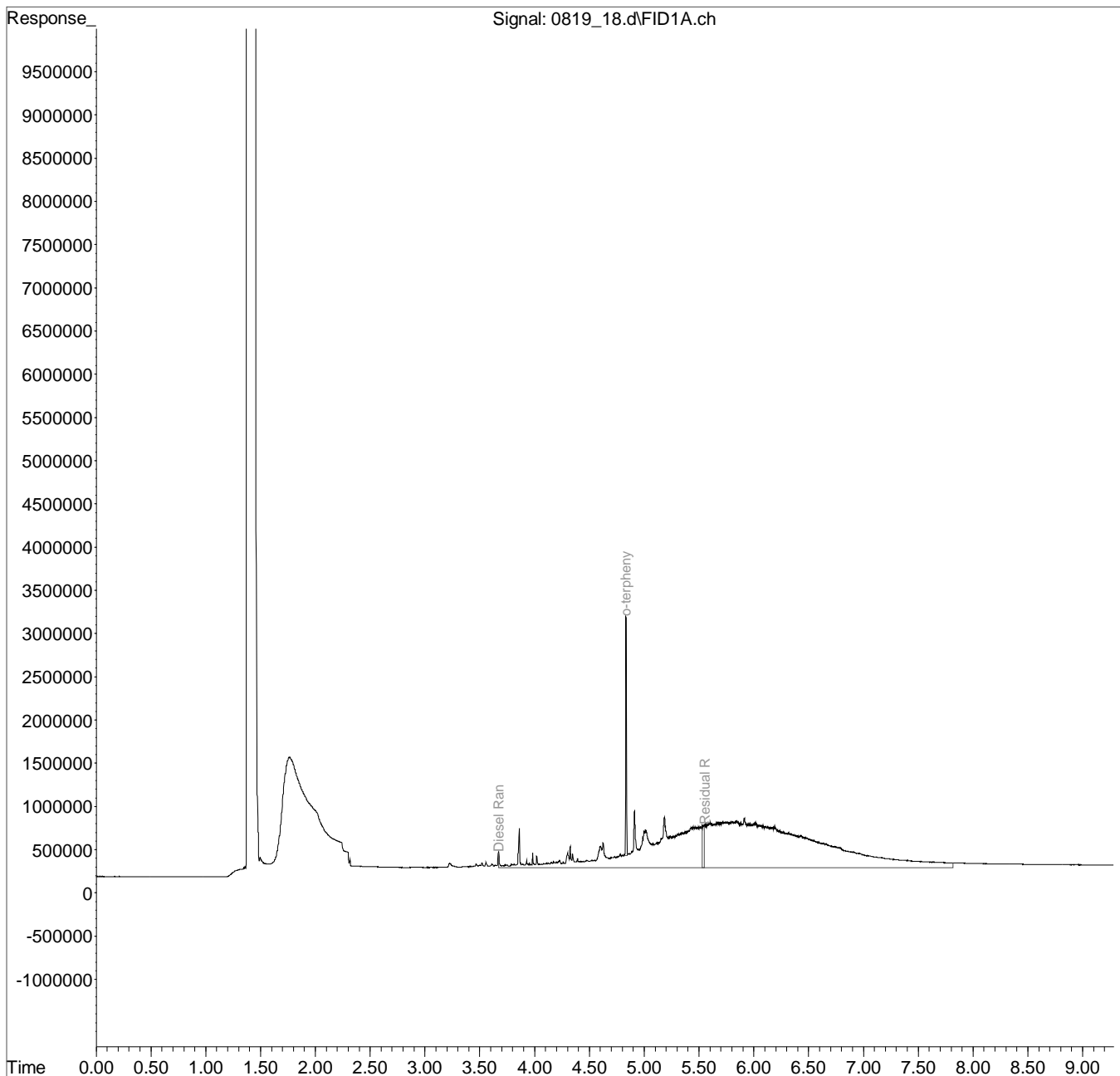
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081918\
Data File : 0819_18.d
Signal(s) : FID1A.ch
Acq On : 19 Aug 2018 4:21 pm
Operator : 773
Sample : L1018764-03 1x WG1154198
Misc : water M.I.s on ranges are corrections
ALS Vial : 13 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 20 15:17:46 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

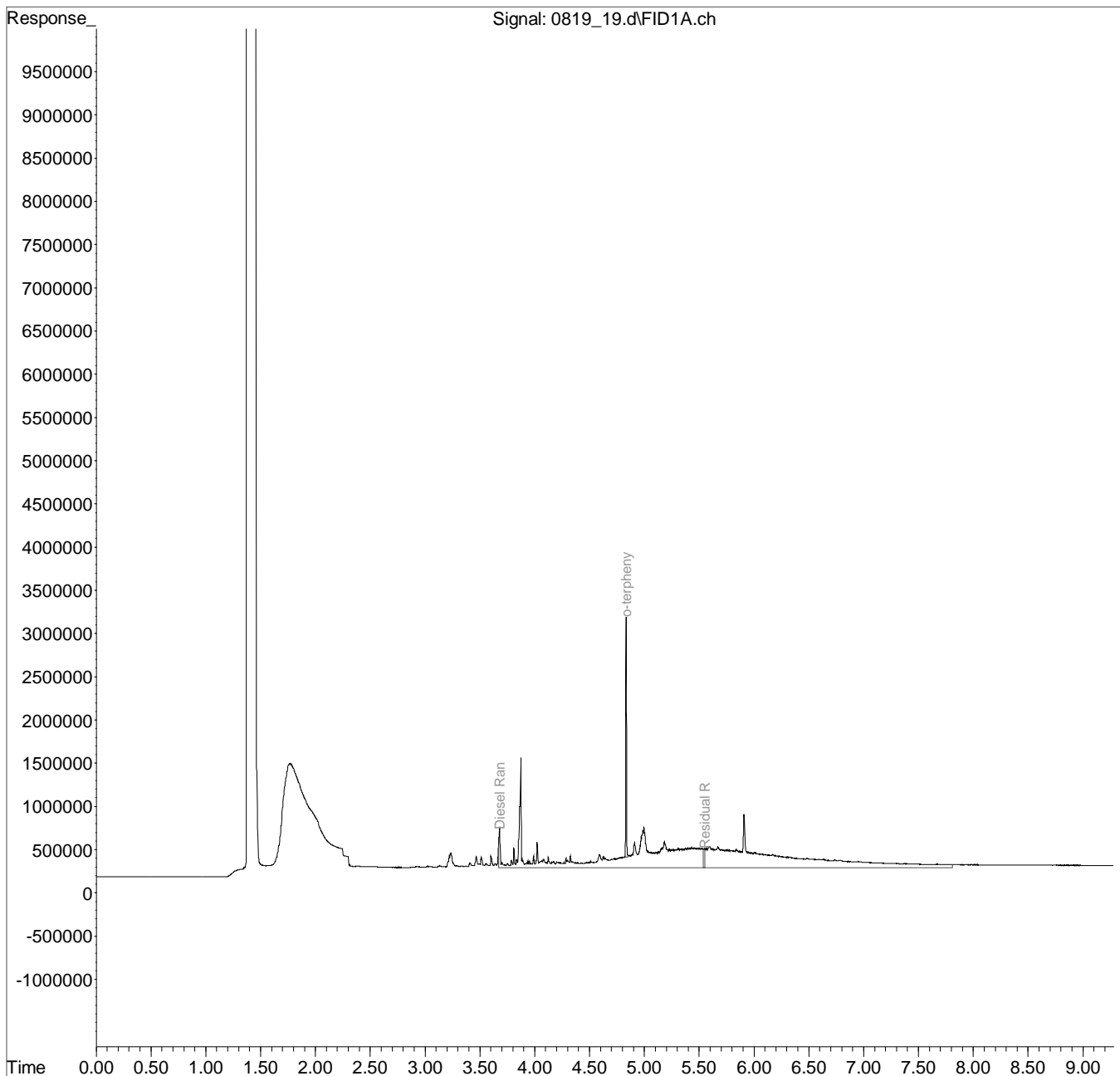
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081918\
 Data File : 0819_19.d
 Signal(s) : FID1A.ch
 Acq On : 19 Aug 2018 4:39 pm
 Operator : 773
 Sample : L1018764-04 1x WG1154198
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 14 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 20 15:18:15 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
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 Response via : Initial Calibration
 Integrator: ChemStation

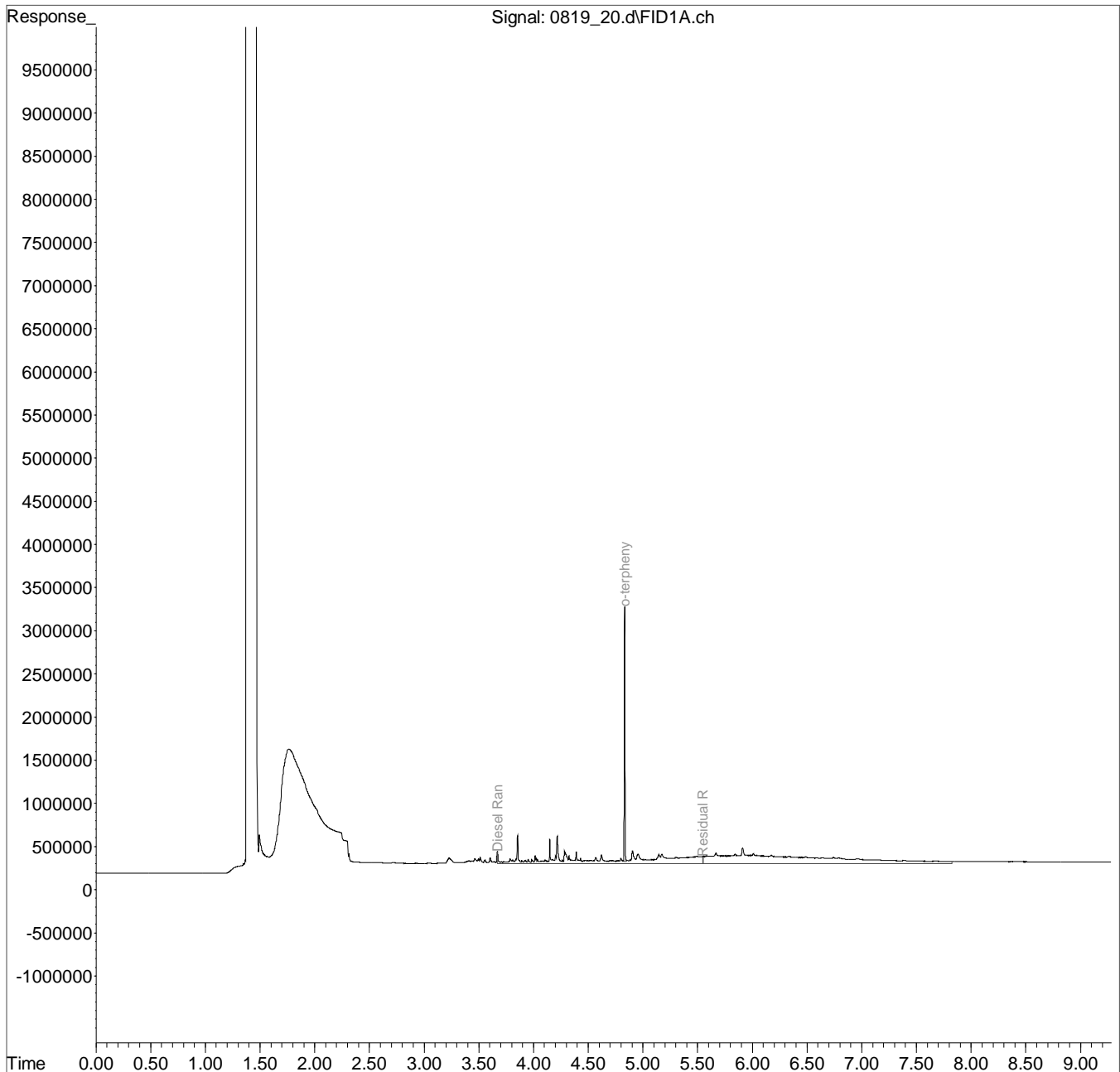
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081918\
 Data File : 0819 20.d
 Signal(s) : FID1A.ch
 Acq On : 20 Aug 2018 7:48 am
 Operator : 773
 Sample : L1018764-05 1x WG1154198
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 15 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 20 15:18:44 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

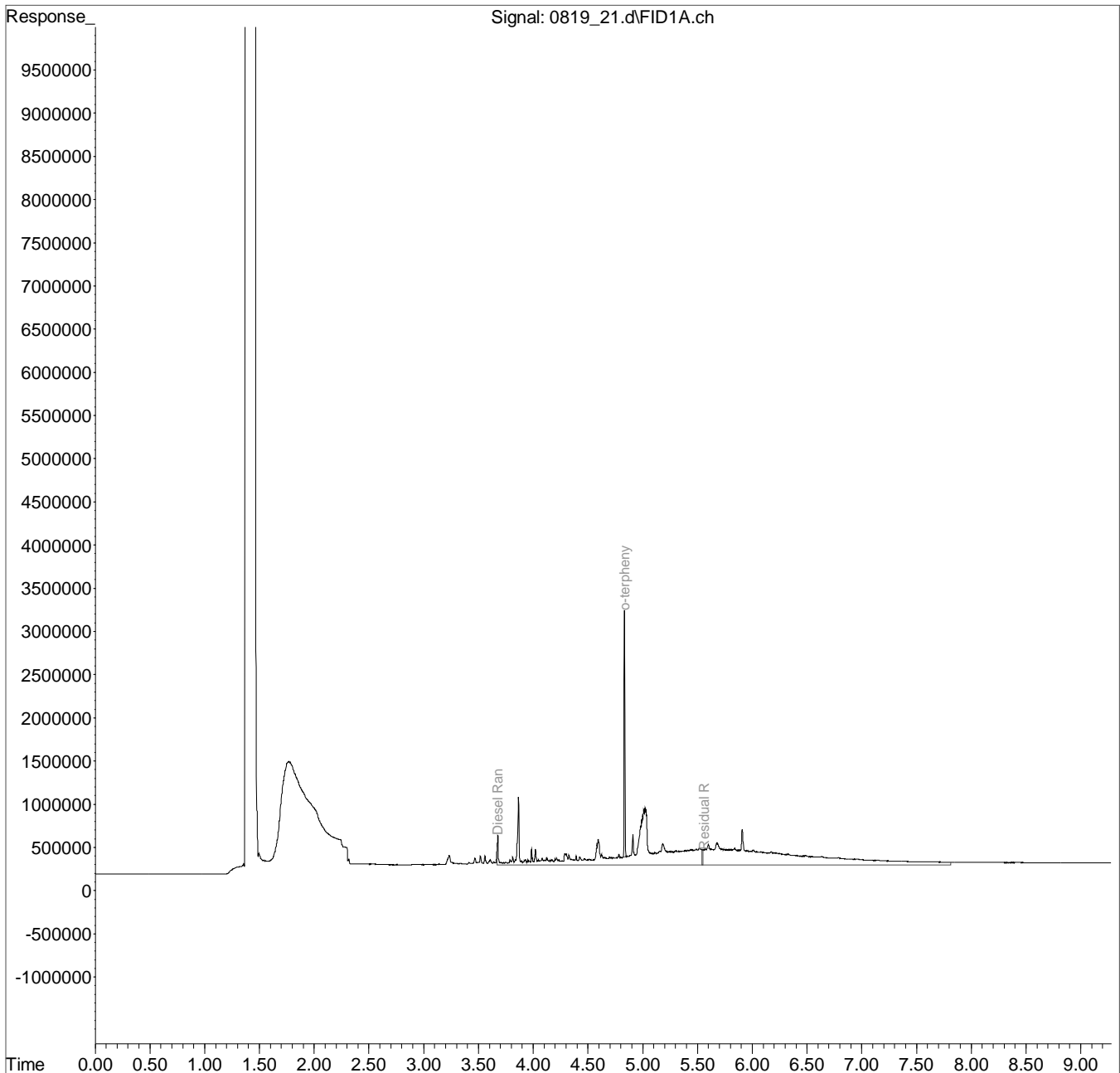
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\081918\
 Data File : 0819 21.d
 Signal(s) : FID1A.ch
 Acq On : 20 Aug 2018 8:06 am
 Operator : 773
 Sample : L1018764-07 1x WG1154198
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 16 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 20 15:19:12 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

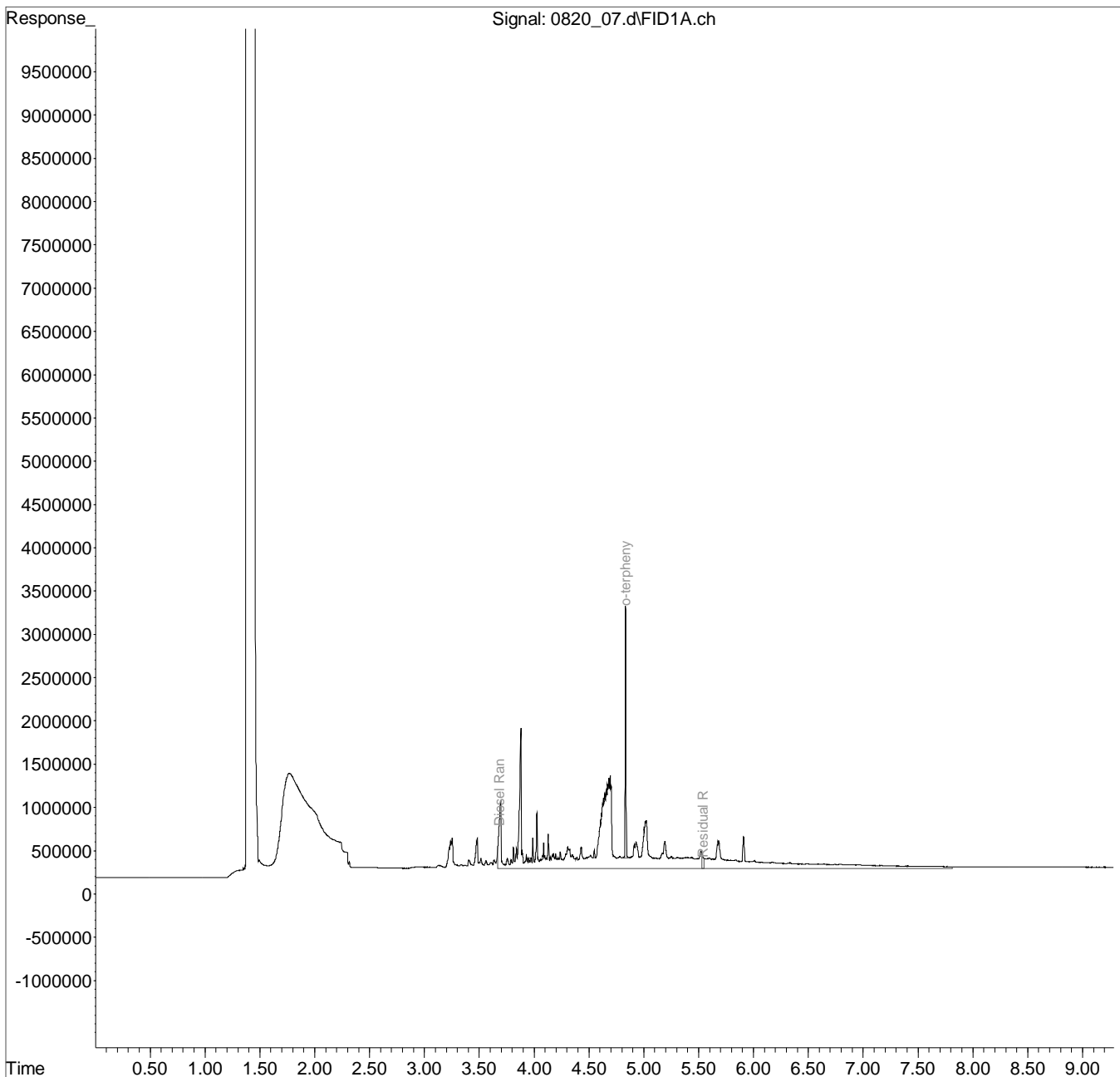
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082018\
 Data File : 0820 07.d
 Signal(s) : FID1A.ch
 Acq On : 20 Aug 2018 12:01 pm
 Operator : 773
 Sample : L1018764-08 1x WG1154198
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 5 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 20 16:21:43 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

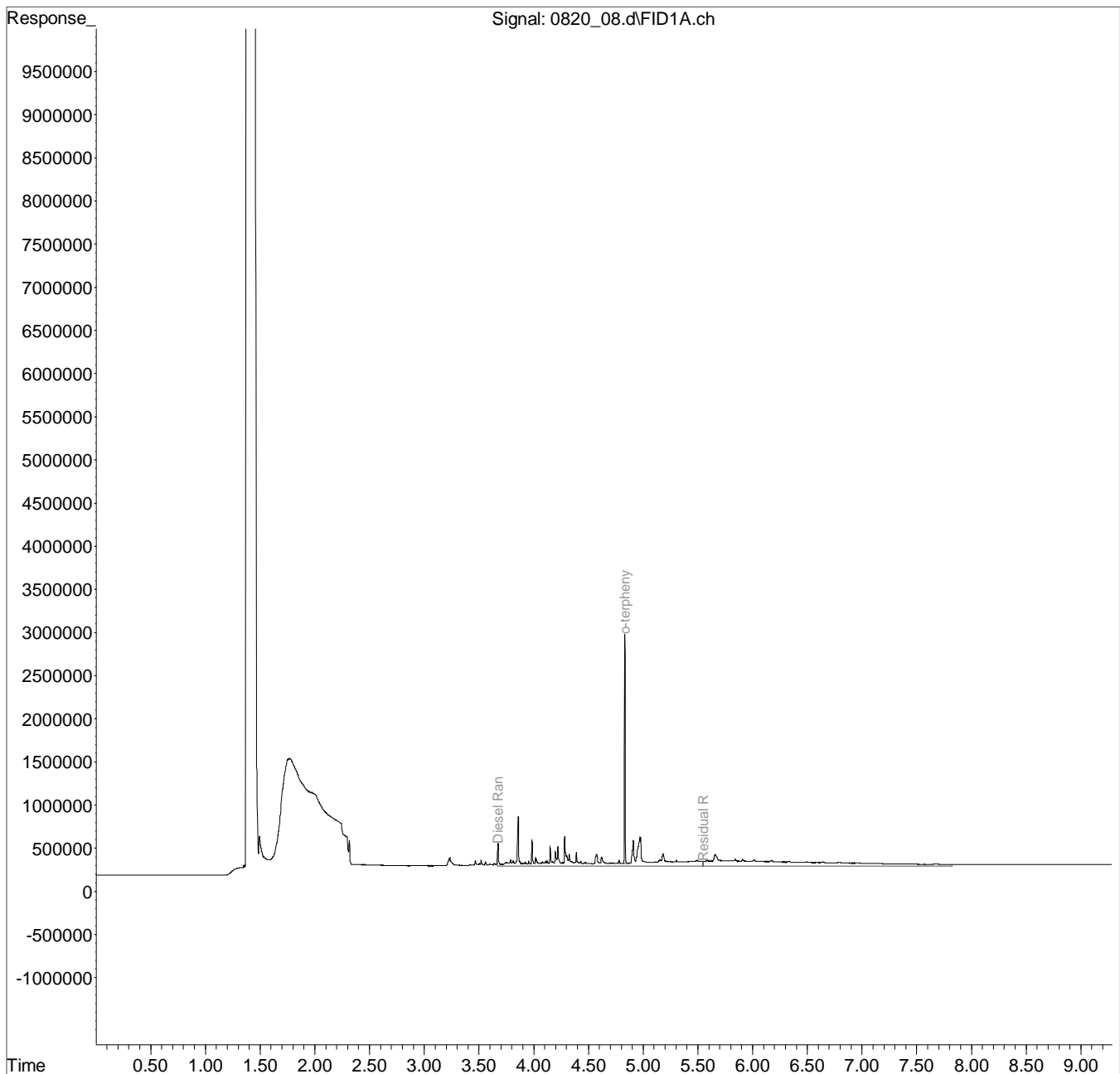
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082018\
Data File : 0820 08.d
Signal(s) : FID1A.ch
Acq On : 20 Aug 2018 12:19 pm
Operator : 773
Sample : L1018764-09 1x WG1154198
Misc : water M.I.s on ranges are corrections
ALS Vial : 6 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 20 16:22:28 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

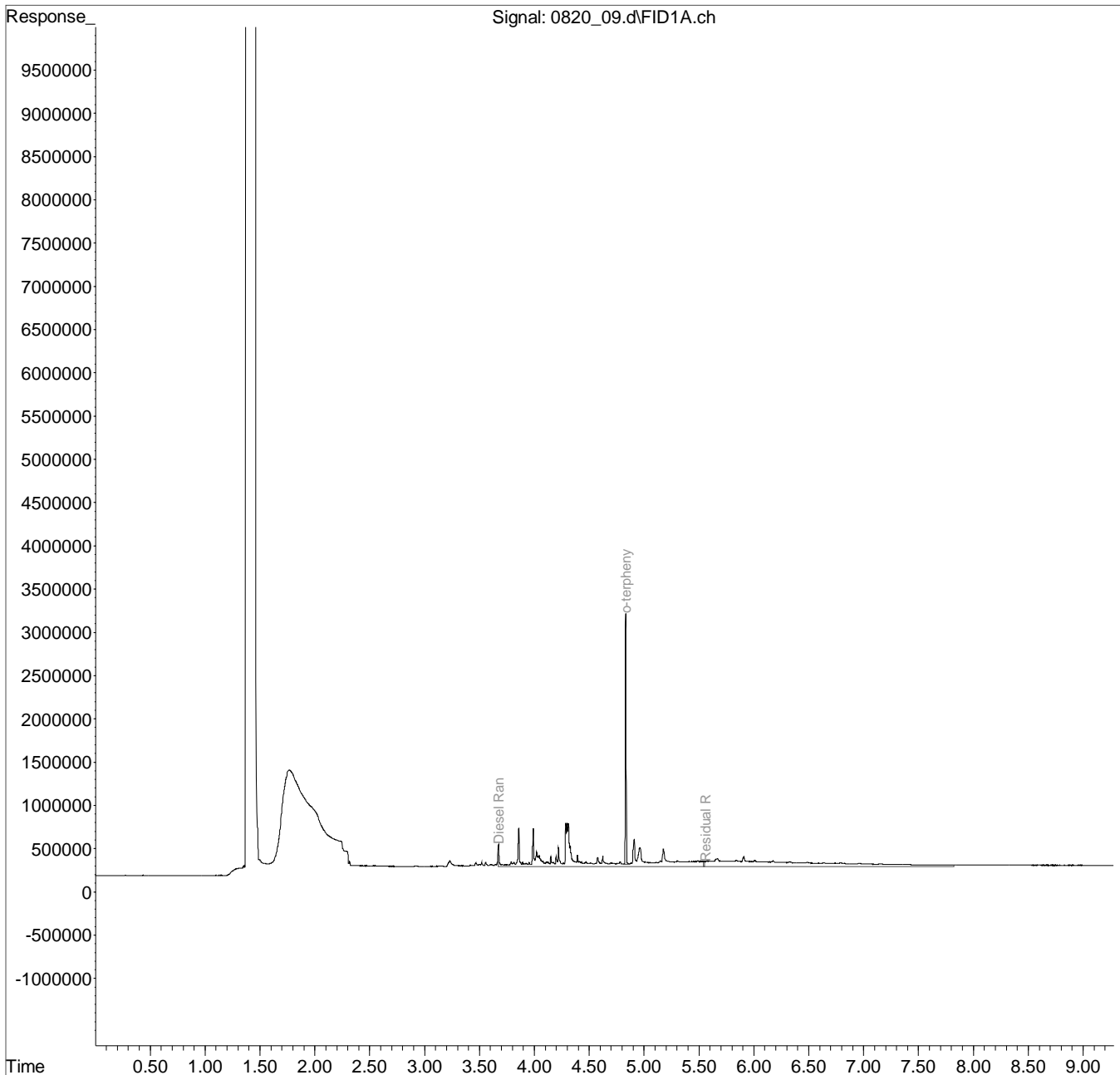
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082018\
 Data File : 0820 09.d
 Signal(s) : FID1A.ch
 Acq On : 20 Aug 2018 12:36 pm
 Operator : 773
 Sample : L1018764-10 1x WG1154198
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 7 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 20 16:23:34 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

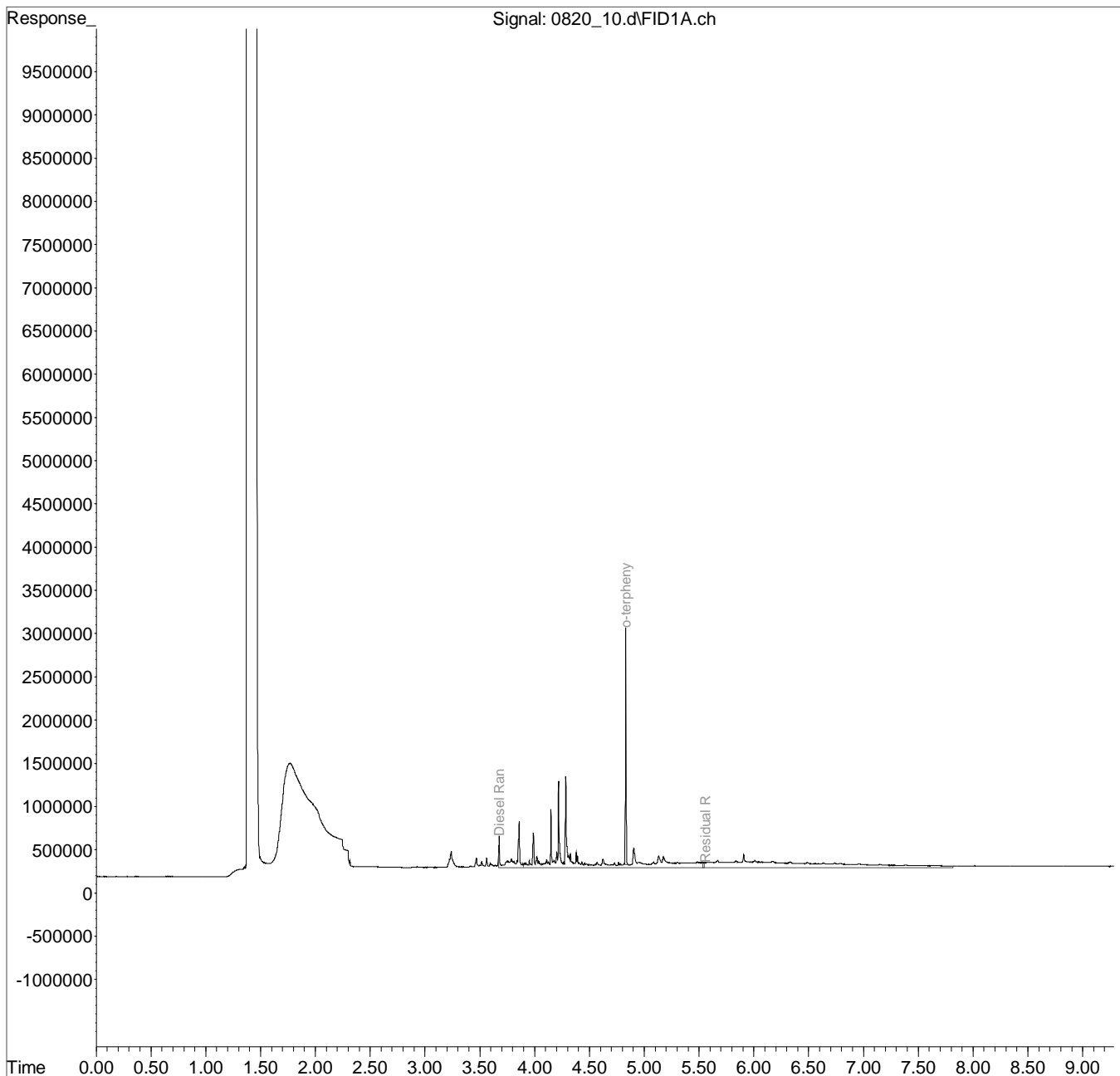
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082018\
Data File : 0820 10.d
Signal(s) : FID1A.ch
Acq On : 20 Aug 2018 12:54 pm
Operator : 773
Sample : L1018764-11 1x WG1154198
Misc : water M.I.s on ranges are corrections
ALS Vial : 8 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 20 16:24:27 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

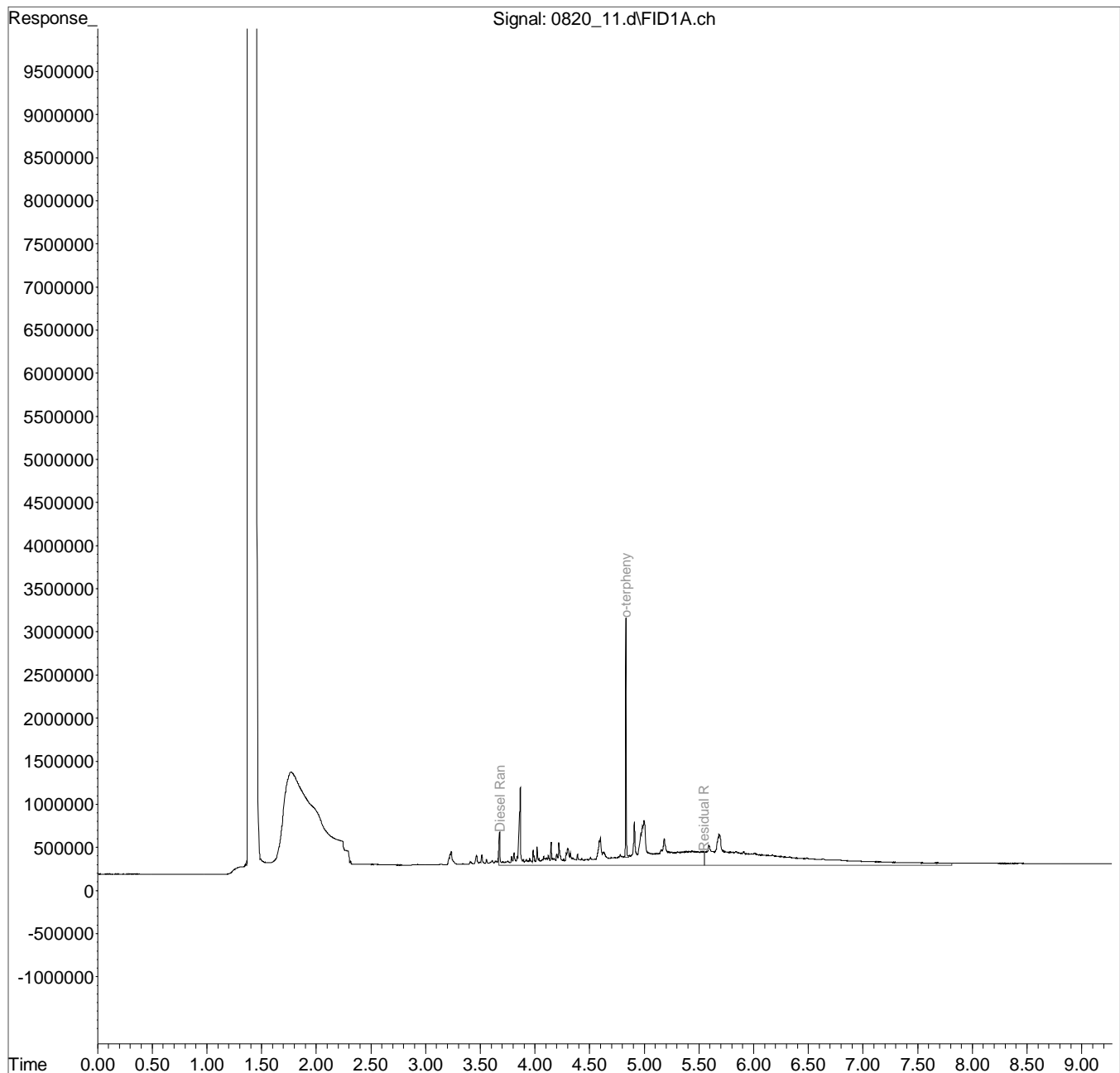
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082018\
Data File : 0820 11.d
Signal(s) : FID1A.ch
Acq On : 20 Aug 2018 1:12 pm
Operator : 773
Sample : L1018764-12 1x WG1154198
Misc : water M.I.s on ranges are corrections
ALS Vial : 9 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 20 16:25:12 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

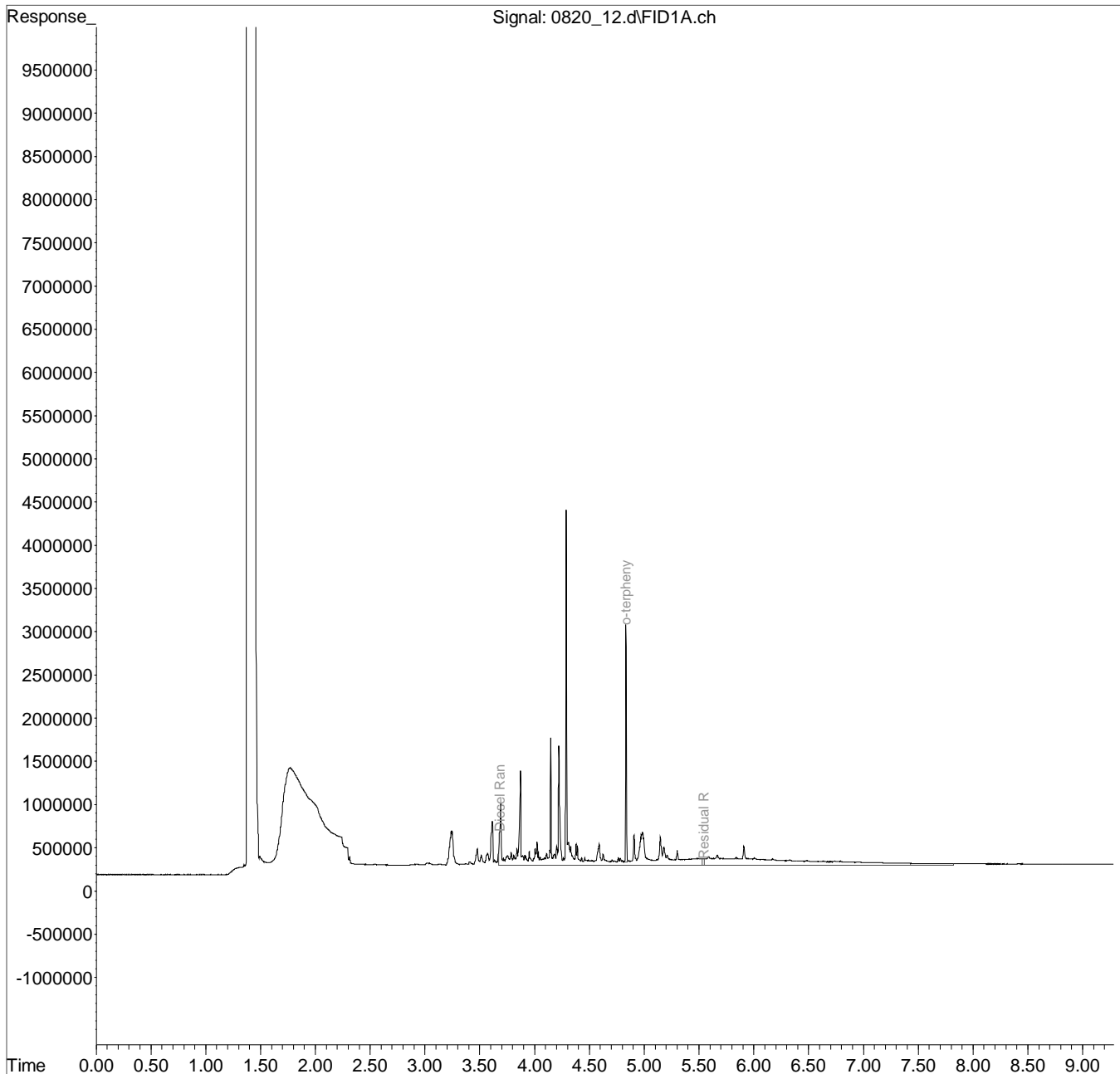
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082018\
 Data File : 0820 12.d
 Signal(s) : FID1A.ch
 Acq On : 20 Aug 2018 1:29 pm
 Operator : 773
 Sample : L1018764-13 1x WG1154198
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 10 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 20 16:25:56 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



August 30, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1019065
Samples Received: 08/18/2018
Project Number: 1896120 04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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1 Cp
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5 Sr
6 Qc
7 Gl
8 Al
9 Sc

SAMPLE SUMMARY



B-18-23(3.0-3.5) L1019065-01 Solid

Collected by
K. Teague
Collected date/time
08/17/18 07:15
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1156889	1	08/24/18 14:18	08/24/18 14:35	KS
Mercury by Method 7471B	WG1156394	1	08/23/18 12:53	08/26/18 13:45	EL
Metals (ICP) by Method 6010C	WG1156386	1	08/23/18 17:29	08/25/18 08:41	TRB
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1155618	25	08/17/18 07:15	08/22/18 12:58	JAH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155415	1	08/17/18 07:15	08/21/18 20:42	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155724	1	08/17/18 07:15	08/22/18 13:27	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156678	1	08/24/18 20:52	08/26/18 13:55	ADF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157238	1	08/25/18 10:38	08/26/18 19:27	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156692	1	08/24/18 17:15	08/25/18 10:58	KM

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

B-18-23(9.5-10.0) L1019065-02 Solid

Collected by
K. Teague
Collected date/time
08/17/18 07:45
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1156889	1	08/24/18 14:18	08/24/18 14:35	KS
Mercury by Method 7471B	WG1156394	1	08/23/18 12:53	08/26/18 13:47	EL
Metals (ICP) by Method 6010C	WG1156386	1	08/23/18 17:29	08/25/18 08:44	TRB
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1155618	25	08/17/18 07:45	08/22/18 13:19	JAH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155415	1	08/17/18 07:45	08/21/18 21:01	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155724	1	08/17/18 07:45	08/22/18 13:47	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156678	1	08/24/18 20:52	08/26/18 10:31	ADF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157238	1	08/25/18 10:38	08/26/18 19:00	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156692	1	08/24/18 17:15	08/25/18 11:19	KM

B-18-19(2.0-2.5) L1019065-03 Solid

Collected by
K. Teague
Collected date/time
08/17/18 08:30
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1156889	1	08/24/18 14:18	08/24/18 14:35	KS
Mercury by Method 7471B	WG1156394	1	08/23/18 12:53	08/26/18 13:50	EL
Metals (ICP) by Method 6010C	WG1156386	1	08/23/18 17:29	08/25/18 08:51	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155415	1	08/17/18 08:30	08/21/18 21:20	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155724	1	08/17/18 08:30	08/22/18 14:07	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156678	1	08/24/18 20:52	08/26/18 12:34	ADF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156692	1	08/24/18 17:15	08/25/18 11:39	KM

B-18-20(2.0-2.5) L1019065-04 Solid

Collected by
K. Teague
Collected date/time
08/17/18 08:20
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1156890	1	08/24/18 14:00	08/24/18 14:15	KS
Mercury by Method 7471B	WG1156394	1	08/23/18 12:53	08/26/18 13:53	EL
Metals (ICP) by Method 6010C	WG1156386	1	08/23/18 17:29	08/25/18 08:54	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155415	1.07	08/17/18 08:20	08/21/18 21:39	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155724	1.07	08/17/18 08:20	08/22/18 14:26	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156678	1	08/24/18 20:52	08/26/18 13:28	ADF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156692	1	08/24/18 17:15	08/25/18 12:00	KM

SAMPLE SUMMARY

B-18-21(3.0-3.5) L1019065-05 Solid

Collected by
K. Teague
Collected date/time
08/17/18 09:05
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1156889	1	08/24/18 14:18	08/24/18 14:35	KS
Mercury by Method 7471B	WG1156394	1	08/23/18 12:53	08/26/18 13:55	EL
Metals (ICP) by Method 6010C	WG1156386	1	08/23/18 17:29	08/25/18 08:56	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155415	1.14	08/17/18 09:05	08/21/18 21:58	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155724	1.14	08/17/18 09:05	08/22/18 14:46	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156678	5	08/24/18 20:52	08/27/18 15:06	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156692	1	08/24/18 17:15	08/25/18 18:13	KM

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

B-18-11(2.0-2.5) L1019065-06 Solid

Collected by
K. Teague
Collected date/time
08/17/18 09:25
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1156889	1	08/24/18 14:18	08/24/18 14:35	KS
Mercury by Method 7471B	WG1156394	1	08/23/18 12:53	08/26/18 14:03	EL
Metals (ICP) by Method 6010C	WG1156386	1	08/23/18 17:29	08/25/18 08:59	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155415	1.24	08/17/18 09:25	08/21/18 22:17	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155724	1.24	08/17/18 09:25	08/22/18 15:06	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156678	5	08/24/18 20:52	08/27/18 15:20	MG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157238	1	08/25/18 10:38	08/26/18 19:14	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156692	1	08/24/18 17:15	08/25/18 12:21	KM

6
Qc

7
Gl

8
Al

9
Sc

B-18-22(9.5-10.0) L1019065-07 Solid

Collected by
K. Teague
Collected date/time
08/16/18 15:05
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1156889	1	08/24/18 14:18	08/24/18 14:35	KS
Mercury by Method 7471B	WG1156394	1	08/23/18 12:53	08/26/18 14:05	EL
Metals (ICP) by Method 6010C	WG1156386	1	08/23/18 17:29	08/25/18 09:01	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155415	1.01	08/16/18 15:05	08/21/18 22:36	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155724	1.01	08/16/18 15:05	08/22/18 15:25	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156678	1	08/24/18 20:52	08/26/18 11:12	ADF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156692	1	08/24/18 17:15	08/25/18 12:41	KM

B-18-11(9.5-10.0) L1019065-08 Solid

Collected by
K. Teague
Collected date/time
08/17/18 10:05
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1156889	1	08/24/18 14:18	08/24/18 14:35	KS
Mercury by Method 7471B	WG1156394	1	08/23/18 12:53	08/26/18 14:08	EL
Metals (ICP) by Method 6010C	WG1156386	1	08/23/18 17:29	08/25/18 09:04	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155415	1.01	08/17/18 10:05	08/21/18 22:54	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155724	1.01	08/17/18 10:05	08/22/18 15:45	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1159138	1	08/29/18 20:08	08/30/18 07:23	MG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1159484	1	08/29/18 20:08	08/30/18 10:37	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157730	1	08/27/18 08:20	08/27/18 15:11	DMG

SAMPLE SUMMARY



B-18-10(9.5-10.0) L1019065-09 Solid

Collected by
K. Teague
Collected date/time
08/17/18 10:45
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1156889	1	08/24/18 14:18	08/24/18 14:35	KS
Mercury by Method 7471B	WG1156394	1	08/23/18 12:53	08/26/18 14:11	EL
Metals (ICP) by Method 6010C	WG1156386	1	08/23/18 17:29	08/25/18 09:06	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155415	1	08/17/18 10:45	08/21/18 23:13	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155724	1	08/17/18 10:45	08/22/18 16:04	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156678	1	08/24/18 20:52	08/26/18 11:39	ADF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156692	1	08/24/18 17:15	08/25/18 13:23	KM

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

B-18-10(2.0-2.5) L1019065-10 Solid

Collected by
K. Teague
Collected date/time
08/17/18 10:10
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1156889	1	08/24/18 14:18	08/24/18 14:35	KS
Mercury by Method 7471B	WG1156394	1	08/23/18 12:53	08/26/18 14:13	EL
Metals (ICP) by Method 6010C	WG1156386	1	08/23/18 17:29	08/25/18 09:09	TRB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155415	1	08/17/18 10:10	08/21/18 23:32	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155724	1	08/17/18 10:10	08/22/18 16:24	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1156678	1	08/24/18 20:52	08/26/18 12:47	ADF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156692	1	08/24/18 17:15	08/25/18 13:44	KM

6
Qc

7
Gl

8
Al

9
Sc

B-18-22 L1019065-11 GW

Collected by
K. Teague
Collected date/time
08/16/18 16:00
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:55	EL
Metals (ICPMS) by Method 6020A	WG1153047	1	08/21/18 01:04	08/21/18 14:17	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154658	1	08/20/18 03:42	08/20/18 03:42	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155342	1	08/21/18 22:38	08/21/18 22:38	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155335	1	08/22/18 20:12	08/23/18 01:35	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155351	1	08/22/18 07:08	08/22/18 20:10	JNJ

B-18-23 L1019065-12 GW

Collected by
K. Teague
Collected date/time
08/17/18 08:00
Received date/time
08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1154478	1	08/19/18 22:04	08/20/18 15:00	EL
Metals (ICPMS) by Method 6020A	WG1153047	1	08/21/18 01:04	08/21/18 14:21	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1154426	1	08/19/18 07:14	08/19/18 07:14	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1154658	1	08/20/18 04:03	08/20/18 04:03	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1155342	1	08/21/18 22:58	08/21/18 22:58	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1155335	1	08/22/18 20:12	08/23/18 01:53	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1154242	1	08/19/18 16:46	08/20/18 18:32	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1155351	1	08/22/18 07:08	08/22/18 20:32	JNJ



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.

Mark W. Beasley
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.9		1	08/24/2018 14:35	WG1156889

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0225	1	08/26/2018 13:45	WG1156394

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.25	1	08/25/2018 08:41	WG1156386
Barium	84.1		0.562	1	08/25/2018 08:41	WG1156386
Cadmium	ND		0.562	1	08/25/2018 08:41	WG1156386
Chromium	10.4		1.12	1	08/25/2018 08:41	WG1156386
Lead	5.74		0.562	1	08/25/2018 08:41	WG1156386
Selenium	ND		2.25	1	08/25/2018 08:41	WG1156386
Silver	ND		1.12	1	08/25/2018 08:41	WG1156386

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		2.81	25	08/22/2018 12:58	WG1155618
(S) a,a,a-Trifluorotoluene(FID)	115		77.0-120		08/22/2018 12:58	WG1155618

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0281	1	08/21/2018 20:42	WG1155415
Acrylonitrile	ND		0.0141	1	08/21/2018 20:42	WG1155415
Benzene	ND		0.00112	1	08/21/2018 20:42	WG1155415
Bromobenzene	ND	J3 J4	0.0141	1	08/21/2018 20:42	WG1155415
Bromodichloromethane	ND		0.00281	1	08/21/2018 20:42	WG1155415
Bromoform	ND		0.0281	1	08/21/2018 20:42	WG1155415
Bromomethane	ND		0.0141	1	08/22/2018 13:27	WG1155724
n-Butylbenzene	ND		0.0141	1	08/21/2018 20:42	WG1155415
sec-Butylbenzene	ND		0.0141	1	08/21/2018 20:42	WG1155415
tert-Butylbenzene	ND		0.00562	1	08/21/2018 20:42	WG1155415
Carbon tetrachloride	ND		0.00562	1	08/21/2018 20:42	WG1155415
Chlorobenzene	ND		0.00281	1	08/21/2018 20:42	WG1155415
Chlorodibromomethane	ND		0.00281	1	08/21/2018 20:42	WG1155415
Chloroethane	ND	J3	0.00562	1	08/21/2018 20:42	WG1155415
Chloroform	ND		0.00281	1	08/21/2018 20:42	WG1155415
Chloromethane	ND		0.0141	1	08/21/2018 20:42	WG1155415
2-Chlorotoluene	ND		0.00281	1	08/21/2018 20:42	WG1155415
4-Chlorotoluene	ND		0.00562	1	08/21/2018 20:42	WG1155415
1,2-Dibromo-3-Chloropropane	ND		0.0281	1	08/21/2018 20:42	WG1155415
1,2-Dibromoethane	ND		0.00281	1	08/21/2018 20:42	WG1155415
Dibromomethane	ND		0.00562	1	08/21/2018 20:42	WG1155415
1,2-Dichlorobenzene	ND		0.00562	1	08/21/2018 20:42	WG1155415
1,3-Dichlorobenzene	ND		0.00562	1	08/21/2018 20:42	WG1155415
1,4-Dichlorobenzene	ND		0.00562	1	08/21/2018 20:42	WG1155415
Dichlorodifluoromethane	ND		0.00281	1	08/21/2018 20:42	WG1155415
1,1-Dichloroethane	ND		0.00281	1	08/21/2018 20:42	WG1155415
1,2-Dichloroethane	ND		0.00281	1	08/21/2018 20:42	WG1155415

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 08/17/18 07:15

L1019065

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND	J3	0.00281	1	08/21/2018 20:42	WG1155415
cis-1,2-Dichloroethene	ND		0.00281	1	08/21/2018 20:42	WG1155415
trans-1,2-Dichloroethene	ND		0.00562	1	08/21/2018 20:42	WG1155415
1,2-Dichloropropane	ND		0.00562	1	08/22/2018 13:27	WG1155724
1,1-Dichloropropene	ND		0.00281	1	08/21/2018 20:42	WG1155415
1,3-Dichloropropane	ND		0.00562	1	08/21/2018 20:42	WG1155415
cis-1,3-Dichloropropene	ND		0.00281	1	08/21/2018 20:42	WG1155415
trans-1,3-Dichloropropene	ND		0.00562	1	08/21/2018 20:42	WG1155415
2,2-Dichloropropane	ND		0.00281	1	08/21/2018 20:42	WG1155415
Di-isopropyl ether	ND		0.00112	1	08/21/2018 20:42	WG1155415
Ethylbenzene	ND		0.00281	1	08/21/2018 20:42	WG1155415
Hexachloro-1,3-butadiene	ND		0.0281	1	08/21/2018 20:42	WG1155415
Isopropylbenzene	ND	J3	0.00281	1	08/21/2018 20:42	WG1155415
p-Isopropyltoluene	ND		0.00562	1	08/21/2018 20:42	WG1155415
2-Butanone (MEK)	0.0566	J0	0.0281	1	08/21/2018 20:42	WG1155415
Methylene Chloride	ND		0.0281	1	08/21/2018 20:42	WG1155415
4-Methyl-2-pentanone (MIBK)	ND		0.0281	1	08/21/2018 20:42	WG1155415
Methyl tert-butyl ether	ND		0.00112	1	08/21/2018 20:42	WG1155415
Naphthalene	ND		0.0141	1	08/21/2018 20:42	WG1155415
n-Propylbenzene	ND	J3	0.00562	1	08/21/2018 20:42	WG1155415
Styrene	ND	J3	0.0141	1	08/21/2018 20:42	WG1155415
1,1,1,2-Tetrachloroethane	ND		0.00281	1	08/21/2018 20:42	WG1155415
1,1,2,2-Tetrachloroethane	ND	J3	0.00281	1	08/21/2018 20:42	WG1155415
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00281	1	08/21/2018 20:42	WG1155415
Tetrachloroethene	ND		0.00281	1	08/21/2018 20:42	WG1155415
Toluene	ND		0.00562	1	08/21/2018 20:42	WG1155415
1,2,3-Trichlorobenzene	ND		0.00281	1	08/21/2018 20:42	WG1155415
1,2,4-Trichlorobenzene	ND		0.0141	1	08/21/2018 20:42	WG1155415
1,1,1-Trichloroethane	ND		0.00281	1	08/21/2018 20:42	WG1155415
1,1,2-Trichloroethane	ND		0.00281	1	08/21/2018 20:42	WG1155415
Trichloroethene	ND		0.00112	1	08/22/2018 13:27	WG1155724
Trichlorofluoromethane	ND		0.00281	1	08/21/2018 20:42	WG1155415
1,2,3-Trichloropropane	ND		0.0141	1	08/22/2018 13:27	WG1155724
1,2,4-Trimethylbenzene	ND		0.00562	1	08/21/2018 20:42	WG1155415
1,2,3-Trimethylbenzene	ND		0.00562	1	08/21/2018 20:42	WG1155415
Vinyl chloride	ND	J3	0.00281	1	08/21/2018 20:42	WG1155415
1,3,5-Trimethylbenzene	ND		0.00562	1	08/21/2018 20:42	WG1155415
o-Xylene	ND		0.00281	1	08/21/2018 20:42	WG1155415
m&p-Xylene	ND		0.00450	1	08/22/2018 13:27	WG1155724
(S) Toluene-d8	104		80.0-120		08/21/2018 20:42	WG1155415
(S) Toluene-d8	119		80.0-120		08/22/2018 13:27	WG1155724
(S) Dibromofluoromethane	98.1		74.0-131		08/21/2018 20:42	WG1155415
(S) Dibromofluoromethane	85.5		74.0-131		08/22/2018 13:27	WG1155724
(S) 4-Bromofluorobenzene	90.2		64.0-132		08/21/2018 20:42	WG1155415
(S) 4-Bromofluorobenzene	108		64.0-132		08/22/2018 13:27	WG1155724

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.50	1	08/26/2018 13:55	WG1156678
Residual Range Organics (RRO)	13.3		11.2	1	08/26/2018 13:55	WG1156678
(S) o-Terphenyl	63.9		18.0-148		08/26/2018 13:55	WG1156678



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.50	1	08/26/2018 19:27	WG1157238
Residual Range Organics (RRO)	11.5		11.2	1	08/26/2018 19:27	WG1157238
<i>(S) o-Terphenyl</i>	98.7		18.0-148		08/26/2018 19:27	WG1157238

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Acenaphthene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Acenaphthylene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Benzo(a)anthracene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Benzo(a)pyrene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Benzo(b)fluoranthene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Benzo(g,h,i)perylene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Benzo(k)fluoranthene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Chrysene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Dibenz(a,h)anthracene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Fluoranthene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Fluorene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Indeno(1,2,3-cd)pyrene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Naphthalene	ND		0.0225	1	08/25/2018 10:58	WG1156692
Phenanthrene	ND		0.00675	1	08/25/2018 10:58	WG1156692
Pyrene	ND		0.00675	1	08/25/2018 10:58	WG1156692
1-Methylnaphthalene	ND		0.0225	1	08/25/2018 10:58	WG1156692
2-Methylnaphthalene	ND		0.0225	1	08/25/2018 10:58	WG1156692
2-Chloronaphthalene	ND		0.0225	1	08/25/2018 10:58	WG1156692
<i>(S) Nitrobenzene-d5</i>	68.0		14.0-149		08/25/2018 10:58	WG1156692
<i>(S) 2-Fluorobiphenyl</i>	71.8		34.0-125		08/25/2018 10:58	WG1156692
<i>(S) p-Terphenyl-d14</i>	72.8		23.0-120		08/25/2018 10:58	WG1156692

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
Total Solids	78.9		1	08/24/2018 14:35	WG1156889

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0253	1	08/26/2018 13:47	WG1156394

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.53	1	08/25/2018 08:44	WG1156386
Barium	70.6		0.633	1	08/25/2018 08:44	WG1156386
Cadmium	ND		0.633	1	08/25/2018 08:44	WG1156386
Chromium	10.8		1.27	1	08/25/2018 08:44	WG1156386
Lead	2.47		0.633	1	08/25/2018 08:44	WG1156386
Selenium	ND		2.53	1	08/25/2018 08:44	WG1156386
Silver	ND		1.27	1	08/25/2018 08:44	WG1156386

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		3.17	25	08/22/2018 13:19	WG1155618
(S) a,a,a-Trifluorotoluene(FID)	116		77.0-120		08/22/2018 13:19	WG1155618

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0317	1	08/21/2018 21:01	WG1155415
Acrylonitrile	ND		0.0158	1	08/21/2018 21:01	WG1155415
Benzene	ND		0.00127	1	08/21/2018 21:01	WG1155415
Bromobenzene	ND	J3 J4	0.0158	1	08/21/2018 21:01	WG1155415
Bromodichloromethane	ND		0.00317	1	08/21/2018 21:01	WG1155415
Bromoform	ND		0.0317	1	08/21/2018 21:01	WG1155415
Bromomethane	ND		0.0158	1	08/22/2018 13:47	WG1155724
n-Butylbenzene	ND		0.0158	1	08/21/2018 21:01	WG1155415
sec-Butylbenzene	ND		0.0158	1	08/21/2018 21:01	WG1155415
tert-Butylbenzene	ND		0.00633	1	08/21/2018 21:01	WG1155415
Carbon tetrachloride	ND		0.00633	1	08/21/2018 21:01	WG1155415
Chlorobenzene	ND		0.00317	1	08/21/2018 21:01	WG1155415
Chlorodibromomethane	ND		0.00317	1	08/21/2018 21:01	WG1155415
Chloroethane	ND	J3	0.00633	1	08/21/2018 21:01	WG1155415
Chloroform	ND		0.00317	1	08/21/2018 21:01	WG1155415
Chloromethane	ND		0.0158	1	08/21/2018 21:01	WG1155415
2-Chlorotoluene	ND		0.00317	1	08/21/2018 21:01	WG1155415
4-Chlorotoluene	ND		0.00633	1	08/21/2018 21:01	WG1155415
1,2-Dibromo-3-Chloropropane	ND		0.0317	1	08/21/2018 21:01	WG1155415
1,2-Dibromoethane	ND		0.00317	1	08/21/2018 21:01	WG1155415
Dibromomethane	ND		0.00633	1	08/21/2018 21:01	WG1155415
1,2-Dichlorobenzene	ND		0.00633	1	08/21/2018 21:01	WG1155415
1,3-Dichlorobenzene	ND		0.00633	1	08/21/2018 21:01	WG1155415
1,4-Dichlorobenzene	ND		0.00633	1	08/21/2018 21:01	WG1155415
Dichlorodifluoromethane	ND		0.00317	1	08/21/2018 21:01	WG1155415
1,1-Dichloroethane	ND		0.00317	1	08/21/2018 21:01	WG1155415
1,2-Dichloroethane	ND		0.00317	1	08/21/2018 21:01	WG1155415

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/17/18 07:45

L1019065

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND	J3	0.00317	1	08/21/2018 21:01	WG1155415
cis-1,2-Dichloroethene	ND		0.00317	1	08/21/2018 21:01	WG1155415
trans-1,2-Dichloroethene	ND		0.00633	1	08/21/2018 21:01	WG1155415
1,2-Dichloropropane	ND		0.00633	1	08/22/2018 13:47	WG1155724
1,1-Dichloropropene	ND		0.00317	1	08/21/2018 21:01	WG1155415
1,3-Dichloropropane	ND		0.00633	1	08/21/2018 21:01	WG1155415
cis-1,3-Dichloropropene	ND		0.00317	1	08/21/2018 21:01	WG1155415
trans-1,3-Dichloropropene	ND		0.00633	1	08/21/2018 21:01	WG1155415
2,2-Dichloropropane	ND		0.00317	1	08/21/2018 21:01	WG1155415
Di-isopropyl ether	ND		0.00127	1	08/21/2018 21:01	WG1155415
Ethylbenzene	ND		0.00317	1	08/21/2018 21:01	WG1155415
Hexachloro-1,3-butadiene	ND		0.0317	1	08/21/2018 21:01	WG1155415
Isopropylbenzene	ND	J3	0.00317	1	08/21/2018 21:01	WG1155415
p-Isopropyltoluene	ND		0.00633	1	08/21/2018 21:01	WG1155415
2-Butanone (MEK)	0.0509	J0	0.0317	1	08/21/2018 21:01	WG1155415
Methylene Chloride	ND		0.0317	1	08/21/2018 21:01	WG1155415
4-Methyl-2-pentanone (MIBK)	ND		0.0317	1	08/21/2018 21:01	WG1155415
Methyl tert-butyl ether	ND		0.00127	1	08/21/2018 21:01	WG1155415
Naphthalene	ND		0.0158	1	08/21/2018 21:01	WG1155415
n-Propylbenzene	ND	J3	0.00633	1	08/21/2018 21:01	WG1155415
Styrene	ND	J3	0.0158	1	08/21/2018 21:01	WG1155415
1,1,1-Tetrachloroethane	ND		0.00317	1	08/21/2018 21:01	WG1155415
1,1,2,2-Tetrachloroethane	ND	J3	0.00317	1	08/21/2018 21:01	WG1155415
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00317	1	08/21/2018 21:01	WG1155415
Tetrachloroethene	ND		0.00317	1	08/21/2018 21:01	WG1155415
Toluene	ND		0.00633	1	08/21/2018 21:01	WG1155415
1,2,3-Trichlorobenzene	ND		0.00317	1	08/21/2018 21:01	WG1155415
1,2,4-Trichlorobenzene	ND		0.0158	1	08/21/2018 21:01	WG1155415
1,1,1-Trichloroethane	ND		0.00317	1	08/21/2018 21:01	WG1155415
1,1,2-Trichloroethane	ND		0.00317	1	08/21/2018 21:01	WG1155415
Trichloroethene	ND		0.00127	1	08/22/2018 13:47	WG1155724
Trichlorofluoromethane	ND		0.00317	1	08/21/2018 21:01	WG1155415
1,2,3-Trichloropropane	ND		0.0158	1	08/22/2018 13:47	WG1155724
1,2,4-Trimethylbenzene	ND		0.00633	1	08/21/2018 21:01	WG1155415
1,2,3-Trimethylbenzene	ND		0.00633	1	08/21/2018 21:01	WG1155415
Vinyl chloride	ND	J3	0.00317	1	08/21/2018 21:01	WG1155415
1,3,5-Trimethylbenzene	ND		0.00633	1	08/21/2018 21:01	WG1155415
o-Xylene	ND		0.00317	1	08/21/2018 21:01	WG1155415
m&p-Xylene	ND		0.00507	1	08/22/2018 13:47	WG1155724
(S) Toluene-d8	109		80.0-120		08/21/2018 21:01	WG1155415
(S) Toluene-d8	118		80.0-120		08/22/2018 13:47	WG1155724
(S) Dibromofluoromethane	97.9		74.0-131		08/21/2018 21:01	WG1155415
(S) Dibromofluoromethane	86.7		74.0-131		08/22/2018 13:47	WG1155724
(S) 4-Bromofluorobenzene	93.3		64.0-132		08/21/2018 21:01	WG1155415
(S) 4-Bromofluorobenzene	99.1		64.0-132		08/22/2018 13:47	WG1155724

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.07	1	08/26/2018 10:31	WG1156678
Residual Range Organics (RRO)	ND		12.7	1	08/26/2018 10:31	WG1156678
(S) o-Terphenyl	58.7		18.0-148		08/26/2018 10:31	WG1156678



Collected date/time: 08/17/18 07:45

L1019065

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.07	1	08/26/2018 19:00	WG1157238
Residual Range Organics (RRO)	ND		12.7	1	08/26/2018 19:00	WG1157238
<i>(S) o-Terphenyl</i>	88.2		18.0-148		08/26/2018 19:00	WG1157238

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Acenaphthene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Acenaphthylene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Benzo(a)anthracene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Benzo(a)pyrene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Benzo(b)fluoranthene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Benzo(g,h,i)perylene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Benzo(k)fluoranthene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Chrysene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Dibenz(a,h)anthracene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Fluoranthene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Fluorene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Indeno(1,2,3-cd)pyrene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Naphthalene	ND		0.0253	1	08/25/2018 11:19	WG1156692
Phenanthrene	ND		0.00760	1	08/25/2018 11:19	WG1156692
Pyrene	ND		0.00760	1	08/25/2018 11:19	WG1156692
1-Methylnaphthalene	ND		0.0253	1	08/25/2018 11:19	WG1156692
2-Methylnaphthalene	ND		0.0253	1	08/25/2018 11:19	WG1156692
2-Chloronaphthalene	ND		0.0253	1	08/25/2018 11:19	WG1156692
<i>(S) Nitrobenzene-d5</i>	82.4		14.0-149		08/25/2018 11:19	WG1156692
<i>(S) 2-Fluorobiphenyl</i>	88.9		34.0-125		08/25/2018 11:19	WG1156692
<i>(S) p-Terphenyl-d14</i>	77.9		23.0-120		08/25/2018 11:19	WG1156692

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	85.5		1	08/24/2018 14:35	WG1156889

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0234	1	08/26/2018 13:50	WG1156394

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.34	1	08/25/2018 08:51	WG1156386
Barium	51.1		0.585	1	08/25/2018 08:51	WG1156386
Cadmium	ND		0.585	1	08/25/2018 08:51	WG1156386
Chromium	12.4		1.17	1	08/25/2018 08:51	WG1156386
Lead	2.76		0.585	1	08/25/2018 08:51	WG1156386
Selenium	ND		2.34	1	08/25/2018 08:51	WG1156386
Silver	ND		1.17	1	08/25/2018 08:51	WG1156386

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0292	1	08/21/2018 21:20	WG1155415
Acrylonitrile	ND		0.0146	1	08/21/2018 21:20	WG1155415
Benzene	ND		0.00117	1	08/21/2018 21:20	WG1155415
Bromobenzene	ND	J3 J4	0.0146	1	08/21/2018 21:20	WG1155415
Bromodichloromethane	ND		0.00292	1	08/21/2018 21:20	WG1155415
Bromoform	ND		0.0292	1	08/21/2018 21:20	WG1155415
Bromomethane	ND		0.0146	1	08/22/2018 14:07	WG1155724
n-Butylbenzene	ND		0.0146	1	08/21/2018 21:20	WG1155415
sec-Butylbenzene	ND		0.0146	1	08/21/2018 21:20	WG1155415
tert-Butylbenzene	ND		0.00585	1	08/21/2018 21:20	WG1155415
Carbon tetrachloride	ND		0.00585	1	08/21/2018 21:20	WG1155415
Chlorobenzene	ND		0.00292	1	08/21/2018 21:20	WG1155415
Chlorodibromomethane	ND		0.00292	1	08/21/2018 21:20	WG1155415
Chloroethane	ND	J3	0.00585	1	08/21/2018 21:20	WG1155415
Chloroform	ND		0.00292	1	08/21/2018 21:20	WG1155415
Chloromethane	ND		0.0146	1	08/21/2018 21:20	WG1155415
2-Chlorotoluene	ND		0.00292	1	08/21/2018 21:20	WG1155415
4-Chlorotoluene	ND		0.00585	1	08/21/2018 21:20	WG1155415
1,2-Dibromo-3-Chloropropane	ND		0.0292	1	08/21/2018 21:20	WG1155415
1,2-Dibromoethane	ND		0.00292	1	08/21/2018 21:20	WG1155415
Dibromomethane	ND		0.00585	1	08/21/2018 21:20	WG1155415
1,2-Dichlorobenzene	ND		0.00585	1	08/21/2018 21:20	WG1155415
1,3-Dichlorobenzene	ND		0.00585	1	08/21/2018 21:20	WG1155415
1,4-Dichlorobenzene	ND		0.00585	1	08/21/2018 21:20	WG1155415
Dichlorodifluoromethane	ND		0.00292	1	08/21/2018 21:20	WG1155415
1,1-Dichloroethane	ND		0.00292	1	08/21/2018 21:20	WG1155415
1,2-Dichloroethane	ND		0.00292	1	08/21/2018 21:20	WG1155415
1,1-Dichloroethene	ND	J3	0.00292	1	08/21/2018 21:20	WG1155415
cis-1,2-Dichloroethene	ND		0.00292	1	08/21/2018 21:20	WG1155415
trans-1,2-Dichloroethene	ND		0.00585	1	08/21/2018 21:20	WG1155415
1,2-Dichloropropane	ND		0.00585	1	08/22/2018 14:07	WG1155724
1,1-Dichloropropene	ND		0.00292	1	08/21/2018 21:20	WG1155415
1,3-Dichloropropane	ND		0.00585	1	08/21/2018 21:20	WG1155415

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/17/18 08:30

L1019065

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00292	1	08/21/2018 21:20	WG1155415
trans-1,3-Dichloropropene	ND		0.00585	1	08/21/2018 21:20	WG1155415
2,2-Dichloropropane	ND		0.00292	1	08/21/2018 21:20	WG1155415
Di-isopropyl ether	ND		0.00117	1	08/21/2018 21:20	WG1155415
Ethylbenzene	ND		0.00292	1	08/21/2018 21:20	WG1155415
Hexachloro-1,3-butadiene	ND		0.0292	1	08/21/2018 21:20	WG1155415
Isopropylbenzene	ND	J3	0.00292	1	08/21/2018 21:20	WG1155415
p-Isopropyltoluene	ND		0.00585	1	08/21/2018 21:20	WG1155415
2-Butanone (MEK)	0.0339	J0	0.0292	1	08/21/2018 21:20	WG1155415
Methylene Chloride	ND		0.0292	1	08/21/2018 21:20	WG1155415
4-Methyl-2-pentanone (MIBK)	ND		0.0292	1	08/21/2018 21:20	WG1155415
Methyl tert-butyl ether	ND		0.00117	1	08/21/2018 21:20	WG1155415
Naphthalene	ND		0.0146	1	08/21/2018 21:20	WG1155415
n-Propylbenzene	ND	J3	0.00585	1	08/21/2018 21:20	WG1155415
Styrene	ND	J3	0.0146	1	08/21/2018 21:20	WG1155415
1,1,1-Tetrachloroethane	ND		0.00292	1	08/21/2018 21:20	WG1155415
1,1,2,2-Tetrachloroethane	ND	J3	0.00292	1	08/21/2018 21:20	WG1155415
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00292	1	08/21/2018 21:20	WG1155415
Tetrachloroethene	ND		0.00292	1	08/21/2018 21:20	WG1155415
Toluene	ND		0.00585	1	08/21/2018 21:20	WG1155415
1,2,3-Trichlorobenzene	ND		0.00292	1	08/21/2018 21:20	WG1155415
1,2,4-Trichlorobenzene	ND		0.0146	1	08/21/2018 21:20	WG1155415
1,1,1-Trichloroethane	ND		0.00292	1	08/21/2018 21:20	WG1155415
1,1,2-Trichloroethane	ND		0.00292	1	08/21/2018 21:20	WG1155415
Trichloroethene	ND		0.00117	1	08/22/2018 14:07	WG1155724
Trichlorofluoromethane	ND		0.00292	1	08/21/2018 21:20	WG1155415
1,2,3-Trichloropropane	ND		0.0146	1	08/22/2018 14:07	WG1155724
1,2,4-Trimethylbenzene	ND		0.00585	1	08/21/2018 21:20	WG1155415
1,2,3-Trimethylbenzene	ND		0.00585	1	08/21/2018 21:20	WG1155415
Vinyl chloride	ND	J3	0.00292	1	08/21/2018 21:20	WG1155415
1,3,5-Trimethylbenzene	ND		0.00585	1	08/21/2018 21:20	WG1155415
o-Xylene	ND		0.00292	1	08/21/2018 21:20	WG1155415
m&p-Xylene	ND		0.00468	1	08/22/2018 14:07	WG1155724
(S) Toluene-d8	110		80.0-120		08/21/2018 21:20	WG1155415
(S) Toluene-d8	118		80.0-120		08/22/2018 14:07	WG1155724
(S) Dibromofluoromethane	89.0		74.0-131		08/21/2018 21:20	WG1155415
(S) Dibromofluoromethane	84.3		74.0-131		08/22/2018 14:07	WG1155724
(S) 4-Bromofluorobenzene	101		64.0-132		08/21/2018 21:20	WG1155415
(S) 4-Bromofluorobenzene	106		64.0-132		08/22/2018 14:07	WG1155724

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.68	1	08/26/2018 12:34	WG1156678
Residual Range Organics (RRO)	ND		11.7	1	08/26/2018 12:34	WG1156678
(S) o-Terphenyl	63.3		18.0-148		08/26/2018 12:34	WG1156678

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Acenaphthene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Acenaphthylene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Benzo(a)anthracene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Benzo(a)pyrene	ND		0.00702	1	08/25/2018 11:39	WG1156692



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Benzo(g,h,i)perylene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Benzo(k)fluoranthene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Chrysene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Dibenz(a,h)anthracene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Fluoranthene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Fluorene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Indeno(1,2,3-cd)pyrene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Naphthalene	ND		0.0234	1	08/25/2018 11:39	WG1156692
Phenanthrene	ND		0.00702	1	08/25/2018 11:39	WG1156692
Pyrene	ND		0.00702	1	08/25/2018 11:39	WG1156692
1-Methylnaphthalene	ND		0.0234	1	08/25/2018 11:39	WG1156692
2-Methylnaphthalene	ND		0.0234	1	08/25/2018 11:39	WG1156692
2-Chloronaphthalene	ND		0.0234	1	08/25/2018 11:39	WG1156692
(S) Nitrobenzene-d5	74.5		14.0-149		08/25/2018 11:39	WG1156692
(S) 2-Fluorobiphenyl	79.3		34.0-125		08/25/2018 11:39	WG1156692
(S) p-Terphenyl-d14	77.7		23.0-120		08/25/2018 11:39	WG1156692

- 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
Total Solids	87.7		1	08/24/2018 14:15	WG1156890

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0228	1	08/26/2018 13:53	WG1156394

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.28	1	08/25/2018 08:54	WG1156386
Barium	67.5		0.570	1	08/25/2018 08:54	WG1156386
Cadmium	ND		0.570	1	08/25/2018 08:54	WG1156386
Chromium	6.50		1.14	1	08/25/2018 08:54	WG1156386
Lead	3.77		0.570	1	08/25/2018 08:54	WG1156386
Selenium	ND		2.28	1	08/25/2018 08:54	WG1156386
Silver	ND		1.14	1	08/25/2018 08:54	WG1156386

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0305	1.07	08/21/2018 21:39	WG1155415
Acrylonitrile	ND		0.0153	1.07	08/21/2018 21:39	WG1155415
Benzene	ND		0.00122	1.07	08/21/2018 21:39	WG1155415
Bromobenzene	ND	J3 J4	0.0153	1.07	08/21/2018 21:39	WG1155415
Bromodichloromethane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
Bromoform	ND		0.0305	1.07	08/21/2018 21:39	WG1155415
Bromomethane	ND		0.0153	1.07	08/22/2018 14:26	WG1155724
n-Butylbenzene	ND		0.0153	1.07	08/21/2018 21:39	WG1155415
sec-Butylbenzene	ND		0.0153	1.07	08/21/2018 21:39	WG1155415
tert-Butylbenzene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
Carbon tetrachloride	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
Chlorobenzene	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
Chlorodibromomethane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
Chloroethane	ND	J3	0.00610	1.07	08/21/2018 21:39	WG1155415
Chloroform	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
Chloromethane	ND		0.0153	1.07	08/21/2018 21:39	WG1155415
2-Chlorotoluene	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
4-Chlorotoluene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
1,2-Dibromo-3-Chloropropane	ND		0.0305	1.07	08/21/2018 21:39	WG1155415
1,2-Dibromoethane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
Dibromomethane	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
1,2-Dichlorobenzene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
1,3-Dichlorobenzene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
1,4-Dichlorobenzene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
Dichlorodifluoromethane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
1,1-Dichloroethane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
1,2-Dichloroethane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
1,1-Dichloroethene	ND	J3	0.00305	1.07	08/21/2018 21:39	WG1155415
cis-1,2-Dichloroethene	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
trans-1,2-Dichloroethene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
1,2-Dichloropropane	ND		0.00610	1.07	08/22/2018 14:26	WG1155724
1,1-Dichloropropene	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
1,3-Dichloropropane	ND		0.00610	1.07	08/21/2018 21:39	WG1155415

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
trans-1,3-Dichloropropene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
2,2-Dichloropropane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
Di-isopropyl ether	ND		0.00122	1.07	08/21/2018 21:39	WG1155415
Ethylbenzene	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
Hexachloro-1,3-butadiene	ND		0.0305	1.07	08/21/2018 21:39	WG1155415
Isopropylbenzene	ND	J3	0.00305	1.07	08/21/2018 21:39	WG1155415
p-Isopropyltoluene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
2-Butanone (MEK)	0.0458	J0	0.0305	1.07	08/21/2018 21:39	WG1155415
Methylene Chloride	ND		0.0305	1.07	08/21/2018 21:39	WG1155415
4-Methyl-2-pentanone (MIBK)	ND		0.0305	1.07	08/21/2018 21:39	WG1155415
Methyl tert-butyl ether	ND		0.00122	1.07	08/21/2018 21:39	WG1155415
Naphthalene	ND		0.0153	1.07	08/21/2018 21:39	WG1155415
n-Propylbenzene	ND	J3	0.00610	1.07	08/21/2018 21:39	WG1155415
Styrene	ND	J3	0.0153	1.07	08/21/2018 21:39	WG1155415
1,1,1,2-Tetrachloroethane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
1,1,2,2-Tetrachloroethane	ND	J3	0.00305	1.07	08/21/2018 21:39	WG1155415
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00305	1.07	08/21/2018 21:39	WG1155415
Tetrachloroethene	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
Toluene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
1,2,3-Trichlorobenzene	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
1,2,4-Trichlorobenzene	ND		0.0153	1.07	08/21/2018 21:39	WG1155415
1,1,1-Trichloroethane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
1,1,2-Trichloroethane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
Trichloroethene	ND		0.00122	1.07	08/22/2018 14:26	WG1155724
Trichlorofluoromethane	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
1,2,3-Trichloropropane	ND		0.0153	1.07	08/22/2018 14:26	WG1155724
1,2,4-Trimethylbenzene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
1,2,3-Trimethylbenzene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
Vinyl chloride	ND	J3	0.00305	1.07	08/21/2018 21:39	WG1155415
1,3,5-Trimethylbenzene	ND		0.00610	1.07	08/21/2018 21:39	WG1155415
o-Xylene	ND		0.00305	1.07	08/21/2018 21:39	WG1155415
m&p-Xylene	ND		0.00488	1.07	08/22/2018 14:26	WG1155724
(S) Toluene-d8	101		80.0-120		08/21/2018 21:39	WG1155415
(S) Toluene-d8	118		80.0-120		08/22/2018 14:26	WG1155724
(S) Dibromofluoromethane	99.0		74.0-131		08/21/2018 21:39	WG1155415
(S) Dibromofluoromethane	86.1		74.0-131		08/22/2018 14:26	WG1155724
(S) 4-Bromofluorobenzene	98.1		64.0-132		08/21/2018 21:39	WG1155415
(S) 4-Bromofluorobenzene	107		64.0-132		08/22/2018 14:26	WG1155724

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.56	1	08/26/2018 13:28	WG1156678
Residual Range Organics (RRO)	ND		11.4	1	08/26/2018 13:28	WG1156678
(S) o-Terphenyl	73.4		18.0-148		08/26/2018 13:28	WG1156678

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Acenaphthene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Acenaphthylene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Benzo(a)anthracene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Benzo(a)pyrene	ND		0.00684	1	08/25/2018 12:00	WG1156692



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Benzo(g,h,i)perylene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Benzo(k)fluoranthene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Chrysene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Dibenz(a,h)anthracene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Fluoranthene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Fluorene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Indeno(1,2,3-cd)pyrene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Naphthalene	ND		0.0228	1	08/25/2018 12:00	WG1156692
Phenanthrene	ND		0.00684	1	08/25/2018 12:00	WG1156692
Pyrene	ND		0.00684	1	08/25/2018 12:00	WG1156692
1-Methylnaphthalene	ND		0.0228	1	08/25/2018 12:00	WG1156692
2-Methylnaphthalene	ND		0.0228	1	08/25/2018 12:00	WG1156692
2-Chloronaphthalene	ND		0.0228	1	08/25/2018 12:00	WG1156692
(S) Nitrobenzene-d5	60.3		14.0-149		08/25/2018 12:00	WG1156692
(S) 2-Fluorobiphenyl	83.8		34.0-125		08/25/2018 12:00	WG1156692
(S) p-Terphenyl-d14	83.3		23.0-120		08/25/2018 12:00	WG1156692

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	88.9		1	08/24/2018 14:35	WG1156889

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0225	1	08/26/2018 13:55	WG1156394

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.25	1	08/25/2018 08:56	WG1156386
Barium	62.0		0.563	1	08/25/2018 08:56	WG1156386
Cadmium	ND		0.563	1	08/25/2018 08:56	WG1156386
Chromium	9.11		1.13	1	08/25/2018 08:56	WG1156386
Lead	12.2		0.563	1	08/25/2018 08:56	WG1156386
Selenium	ND		2.25	1	08/25/2018 08:56	WG1156386
Silver	ND		1.13	1	08/25/2018 08:56	WG1156386

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0321	1.14	08/21/2018 21:58	WG1155415
Acrylonitrile	ND		0.0160	1.14	08/21/2018 21:58	WG1155415
Benzene	ND		0.00128	1.14	08/21/2018 21:58	WG1155415
Bromobenzene	ND	J3 J4	0.0160	1.14	08/21/2018 21:58	WG1155415
Bromodichloromethane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
Bromoform	ND		0.0321	1.14	08/21/2018 21:58	WG1155415
Bromomethane	ND		0.0160	1.14	08/22/2018 14:46	WG1155724
n-Butylbenzene	ND		0.0160	1.14	08/21/2018 21:58	WG1155415
sec-Butylbenzene	ND		0.0160	1.14	08/21/2018 21:58	WG1155415
tert-Butylbenzene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
Carbon tetrachloride	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
Chlorobenzene	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
Chlorodibromomethane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
Chloroethane	ND	J3	0.00641	1.14	08/21/2018 21:58	WG1155415
Chloroform	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
Chloromethane	ND		0.0160	1.14	08/21/2018 21:58	WG1155415
2-Chlorotoluene	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
4-Chlorotoluene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
1,2-Dibromo-3-Chloropropane	ND		0.0321	1.14	08/21/2018 21:58	WG1155415
1,2-Dibromoethane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
Dibromomethane	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
1,2-Dichlorobenzene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
1,3-Dichlorobenzene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
1,4-Dichlorobenzene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
Dichlorodifluoromethane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
1,1-Dichloroethane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
1,2-Dichloroethane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
1,1-Dichloroethene	ND	J3	0.00321	1.14	08/21/2018 21:58	WG1155415
cis-1,2-Dichloroethene	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
trans-1,2-Dichloroethene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
1,2-Dichloropropane	ND		0.00641	1.14	08/22/2018 14:46	WG1155724
1,1-Dichloropropene	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
1,3-Dichloropropane	ND		0.00641	1.14	08/21/2018 21:58	WG1155415

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/17/18 09:05

L1019065

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
trans-1,3-Dichloropropene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
2,2-Dichloropropane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
Di-isopropyl ether	ND		0.00128	1.14	08/21/2018 21:58	WG1155415
Ethylbenzene	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
Hexachloro-1,3-butadiene	ND		0.0321	1.14	08/21/2018 21:58	WG1155415
Isopropylbenzene	ND	J3	0.00321	1.14	08/21/2018 21:58	WG1155415
p-Isopropyltoluene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
2-Butanone (MEK)	0.0381		0.0321	1.14	08/21/2018 21:58	WG1155415
Methylene Chloride	ND		0.0321	1.14	08/21/2018 21:58	WG1155415
4-Methyl-2-pentanone (MIBK)	ND		0.0321	1.14	08/21/2018 21:58	WG1155415
Methyl tert-butyl ether	ND		0.00128	1.14	08/21/2018 21:58	WG1155415
Naphthalene	ND		0.0160	1.14	08/21/2018 21:58	WG1155415
n-Propylbenzene	ND	J3	0.00641	1.14	08/21/2018 21:58	WG1155415
Styrene	ND	J3	0.0160	1.14	08/21/2018 21:58	WG1155415
1,1,1,2-Tetrachloroethane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
1,1,2,2-Tetrachloroethane	ND	J3	0.00321	1.14	08/21/2018 21:58	WG1155415
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00321	1.14	08/21/2018 21:58	WG1155415
Tetrachloroethene	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
Toluene	0.00650		0.00641	1.14	08/21/2018 21:58	WG1155415
1,2,3-Trichlorobenzene	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
1,2,4-Trichlorobenzene	ND		0.0160	1.14	08/21/2018 21:58	WG1155415
1,1,1-Trichloroethane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
1,1,2-Trichloroethane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
Trichloroethene	ND		0.00128	1.14	08/22/2018 14:46	WG1155724
Trichlorofluoromethane	ND		0.00321	1.14	08/21/2018 21:58	WG1155415
1,2,3-Trichloropropane	ND		0.0160	1.14	08/22/2018 14:46	WG1155724
1,2,4-Trimethylbenzene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
1,2,3-Trimethylbenzene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
Vinyl chloride	ND	J3	0.00321	1.14	08/21/2018 21:58	WG1155415
1,3,5-Trimethylbenzene	ND		0.00641	1.14	08/21/2018 21:58	WG1155415
o-Xylene	0.00463		0.00321	1.14	08/21/2018 21:58	WG1155415
m&p-Xylene	ND		0.00513	1.14	08/22/2018 14:46	WG1155724
(S) Toluene-d8	115		80.0-120		08/21/2018 21:58	WG1155415
(S) Toluene-d8	118		80.0-120		08/22/2018 14:46	WG1155724
(S) Dibromofluoromethane	93.9		74.0-131		08/21/2018 21:58	WG1155415
(S) Dibromofluoromethane	85.6		74.0-131		08/22/2018 14:46	WG1155724
(S) 4-Bromofluorobenzene	98.4		64.0-132		08/21/2018 21:58	WG1155415
(S) 4-Bromofluorobenzene	103		64.0-132		08/22/2018 14:46	WG1155724

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		22.5	5	08/27/2018 15:06	WG1156678
Residual Range Organics (RRO)	ND		56.3	5	08/27/2018 15:06	WG1156678
(S) o-Terphenyl	78.4		18.0-148		08/27/2018 15:06	WG1156678

Sample Narrative:

L1019065-05 WG1156678: Cannot run at lower dilution due to viscosity of extract



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0161		0.00675	1	08/25/2018 18:13	WG1156692
Acenaphthene	ND		0.00675	1	08/25/2018 18:13	WG1156692
Acenaphthylene	ND		0.00675	1	08/25/2018 18:13	WG1156692
Benzo(a)anthracene	0.0128		0.00675	1	08/25/2018 18:13	WG1156692
Benzo(a)pyrene	0.0883		0.00675	1	08/25/2018 18:13	WG1156692
Benzo(b)fluoranthene	0.0344		0.00675	1	08/25/2018 18:13	WG1156692
Benzo(g,h,i)perylene	0.126		0.00675	1	08/25/2018 18:13	WG1156692
Benzo(k)fluoranthene	ND		0.00675	1	08/25/2018 18:13	WG1156692
Chrysene	0.0524		0.00675	1	08/25/2018 18:13	WG1156692
Dibenz(a,h)anthracene	0.0191		0.00675	1	08/25/2018 18:13	WG1156692
Fluoranthene	0.00930		0.00675	1	08/25/2018 18:13	WG1156692
Fluorene	ND		0.00675	1	08/25/2018 18:13	WG1156692
Indeno(1,2,3-cd)pyrene	0.0272		0.00675	1	08/25/2018 18:13	WG1156692
Naphthalene	ND		0.0225	1	08/25/2018 18:13	WG1156692
Phenanthrene	ND		0.00675	1	08/25/2018 18:13	WG1156692
Pyrene	0.0303		0.00675	1	08/25/2018 18:13	WG1156692
1-Methylnaphthalene	ND		0.0225	1	08/25/2018 18:13	WG1156692
2-Methylnaphthalene	ND		0.0225	1	08/25/2018 18:13	WG1156692
2-Chloronaphthalene	ND		0.0225	1	08/25/2018 18:13	WG1156692
(S) Nitrobenzene-d5	70.9		14.0-149		08/25/2018 18:13	WG1156692
(S) 2-Fluorobiphenyl	73.3		34.0-125		08/25/2018 18:13	WG1156692
(S) p-Terphenyl-d14	73.5		23.0-120		08/25/2018 18:13	WG1156692

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	96.4		1	08/24/2018 14:35	WG1156889

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0207	1	08/26/2018 14:03	WG1156394

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.07	1	08/25/2018 08:59	WG1156386
Barium	75.3		0.518	1	08/25/2018 08:59	WG1156386
Cadmium	ND		0.518	1	08/25/2018 08:59	WG1156386
Chromium	12.7		1.04	1	08/25/2018 08:59	WG1156386
Lead	13.5		0.518	1	08/25/2018 08:59	WG1156386
Selenium	ND		2.07	1	08/25/2018 08:59	WG1156386
Silver	ND		1.04	1	08/25/2018 08:59	WG1156386

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0321	1.24	08/21/2018 22:17	WG1155415
Acrylonitrile	ND		0.0161	1.24	08/21/2018 22:17	WG1155415
Benzene	ND		0.00129	1.24	08/21/2018 22:17	WG1155415
Bromobenzene	ND	J3 J4	0.0161	1.24	08/21/2018 22:17	WG1155415
Bromodichloromethane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
Bromoform	ND		0.0321	1.24	08/21/2018 22:17	WG1155415
Bromomethane	ND		0.0161	1.24	08/22/2018 15:06	WG1155724
n-Butylbenzene	ND		0.0161	1.24	08/21/2018 22:17	WG1155415
sec-Butylbenzene	ND		0.0161	1.24	08/21/2018 22:17	WG1155415
tert-Butylbenzene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
Carbon tetrachloride	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
Chlorobenzene	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
Chlorodibromomethane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
Chloroethane	ND	J3	0.00643	1.24	08/21/2018 22:17	WG1155415
Chloroform	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
Chloromethane	ND		0.0161	1.24	08/21/2018 22:17	WG1155415
2-Chlorotoluene	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
4-Chlorotoluene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
1,2-Dibromo-3-Chloropropane	ND		0.0321	1.24	08/21/2018 22:17	WG1155415
1,2-Dibromoethane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
Dibromomethane	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
1,2-Dichlorobenzene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
1,3-Dichlorobenzene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
1,4-Dichlorobenzene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
Dichlorodifluoromethane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
1,1-Dichloroethane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
1,2-Dichloroethane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
1,1-Dichloroethene	ND	J3	0.00321	1.24	08/21/2018 22:17	WG1155415
cis-1,2-Dichloroethene	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
trans-1,2-Dichloroethene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
1,2-Dichloropropane	ND		0.00643	1.24	08/22/2018 15:06	WG1155724
1,1-Dichloropropene	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
1,3-Dichloropropane	ND		0.00643	1.24	08/21/2018 22:17	WG1155415

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
trans-1,3-Dichloropropene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
2,2-Dichloropropane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
Di-isopropyl ether	ND		0.00129	1.24	08/21/2018 22:17	WG1155415
Ethylbenzene	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
Hexachloro-1,3-butadiene	ND		0.0321	1.24	08/21/2018 22:17	WG1155415
Isopropylbenzene	ND	J3	0.00321	1.24	08/21/2018 22:17	WG1155415
p-Isopropyltoluene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
2-Butanone (MEK)	0.0428		0.0321	1.24	08/21/2018 22:17	WG1155415
Methylene Chloride	ND		0.0321	1.24	08/21/2018 22:17	WG1155415
4-Methyl-2-pentanone (MIBK)	ND		0.0321	1.24	08/21/2018 22:17	WG1155415
Methyl tert-butyl ether	ND		0.00129	1.24	08/21/2018 22:17	WG1155415
Naphthalene	ND		0.0161	1.24	08/21/2018 22:17	WG1155415
n-Propylbenzene	ND	J3	0.00643	1.24	08/21/2018 22:17	WG1155415
Styrene	ND	J3	0.0161	1.24	08/21/2018 22:17	WG1155415
1,1,1-Tetrachloroethane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
1,1,2,2-Tetrachloroethane	ND	J3	0.00321	1.24	08/21/2018 22:17	WG1155415
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00321	1.24	08/21/2018 22:17	WG1155415
Tetrachloroethene	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
Toluene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
1,2,3-Trichlorobenzene	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
1,2,4-Trichlorobenzene	ND		0.0161	1.24	08/21/2018 22:17	WG1155415
1,1,1-Trichloroethane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
1,1,2-Trichloroethane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
Trichloroethene	ND		0.00129	1.24	08/22/2018 15:06	WG1155724
Trichlorofluoromethane	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
1,2,3-Trichloropropane	ND		0.0161	1.24	08/22/2018 15:06	WG1155724
1,2,4-Trimethylbenzene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
1,2,3-Trimethylbenzene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
Vinyl chloride	ND	J3	0.00321	1.24	08/21/2018 22:17	WG1155415
1,3,5-Trimethylbenzene	ND		0.00643	1.24	08/21/2018 22:17	WG1155415
o-Xylene	ND		0.00321	1.24	08/21/2018 22:17	WG1155415
m&p-Xylene	ND		0.00514	1.24	08/22/2018 15:06	WG1155724
(S) Toluene-d8	111		80.0-120		08/21/2018 22:17	WG1155415
(S) Toluene-d8	118		80.0-120		08/22/2018 15:06	WG1155724
(S) Dibromofluoromethane	94.8		74.0-131		08/21/2018 22:17	WG1155415
(S) Dibromofluoromethane	86.7		74.0-131		08/22/2018 15:06	WG1155724
(S) 4-Bromofluorobenzene	99.1		64.0-132		08/21/2018 22:17	WG1155415
(S) 4-Bromofluorobenzene	104		64.0-132		08/22/2018 15:06	WG1155724

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		20.7	5	08/27/2018 15:20	WG1156678
Residual Range Organics (RRO)	ND		51.8	5	08/27/2018 15:20	WG1156678
(S) o-Terphenyl	90.3		18.0-148		08/27/2018 15:20	WG1156678

Sample Narrative:

L1019065-06 WG1156678: Cannot run at lower dilution due to viscosity of extract

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.15	1	08/26/2018 19:14	WG1157238
Residual Range Organics (RRO)	ND		10.4	1	08/26/2018 19:14	WG1157238



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	87.1		18.0-148		08/26/2018 19:14	WG1157238

1 Cp

2 Tc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Acenaphthene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Acenaphthylene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Benzo(a)anthracene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Benzo(a)pyrene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Benzo(b)fluoranthene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Benzo(g,h,i)perylene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Benzo(k)fluoranthene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Chrysene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Dibenz(a,h)anthracene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Fluoranthene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Fluorene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Indeno(1,2,3-cd)pyrene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Naphthalene	ND		0.0207	1	08/25/2018 12:21	WG1156692
Phenanthrene	ND		0.00622	1	08/25/2018 12:21	WG1156692
Pyrene	ND		0.00622	1	08/25/2018 12:21	WG1156692
1-Methylnaphthalene	ND		0.0207	1	08/25/2018 12:21	WG1156692
2-Methylnaphthalene	ND		0.0207	1	08/25/2018 12:21	WG1156692
2-Chloronaphthalene	ND		0.0207	1	08/25/2018 12:21	WG1156692
(S) Nitrobenzene-d5	66.4		14.0-149		08/25/2018 12:21	WG1156692
(S) 2-Fluorobiphenyl	90.3		34.0-125		08/25/2018 12:21	WG1156692
(S) p-Terphenyl-d14	92.9		23.0-120		08/25/2018 12:21	WG1156692

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
Total Solids	74.2		1	08/24/2018 14:35	WG1156889

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0270	1	08/26/2018 14:05	WG1156394

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.70	1	08/25/2018 09:01	WG1156386
Barium	87.2		0.674	1	08/25/2018 09:01	WG1156386
Cadmium	ND		0.674	1	08/25/2018 09:01	WG1156386
Chromium	12.9		1.35	1	08/25/2018 09:01	WG1156386
Lead	2.77		0.674	1	08/25/2018 09:01	WG1156386
Selenium	ND		2.70	1	08/25/2018 09:01	WG1156386
Silver	ND		1.35	1	08/25/2018 09:01	WG1156386

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND		0.0340	1.01	08/21/2018 22:36	WG1155415
Acrylonitrile	ND		0.0170	1.01	08/21/2018 22:36	WG1155415
Benzene	ND		0.00136	1.01	08/21/2018 22:36	WG1155415
Bromobenzene	ND	J3 J4	0.0170	1.01	08/21/2018 22:36	WG1155415
Bromodichloromethane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
Bromoform	ND		0.0340	1.01	08/21/2018 22:36	WG1155415
Bromomethane	ND		0.0170	1.01	08/22/2018 15:25	WG1155724
n-Butylbenzene	ND		0.0170	1.01	08/21/2018 22:36	WG1155415
sec-Butylbenzene	ND		0.0170	1.01	08/21/2018 22:36	WG1155415
tert-Butylbenzene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
Carbon tetrachloride	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
Chlorobenzene	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
Chlorodibromomethane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
Chloroethane	ND	J3	0.00681	1.01	08/21/2018 22:36	WG1155415
Chloroform	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
Chloromethane	ND		0.0170	1.01	08/21/2018 22:36	WG1155415
2-Chlorotoluene	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
4-Chlorotoluene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
1,2-Dibromo-3-Chloropropane	ND		0.0340	1.01	08/21/2018 22:36	WG1155415
1,2-Dibromoethane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
Dibromomethane	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
1,2-Dichlorobenzene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
1,3-Dichlorobenzene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
1,4-Dichlorobenzene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
Dichlorodifluoromethane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
1,1-Dichloroethane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
1,2-Dichloroethane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
1,1-Dichloroethene	ND	J3	0.00340	1.01	08/21/2018 22:36	WG1155415
cis-1,2-Dichloroethene	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
trans-1,2-Dichloroethene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
1,2-Dichloropropane	ND		0.00681	1.01	08/22/2018 15:25	WG1155724
1,1-Dichloropropene	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
1,3-Dichloropropane	ND		0.00681	1.01	08/21/2018 22:36	WG1155415

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
trans-1,3-Dichloropropene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
2,2-Dichloropropane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
Di-isopropyl ether	ND		0.00136	1.01	08/21/2018 22:36	WG1155415
Ethylbenzene	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
Hexachloro-1,3-butadiene	ND		0.0340	1.01	08/21/2018 22:36	WG1155415
Isopropylbenzene	ND	J3	0.00340	1.01	08/21/2018 22:36	WG1155415
p-Isopropyltoluene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
2-Butanone (MEK)	0.0414		0.0340	1.01	08/21/2018 22:36	WG1155415
Methylene Chloride	ND		0.0340	1.01	08/21/2018 22:36	WG1155415
4-Methyl-2-pentanone (MIBK)	ND		0.0340	1.01	08/21/2018 22:36	WG1155415
Methyl tert-butyl ether	ND		0.00136	1.01	08/21/2018 22:36	WG1155415
Naphthalene	ND		0.0170	1.01	08/21/2018 22:36	WG1155415
n-Propylbenzene	ND	J3	0.00681	1.01	08/21/2018 22:36	WG1155415
Styrene	ND	J3	0.0170	1.01	08/21/2018 22:36	WG1155415
1,1,1,2-Tetrachloroethane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
1,1,2,2-Tetrachloroethane	ND	J3	0.00340	1.01	08/21/2018 22:36	WG1155415
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00340	1.01	08/21/2018 22:36	WG1155415
Tetrachloroethene	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
Toluene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
1,2,3-Trichlorobenzene	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
1,2,4-Trichlorobenzene	ND		0.0170	1.01	08/21/2018 22:36	WG1155415
1,1,1-Trichloroethane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
1,1,2-Trichloroethane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
Trichloroethene	ND		0.00136	1.01	08/22/2018 15:25	WG1155724
Trichlorofluoromethane	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
1,2,3-Trichloropropane	ND		0.0170	1.01	08/22/2018 15:25	WG1155724
1,2,4-Trimethylbenzene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
1,2,3-Trimethylbenzene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
Vinyl chloride	ND	J3	0.00340	1.01	08/21/2018 22:36	WG1155415
1,3,5-Trimethylbenzene	ND		0.00681	1.01	08/21/2018 22:36	WG1155415
o-Xylene	ND		0.00340	1.01	08/21/2018 22:36	WG1155415
m&p-Xylene	ND		0.00545	1.01	08/22/2018 15:25	WG1155724
(S) Toluene-d8	108		80.0-120		08/21/2018 22:36	WG1155415
(S) Toluene-d8	117		80.0-120		08/22/2018 15:25	WG1155724
(S) Dibromofluoromethane	93.3		74.0-131		08/21/2018 22:36	WG1155415
(S) Dibromofluoromethane	88.0		74.0-131		08/22/2018 15:25	WG1155724
(S) 4-Bromofluorobenzene	98.7		64.0-132		08/21/2018 22:36	WG1155415
(S) 4-Bromofluorobenzene	105		64.0-132		08/22/2018 15:25	WG1155724

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.39	1	08/26/2018 11:12	WG1156678
Residual Range Organics (RRO)	ND		13.5	1	08/26/2018 11:12	WG1156678
(S) o-Terphenyl	81.0		18.0-148		08/26/2018 11:12	WG1156678

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Acenaphthene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Acenaphthylene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Benzo(a)anthracene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Benzo(a)pyrene	ND		0.00809	1	08/25/2018 12:41	WG1156692



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Benzo(g,h,i)perylene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Benzo(k)fluoranthene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Chrysene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Dibenz(a,h)anthracene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Fluoranthene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Fluorene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Indeno(1,2,3-cd)pyrene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Naphthalene	ND		0.0270	1	08/25/2018 12:41	WG1156692
Phenanthrene	ND		0.00809	1	08/25/2018 12:41	WG1156692
Pyrene	ND		0.00809	1	08/25/2018 12:41	WG1156692
1-Methylnaphthalene	ND		0.0270	1	08/25/2018 12:41	WG1156692
2-Methylnaphthalene	ND		0.0270	1	08/25/2018 12:41	WG1156692
2-Chloronaphthalene	ND		0.0270	1	08/25/2018 12:41	WG1156692
<i>(S)</i> Nitrobenzene-d5	64.7		14.0-149		08/25/2018 12:41	WG1156692
<i>(S)</i> 2-Fluorobiphenyl	86.2		34.0-125		08/25/2018 12:41	WG1156692
<i>(S)</i> p-Terphenyl-d14	74.3		23.0-120		08/25/2018 12:41	WG1156692

- 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	77.1		1	08/24/2018 14:35	WG1156889

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0259	1	08/26/2018 14:08	WG1156394

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.59	1	08/25/2018 09:04	WG1156386
Barium	87.6		0.649	1	08/25/2018 09:04	WG1156386
Cadmium	ND		0.649	1	08/25/2018 09:04	WG1156386
Chromium	14.8		1.30	1	08/25/2018 09:04	WG1156386
Lead	3.20		0.649	1	08/25/2018 09:04	WG1156386
Selenium	ND		2.59	1	08/25/2018 09:04	WG1156386
Silver	ND		1.30	1	08/25/2018 09:04	WG1156386

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0328	1.01	08/21/2018 22:54	WG1155415
Acrylonitrile	ND		0.0164	1.01	08/21/2018 22:54	WG1155415
Benzene	ND		0.00131	1.01	08/21/2018 22:54	WG1155415
Bromobenzene	ND	J3 J4	0.0164	1.01	08/21/2018 22:54	WG1155415
Bromodichloromethane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
Bromoform	ND		0.0328	1.01	08/21/2018 22:54	WG1155415
Bromomethane	ND		0.0164	1.01	08/22/2018 15:45	WG1155724
n-Butylbenzene	ND		0.0164	1.01	08/21/2018 22:54	WG1155415
sec-Butylbenzene	ND		0.0164	1.01	08/21/2018 22:54	WG1155415
tert-Butylbenzene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
Carbon tetrachloride	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
Chlorobenzene	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
Chlorodibromomethane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
Chloroethane	ND	J3	0.00655	1.01	08/21/2018 22:54	WG1155415
Chloroform	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
Chloromethane	ND		0.0164	1.01	08/21/2018 22:54	WG1155415
2-Chlorotoluene	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
4-Chlorotoluene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
1,2-Dibromo-3-Chloropropane	ND		0.0328	1.01	08/21/2018 22:54	WG1155415
1,2-Dibromoethane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
Dibromomethane	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
1,2-Dichlorobenzene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
1,3-Dichlorobenzene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
1,4-Dichlorobenzene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
Dichlorodifluoromethane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
1,1-Dichloroethane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
1,2-Dichloroethane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
1,1-Dichloroethene	ND	J3	0.00328	1.01	08/21/2018 22:54	WG1155415
cis-1,2-Dichloroethene	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
trans-1,2-Dichloroethene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
1,2-Dichloropropane	ND		0.00655	1.01	08/22/2018 15:45	WG1155724
1,1-Dichloropropene	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
1,3-Dichloropropane	ND		0.00655	1.01	08/21/2018 22:54	WG1155415

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
trans-1,3-Dichloropropene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
2,2-Dichloropropane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
Di-isopropyl ether	ND		0.00131	1.01	08/21/2018 22:54	WG1155415
Ethylbenzene	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
Hexachloro-1,3-butadiene	ND		0.0328	1.01	08/21/2018 22:54	WG1155415
Isopropylbenzene	ND	J3	0.00328	1.01	08/21/2018 22:54	WG1155415
p-Isopropyltoluene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
2-Butanone (MEK)	ND		0.0328	1.01	08/21/2018 22:54	WG1155415
Methylene Chloride	ND		0.0328	1.01	08/21/2018 22:54	WG1155415
4-Methyl-2-pentanone (MIBK)	ND		0.0328	1.01	08/21/2018 22:54	WG1155415
Methyl tert-butyl ether	ND		0.00131	1.01	08/21/2018 22:54	WG1155415
Naphthalene	ND		0.0164	1.01	08/21/2018 22:54	WG1155415
n-Propylbenzene	ND	J3	0.00655	1.01	08/21/2018 22:54	WG1155415
Styrene	ND	J3	0.0164	1.01	08/21/2018 22:54	WG1155415
1,1,1,2-Tetrachloroethane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
1,1,2,2-Tetrachloroethane	ND	J3	0.00328	1.01	08/21/2018 22:54	WG1155415
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00328	1.01	08/21/2018 22:54	WG1155415
Tetrachloroethene	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
Toluene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
1,2,3-Trichlorobenzene	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
1,2,4-Trichlorobenzene	ND		0.0164	1.01	08/21/2018 22:54	WG1155415
1,1,1-Trichloroethane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
1,1,2-Trichloroethane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
Trichloroethene	ND		0.00131	1.01	08/22/2018 15:45	WG1155724
Trichlorofluoromethane	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
1,2,3-Trichloropropane	ND		0.0164	1.01	08/22/2018 15:45	WG1155724
1,2,4-Trimethylbenzene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
1,2,3-Trimethylbenzene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
Vinyl chloride	ND	J3	0.00328	1.01	08/21/2018 22:54	WG1155415
1,3,5-Trimethylbenzene	ND		0.00655	1.01	08/21/2018 22:54	WG1155415
o-Xylene	ND		0.00328	1.01	08/21/2018 22:54	WG1155415
m&p-Xylene	ND		0.00524	1.01	08/22/2018 15:45	WG1155724
(S) Toluene-d8	109		80.0-120		08/21/2018 22:54	WG1155415
(S) Toluene-d8	118		80.0-120		08/22/2018 15:45	WG1155724
(S) Dibromofluoromethane	92.8		74.0-131		08/21/2018 22:54	WG1155415
(S) Dibromofluoromethane	85.9		74.0-131		08/22/2018 15:45	WG1155724
(S) 4-Bromofluorobenzene	93.3		64.0-132		08/21/2018 22:54	WG1155415
(S) 4-Bromofluorobenzene	97.0		64.0-132		08/22/2018 15:45	WG1155724

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.19	1	08/30/2018 07:23	WG1159138
Residual Range Organics (RRO)	ND		13.0	1	08/30/2018 07:23	WG1159138
(S) o-Terphenyl	78.4		18.0-148		08/30/2018 07:23	WG1159138

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.19	1	08/30/2018 10:37	WG1159484
Residual Range Organics (RRO)	ND		13.0	1	08/30/2018 10:37	WG1159484
(S) o-Terphenyl	72.5		18.0-148		08/30/2018 10:37	WG1159484



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND	<u>J3</u>	0.00778	1	08/27/2018 15:11	WG1157730
Acenaphthene	ND		0.00778	1	08/27/2018 15:11	WG1157730
Acenaphthylene	ND		0.00778	1	08/27/2018 15:11	WG1157730
Benzo(a)anthracene	ND	<u>J3</u>	0.00778	1	08/27/2018 15:11	WG1157730
Benzo(a)pyrene	ND		0.00778	1	08/27/2018 15:11	WG1157730
Benzo(b)fluoranthene	ND		0.00778	1	08/27/2018 15:11	WG1157730
Benzo(g,h,i)perylene	ND		0.00778	1	08/27/2018 15:11	WG1157730
Benzo(k)fluoranthene	ND		0.00778	1	08/27/2018 15:11	WG1157730
Chrysene	ND	<u>J3</u>	0.00778	1	08/27/2018 15:11	WG1157730
Dibenz(a,h)anthracene	ND		0.00778	1	08/27/2018 15:11	WG1157730
Fluoranthene	ND	<u>J3 J5</u>	0.00778	1	08/27/2018 15:11	WG1157730
Fluorene	ND		0.00778	1	08/27/2018 15:11	WG1157730
Indeno(1,2,3-cd)pyrene	ND		0.00778	1	08/27/2018 15:11	WG1157730
Naphthalene	ND	<u>J3</u>	0.0259	1	08/27/2018 15:11	WG1157730
Phenanthrene	ND	<u>J3 J5</u>	0.00778	1	08/27/2018 15:11	WG1157730
Pyrene	ND	<u>J3 J5</u>	0.00778	1	08/27/2018 15:11	WG1157730
1-Methylnaphthalene	ND		0.0259	1	08/27/2018 15:11	WG1157730
2-Methylnaphthalene	ND		0.0259	1	08/27/2018 15:11	WG1157730
2-Chloronaphthalene	ND		0.0259	1	08/27/2018 15:11	WG1157730
(S) Nitrobenzene-d5	78.5		14.0-149		08/27/2018 15:11	WG1157730
(S) 2-Fluorobiphenyl	69.9		34.0-125		08/27/2018 15:11	WG1157730
(S) p-Terphenyl-d14	74.7		23.0-120		08/27/2018 15:11	WG1157730

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	77.5		1	08/24/2018 14:35	WG1156889

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0258	1	08/26/2018 14:11	WG1156394

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.58	1	08/25/2018 09:06	WG1156386
Barium	88.9		0.645	1	08/25/2018 09:06	WG1156386
Cadmium	ND		0.645	1	08/25/2018 09:06	WG1156386
Chromium	13.7		1.29	1	08/25/2018 09:06	WG1156386
Lead	3.38		0.645	1	08/25/2018 09:06	WG1156386
Selenium	ND		2.58	1	08/25/2018 09:06	WG1156386
Silver	ND		1.29	1	08/25/2018 09:06	WG1156386

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0323	1	08/21/2018 23:13	WG1155415
Acrylonitrile	ND		0.0161	1	08/21/2018 23:13	WG1155415
Benzene	ND		0.00129	1	08/21/2018 23:13	WG1155415
Bromobenzene	ND	J3 J4	0.0161	1	08/21/2018 23:13	WG1155415
Bromodichloromethane	ND		0.00323	1	08/21/2018 23:13	WG1155415
Bromoform	ND		0.0323	1	08/21/2018 23:13	WG1155415
Bromomethane	ND		0.0161	1	08/22/2018 16:04	WG1155724
n-Butylbenzene	ND		0.0161	1	08/21/2018 23:13	WG1155415
sec-Butylbenzene	ND		0.0161	1	08/21/2018 23:13	WG1155415
tert-Butylbenzene	ND		0.00645	1	08/21/2018 23:13	WG1155415
Carbon tetrachloride	ND		0.00645	1	08/21/2018 23:13	WG1155415
Chlorobenzene	ND		0.00323	1	08/21/2018 23:13	WG1155415
Chlorodibromomethane	ND		0.00323	1	08/21/2018 23:13	WG1155415
Chloroethane	ND	J3	0.00645	1	08/21/2018 23:13	WG1155415
Chloroform	ND		0.00323	1	08/21/2018 23:13	WG1155415
Chloromethane	ND		0.0161	1	08/21/2018 23:13	WG1155415
2-Chlorotoluene	ND		0.00323	1	08/21/2018 23:13	WG1155415
4-Chlorotoluene	ND		0.00645	1	08/21/2018 23:13	WG1155415
1,2-Dibromo-3-Chloropropane	ND		0.0323	1	08/21/2018 23:13	WG1155415
1,2-Dibromoethane	ND		0.00323	1	08/21/2018 23:13	WG1155415
Dibromomethane	ND		0.00645	1	08/21/2018 23:13	WG1155415
1,2-Dichlorobenzene	ND		0.00645	1	08/21/2018 23:13	WG1155415
1,3-Dichlorobenzene	ND		0.00645	1	08/21/2018 23:13	WG1155415
1,4-Dichlorobenzene	ND		0.00645	1	08/21/2018 23:13	WG1155415
Dichlorodifluoromethane	ND		0.00323	1	08/21/2018 23:13	WG1155415
1,1-Dichloroethane	ND		0.00323	1	08/21/2018 23:13	WG1155415
1,2-Dichloroethane	ND		0.00323	1	08/21/2018 23:13	WG1155415
1,1-Dichloroethene	ND	J3	0.00323	1	08/21/2018 23:13	WG1155415
cis-1,2-Dichloroethene	ND		0.00323	1	08/21/2018 23:13	WG1155415
trans-1,2-Dichloroethene	ND		0.00645	1	08/21/2018 23:13	WG1155415
1,2-Dichloropropane	ND		0.00645	1	08/22/2018 16:04	WG1155724
1,1-Dichloropropene	ND		0.00323	1	08/21/2018 23:13	WG1155415
1,3-Dichloropropane	ND		0.00645	1	08/21/2018 23:13	WG1155415

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00323	1	08/21/2018 23:13	WG1155415
trans-1,3-Dichloropropene	ND		0.00645	1	08/21/2018 23:13	WG1155415
2,2-Dichloropropane	ND		0.00323	1	08/21/2018 23:13	WG1155415
Di-isopropyl ether	ND		0.00129	1	08/21/2018 23:13	WG1155415
Ethylbenzene	ND		0.00323	1	08/21/2018 23:13	WG1155415
Hexachloro-1,3-butadiene	ND		0.0323	1	08/21/2018 23:13	WG1155415
Isopropylbenzene	ND	J3	0.00323	1	08/21/2018 23:13	WG1155415
p-Isopropyltoluene	ND		0.00645	1	08/21/2018 23:13	WG1155415
2-Butanone (MEK)	0.0426		0.0323	1	08/21/2018 23:13	WG1155415
Methylene Chloride	ND		0.0323	1	08/21/2018 23:13	WG1155415
4-Methyl-2-pentanone (MIBK)	ND		0.0323	1	08/21/2018 23:13	WG1155415
Methyl tert-butyl ether	ND		0.00129	1	08/21/2018 23:13	WG1155415
Naphthalene	ND		0.0161	1	08/21/2018 23:13	WG1155415
n-Propylbenzene	ND	J3	0.00645	1	08/21/2018 23:13	WG1155415
Styrene	ND	J3	0.0161	1	08/21/2018 23:13	WG1155415
1,1,1-Tetrachloroethane	ND		0.00323	1	08/21/2018 23:13	WG1155415
1,1,2,2-Tetrachloroethane	ND	J3	0.00323	1	08/21/2018 23:13	WG1155415
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00323	1	08/21/2018 23:13	WG1155415
Tetrachloroethene	ND		0.00323	1	08/21/2018 23:13	WG1155415
Toluene	ND		0.00645	1	08/21/2018 23:13	WG1155415
1,2,3-Trichlorobenzene	ND		0.00323	1	08/21/2018 23:13	WG1155415
1,2,4-Trichlorobenzene	ND		0.0161	1	08/21/2018 23:13	WG1155415
1,1,1-Trichloroethane	ND		0.00323	1	08/21/2018 23:13	WG1155415
1,1,2-Trichloroethane	ND		0.00323	1	08/21/2018 23:13	WG1155415
Trichloroethene	ND		0.00129	1	08/22/2018 16:04	WG1155724
Trichlorofluoromethane	ND		0.00323	1	08/21/2018 23:13	WG1155415
1,2,3-Trichloropropane	ND		0.0161	1	08/22/2018 16:04	WG1155724
1,2,4-Trimethylbenzene	ND		0.00645	1	08/21/2018 23:13	WG1155415
1,2,3-Trimethylbenzene	ND		0.00645	1	08/21/2018 23:13	WG1155415
Vinyl chloride	ND	J3	0.00323	1	08/21/2018 23:13	WG1155415
1,3,5-Trimethylbenzene	ND		0.00645	1	08/21/2018 23:13	WG1155415
o-Xylene	ND		0.00323	1	08/21/2018 23:13	WG1155415
m&p-Xylene	ND		0.00516	1	08/22/2018 16:04	WG1155724
(S) Toluene-d8	114		80.0-120		08/21/2018 23:13	WG1155415
(S) Toluene-d8	117		80.0-120		08/22/2018 16:04	WG1155724
(S) Dibromofluoromethane	96.4		74.0-131		08/21/2018 23:13	WG1155415
(S) Dibromofluoromethane	88.4		74.0-131		08/22/2018 16:04	WG1155724
(S) 4-Bromofluorobenzene	94.4		64.0-132		08/21/2018 23:13	WG1155415
(S) 4-Bromofluorobenzene	98.3		64.0-132		08/22/2018 16:04	WG1155724

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.16	1	08/26/2018 11:39	WG1156678
Residual Range Organics (RRO)	ND		12.9	1	08/26/2018 11:39	WG1156678
(S) o-Terphenyl	79.4		18.0-148		08/26/2018 11:39	WG1156678

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Acenaphthene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Acenaphthylene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Benzo(a)anthracene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Benzo(a)pyrene	ND		0.00774	1	08/25/2018 13:23	WG1156692



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Benzo(g,h,i)perylene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Benzo(k)fluoranthene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Chrysene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Dibenz(a,h)anthracene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Fluoranthene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Fluorene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Indeno(1,2,3-cd)pyrene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Naphthalene	ND		0.0258	1	08/25/2018 13:23	WG1156692
Phenanthrene	ND		0.00774	1	08/25/2018 13:23	WG1156692
Pyrene	ND		0.00774	1	08/25/2018 13:23	WG1156692
1-Methylnaphthalene	ND		0.0258	1	08/25/2018 13:23	WG1156692
2-Methylnaphthalene	ND		0.0258	1	08/25/2018 13:23	WG1156692
2-Chloronaphthalene	ND		0.0258	1	08/25/2018 13:23	WG1156692
(S) Nitrobenzene-d5	33.1		14.0-149		08/25/2018 13:23	WG1156692
(S) 2-Fluorobiphenyl	48.3		34.0-125		08/25/2018 13:23	WG1156692
(S) p-Terphenyl-d14	34.4		23.0-120		08/25/2018 13:23	WG1156692

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.9		1	08/24/2018 14:35	WG1156889

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0220	1	08/26/2018 14:13	WG1156394

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.20	1	08/25/2018 09:09	WG1156386
Barium	79.7		0.550	1	08/25/2018 09:09	WG1156386
Cadmium	ND		0.550	1	08/25/2018 09:09	WG1156386
Chromium	9.83		1.10	1	08/25/2018 09:09	WG1156386
Lead	7.94		0.550	1	08/25/2018 09:09	WG1156386
Selenium	ND		2.20	1	08/25/2018 09:09	WG1156386
Silver	ND		1.10	1	08/25/2018 09:09	WG1156386

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0275	1	08/21/2018 23:32	WG1155415
Acrylonitrile	ND		0.0137	1	08/21/2018 23:32	WG1155415
Benzene	ND		0.00110	1	08/21/2018 23:32	WG1155415
Bromobenzene	ND	J3 J4	0.0137	1	08/21/2018 23:32	WG1155415
Bromodichloromethane	ND		0.00275	1	08/21/2018 23:32	WG1155415
Bromoform	ND		0.0275	1	08/21/2018 23:32	WG1155415
Bromomethane	ND		0.0137	1	08/22/2018 16:24	WG1155724
n-Butylbenzene	ND		0.0137	1	08/21/2018 23:32	WG1155415
sec-Butylbenzene	ND		0.0137	1	08/21/2018 23:32	WG1155415
tert-Butylbenzene	ND		0.00550	1	08/21/2018 23:32	WG1155415
Carbon tetrachloride	ND		0.00550	1	08/21/2018 23:32	WG1155415
Chlorobenzene	ND		0.00275	1	08/21/2018 23:32	WG1155415
Chlorodibromomethane	ND		0.00275	1	08/21/2018 23:32	WG1155415
Chloroethane	0.0248	J3	0.00550	1	08/21/2018 23:32	WG1155415
Chloroform	ND		0.00275	1	08/21/2018 23:32	WG1155415
Chloromethane	ND		0.0137	1	08/21/2018 23:32	WG1155415
2-Chlorotoluene	ND		0.00275	1	08/21/2018 23:32	WG1155415
4-Chlorotoluene	ND		0.00550	1	08/21/2018 23:32	WG1155415
1,2-Dibromo-3-Chloropropane	ND		0.0275	1	08/21/2018 23:32	WG1155415
1,2-Dibromoethane	ND		0.00275	1	08/21/2018 23:32	WG1155415
Dibromomethane	0.00611		0.00550	1	08/21/2018 23:32	WG1155415
1,2-Dichlorobenzene	ND		0.00550	1	08/21/2018 23:32	WG1155415
1,3-Dichlorobenzene	ND		0.00550	1	08/21/2018 23:32	WG1155415
1,4-Dichlorobenzene	ND		0.00550	1	08/21/2018 23:32	WG1155415
Dichlorodifluoromethane	ND		0.00275	1	08/21/2018 23:32	WG1155415
1,1-Dichloroethane	ND		0.00275	1	08/21/2018 23:32	WG1155415
1,2-Dichloroethane	ND		0.00275	1	08/21/2018 23:32	WG1155415
1,1-Dichloroethene	ND	J3	0.00275	1	08/21/2018 23:32	WG1155415
cis-1,2-Dichloroethene	ND		0.00275	1	08/21/2018 23:32	WG1155415
trans-1,2-Dichloroethene	ND		0.00550	1	08/21/2018 23:32	WG1155415
1,2-Dichloropropane	ND		0.00550	1	08/22/2018 16:24	WG1155724
1,1-Dichloropropene	0.0454		0.00275	1	08/21/2018 23:32	WG1155415
1,3-Dichloropropane	ND		0.00550	1	08/21/2018 23:32	WG1155415

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/17/18 10:10

L1019065

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00275	1	08/21/2018 23:32	WG1155415
trans-1,3-Dichloropropene	0.00897		0.00550	1	08/21/2018 23:32	WG1155415
2,2-Dichloropropane	ND		0.00275	1	08/21/2018 23:32	WG1155415
Di-isopropyl ether	ND		0.00110	1	08/21/2018 23:32	WG1155415
Ethylbenzene	ND		0.00275	1	08/21/2018 23:32	WG1155415
Hexachloro-1,3-butadiene	ND		0.0275	1	08/21/2018 23:32	WG1155415
Isopropylbenzene	ND	J3	0.00275	1	08/21/2018 23:32	WG1155415
p-Isopropyltoluene	ND		0.00550	1	08/21/2018 23:32	WG1155415
2-Butanone (MEK)	0.0383		0.0275	1	08/21/2018 23:32	WG1155415
Methylene Chloride	ND		0.0275	1	08/21/2018 23:32	WG1155415
4-Methyl-2-pentanone (MIBK)	ND		0.0275	1	08/21/2018 23:32	WG1155415
Methyl tert-butyl ether	ND		0.00110	1	08/21/2018 23:32	WG1155415
Naphthalene	ND		0.0137	1	08/21/2018 23:32	WG1155415
n-Propylbenzene	ND	J3	0.00550	1	08/21/2018 23:32	WG1155415
Styrene	ND	J3	0.0137	1	08/21/2018 23:32	WG1155415
1,1,1,2-Tetrachloroethane	ND		0.00275	1	08/21/2018 23:32	WG1155415
1,1,2,2-Tetrachloroethane	ND	J3	0.00275	1	08/21/2018 23:32	WG1155415
1,1,2-Trichlorotrifluoroethane	ND	J3	0.00275	1	08/21/2018 23:32	WG1155415
Tetrachloroethene	ND		0.00275	1	08/21/2018 23:32	WG1155415
Toluene	ND		0.00550	1	08/21/2018 23:32	WG1155415
1,2,3-Trichlorobenzene	ND		0.00275	1	08/21/2018 23:32	WG1155415
1,2,4-Trichlorobenzene	ND		0.0137	1	08/21/2018 23:32	WG1155415
1,1,1-Trichloroethane	ND		0.00275	1	08/21/2018 23:32	WG1155415
1,1,2-Trichloroethane	ND		0.00275	1	08/21/2018 23:32	WG1155415
Trichloroethene	ND		0.00110	1	08/22/2018 16:24	WG1155724
Trichlorofluoromethane	ND		0.00275	1	08/21/2018 23:32	WG1155415
1,2,3-Trichloropropane	ND		0.0137	1	08/22/2018 16:24	WG1155724
1,2,4-Trimethylbenzene	ND		0.00550	1	08/21/2018 23:32	WG1155415
1,2,3-Trimethylbenzene	ND		0.00550	1	08/21/2018 23:32	WG1155415
Vinyl chloride	ND	J3	0.00275	1	08/21/2018 23:32	WG1155415
1,3,5-Trimethylbenzene	ND		0.00550	1	08/21/2018 23:32	WG1155415
o-Xylene	ND		0.00275	1	08/21/2018 23:32	WG1155415
m&p-Xylene	ND		0.00440	1	08/22/2018 16:24	WG1155724
(S) Toluene-d8	109		80.0-120		08/21/2018 23:32	WG1155415
(S) Toluene-d8	116		80.0-120		08/22/2018 16:24	WG1155724
(S) Dibromofluoromethane	96.5		74.0-131		08/21/2018 23:32	WG1155415
(S) Dibromofluoromethane	90.0		74.0-131		08/22/2018 16:24	WG1155724
(S) 4-Bromofluorobenzene	97.9		64.0-132		08/21/2018 23:32	WG1155415
(S) 4-Bromofluorobenzene	105		64.0-132		08/22/2018 16:24	WG1155724

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.40	1	08/26/2018 12:47	WG1156678
Residual Range Organics (RRO)	ND		11.0	1	08/26/2018 12:47	WG1156678
(S) o-Terphenyl	87.0		18.0-148		08/26/2018 12:47	WG1156678

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Acenaphthene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Acenaphthylene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Benzo(a)anthracene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Benzo(a)pyrene	ND		0.00660	1	08/25/2018 13:44	WG1156692



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Benzo(g,h,i)perylene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Benzo(k)fluoranthene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Chrysene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Dibenz(a,h)anthracene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Fluoranthene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Fluorene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Indeno(1,2,3-cd)pyrene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Naphthalene	ND		0.0220	1	08/25/2018 13:44	WG1156692
Phenanthrene	ND		0.00660	1	08/25/2018 13:44	WG1156692
Pyrene	ND		0.00660	1	08/25/2018 13:44	WG1156692
1-Methylnaphthalene	ND		0.0220	1	08/25/2018 13:44	WG1156692
2-Methylnaphthalene	ND		0.0220	1	08/25/2018 13:44	WG1156692
2-Chloronaphthalene	ND		0.0220	1	08/25/2018 13:44	WG1156692
(S) Nitrobenzene-d5	82.0		14.0-149		08/25/2018 13:44	WG1156692
(S) 2-Fluorobiphenyl	87.6		34.0-125		08/25/2018 13:44	WG1156692
(S) p-Terphenyl-d14	88.7		23.0-120		08/25/2018 13:44	WG1156692

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:55	WG1154478

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	3.88		2.00	1	08/21/2018 14:17	WG1153047
Barium,Dissolved	70.6		5.00	1	08/21/2018 14:17	WG1153047
Cadmium,Dissolved	ND		1.00	1	08/21/2018 14:17	WG1153047
Chromium,Dissolved	ND		2.00	1	08/21/2018 14:17	WG1153047
Lead,Dissolved	ND		2.00	1	08/21/2018 14:17	WG1153047
Selenium,Dissolved	ND		2.00	1	08/21/2018 14:17	WG1153047
Silver,Dissolved	ND		2.00	1	08/21/2018 14:17	WG1153047

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/20/2018 03:42	WG1154658
Acrolein	ND	<u>JO</u>	50.0	1	08/20/2018 03:42	WG1154658
Acrylonitrile	ND		10.0	1	08/20/2018 03:42	WG1154658
Benzene	ND		1.00	1	08/20/2018 03:42	WG1154658
Bromobenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
Bromodichloromethane	ND		1.00	1	08/20/2018 03:42	WG1154658
Bromoform	ND		1.00	1	08/20/2018 03:42	WG1154658
Bromomethane	ND	<u>JO</u>	5.00	1	08/20/2018 03:42	WG1154658
n-Butylbenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
sec-Butylbenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
tert-Butylbenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
Carbon tetrachloride	ND		1.00	1	08/20/2018 03:42	WG1154658
Chlorobenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
Chlorodibromomethane	ND		1.00	1	08/20/2018 03:42	WG1154658
Chloroethane	ND		5.00	1	08/20/2018 03:42	WG1154658
Chloroform	ND		5.00	1	08/20/2018 03:42	WG1154658
Chloromethane	ND		2.50	1	08/20/2018 03:42	WG1154658
2-Chlorotoluene	ND		1.00	1	08/20/2018 03:42	WG1154658
4-Chlorotoluene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/20/2018 03:42	WG1154658
1,2-Dibromoethane	ND		1.00	1	08/20/2018 03:42	WG1154658
Dibromomethane	ND		1.00	1	08/20/2018 03:42	WG1154658
1,2-Dichlorobenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,3-Dichlorobenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,4-Dichlorobenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
Dichlorodifluoromethane	ND		5.00	1	08/20/2018 03:42	WG1154658
1,1-Dichloroethane	ND		1.00	1	08/20/2018 03:42	WG1154658
1,2-Dichloroethane	ND		1.00	1	08/20/2018 03:42	WG1154658
1,1-Dichloroethene	ND		1.00	1	08/20/2018 03:42	WG1154658
cis-1,2-Dichloroethene	ND		1.00	1	08/20/2018 03:42	WG1154658
trans-1,2-Dichloroethene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,2-Dichloropropane	ND		1.00	1	08/20/2018 03:42	WG1154658
1,1-Dichloropropene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,3-Dichloropropane	ND		1.00	1	08/20/2018 03:42	WG1154658
cis-1,3-Dichloropropene	ND		1.00	1	08/20/2018 03:42	WG1154658
trans-1,3-Dichloropropene	ND		1.00	1	08/20/2018 03:42	WG1154658
2,2-Dichloropropane	ND		1.00	1	08/20/2018 03:42	WG1154658
Di-isopropyl ether	ND		1.00	1	08/20/2018 03:42	WG1154658
Ethylbenzene	ND		1.00	1	08/20/2018 03:42	WG1154658

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Hexachloro-1,3-butadiene	ND		1.00	1	08/21/2018 22:38	WG1155342
Isopropylbenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
p-Isopropyltoluene	ND		1.00	1	08/20/2018 03:42	WG1154658
2-Butanone (MEK)	ND		10.0	1	08/20/2018 03:42	WG1154658
Methylene Chloride	ND		5.00	1	08/20/2018 03:42	WG1154658
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/20/2018 03:42	WG1154658
Methyl tert-butyl ether	ND		1.00	1	08/20/2018 03:42	WG1154658
Naphthalene	ND		5.00	1	08/20/2018 03:42	WG1154658
n-Propylbenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
Styrene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/20/2018 03:42	WG1154658
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/20/2018 03:42	WG1154658
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/20/2018 03:42	WG1154658
Tetrachloroethene	ND		1.00	1	08/20/2018 03:42	WG1154658
Toluene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,2,3-Trichlorobenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,2,4-Trichlorobenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,1,1-Trichloroethane	ND		1.00	1	08/20/2018 03:42	WG1154658
1,1,2-Trichloroethane	ND		1.00	1	08/20/2018 03:42	WG1154658
Trichloroethene	ND		1.00	1	08/20/2018 03:42	WG1154658
Trichlorofluoromethane	ND	JO	5.00	1	08/20/2018 03:42	WG1154658
1,2,3-Trichloropropane	ND		2.50	1	08/20/2018 03:42	WG1154658
1,2,4-Trimethylbenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,2,3-Trimethylbenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
1,3,5-Trimethylbenzene	ND		1.00	1	08/20/2018 03:42	WG1154658
Vinyl chloride	ND		1.00	1	08/20/2018 03:42	WG1154658
o-Xylene	ND		1.00	1	08/20/2018 03:42	WG1154658
m&p-Xylene	ND		2.00	1	08/20/2018 03:42	WG1154658
(S) Toluene-d8	104		80.0-120		08/20/2018 03:42	WG1154658
(S) Toluene-d8	101		80.0-120		08/21/2018 22:38	WG1155342
(S) Dibromofluoromethane	101		76.0-123		08/20/2018 03:42	WG1154658
(S) Dibromofluoromethane	104		76.0-123		08/21/2018 22:38	WG1155342
(S) 4-Bromofluorobenzene	104		80.0-120		08/20/2018 03:42	WG1154658
(S) 4-Bromofluorobenzene	99.3		80.0-120		08/21/2018 22:38	WG1155342

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	287		200	1	08/23/2018 01:35	WG1155335
Residual Range Organics (RRO)	345		250	1	08/23/2018 01:35	WG1155335
(S) o-Terphenyl	98.9		52.0-156		08/23/2018 01:35	WG1155335

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Acenaphthene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Acenaphthylene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Benzo(a)anthracene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Benzo(a)pyrene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Benzo(b)fluoranthene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Benzo(g,h,i)perylene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Benzo(k)fluoranthene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Chrysene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Dibenz(a,h)anthracene	ND		0.0500	1	08/22/2018 20:10	WG1155351



Collected date/time: 08/16/18 16:00

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Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluoranthene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Fluorene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Naphthalene	ND		0.250	1	08/22/2018 20:10	WG1155351
Phenanthrene	ND		0.0500	1	08/22/2018 20:10	WG1155351
Pyrene	ND		0.0500	1	08/22/2018 20:10	WG1155351
1-Methylnaphthalene	ND		0.250	1	08/22/2018 20:10	WG1155351
2-Methylnaphthalene	ND		0.250	1	08/22/2018 20:10	WG1155351
2-Chloronaphthalene	ND		0.250	1	08/22/2018 20:10	WG1155351
(S) Nitrobenzene-d5	99.5		31.0-160		08/22/2018 20:10	WG1155351
(S) 2-Fluorobiphenyl	105		48.0-148		08/22/2018 20:10	WG1155351
(S) p-Terphenyl-d14	105		37.0-146		08/22/2018 20:10	WG1155351

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/20/2018 15:00	WG1154478

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	3.65		2.00	1	08/21/2018 14:21	WG1153047
Barium,Dissolved	21.1		5.00	1	08/21/2018 14:21	WG1153047
Cadmium,Dissolved	ND		1.00	1	08/21/2018 14:21	WG1153047
Chromium,Dissolved	ND		2.00	1	08/21/2018 14:21	WG1153047
Lead,Dissolved	ND		2.00	1	08/21/2018 14:21	WG1153047
Selenium,Dissolved	ND		2.00	1	08/21/2018 14:21	WG1153047
Silver,Dissolved	ND		2.00	1	08/21/2018 14:21	WG1153047

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	08/19/2018 07:14	WG1154426
(S) a, a, a-Trifluorotoluene(FID)	101		77.0-122		08/19/2018 07:14	WG1154426

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/20/2018 04:03	WG1154658
Acrolein	ND	<u>JO</u>	50.0	1	08/20/2018 04:03	WG1154658
Acrylonitrile	ND		10.0	1	08/20/2018 04:03	WG1154658
Benzene	ND		1.00	1	08/20/2018 04:03	WG1154658
Bromobenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
Bromodichloromethane	ND		1.00	1	08/20/2018 04:03	WG1154658
Bromoform	ND		1.00	1	08/20/2018 04:03	WG1154658
Bromomethane	ND	<u>JO</u>	5.00	1	08/20/2018 04:03	WG1154658
n-Butylbenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
sec-Butylbenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
tert-Butylbenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
Carbon tetrachloride	ND		1.00	1	08/20/2018 04:03	WG1154658
Chlorobenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
Chlorodibromomethane	ND		1.00	1	08/20/2018 04:03	WG1154658
Chloroethane	ND		5.00	1	08/20/2018 04:03	WG1154658
Chloroform	ND		5.00	1	08/20/2018 04:03	WG1154658
Chloromethane	ND		2.50	1	08/20/2018 04:03	WG1154658
2-Chlorotoluene	ND		1.00	1	08/20/2018 04:03	WG1154658
4-Chlorotoluene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/20/2018 04:03	WG1154658
1,2-Dibromoethane	ND		1.00	1	08/20/2018 04:03	WG1154658
Dibromomethane	ND		1.00	1	08/20/2018 04:03	WG1154658
1,2-Dichlorobenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,3-Dichlorobenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,4-Dichlorobenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
Dichlorodifluoromethane	ND		5.00	1	08/20/2018 04:03	WG1154658
1,1-Dichloroethane	ND		1.00	1	08/20/2018 04:03	WG1154658
1,2-Dichloroethane	ND		1.00	1	08/20/2018 04:03	WG1154658
1,1-Dichloroethene	ND		1.00	1	08/20/2018 04:03	WG1154658
cis-1,2-Dichloroethene	ND		1.00	1	08/20/2018 04:03	WG1154658
trans-1,2-Dichloroethene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,2-Dichloropropane	ND		1.00	1	08/20/2018 04:03	WG1154658



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,1-Dichloropropene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,3-Dichloropropane	ND		1.00	1	08/20/2018 04:03	WG1154658
cis-1,3-Dichloropropene	ND		1.00	1	08/20/2018 04:03	WG1154658
trans-1,3-Dichloropropene	ND		1.00	1	08/20/2018 04:03	WG1154658
2,2-Dichloropropane	ND		1.00	1	08/20/2018 04:03	WG1154658
Di-isopropyl ether	ND		1.00	1	08/20/2018 04:03	WG1154658
Ethylbenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
Hexachloro-1,3-butadiene	ND		1.00	1	08/21/2018 22:58	WG1155342
Isopropylbenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
p-Isopropyltoluene	ND		1.00	1	08/20/2018 04:03	WG1154658
2-Butanone (MEK)	ND		10.0	1	08/20/2018 04:03	WG1154658
Methylene Chloride	ND		5.00	1	08/20/2018 04:03	WG1154658
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/20/2018 04:03	WG1154658
Methyl tert-butyl ether	ND		1.00	1	08/20/2018 04:03	WG1154658
Naphthalene	ND		5.00	1	08/20/2018 04:03	WG1154658
n-Propylbenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
Styrene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/20/2018 04:03	WG1154658
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/20/2018 04:03	WG1154658
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/20/2018 04:03	WG1154658
Tetrachloroethene	ND		1.00	1	08/20/2018 04:03	WG1154658
Toluene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,2,3-Trichlorobenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,2,4-Trichlorobenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,1,1-Trichloroethane	ND		1.00	1	08/20/2018 04:03	WG1154658
1,1,2-Trichloroethane	ND		1.00	1	08/20/2018 04:03	WG1154658
Trichloroethene	ND		1.00	1	08/20/2018 04:03	WG1154658
Trichlorofluoromethane	ND	JO	5.00	1	08/20/2018 04:03	WG1154658
1,2,3-Trichloropropane	ND		2.50	1	08/20/2018 04:03	WG1154658
1,2,4-Trimethylbenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,2,3-Trimethylbenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
1,3,5-Trimethylbenzene	ND		1.00	1	08/20/2018 04:03	WG1154658
Vinyl chloride	ND		1.00	1	08/20/2018 04:03	WG1154658
o-Xylene	ND		1.00	1	08/20/2018 04:03	WG1154658
m&p-Xylene	ND		2.00	1	08/20/2018 04:03	WG1154658
(S) Toluene-d8	104		80.0-120		08/20/2018 04:03	WG1154658
(S) Toluene-d8	100		80.0-120		08/21/2018 22:58	WG1155342
(S) Dibromofluoromethane	100		76.0-123		08/20/2018 04:03	WG1154658
(S) Dibromofluoromethane	103		76.0-123		08/21/2018 22:58	WG1155342
(S) 4-Bromofluorobenzene	103		80.0-120		08/20/2018 04:03	WG1154658
(S) 4-Bromofluorobenzene	101		80.0-120		08/21/2018 22:58	WG1155342

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/23/2018 01:53	WG1155335
Residual Range Organics (RRO)	ND		250	1	08/23/2018 01:53	WG1155335
(S) o-Terphenyl	103		52.0-156		08/23/2018 01:53	WG1155335

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/20/2018 18:32	WG1154242
Residual Range Organics (RRO)	ND		250	1	08/20/2018 18:32	WG1154242
(S) o-Terphenyl	91.6		52.0-156		08/20/2018 18:32	WG1154242



Collected date/time: 08/17/18 08:00

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Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Acenaphthene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Acenaphthylene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Benzo(a)anthracene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Benzo(a)pyrene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Benzo(b)fluoranthene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Benzo(g,h,i)perylene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Benzo(k)fluoranthene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Chrysene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Dibenz(a,h)anthracene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Fluoranthene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Fluorene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Naphthalene	ND		0.250	1	08/22/2018 20:32	WG1155351
Phenanthrene	ND		0.0500	1	08/22/2018 20:32	WG1155351
Pyrene	ND		0.0500	1	08/22/2018 20:32	WG1155351
1-Methylnaphthalene	ND		0.250	1	08/22/2018 20:32	WG1155351
2-Methylnaphthalene	ND		0.250	1	08/22/2018 20:32	WG1155351
2-Chloronaphthalene	ND		0.250	1	08/22/2018 20:32	WG1155351
(S) Nitrobenzene-d5	97.9		31.0-160		08/22/2018 20:32	WG1155351
(S) 2-Fluorobiphenyl	103		48.0-148		08/22/2018 20:32	WG1155351
(S) p-Terphenyl-d14	106		37.0-146		08/22/2018 20:32	WG1155351

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



Method Blank (MB)

(MB) R3336839-1 08/24/18 14:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L1019059-24 Original Sample (OS) • Duplicate (DUP)

(OS) L1019059-24 08/24/18 14:35 • (DUP) R3336839-3 08/24/18 14:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	84.8	86.8	1	2.32		10

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3336839-2 08/24/18 14:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	



Method Blank (MB)

(MB) R3336828-1 08/24/18 14:15

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1019078-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1019078-03 08/24/18 14:15 • (DUP) R3336828-3 08/24/18 14:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	84.9	85.7	1	1.00		10

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3336828-2 08/24/18 14:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	



Method Blank (MB)

(MB) R3335083-1 08/20/18 14:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	0.0702	↓	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) R3335083-2 08/20/18 14:51 • (LCSD) R3335083-3 08/20/18 14:53

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 %
Mercury,Dissolved	3.00	3.32	3.20	111	107	80.0-120			3.46	20

L1019065-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019065-12 08/20/18 15:00 • (MS) R3335083-4 08/20/18 15:02 • (MSD) R3335083-5 08/20/18 15:04

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 %
Mercury,Dissolved	3.00	ND	3.28	3.19	109	106	1	75.0-125			2.68	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336749-1 08/26/18 13:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.00280	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336749-2 08/26/18 13:32 • (LCSD) R3336749-3 08/26/18 13:35

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.281	0.272	93.7	90.8	80.0-120			3.15	20

L1019142-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019142-02 08/26/18 13:37 • (MS) R3336749-4 08/26/18 13:40 • (MSD) R3336749-5 08/26/18 13:42

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.0394	0.329	0.305	96.6	88.5	1	75.0-125			7.57	20



Method Blank (MB)

(MB) R3336637-1 08/25/18 08:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Arsenic	U		0.650	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.740	2.00
Silver	U		0.280	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336637-2 08/25/18 08:24 • (LCSD) R3336637-3 08/25/18 08:27

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	%	%	%			%	%
Arsenic	100	97.9	95.4	97.9	95.4	80.0-120			2.63	20
Barium	100	102	100	102	100	80.0-120			1.86	20
Cadmium	100	97.9	96.5	97.9	96.5	80.0-120			1.47	20
Chromium	100	101	99.0	101	99.0	80.0-120			1.85	20
Lead	100	99.4	97.7	99.4	97.7	80.0-120			1.68	20
Selenium	100	101	98.5	101	98.5	80.0-120			2.62	20
Silver	20.0	18.1	17.8	90.5	89.2	80.0-120			1.44	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1019464-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019464-01 08/25/18 08:29 • (MS) R3336637-6 08/25/18 08:36 • (MSD) R3336637-7 08/25/18 08:39

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	%	%		%			%	%
Arsenic	107	14.8	120	120	98.8	98.1	1	75.0-125			0.570	20
Barium	107	139	247	243	101	97.9	1	75.0-125			1.45	20
Cadmium	107	ND	106	105	98.7	98.3	1	75.0-125			0.386	20
Chromium	107	16.1	120	119	97.3	96.2	1	75.0-125			1.03	20
Lead	107	18.3	128	127	103	102	1	75.0-125			1.24	20
Selenium	107	ND	104	106	97.6	98.9	1	75.0-125			1.24	20
Silver	21.4	ND	18.9	18.9	88.6	88.3	1	75.0-125			0.363	20



Method Blank (MB)

(MB) R3335396-1 08/21/18 12:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		0.250	2.00
Barium,Dissolved	U		0.360	5.00
Cadmium,Dissolved	U		0.160	1.00
Chromium,Dissolved	U		0.540	2.00
Lead,Dissolved	U		0.240	2.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335396-2 08/21/18 12:12 • (LCSD) R3335396-3 08/21/18 12:17

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 %
Arsenic,Dissolved	50.0	50.7	51.4	101	103	80.0-120			1.30	20
Barium,Dissolved	50.0	49.1	48.6	98.1	97.1	80.0-120			1.05	20
Cadmium,Dissolved	50.0	46.9	46.6	93.9	93.2	80.0-120			0.707	20
Chromium,Dissolved	50.0	51.4	51.2	103	102	80.0-120			0.506	20
Lead,Dissolved	50.0	49.9	50.0	99.7	100	80.0-120			0.230	20
Selenium,Dissolved	50.0	49.6	51.1	99.1	102	80.0-120			3.10	20
Silver,Dissolved	50.0	47.6	47.5	95.2	95.0	80.0-120			0.284	20

L1017869-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017869-01 08/21/18 12:22 • (MS) R3335396-5 08/21/18 12:31 • (MSD) R3335396-6 08/21/18 12:35

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 %
Arsenic,Dissolved	50.0	7.12	57.2	57.6	100	101	1	75.0-125			0.748	20
Barium,Dissolved	50.0	43.6	90.9	92.7	94.6	98.2	1	75.0-125			1.95	20
Cadmium,Dissolved	50.0	ND	48.8	48.8	97.5	97.5	1	75.0-125			0.0273	20
Chromium,Dissolved	50.0	3.78	54.3	54.7	101	102	1	75.0-125			0.824	20
Lead,Dissolved	50.0	ND	50.9	51.1	102	102	1	75.0-125			0.437	20
Selenium,Dissolved	50.0	ND	50.9	52.0	102	104	1	75.0-125			2.10	20
Silver,Dissolved	50.0	ND	48.7	48.7	97.5	97.4	1	75.0-125			0.0873	20



Method Blank (MB)

(MB) R3335833-5 08/19/18 06:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-122

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) R3335833-3 08/19/18 04:56 • (LCSD) R3335833-4 08/19/18 05:18

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 %
Gasoline Range Organics-NWTPH	5500	5400	5630	98.2	102	72.0-134			4.10	20
(S) a,a,a-Trifluorotoluene(FID)				99.9	99.8	77.0-122				

L1018785-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018785-01 08/19/18 07:57 • (MS) R3335833-6 08/19/18 15:03 • (MSD) R3335833-7 08/19/18 15:25

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 %
Gasoline Range Organics-NWTPH	5500	U	5200	5510	94.5	100	1	23.0-159			5.87	20
(S) a,a,a-Trifluorotoluene(FID)					102	102		77.0-122				



Method Blank (MB)

(MB) R3336043-3 08/22/18 11:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	105			77.0-120

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336043-1 08/22/18 10:55 • (LCSD) R3336043-2 08/22/18 11:16

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 %
Gasoline Range Organics-NWTPH	5.50	4.87	5.14	88.5	93.4	70.0-133			5.43	20
(S) a,a,a-Trifluorotoluene(FID)				94.3	95.2	77.0-120				

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335398-4 08/19/18 23:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Isopropylbenzene	U		0.326	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3335398-4 08/19/18 23:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
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		0.412	1.00
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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	103			80.0-120
(S) Dibromofluoromethane	102			76.0-123
(S) 4-Bromofluorobenzene	104			80.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335398-1 08/19/18 21:58 • (LCSD) R3335398-2 08/19/18 22:19

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	140	151	112	121	10.0-160			7.26	23
Acrolein	125	66.0	71.9	52.8	57.5	10.0-160			8.63	20
Acrylonitrile	125	130	136	104	109	60.0-142			4.05	20
Benzene	25.0	23.0	22.8	92.0	91.2	69.0-123			0.833	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335398-1 08/19/18 21:58 • (LCSD) R3335398-2 08/19/18 22:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromobenzene	25.0	23.0	22.7	92.2	90.7	79.0-120			1.63	20
Bromodichloromethane	25.0	22.0	22.1	87.9	88.4	76.0-120			0.648	20
Bromoform	25.0	23.7	23.3	94.7	93.3	67.0-132			1.49	20
Bromomethane	25.0	18.8	18.3	75.1	73.3	18.0-160			2.41	20
n-Butylbenzene	25.0	24.3	24.7	97.0	99.0	72.0-126			1.97	20
sec-Butylbenzene	25.0	23.9	23.7	95.6	94.7	74.0-121			1.01	20
tert-Butylbenzene	25.0	23.7	23.5	94.8	94.0	75.0-122			0.906	20
Carbon tetrachloride	25.0	20.8	20.5	83.0	81.8	63.0-122			1.44	20
Chlorobenzene	25.0	22.6	22.9	90.3	91.4	79.0-121			1.22	20
Chlorodibromomethane	25.0	23.7	24.2	94.7	96.9	75.0-125			2.29	20
Chloroethane	25.0	20.3	20.4	81.3	81.7	47.0-152			0.468	20
Chloroform	25.0	22.6	22.4	90.4	89.4	72.0-121			1.11	20
Chloromethane	25.0	26.6	27.5	106	110	48.0-139			3.44	20
2-Chlorotoluene	25.0	23.2	22.7	92.8	90.9	74.0-122			2.06	20
4-Chlorotoluene	25.0	23.2	22.9	92.8	91.7	79.0-120			1.28	20
1,2-Dibromo-3-Chloropropane	25.0	23.7	25.3	95.0	101	64.0-127			6.30	20
1,2-Dibromoethane	25.0	23.9	24.5	95.6	97.8	77.0-123			2.28	20
Dibromomethane	25.0	23.2	23.8	92.7	95.4	78.0-120			2.82	20
1,2-Dichlorobenzene	25.0	23.8	24.1	95.3	96.4	80.0-120			1.14	20
1,3-Dichlorobenzene	25.0	23.5	23.6	94.1	94.3	72.0-123			0.191	20
1,4-Dichlorobenzene	25.0	23.1	23.2	92.2	92.9	77.0-120			0.715	20
Dichlorodifluoromethane	25.0	29.6	31.0	118	124	49.0-155			4.48	20
1,1-Dichloroethane	25.0	23.8	23.6	95.3	94.3	70.0-126			0.974	20
1,2-Dichloroethane	25.0	23.9	23.8	95.5	95.3	67.0-126			0.171	20
1,1-Dichloroethene	25.0	22.6	22.9	90.2	91.6	64.0-129			1.55	20
cis-1,2-Dichloroethene	25.0	22.7	22.7	91.0	90.9	73.0-120			0.0974	20
trans-1,2-Dichloroethene	25.0	22.5	22.6	90.1	90.5	71.0-121			0.440	20
1,2-Dichloropropane	25.0	25.8	26.1	103	104	75.0-125			1.21	20
1,1-Dichloropropene	25.0	23.3	23.1	93.3	92.4	71.0-129			0.912	20
1,3-Dichloropropane	25.0	24.0	24.8	95.8	99.2	80.0-121			3.46	20
cis-1,3-Dichloropropene	25.0	24.2	24.8	96.9	99.3	79.0-123			2.45	20
trans-1,3-Dichloropropene	25.0	24.4	24.7	97.7	99.0	74.0-127			1.25	20
2,2-Dichloropropane	25.0	20.8	20.1	83.0	80.6	60.0-125			3.00	20
Di-isopropyl ether	25.0	26.4	26.4	106	106	59.0-133			0.175	20
Ethylbenzene	25.0	22.2	22.6	88.8	90.5	77.0-120			1.88	20
Isopropylbenzene	25.0	23.7	23.0	94.9	91.9	75.0-120			3.19	20
p-Isopropyltoluene	25.0	24.0	24.2	96.1	96.9	74.0-126			0.818	20
2-Butanone (MEK)	125	136	141	109	113	37.0-158			3.58	20
Methylene Chloride	25.0	22.0	22.0	87.9	88.1	66.0-121			0.239	20
4-Methyl-2-pentanone (MIBK)	125	129	135	103	108	59.0-143			4.30	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) R3335398-1 08/19/18 21:58 • (LCSD) R3335398-2 08/19/18 22:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Methyl tert-butyl ether	25.0	24.6	24.4	98.3	97.8	64.0-123			0.560	20
Naphthalene	25.0	24.2	27.9	96.9	112	62.0-128			14.2	20
n-Propylbenzene	25.0	22.6	22.3	90.6	89.1	79.0-120			1.60	20
Styrene	25.0	23.9	23.7	95.8	94.9	78.0-124			0.894	20
1,1,1,2-Tetrachloroethane	25.0	22.3	22.4	89.1	89.8	75.0-122			0.805	20
1,1,2,2-Tetrachloroethane	25.0	23.6	23.6	94.3	94.5	71.0-122			0.179	20
Tetrachloroethene	25.0	21.4	21.8	85.4	87.1	70.0-127			1.86	20
Toluene	25.0	22.3	22.3	89.1	89.3	77.0-120			0.230	20
1,1,2-Trichlorotrifluoroethane	25.0	22.9	23.2	91.6	92.9	61.0-136			1.45	20
1,2,3-Trichlorobenzene	25.0	27.9	32.7	112	131	61.0-133			15.6	20
1,2,4-Trichlorobenzene	25.0	24.5	28.0	97.8	112	69.0-129			13.4	20
1,1,1-Trichloroethane	25.0	22.7	22.3	90.9	89.3	68.0-122			1.76	20
1,1,2-Trichloroethane	25.0	24.0	24.6	96.1	98.6	78.0-120			2.54	20
Trichloroethene	25.0	23.5	23.5	94.1	94.0	78.0-120			0.114	20
Trichlorofluoromethane	25.0	19.8	20.0	79.4	80.1	56.0-137			0.876	20
1,2,3-Trichloropropane	25.0	24.4	24.4	97.8	97.7	72.0-124			0.135	20
1,2,3-Trimethylbenzene	25.0	23.2	23.1	92.8	92.3	75.0-120			0.575	20
1,2,4-Trimethylbenzene	25.0	24.1	23.9	96.5	95.6	75.0-120			0.902	20
1,3,5-Trimethylbenzene	25.0	23.7	23.3	94.6	93.3	75.0-120			1.44	20
Vinyl chloride	25.0	25.5	26.1	102	104	64.0-133			2.31	20
o-Xylene	25.0	22.7	22.5	90.8	90.0	78.0-120			0.860	20
m&p-Xylenes	50.0	44.6	45.0	89.2	90.0	77.0-120			0.917	20
(S) Toluene-d8				102	103	80.0-120				
(S) Dibromofluoromethane				99.5	98.8	76.0-123				
(S) 4-Bromofluorobenzene				102	101	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336221-3 08/21/18 21:12

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.256	1.00
(S) Toluene-d8	105			80.0-120
(S) Dibromofluoromethane	104			76.0-123
(S) 4-Bromofluorobenzene	102			80.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336221-1 08/21/18 20:12 • (LCSD) R3336221-2 08/21/18 20:32

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 %
Hexachloro-1,3-butadiene	25.0	24.2	24.6	96.7	98.3	64.0-131			1.63	20
(S) Toluene-d8				94.5	96.4	80.0-120				
(S) Dibromofluoromethane				106	105	76.0-123				
(S) 4-Bromofluorobenzene				97.2	101	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335582-3 08/21/18 19:44

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
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
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	U		0.0125	0.0250

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3335582-3 08/21/18 19:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichlorofluoromethane	U		0.000500	0.00250
1,2,3-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
o-Xylene	U		0.00100	0.00250
(S) Toluene-d8	104			80.0-120
(S) Dibromofluoromethane	109			74.0-131
(S) 4-Bromofluorobenzene	97.6			64.0-132

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) R3335582-1 08/21/18 17:48 • (LCSD) R3335582-2 08/21/18 18:07

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	0.957	0.896	153	143	25.3-178			6.65	22.9
Acrylonitrile	0.625	0.717	0.747	115	119	57.8-143			4.00	20
Benzene	0.125	0.122	0.109	97.9	87.1	72.6-120			11.7	20
Bromobenzene	0.125	0.146	0.116	117	92.6	80.3-115	J4	J3	23.2	20
Bromodichloromethane	0.125	0.119	0.133	95.1	107	75.3-119			11.5	20
Bromoform	0.125	0.132	0.120	106	95.9	69.1-135			9.90	20
n-Butylbenzene	0.125	0.113	0.117	90.5	93.4	74.2-134			3.13	20
sec-Butylbenzene	0.125	0.124	0.114	99.1	91.2	77.8-129			8.27	20
tert-Butylbenzene	0.125	0.131	0.119	105	95.3	77.2-129			9.75	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335582-1 08/21/18 17:48 • (LCSD) R3335582-2 08/21/18 18:07

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 %
Carbon tetrachloride	0.125	0.126	0.132	101	106	69.4-129			4.65	20
Chlorobenzene	0.125	0.133	0.133	106	106	78.9-122			0.0347	20
Chlorodibromomethane	0.125	0.106	0.118	85.1	94.5	76.4-126			10.5	20
Chloroethane	0.125	0.108	0.135	86.6	108	47.2-147		J3	22.3	20
Chloroform	0.125	0.128	0.121	102	96.5	73.3-122			5.93	20
Chloromethane	0.125	0.105	0.128	84.2	102	53.1-135			19.3	20
2-Chlorotoluene	0.125	0.139	0.119	111	95.2	74.6-127			15.7	20
4-Chlorotoluene	0.125	0.141	0.121	113	96.8	79.5-123			15.6	20
1,2-Dibromo-3-Chloropropane	0.125	0.131	0.130	105	104	64.9-131			0.847	20
1,2-Dibromoethane	0.125	0.111	0.123	88.5	98.2	78.7-123			10.4	20
Dibromomethane	0.125	0.136	0.133	109	107	78.5-117			2.13	20
1,2-Dichlorobenzene	0.125	0.129	0.122	103	98.0	83.6-119			5.33	20
1,3-Dichlorobenzene	0.125	0.126	0.123	101	98.0	75.9-129			2.76	20
1,4-Dichlorobenzene	0.125	0.115	0.118	91.7	94.8	81.0-115			3.34	20
Dichlorodifluoromethane	0.125	0.120	0.127	95.7	101	50.9-139			5.73	20
1,1-Dichloroethane	0.125	0.122	0.133	97.5	106	71.7-125			8.48	20
1,2-Dichloroethane	0.125	0.125	0.128	100	102	67.2-121			2.10	20
1,1-Dichloroethene	0.125	0.110	0.139	88.3	111	60.6-133		J3	22.7	20
cis-1,2-Dichloroethene	0.125	0.120	0.111	96.4	88.7	76.1-121			8.27	20
trans-1,2-Dichloroethene	0.125	0.118	0.141	94.1	113	70.7-124			18.3	20
1,1-Dichloropropene	0.125	0.118	0.108	94.7	86.6	71.2-126			8.93	20
1,3-Dichloropropene	0.125	0.126	0.128	101	102	80.3-114			1.76	20
cis-1,3-Dichloropropene	0.125	0.116	0.118	92.7	94.2	77.3-123			1.60	20
trans-1,3-Dichloropropene	0.125	0.112	0.133	89.3	106	73.0-127			17.3	20
2,2-Dichloropropane	0.125	0.120	0.122	96.0	97.3	61.9-132			1.34	20
Di-isopropyl ether	0.125	0.121	0.141	96.5	113	67.2-131			15.4	20
Ethylbenzene	0.125	0.125	0.132	100	105	78.6-124			5.11	20
Hexachloro-1,3-butadiene	0.125	0.128	0.125	102	99.7	69.2-136			2.62	20
Isopropylbenzene	0.125	0.140	0.113	112	90.2	79.4-126		J3	21.7	20
p-Isopropyltoluene	0.125	0.117	0.116	93.3	92.4	75.4-132			0.946	20
2-Butanone (MEK)	0.625	0.807	0.669	129	107	44.5-154			18.7	21.3
Methylene Chloride	0.125	0.122	0.143	97.4	115	68.2-119			16.2	20
4-Methyl-2-pentanone (MIBK)	0.625	0.731	0.691	117	111	61.1-138			5.64	20
Methyl tert-butyl ether	0.125	0.128	0.148	102	119	70.2-122			14.7	20
Naphthalene	0.125	0.122	0.124	97.6	98.8	69.9-132			1.23	20
n-Propylbenzene	0.125	0.138	0.112	110	89.6	80.2-124		J3	20.7	20
Styrene	0.125	0.146	0.118	117	94.3	79.4-124		J3	21.3	20
1,1,1,2-Tetrachloroethane	0.125	0.111	0.126	88.7	101	76.7-127			12.8	20
1,1,2,2-Tetrachloroethane	0.125	0.144	0.106	115	84.7	78.8-124		J3	30.3	20
Tetrachloroethene	0.125	0.105	0.109	84.1	87.4	71.1-133			3.84	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) R3335582-1 08/21/18 17:48 • (LCSD) R3335582-2 08/21/18 18:07

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 %
Toluene	0.125	0.118	0.119	94.6	94.9	76.7-116			0.321	20
1,1,2-Trichlorotrifluoroethane	0.125	0.105	0.129	84.2	103	62.6-138		J3	20.3	20
1,2,3-Trichlorobenzene	0.125	0.123	0.123	98.5	98.6	72.5-137			0.0666	20
1,2,4-Trichlorobenzene	0.125	0.119	0.125	95.0	100	74.0-137			5.14	20
1,1,1-Trichloroethane	0.125	0.117	0.122	93.4	97.8	69.9-127			4.63	20
1,1,2-Trichloroethane	0.125	0.121	0.126	97.1	101	81.9-119			3.73	20
Trichlorofluoromethane	0.125	0.107	0.128	85.3	102	51.5-151			18.3	20
1,2,3-Trimethylbenzene	0.125	0.118	0.117	94.2	93.6	79.4-118			0.638	20
1,2,4-Trimethylbenzene	0.125	0.136	0.122	108	97.8	77.1-124			10.3	20
1,3,5-Trimethylbenzene	0.125	0.137	0.120	110	96.3	79.0-125			13.0	20
Vinyl chloride	0.125	0.111	0.140	88.9	112	58.4-134		J3	22.9	20
o-Xylene	0.125	0.126	0.128	101	102	78.5-124			1.03	20
(S) Toluene-d8				101	105	80.0-120				
(S) Dibromofluoromethane				104	99.3	74.0-131				
(S) 4-Bromofluorobenzene				118	95.1	64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1019089-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019089-01 08/22/18 00:29 • (MS) R3335582-4 08/22/18 02:41 • (MSD) R3335582-5 08/22/18 03:00

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 %
Acetone	0.736	ND	0.728	0.751	98.9	102	1	10.0-130			3.05	31.5
Acrylonitrile	0.736	ND	0.576	0.485	78.3	65.9	1	39.3-152			17.2	27.2
Benzene	0.147	ND	0.159	0.136	108	92.4	1	47.8-131			15.4	22.8
Bromobenzene	0.147	ND	0.173	0.153	118	104	1	40.0-130			12.4	27.4
Bromodichloromethane	0.147	ND	0.157	0.153	106	104	1	50.6-128			2.25	22.8
Bromoform	0.147	ND	0.158	0.133	107	90.2	1	43.3-139			17.3	25.9
n-Butylbenzene	0.147	ND	0.168	0.159	114	108	1	23.6-146			5.42	39.2
sec-Butylbenzene	0.147	ND	0.183	0.153	124	104	1	31.0-142			17.8	34.7
tert-Butylbenzene	0.147	ND	0.177	0.149	120	101	1	36.9-142			17.0	31.7
Carbon tetrachloride	0.147	ND	0.170	0.163	116	111	1	46.0-140			4.27	27.2
Chlorobenzene	0.147	ND	0.165	0.170	112	115	1	44.1-134			2.52	25.7
Chlorodibromomethane	0.147	ND	0.137	0.147	93.0	100	1	49.7-134			7.40	24
Chloroethane	0.147	ND	0.0836	0.103	56.8	70.2	1	5.00-164			21.2	28.4
Chloroform	0.147	ND	0.156	0.138	106	93.7	1	51.2-133			12.1	22.8
Chloromethane	0.147	ND	0.143	0.181	97.2	123	1	31.4-141			23.4	24.6
2-Chlorotoluene	0.147	ND	0.174	0.133	118	90.4	1	36.1-137			26.6	28.9
4-Chlorotoluene	0.147	ND	0.175	0.141	119	96.1	1	35.4-137			21.2	29.8
1,2-Dibromo-3-Chloropropane	0.147	ND	0.125	0.122	84.7	82.8	1	40.4-138			2.34	30.8



L1019089-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019089-01 08/22/18 00:29 • (MS) R3335582-4 08/22/18 02:41 • (MSD) R3335582-5 08/22/18 03:00

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 %
1,2-Dibromoethane	0.147	ND	0.140	0.132	95.1	89.6	1	50.2-133			5.96	23.6
Dibromomethane	0.147	ND	0.152	0.145	103	98.2	1	52.4-128			5.19	23
1,2-Dichlorobenzene	0.147	ND	0.147	0.155	100	105	1	34.6-139			5.20	29.9
1,3-Dichlorobenzene	0.147	ND	0.154	0.146	105	99.0	1	28.4-142			5.69	31.2
1,4-Dichlorobenzene	0.147	ND	0.144	0.137	97.8	92.9	1	35.0-133			5.15	31.1
Dichlorodifluoromethane	0.147	ND	0.219	0.258	149	175	1	31.2-144	J5	J5	16.2	30.2
1,1-Dichloroethane	0.147	ND	0.157	0.133	107	90.5	1	49.1-136			16.7	22.9
1,2-Dichloroethane	0.147	ND	0.139	0.138	94.2	94.0	1	47.1-129			0.218	22.7
1,1-Dichloroethene	0.147	ND	0.150	0.173	102	117	1	36.1-142			14.3	25.6
cis-1,2-Dichloroethene	0.147	ND	0.153	0.127	104	86.3	1	50.6-133			18.5	23
trans-1,2-Dichloroethene	0.147	ND	0.149	0.168	101	114	1	43.8-135			12.3	24.8
1,1-Dichloropropene	0.147	ND	0.143	0.131	97.2	89.0	1	43.0-137			8.87	26.4
1,3-Dichloropropane	0.147	ND	0.153	0.152	104	103	1	51.4-127			1.02	23.1
cis-1,3-Dichloropropene	0.147	ND	0.144	0.142	97.7	96.3	1	48.4-134			1.47	23.6
trans-1,3-Dichloropropene	0.147	ND	0.145	0.143	98.3	97.2	1	46.6-135			1.13	25.3
2,2-Dichloropropane	0.147	ND	0.151	0.145	102	98.6	1	45.2-141			3.81	26.6
Di-isopropyl ether	0.147	ND	0.149	0.126	101	85.4	1	46.7-140			16.6	23.5
Ethylbenzene	0.147	ND	0.162	0.161	110	109	1	44.8-135			0.667	26.9
Hexachloro-1,3-butadiene	0.147	ND	0.178	0.193	121	131	1	10.0-149			8.20	40
Isopropylbenzene	0.147	ND	0.182	0.149	122	100	1	41.9-139			19.7	29.3
p-Isopropyltoluene	0.147	ND	0.172	0.160	117	108	1	27.3-146			7.48	35.1
2-Butanone (MEK)	0.736	ND	0.719	0.734	97.7	99.6	1	23.9-170			1.97	28.3
Methylene Chloride	0.147	ND	0.140	0.165	95.2	112	1	46.7-125			16.3	22.2
4-Methyl-2-pentanone (MIBK)	0.736	ND	0.720	0.706	97.8	95.8	1	42.4-146			2.01	26.7
Methyl tert-butyl ether	0.147	ND	0.121	0.135	81.9	91.8	1	50.4-131			11.4	24.8
Naphthalene	0.147	ND	0.137	0.140	93.3	94.9	1	18.4-145			1.73	34
n-Propylbenzene	0.147	ND	0.175	0.142	118	94.7	1	35.2-139			21.3	31.9
Styrene	0.147	ND	0.184	0.142	125	96.5	1	39.7-137			25.5	28.2
1,1,1,2-Tetrachloroethane	0.147	ND	0.134	0.167	91.0	113	1	48.8-136			22.0	25.5
1,1,2,2-Tetrachloroethane	0.147	ND	0.163	0.120	111	81.2	1	45.7-140		J3	31.0	26.4
Tetrachloroethene	0.147	ND	0.129	0.142	87.9	96.1	1	37.7-140			8.90	29.2
Toluene	0.147	ND	0.161	0.154	109	104	1	47.8-127			4.45	24.3
1,1,2-Trichlorotrifluoroethane	0.147	ND	0.146	0.167	98.9	113	1	35.7-146			13.6	28.8
1,2,3-Trichlorobenzene	0.147	ND	0.147	0.163	100	111	1	10.0-150			10.2	38.5
1,2,4-Trichlorobenzene	0.147	ND	0.143	0.156	96.9	106	1	10.0-153			8.65	39.3
1,1,1-Trichloroethane	0.147	ND	0.159	0.152	108	103	1	49.0-138			4.32	25.3
1,1,2-Trichloroethane	0.147	ND	0.148	0.144	101	97.8	1	52.3-132			2.86	23.4
Trichlorofluoromethane	0.147	ND	0.102	0.116	69.5	79.0	1	12.8-169			12.7	29.7
1,2,3-Trimethylbenzene	0.147	0.00878	0.158	0.152	101	97.4	1	41.0-133			3.74	27.6

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1019089-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019089-01 08/22/18 00:29 • (MS) R3335582-4 08/22/18 02:41 • (MSD) R3335582-5 08/22/18 03:00

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 %
1,2,4-Trimethylbenzene	0.147	0.0366	0.291	0.255	173	148	1	32.9-139	J5	J5	13.4	30.6
1,3,5-Trimethylbenzene	0.147	ND	0.178	0.151	121	102	1	37.1-138			16.4	30.6
Vinyl chloride	0.147	ND	0.143	0.175	97.2	119	1	32.0-146			19.9	26.3
o-Xylene	0.147	ND	0.160	0.169	108	115	1	43.2-136			5.85	26.2
<i>(S) Toluene-d8</i>					105	109		80.0-120				
<i>(S) Dibromofluoromethane</i>					95.5	94.8		74.0-131				
<i>(S) 4-Bromofluorobenzene</i>					111	96.1		64.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335939-2 08/22/18 10:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Bromomethane	U		0.00370	0.0125
1,2-Dichloropropane	U		0.00127	0.00500
Trichloroethene	U		0.000400	0.00100
1,2,3-Trichloropropane	U		0.00510	0.0125
m&p-Xylenes	0.00169	↓	0.00150	0.00400
(S) Toluene-d8	117			80.0-120
(S) Dibromofluoromethane	85.2			74.0-131
(S) 4-Bromofluorobenzene	109			64.0-132

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3335939-1 08/22/18 09:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Bromomethane	0.125	0.102	81.5	23.0-191	
1,2-Dichloropropane	0.125	0.108	86.6	76.9-123	
Trichloroethene	0.125	0.122	97.2	77.2-122	
1,2,3-Trichloropropane	0.125	0.150	120	74.0-124	
m&p-Xylenes	0.250	0.226	90.5	77.3-124	
(S) Toluene-d8			109	80.0-120	
(S) Dibromofluoromethane			92.9	74.0-131	
(S) 4-Bromofluorobenzene			108	64.0-132	



Method Blank (MB)

(MB) R3336023-1 08/23/18 00:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	83.0			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336023-2 08/23/18 01:00 • (LCSD) R3336023-3 08/23/18 01:17

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 %
Diesel Range Organics (DRO)	750	718	752	95.7	100	50.0-150			4.63	20
Residual Range Organics (RRO)	750	732	775	97.6	103	50.0-150			5.71	20
<i>(S) o-Terphenyl</i>				96.5	101	52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336745-1 08/25/18 17:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	91.3			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336745-2 08/25/18 17:29 • (LCSD) R3336745-4 08/26/18 10:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	20.1	22.7	80.4	90.8	50.0-150			12.1	20
Residual Range Organics (RRO)	25.0	15.7	18.4	62.8	73.6	50.0-150			15.8	20
(S) o-Terphenyl				77.5	83.5	18.0-148				

L1019065-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019065-02 08/26/18 10:31 • (MS) R3336745-5 08/26/18 10:45 • (MSD) R3336745-6 08/26/18 10:58

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	31.7	ND	27.6	25.6	87.2	80.8	1	50.0-150			7.62	20
Residual Range Organics (RRO)	31.7	ND	23.4	21.7	74.0	68.4	1	50.0-150			7.87	20
(S) o-Terphenyl					80.2	71.5		18.0-148				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3337850-1 08/30/18 01:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	82.9			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337850-2 08/30/18 02:12 • (LCSD) R3337850-3 08/30/18 02:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	25.2	23.8	101	95.2	50.0-150			5.71	20
Residual Range Organics (RRO)	25.0	22.9	22.0	91.6	88.0	50.0-150			4.01	20
<i>(S) o-Terphenyl</i>				80.9	76.1	18.0-148				

L1021500-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021500-05 08/30/18 02:53 • (MS) R3337850-4 08/30/18 03:06 • (MSD) R3337850-5 08/30/18 03:20

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 %
Diesel Range Organics (DRO)	24.8	U	89.5	167	249	569	10	50.0-150	<u>J5</u>	<u>J3 J5</u>	60.4	20
Residual Range Organics (RRO)	24.8	U	297	596	742	1970	10	50.0-150	<u>V</u>	<u>J3 V</u>	67.0	20
<i>(S) o-Terphenyl</i>					67.2	66.4		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3335303-1 08/20/18 15:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	87.5			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335303-2 08/20/18 15:34 • (LCSD) R3335303-3 08/20/18 15:52

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 %
Diesel Range Organics (DRO)	750	682	692	90.9	92.3	50.0-150			1.46	20
Residual Range Organics (RRO)	750	710	688	94.7	91.7	50.0-150			3.15	20
(S) o-Terphenyl				99.5	96.5	52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336885-1 08/26/18 13:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	104			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336885-2 08/26/18 13:54 • (LCSD) R3336885-3 08/26/18 14:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	26.3	27.1	105	108	50.0-150			3.00	20
Residual Range Organics (RRO)	25.0	21.9	22.3	87.6	89.2	50.0-150			1.81	20
(S) o-Terphenyl				98.3	103	18.0-148				

L1020192-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020192-04 08/27/18 20:27 • (MS) R3337062-1 08/27/18 20:40 • (MSD) R3337062-2 08/27/18 20:52

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	28.2	ND	34.5	34.7	122	123	1	50.0-150			0.651	20
Residual Range Organics (RRO)	28.2	ND	15.1	13.9	53.6	49.2	1	50.0-150		J6	8.56	20
(S) o-Terphenyl					97.1	90.2		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3337947-1 08/30/18 09:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	82.9			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337947-2 08/30/18 10:10 • (LCSD) R3337947-3 08/30/18 10:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	24.3	24.2	97.2	96.8	50.0-150			0.412	20
Residual Range Organics (RRO)	25.0	17.6	16.7	70.4	66.8	50.0-150			5.25	20
<i>(S) o-Terphenyl</i>				85.4	85.9	18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336394-1 08/22/18 14:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	0.00407	U	0.00212	0.0500
Benzo(g,h,i)perylene	0.00234	U	0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	0.0337	U	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	106			31.0-160
(S) 2-Fluorobiphenyl	112			48.0-148
(S) p-Terphenyl-d14	115			37.0-146

- 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) R3336394-2 08/22/18 14:41 • (LCSD) R3336394-3 08/22/18 15:03

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 %
Anthracene	2.00	2.23	2.22	111	111	64.0-142			0.449	20
Acenaphthene	2.00	1.96	1.92	98.0	96.0	66.0-132			2.06	20
Acenaphthylene	2.00	2.25	2.21	112	111	65.0-132			1.79	20
Benzo(a)anthracene	2.00	2.25	2.23	112	111	59.0-134			0.893	20
Benzo(a)pyrene	2.00	2.29	2.24	115	112	61.0-145			2.21	20
Benzo(b)fluoranthene	2.00	2.23	2.18	111	109	57.0-136			2.27	20
Benzo(g,h,i)perylene	2.00	2.09	2.01	104	100	54.0-140			3.90	20
Benzo(k)fluoranthene	2.00	2.28	2.22	114	111	57.0-141			2.67	20
Chrysene	2.00	2.19	2.16	109	108	63.0-140			1.38	20
Dibenz(a,h)anthracene	2.00	2.12	2.01	106	100	49.0-141			5.33	20
Fluoranthene	2.00	2.27	2.24	114	112	65.0-143			1.33	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336394-2 08/22/18 14:41 • (LCSD) R3336394-3 08/22/18 15:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	2.14	2.09	107	104	64.0-129			2.36	20
Indeno(1,2,3-cd)pyrene	2.00	2.09	2.02	104	101	53.0-141			3.41	20
Naphthalene	2.00	1.99	1.96	99.5	98.0	68.0-129			1.52	20
Phenanthrene	2.00	1.91	1.88	95.5	94.0	62.0-132			1.58	20
Pyrene	2.00	2.14	2.11	107	105	58.0-156			1.41	20
1-Methylnaphthalene	2.00	2.13	2.10	106	105	68.0-137			1.42	20
2-Methylnaphthalene	2.00	2.05	2.03	103	102	68.0-134			0.980	20
2-Chloronaphthalene	2.00	1.96	1.93	98.0	96.5	65.0-129			1.54	20
<i>(S) Nitrobenzene-d5</i>				97.5	98.0	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				108	106	48.0-148				
<i>(S) p-Terphenyl-d14</i>				107	105	37.0-146				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1019010-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019010-05 08/22/18 17:15 • (MS) R3336394-4 08/22/18 17:37 • (MSD) R3336394-5 08/22/18 17:59

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	1.90	U	2.07	2.07	109	109	1	60.0-142			0.000	20
Acenaphthene	1.90	0.0150	1.85	1.86	96.6	97.1	1	46.0-149			0.539	20
Acenaphthylene	1.90	U	2.13	2.14	112	113	1	54.0-142			0.468	20
Benzo(a)anthracene	1.90	U	2.12	2.17	112	114	1	55.0-134			2.33	20
Benzo(a)pyrene	1.90	U	1.96	2.04	103	107	1	58.0-136			4.00	20
Benzo(b)fluoranthene	1.90	0.00385	1.90	1.91	99.8	100	1	54.0-130			0.525	20
Benzo(g,h,i)perylene	1.90	0.00279	1.72	1.81	90.4	95.1	1	46.0-135			5.10	20
Benzo(k)fluoranthene	1.90	U	1.89	2.04	99.5	107	1	52.0-131			7.63	20
Chrysene	1.90	U	2.01	2.05	106	108	1	55.0-137			1.97	20
Dibenz(a,h)anthracene	1.90	U	1.77	1.87	93.2	98.4	1	36.0-140			5.49	20
Fluoranthene	1.90	U	2.09	2.10	110	111	1	58.0-144			0.477	20
Fluorene	1.90	0.0177	2.03	2.06	106	107	1	49.0-142			1.47	20
Indeno(1,2,3-cd)pyrene	1.90	U	1.66	1.76	87.4	92.6	1	46.0-134			5.85	20
Naphthalene	1.90	0.0530	1.90	1.93	97.2	98.8	1	29.0-154			1.57	20
Phenanthrene	1.90	0.0334	1.83	1.84	94.6	95.1	1	44.0-145			0.545	20
Pyrene	1.90	0.0136	2.04	2.06	107	108	1	62.0-150			0.976	20
1-Methylnaphthalene	1.90	0.0245	2.05	2.07	107	108	1	26.0-160			0.971	20
2-Methylnaphthalene	1.90	0.0302	1.98	2.00	103	104	1	51.0-150			1.01	20
2-Chloronaphthalene	1.90	U	1.87	1.88	98.4	98.9	1	57.0-136			0.533	20
<i>(S) Nitrobenzene-d5</i>					97.9	97.4		31.0-160				
<i>(S) 2-Fluorobiphenyl</i>					108	108		48.0-148				
<i>(S) p-Terphenyl-d14</i>					103	105		37.0-146				



Method Blank (MB)

(MB) R3336751-3 08/25/18 10:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	98.8			14.0-149
(S) 2-Fluorobiphenyl	109			34.0-125
(S) p-Terphenyl-d14	107			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336751-1 08/25/18 09:56 • (LCSD) R3336751-2 08/25/18 10:16

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 %
Anthracene	0.0800	0.0696	0.0765	87.0	95.6	50.0-125			9.45	20
Acenaphthene	0.0800	0.0753	0.0716	94.1	89.5	52.0-120			5.04	20
Acenaphthylene	0.0800	0.0764	0.0723	95.5	90.4	51.0-120			5.51	20
Benzo(a)anthracene	0.0800	0.0715	0.0674	89.4	84.3	46.0-121			5.90	20
Benzo(a)pyrene	0.0800	0.0550	0.0540	68.8	67.5	42.0-121			1.83	20
Benzo(b)fluoranthene	0.0800	0.0657	0.0613	82.1	76.6	42.0-123			6.93	20
Benzo(g,h,i)perylene	0.0800	0.0717	0.0680	89.6	85.0	43.0-128			5.30	20
Benzo(k)fluoranthene	0.0800	0.0868	0.0837	109	105	45.0-128			3.64	20
Chrysene	0.0800	0.0817	0.0778	102	97.3	48.0-127			4.89	20
Dibenz(a,h)anthracene	0.0800	0.0739	0.0700	92.4	87.5	43.0-132			5.42	20
Fluoranthene	0.0800	0.0800	0.0761	100	95.1	49.0-129			5.00	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336751-1 08/25/18 09:56 • (LCSD) R3336751-2 08/25/18 10:16

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 %
Fluorene	0.0800	0.0753	0.0717	94.1	89.6	50.0-120			4.90	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0729	0.0693	91.1	86.6	44.0-131			5.06	20
Naphthalene	0.0800	0.0695	0.0658	86.9	82.3	50.0-120			5.47	20
Phenanthrene	0.0800	0.0755	0.0724	94.4	90.5	48.0-120			4.19	20
Pyrene	0.0800	0.0734	0.0696	91.8	87.0	48.0-135			5.31	20
1-Methylnaphthalene	0.0800	0.0749	0.0711	93.6	88.9	52.0-122			5.21	20
2-Methylnaphthalene	0.0800	0.0717	0.0682	89.6	85.3	52.0-120			5.00	20
2-Chloronaphthalene	0.0800	0.0776	0.0734	97.0	91.8	50.0-120			5.56	20
(S) Nitrobenzene-d5				90.3	84.9	14.0-149				
(S) 2-Fluorobiphenyl				97.5	92.6	34.0-125				
(S) p-Terphenyl-d14				93.4	87.9	23.0-120				

L1019104-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019104-03 08/25/18 14:25 • (MS) R3336751-4 08/25/18 14:46 • (MSD) R3336751-5 08/25/18 15:07

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 %
Anthracene	0.0903	0.00239	0.0694	0.0688	74.2	74.7	1	20.0-136			0.820	24
Acenaphthene	0.0903	0.00126	0.0730	0.0703	79.5	77.7	1	29.0-124			3.80	20
Acenaphthylene	0.0903	U	0.0727	0.0713	80.5	80.2	1	35.0-120			1.89	20
Benzo(a)anthracene	0.0903	0.00679	0.0704	0.0719	70.5	73.2	1	13.0-132			2.07	27
Benzo(a)pyrene	0.0903	0.00650	0.0672	0.0696	67.3	71.0	1	14.0-138			3.48	27
Benzo(b)fluoranthene	0.0903	0.00890	0.0655	0.0662	62.8	64.5	1	10.0-129			1.03	31
Benzo(g,h,i)perylene	0.0903	0.00658	0.0627	0.0653	62.2	66.1	1	10.0-133			4.07	30
Benzo(k)fluoranthene	0.0903	0.00288	0.0685	0.0699	72.7	75.3	1	15.0-131			1.97	27
Chrysene	0.0903	0.0105	0.0779	0.0778	74.6	75.7	1	15.0-137			0.146	25
Dibenz(a,h)anthracene	0.0903	0.00160	0.0630	0.0647	68.1	71.0	1	15.0-132			2.66	27
Fluoranthene	0.0903	0.0132	0.0864	0.0864	81.2	82.4	1	13.0-139			0.000	28
Fluorene	0.0903	0.000716	0.0725	0.0705	79.5	78.5	1	27.0-122			2.70	22
Indeno(1,2,3-cd)pyrene	0.0903	0.00398	0.0618	0.0634	64.1	66.8	1	11.0-133			2.54	29
Naphthalene	0.0903	0.0133	0.0722	0.0811	65.3	76.3	1	18.0-136			11.5	21
Phenanthrene	0.0903	0.0248	0.0821	0.0839	63.4	66.5	1	15.0-133			2.19	25
Pyrene	0.0903	0.0143	0.0790	0.0791	71.7	73.0	1	11.0-146			0.143	29
1-Methylnaphthalene	0.0903	0.0361	0.0997	0.0844	70.5	54.3	1	24.0-137			16.6	22
2-Methylnaphthalene	0.0903	0.0266	0.0945	0.0831	75.1	63.5	1	23.0-136			12.8	22
2-Chloronaphthalene	0.0903	U	0.0860	0.0721	95.2	81.1	1	36.0-120			17.5	20
(S) Nitrobenzene-d5					77.3	60.7		14.0-149				
(S) 2-Fluorobiphenyl					94.9	78.3		34.0-125				
(S) p-Terphenyl-d14					80.8	72.6		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336974-3 08/27/18 14:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	109			14.0-149
(S) 2-Fluorobiphenyl	105			34.0-125
(S) p-Terphenyl-d14	112			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336974-1 08/27/18 13:47 • (LCSD) R3336974-2 08/27/18 14:08

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 %
Anthracene	0.0800	0.0820	0.0699	103	87.4	50.0-126			15.9	20
Acenaphthene	0.0800	0.0742	0.0763	92.8	95.4	50.0-120			2.79	20
Acenaphthylene	0.0800	0.0722	0.0746	90.3	93.3	50.0-120			3.27	20
Benzo(a)anthracene	0.0800	0.0775	0.0799	96.9	99.9	45.0-120			3.05	20
Benzo(a)pyrene	0.0800	0.0638	0.0694	79.8	86.8	42.0-120			8.41	20
Benzo(b)fluoranthene	0.0800	0.0801	0.0814	100	102	42.0-121			1.61	20
Benzo(g,h,i)perylene	0.0800	0.0775	0.0789	96.9	98.6	45.0-125			1.79	20
Benzo(k)fluoranthene	0.0800	0.0783	0.0828	97.9	104	49.0-125			5.59	20
Chrysene	0.0800	0.0820	0.0854	103	107	49.0-122			4.06	20
Dibenz(a,h)anthracene	0.0800	0.0787	0.0798	98.4	99.8	47.0-125			1.39	20
Fluoranthene	0.0800	0.0797	0.0842	99.6	105	49.0-129			5.49	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336974-1 08/27/18 13:47 • (LCSD) R3336974-2 08/27/18 14:08

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 %
Fluorene	0.0800	0.0709	0.0728	88.6	91.0	49.0-120			2.64	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0786	0.0807	98.3	101	46.0-125			2.64	20
Naphthalene	0.0800	0.0632	0.0631	79.0	78.9	50.0-120			0.158	20
Phenanthrene	0.0800	0.0736	0.0756	92.0	94.5	47.0-120			2.68	20
Pyrene	0.0800	0.0744	0.0785	93.0	98.1	43.0-123			5.36	20
1-Methylnaphthalene	0.0800	0.0719	0.0730	89.9	91.3	51.0-121			1.52	20
2-Methylnaphthalene	0.0800	0.0677	0.0686	84.6	85.8	50.0-120			1.32	20
2-Chloronaphthalene	0.0800	0.0717	0.0734	89.6	91.8	50.0-120			2.34	20
(S) Nitrobenzene-d5				108	109	14.0-149				
(S) 2-Fluorobiphenyl				100	102	34.0-125				
(S) p-Terphenyl-d14				106	109	23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1019065-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019065-08 08/27/18 15:11 • (MS) R3336974-4 08/27/18 15:31 • (MSD) R3336974-5 08/27/18 15:52

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 %
Anthracene	0.104	ND	0.0825	0.140	79.5	135	1	10.0-145		J3	51.7	30
Acenaphthene	0.104	ND	0.0717	0.0759	69.1	73.1	1	14.0-127			5.62	27
Acenaphthylene	0.104	ND	0.0708	0.0603	68.3	58.1	1	21.0-124			16.0	25
Benzo(a)anthracene	0.104	ND	0.0685	0.102	66.0	98.4	1	10.0-139		J3	39.4	30
Benzo(a)pyrene	0.104	ND	0.0680	0.0756	65.5	72.9	1	10.0-141			10.7	31
Benzo(b)fluoranthene	0.104	ND	0.0690	0.0798	66.5	76.9	1	10.0-140			14.5	36
Benzo(g,h,i)perylene	0.104	ND	0.0680	0.0650	65.5	62.6	1	10.0-140			4.49	33
Benzo(k)fluoranthene	0.104	ND	0.0678	0.0669	65.4	64.5	1	10.0-137			1.35	31
Chrysene	0.104	ND	0.0717	0.102	69.1	98.8	1	10.0-145		J3	35.3	30
Dibenz(a,h)anthracene	0.104	ND	0.0680	0.0601	65.5	57.9	1	10.0-132			12.4	31
Fluoranthene	0.104	ND	0.0767	0.202	73.9	195	1	10.0-153		J3 J5	90.1	33
Fluorene	0.104	ND	0.0650	0.0732	62.6	70.5	1	11.0-130			11.8	29
Indeno(1,2,3-cd)pyrene	0.104	ND	0.0677	0.0640	65.3	61.6	1	10.0-137			5.71	32
Naphthalene	0.104	ND	0.0667	0.121	64.3	116	1	10.0-135		J3	57.5	27
Phenanthrene	0.104	ND	0.0675	0.275	65.0	265	1	10.0-144		J3 J5	121	31
Pyrene	0.104	ND	0.0698	0.174	67.3	168	1	10.0-148		J3 J5	85.4	35
1-Methylnaphthalene	0.104	ND	0.0723	0.0802	69.6	77.3	1	10.0-142			10.4	28
2-Methylnaphthalene	0.104	ND	0.0702	0.0867	67.6	83.5	1	10.0-137			21.0	28
2-Chloronaphthalene	0.104	ND	0.0698	0.0612	67.3	59.0	1	29.0-120			13.1	24
(S) Nitrobenzene-d5					89.0	76.4		14.0-149				
(S) 2-Fluorobiphenyl					75.3	65.2		34.0-125				
(S) p-Terphenyl-d14					73.9	66.1		23.0-120				



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.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
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.
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



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.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

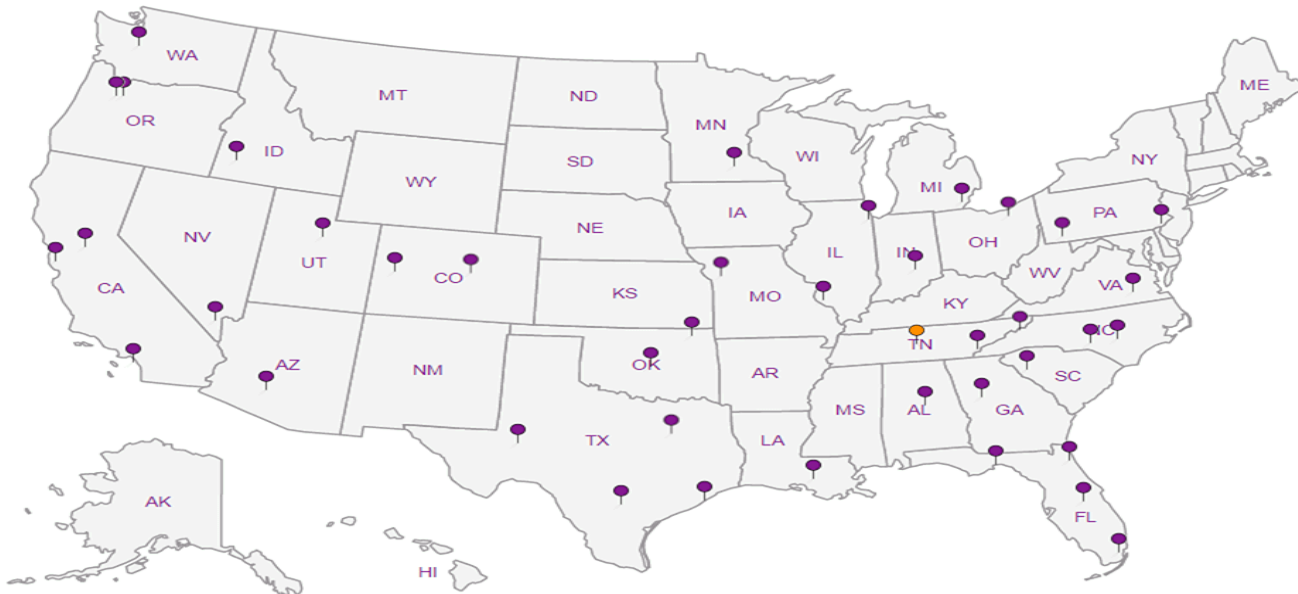
Third Party Federal Accreditations

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.



Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Accounts Payable
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Report to:
 Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
 Katie.Teague@kennedyjenks.com

Project Description: **BNSF - Wishram Railyard, WA**
 City/State Collected: **Wishram, WA**

Phone: **253-835-6400**
 Client Project #: **1896120 04**
 Lab Project #: **BNSF1KEN-WISHRAM**

Collected by (print): **K. Teague**
 Site/Facility ID #
 P.O. #

Collected by (signature): *[Signature]*
 Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day
 Date Results Needed

Immediately Packed on Ice: N Y X

Chain of Custody Page 1 of 3

Pace Analytical
 National Center for Testing & Innovation

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **1019065**
H225

Acctnum: **BNSF1KEN**
 Template: **T138670**
 Prelogin: **P663876**
 TSR: **134 - Mark W. Beasley**
 PB: **7-23-186**
 Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	Remarks	Sample # (lab only)
B-18-23(3.0-3.5)	Grab	SS	3-3.5	8/17/18	0715	6	X	X	X	X	X		01
B-18-23(9.5-10.0)		SS	9.5-10		0745	6	X	X	X	X	X		02
B-18-19(2.0-2.5)		SS	2-2.5		0830	3	X		X		X		03
B-18-20(2.0-2.5)		SS	2-2.5		0820	3	X		X		X		04
B-18-21(3.0-3.5)		SS	3-3.5		0905	3	X		X		X		05
B-18-11(2.0-2.5)		SS	2-2.5		0925	4	X		X	X	X		06
B-18-22(9.5-10.0)		SS	9.5-10	8/16/18	1505	3	X		X		X		07
B-18-23(9.5-10.0)	Grab	SS	9.5-10	8/17/18	1340	6	X	X	X	X	X	HOLD	
B-18-11(9.5-10.0)		SS	9.5-10		1005	4	X		X	X	X		08
B-18-10(9.5-10.0)		SS	9.5-10		1045	3	X		X		X		09

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: **Include Dx and Gx chromatograms**
No spaces in sample names

Samples returned via:
 UPS FedEx Courier


Tracking # **4492 628 2031, 4492 628 2042**

Relinquished by: (Signature) Date: Time: Received by: (Signature) Trip Blank Received: Yes No
 MeOH TBR

Temp: **4.43** °C Bottles Received: **62**

Relinquished by: (Signature) Date: Time: Received by: (Signature) Date: Time: **8/18/18 8:45**

Condition: **8-128** NCF / OK

Kennedy/Jenks Con-BNSF Region 1 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001		Billing Information: Accounts Payable 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001				Pres Chk	Analysis / Container / Preservative							Chain of Custody Page 2 of 3  12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859													
		Report to: Ryan Hultgren					Email To: RyanHultgren@kennedyjenks.com , KatieTeague@kennedyjenks.com				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;">MRCRAB, TS 4ozClr-NoPres</td> <td style="width:10%;">NWTPHGX 40ml/NaHSO4/Syr/MeOH</td> <td style="width:10%;">TPHDx no SGT, PAHs 4ozClr-NoPres</td> <td style="width:10%;">TPHDx with SGT 4ozClr-NoPres</td> <td style="width:10%;">V8260C 40mlAmb/MeOH5ml/Syr</td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> </tr> </table>							MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr					
MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr																							
Project Description: BNSF - Wishram Railyard, WA		City/State Collected:				No. of Cntrs								Remarks Sample # (lab only)													
Phone: 253-835-6400 Fax:		Client Project # Lab Project # BNSF1KEN-WISHRAM												Collected by (print): Site/Facility ID # P.O. #		Quote #		Date Results Needed		Immediately Packed on Ice N ___ Y ___ Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day		Sample ID Comp/Grab Matrix * Depth Date Time					
Sample ID: B-18-10 (20-2.5)		Comp/Grab: Grab		Matrix: SS		Depth: 20-2.5		Date: 8/17/18		Time: 1010		No. of Cntrs: 3		X X X		20											
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Remarks: Include Dx and Gx chromatograms No spaces in sample names				pH _____ Temp _____ Flow _____ Other _____							Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N														
Relinquished by: (Signature)		Date:		Time:		Received by: (Signature)				Trip Blank Received: Yes/No 2 <input checked="" type="checkbox"/> Y <input type="checkbox"/> No (HCl/MeOH TBR)		Temp: 4.2°C		Bottles Received: 62		If preservation required by Login: Date/Time											
Relinquished by: (Signature)		Date:		Time:		Received for lab by: (Signature)				Date: 8/18/18		Time: 8:45		Hold:		Condition: NCF / OK											

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 3 of 3



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
Katie.Teague@kennedyjenks.com,

Project
Description: BNSF - Wishram Railway, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
189617004

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collector (signature):

Rush? (Lab MUST Be Notified)

Quote #

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Date Results Needed

Immediately
Packed on Ice N Y X

No.
of
Entrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Entrs	Diss M6020RCRA8-D 250mlHDPE-HNO3	NWTPHDXLVI-w/ SGT 40mlAmb-HCl-BT	NWTPHDXLVI-NoSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	V8260C 40mlAmb-HCl
B-18-22	Grab	GW	8/16/18	→	1600	1	X		X		X	X
B-18-23	1	GW	8/17/18		0800	1	X	X	X	X	X	X
		GW										
		GW										
		GW										
		GW										
		GW										
		GW										
		GW										

L# 1019065
Table #
Acctnum: BNSF1KEN
Template: T138674
Prelogin: P663892
TSR: 134 - Mark W. Beasley
PB: 7-23-186
Shipped Via: FedEX Ground
Remarks Sample # (lab only)
-11
-12

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: Include NWTPHDx and Gx chromatograms
Diss metals field filtered. No spaces in sample names.

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist
COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
IF Applicable
VQA Zero Headspace: Y N
Preservation Correctly Labeled: Y N
Date: 8/18/18

Samples returned via:
UPS FedEx Courier

Tracking # 4492 6218 2031 4492 6218 2042

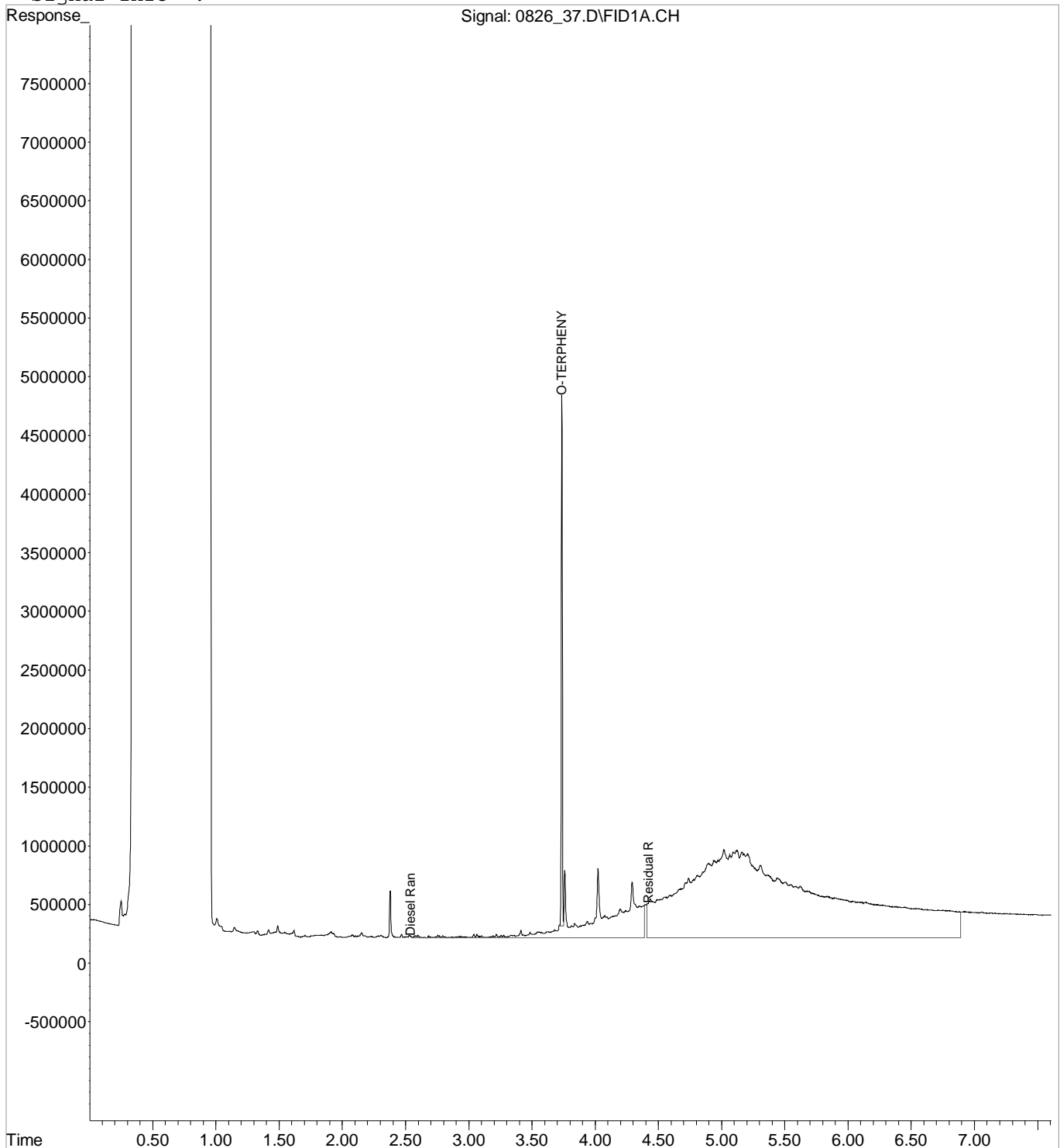
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: <input checked="" type="checkbox"/> Yes/No	Temp: °C	Bottles Received:	if preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	2 <input checked="" type="checkbox"/> HCl/MeOH TBR	4492 62		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/18/18	Time: 8:45	Hold:	

Condition:
NCF 1/0Y

Data File : C:\MSDCHEM\1\DATA\082618\0826 37.D Vial: 29
Acq On : 26 Aug 2018 7:27 pm Operator: 851
Sample : L1019065-01 1X WG1157238 Inst : SVG13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 27 10:41 2018 Quant Results File: EP13H26R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H26R.M (Chemstation Integrator)
Title :
Last Update : Sun Aug 26 14:02:21 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

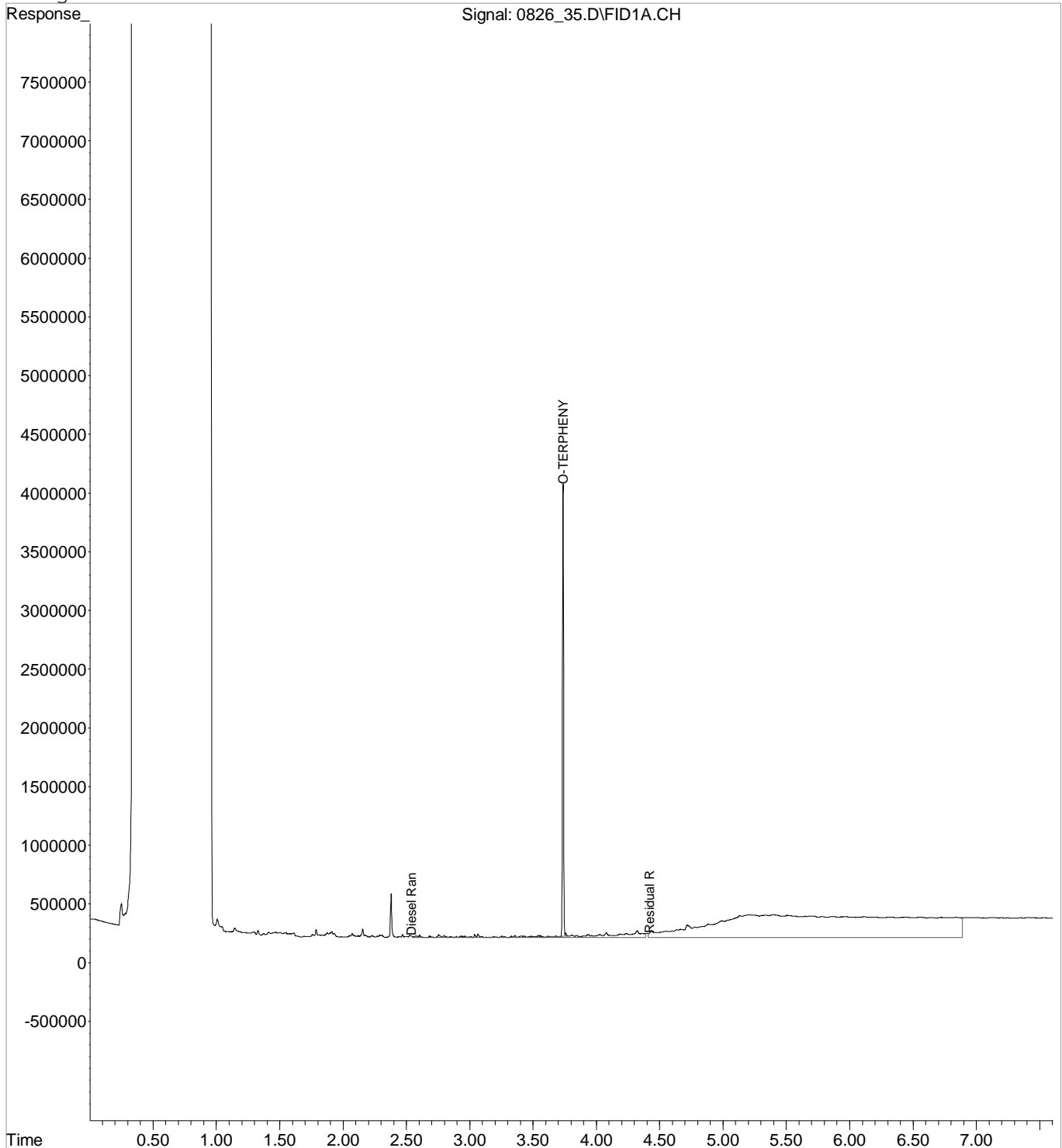
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082618\0826 35.D Vial: 27
Acq On : 26 Aug 2018 7:00 pm Operator: 851
Sample : L1019065-02 1X WG1157238 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 27 10:40 2018 Quant Results File: EP13H26R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H26R.M (Chemstation Integrator)
Title :
Last Update : Sun Aug 26 14:02:21 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

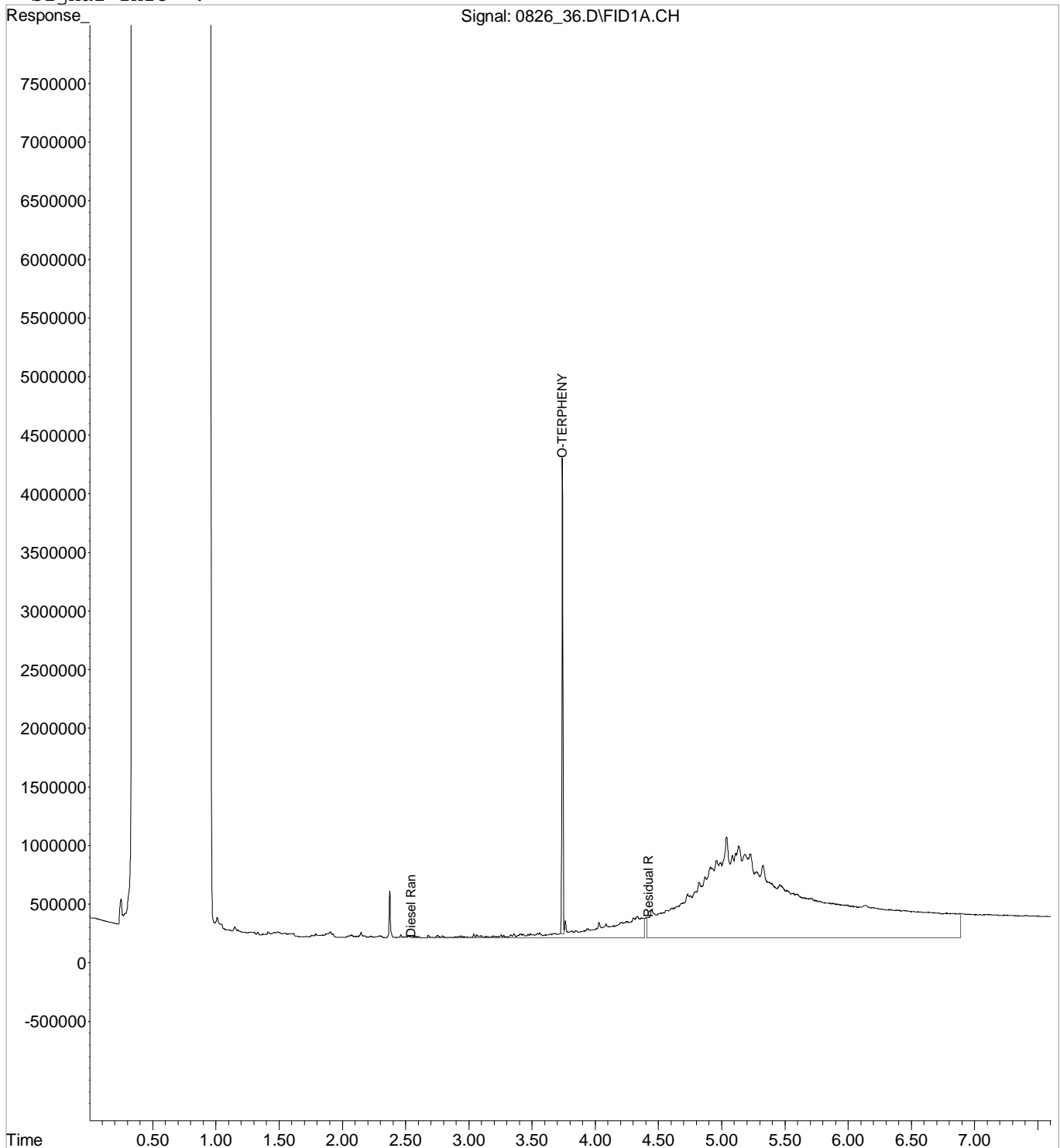
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082618\0826 36.D Vial: 28
Acq On : 26 Aug 2018 7:14 pm Operator: 851
Sample : L1019065-06 1X WG1157238 Inst : SVGC13
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 27 10:40 2018 Quant Results File: EP13H26R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP13H26R.M (Chemstation Integrator)
Title :
Last Update : Sun Aug 26 14:02:21 2018
Response via : Single Level Calibration
DataAcq Meth : OA10.M

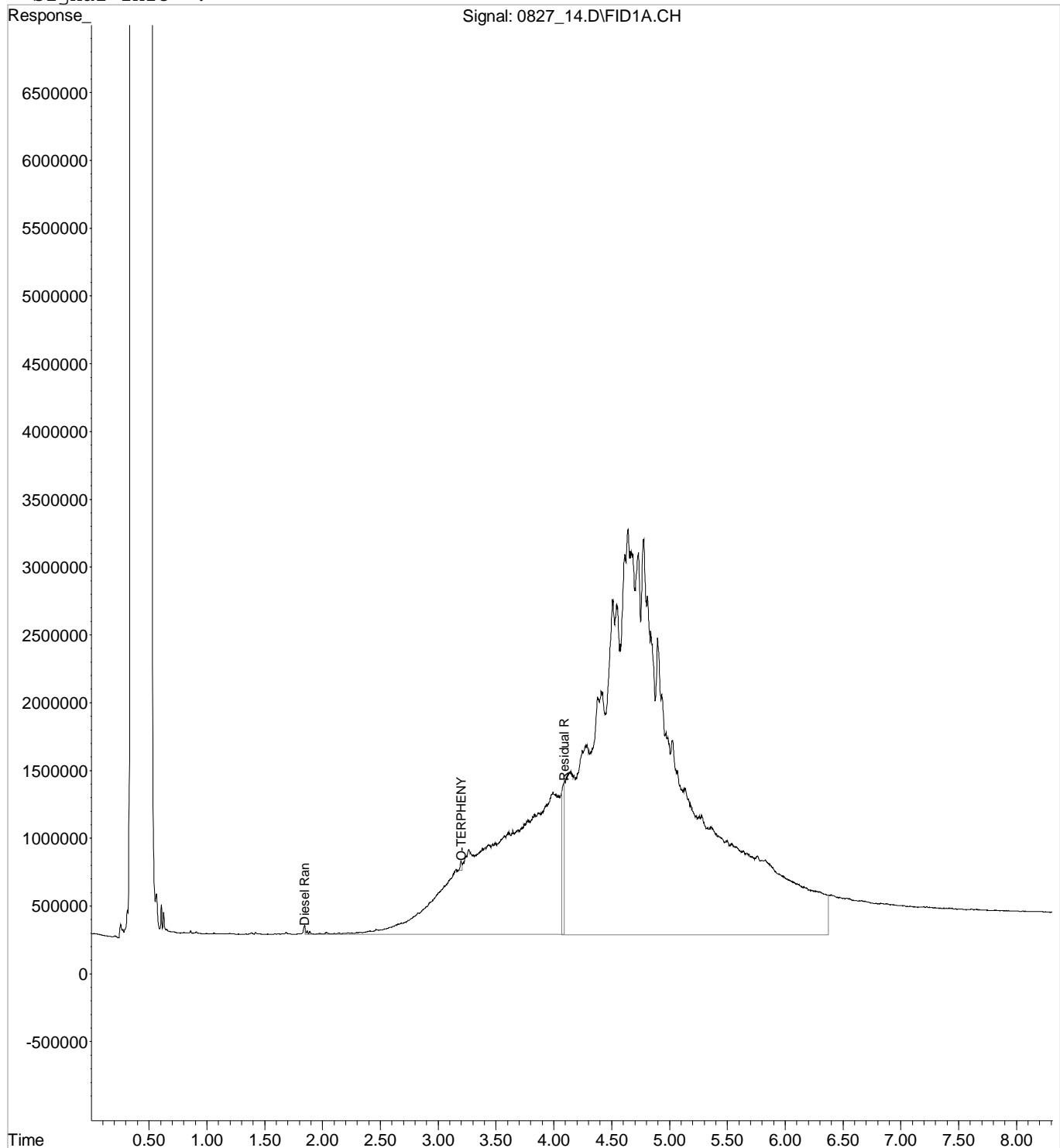
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082718\0827 14.D Vial: 13
Acq On : 8-27-2018 05:27:09 PM Operator: 773
Sample : L1019065-08 2x WG1157238 Inst : SVGC16
Misc : SOIL all M.I's on ranges are corrections Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 27 19:04 2018 Quant Results File: EP16H23R.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP16H23R.M (Chemstation Integrator)
Title :
Last Update : Thu Aug 23 17:13:42 2018
Response via : Single Level Calibration
DataAcq Meth : OA12.M

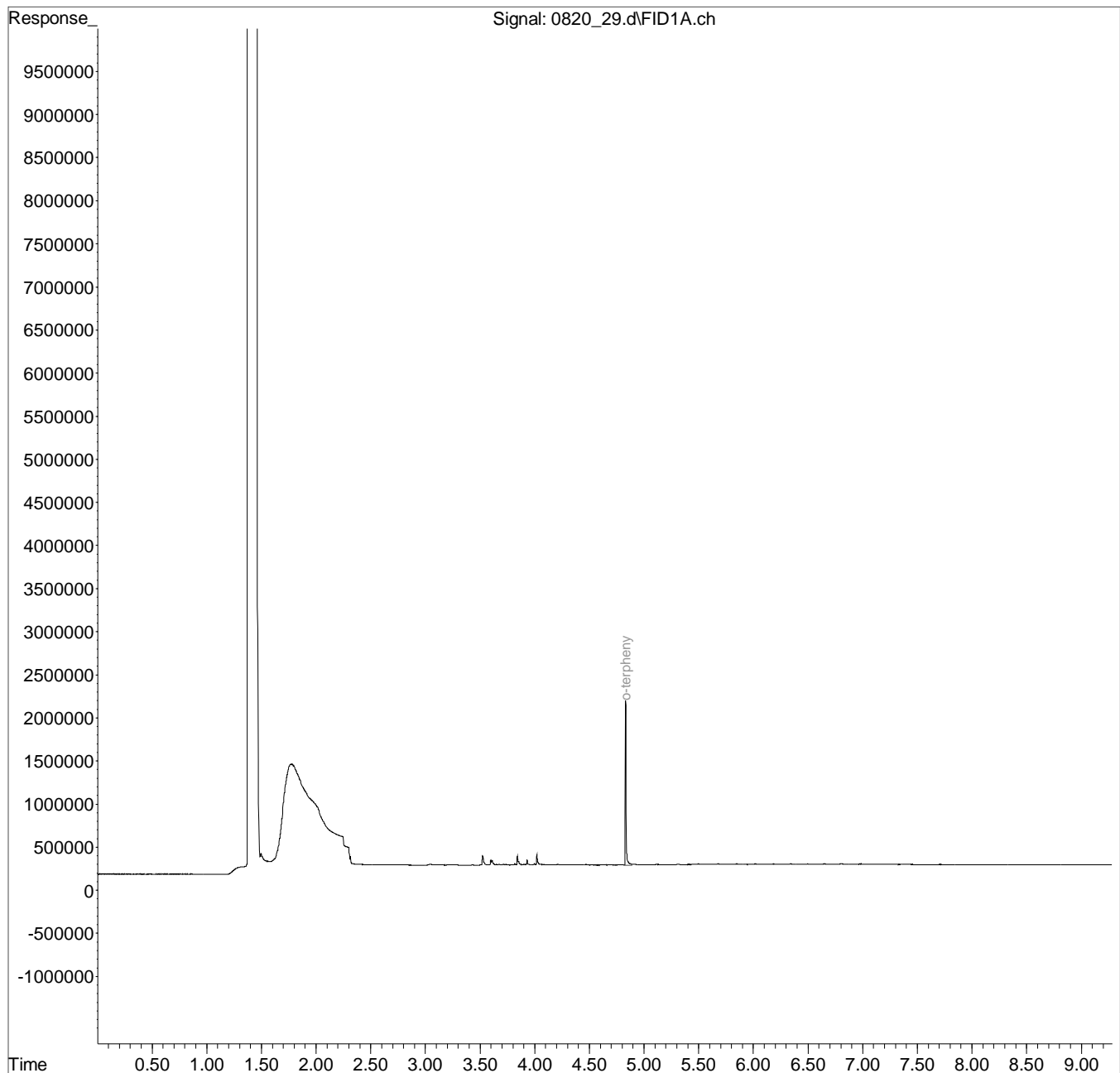
Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\082018\
Data File : 0820 29.d
Signal(s) : FID1A.ch
Acq On : 20 Aug 2018 6:32 pm
Operator : 773
Sample : L1019065-12 1x WG1154242
Misc : water M.I.s on ranges are corrections
ALS Vial : 21 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 21 11:06:28 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

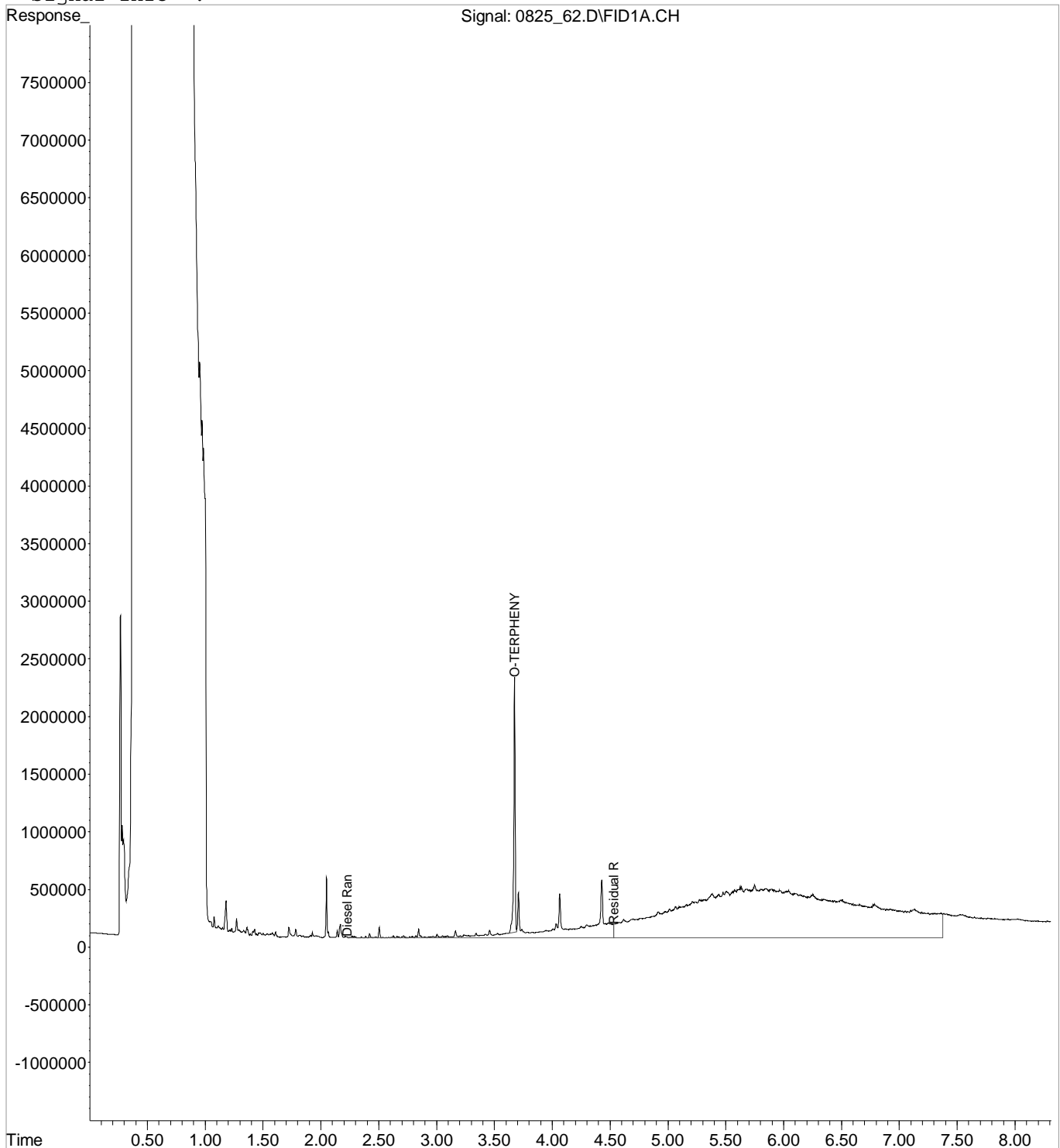
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data File : C:\MSDCHEM\1\DATA\082518\0825 62.D Vial: 44
Acq On : 26 Aug 2018 1:55 pm Operator: 647
Sample : L1019065-01 1x WG1156678 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 26 16:31 2018 Quant Results File: EP02H24BR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H24BR.M (Chemstation Integrator)
Title :
Last Update : Sat Aug 25 05:22:49 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

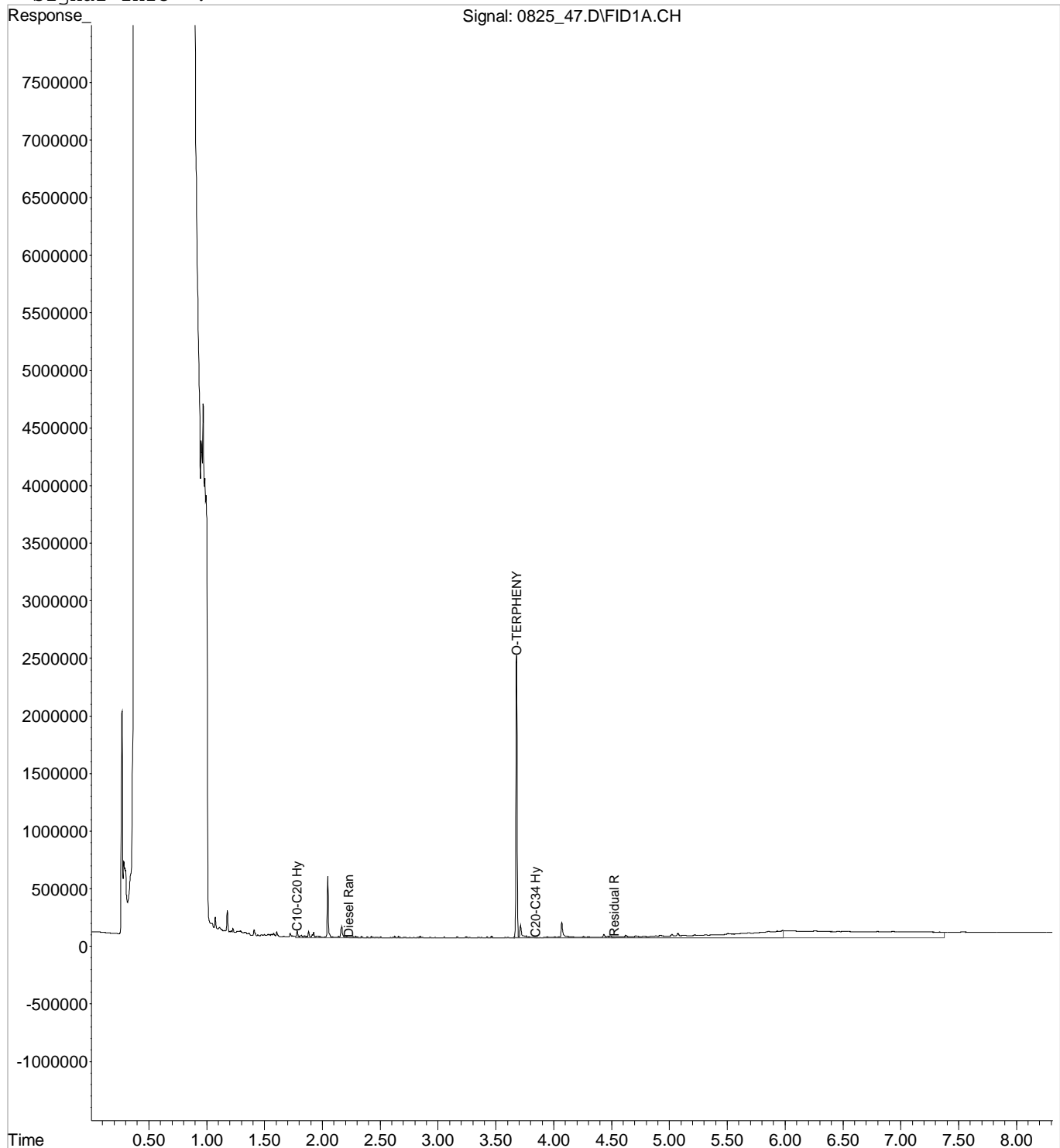
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082518\0825 47.D Vial: 32
Acq On : 26 Aug 2018 10:31 am Operator: 647
Sample : L1019065-02 1x WG1156678 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 26 15:31 2018 Quant Results File: EP02H24BR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H24BR.M (Chemstation Integrator)
Title :
Last Update : Sat Aug 25 05:22:49 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

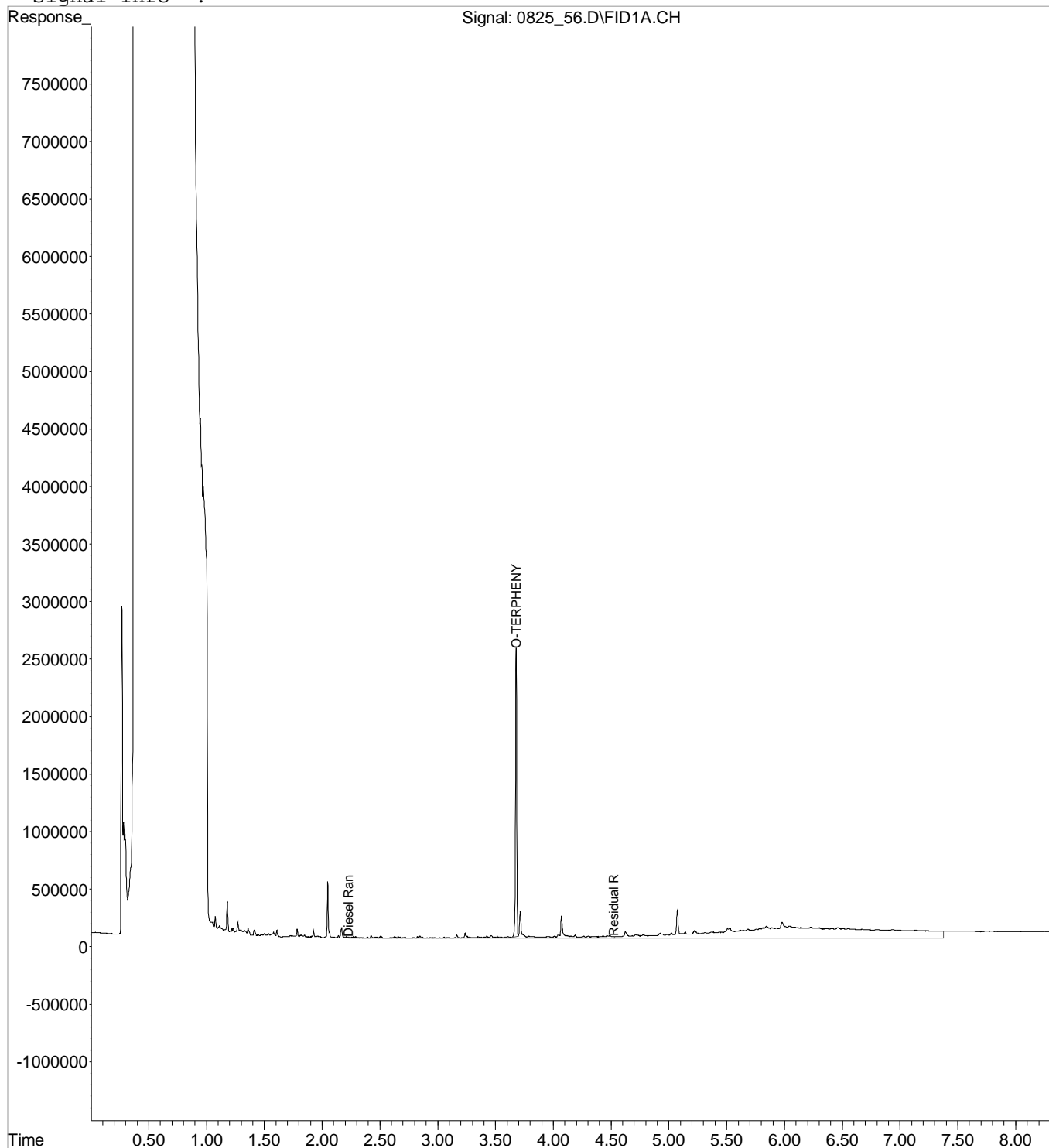
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082518\0825 56.D Vial: 38
Acq On : 26 Aug 2018 12:34 pm Operator: 647
Sample : L1019065-03 1x WG1156678 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 26 16:18 2018 Quant Results File: EP02H24BR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H24BR.M (Chemstation Integrator)
Title :
Last Update : Sat Aug 25 05:22:49 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

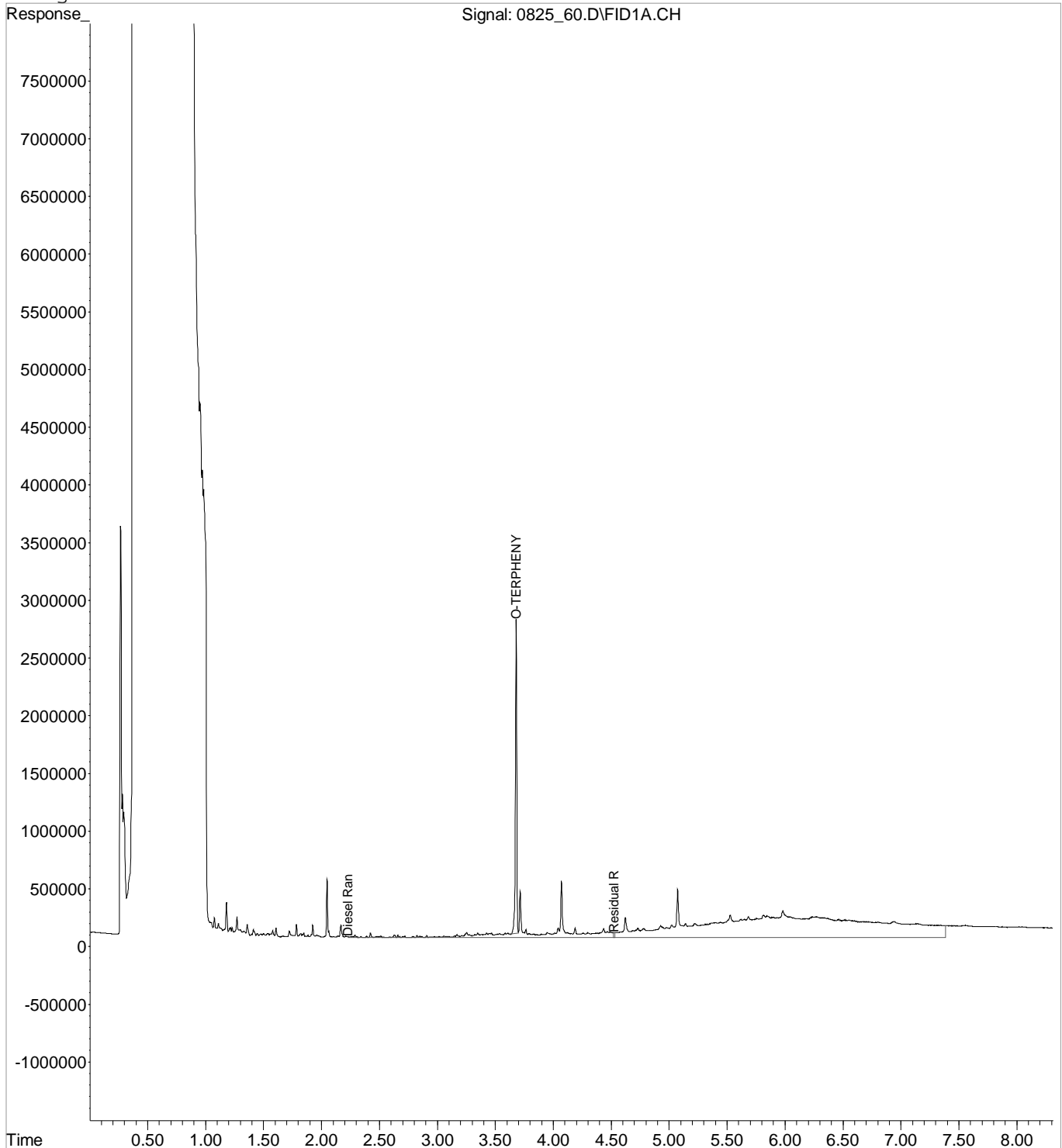
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082518\0825 60.D Vial: 42
Acq On : 26 Aug 2018 1:28 pm Operator: 647
Sample : L1019065-04 1x WG1156678 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 26 16:25 2018 Quant Results File: EP02H24BR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H24BR.M (Chemstation Integrator)
Title :
Last Update : Sat Aug 25 05:22:49 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

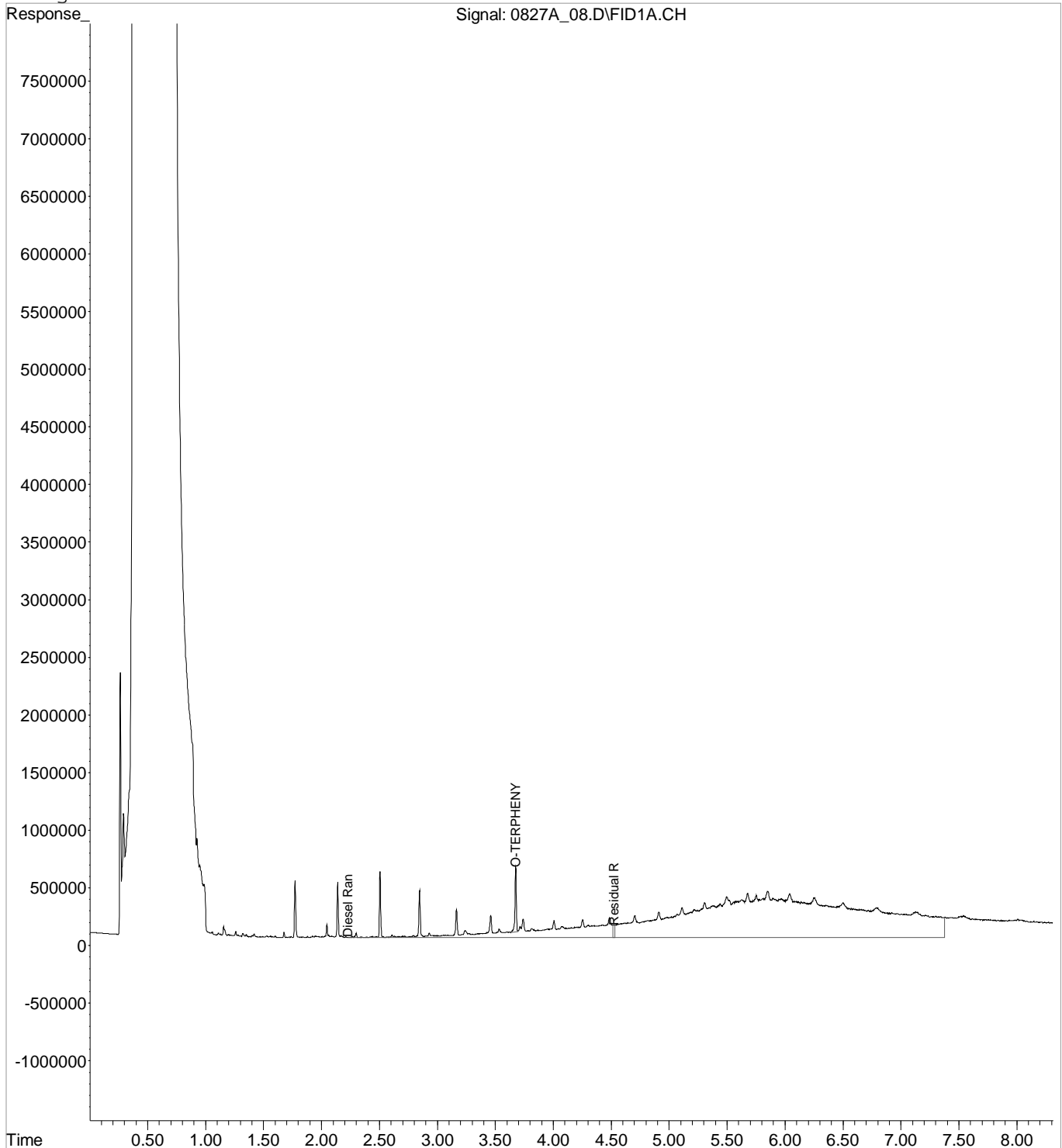
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082718A\0827A 08.D Vial: 46
Acq On : 27 Aug 2018 3:06 pm Operator: 851
Sample : L1019065-05 5x WG1156678 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 27 22:01 2018 Quant Results File: EP02H24BR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H24BR.M (Chemstation Integrator)
Title :
Last Update : Sat Aug 25 05:22:49 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

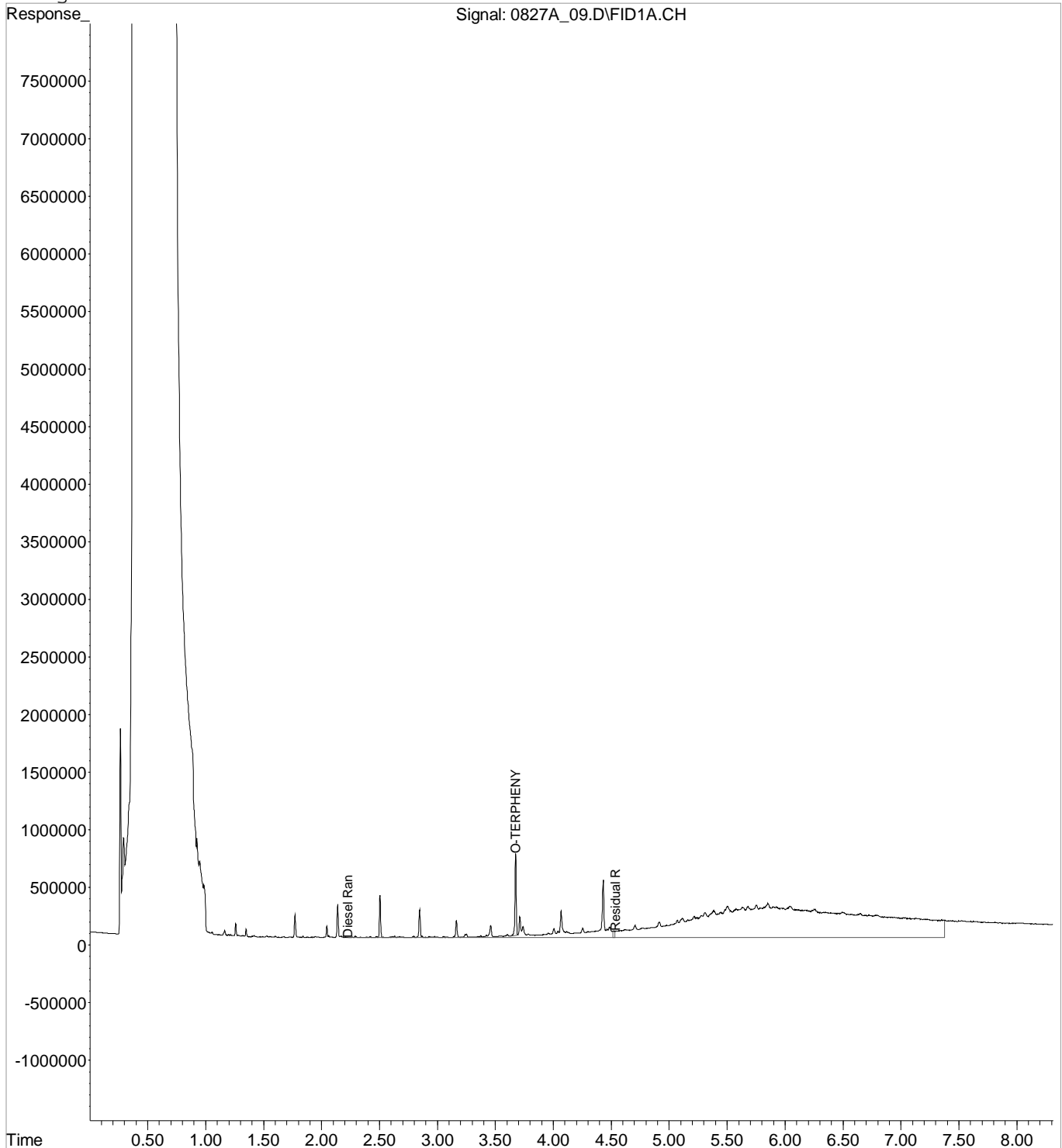
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082718A\0827A 09.D Vial: 47
Acq On : 27 Aug 2018 3:20 pm Operator: 851
Sample : L1019065-06 5x WG1156678 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 27 22:01 2018 Quant Results File: EP02H24BR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H24BR.M (Chemstation Integrator)
Title :
Last Update : Sat Aug 25 05:22:49 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

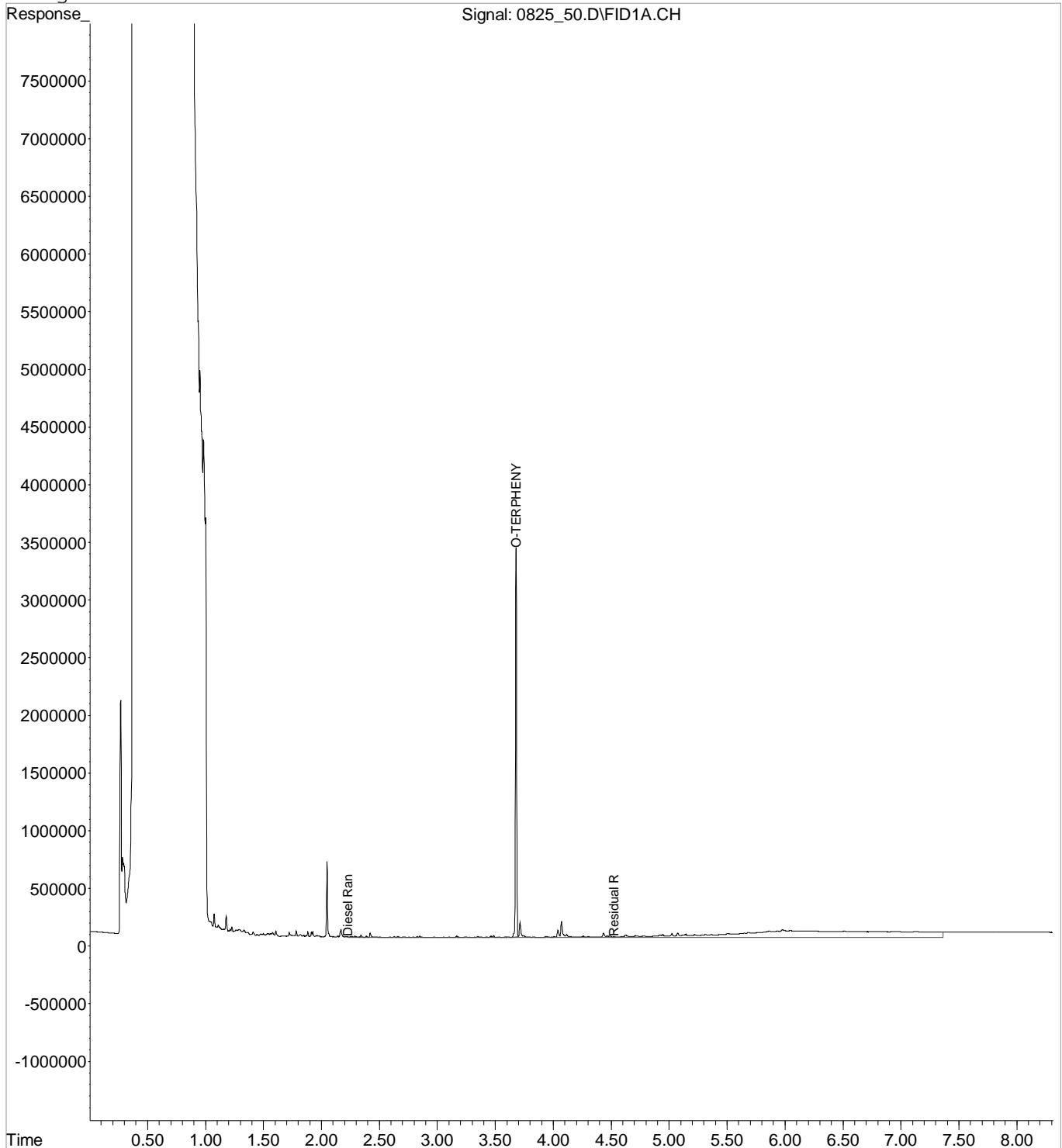
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082518\0825 50.D Vial: 35
Acq On : 26 Aug 2018 11:12 am Operator: 647
Sample : L1019065-07 1x WG1156678 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 26 15:33 2018 Quant Results File: EP02H24BR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H24BR.M (Chemstation Integrator)
Title :
Last Update : Sat Aug 25 05:22:49 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

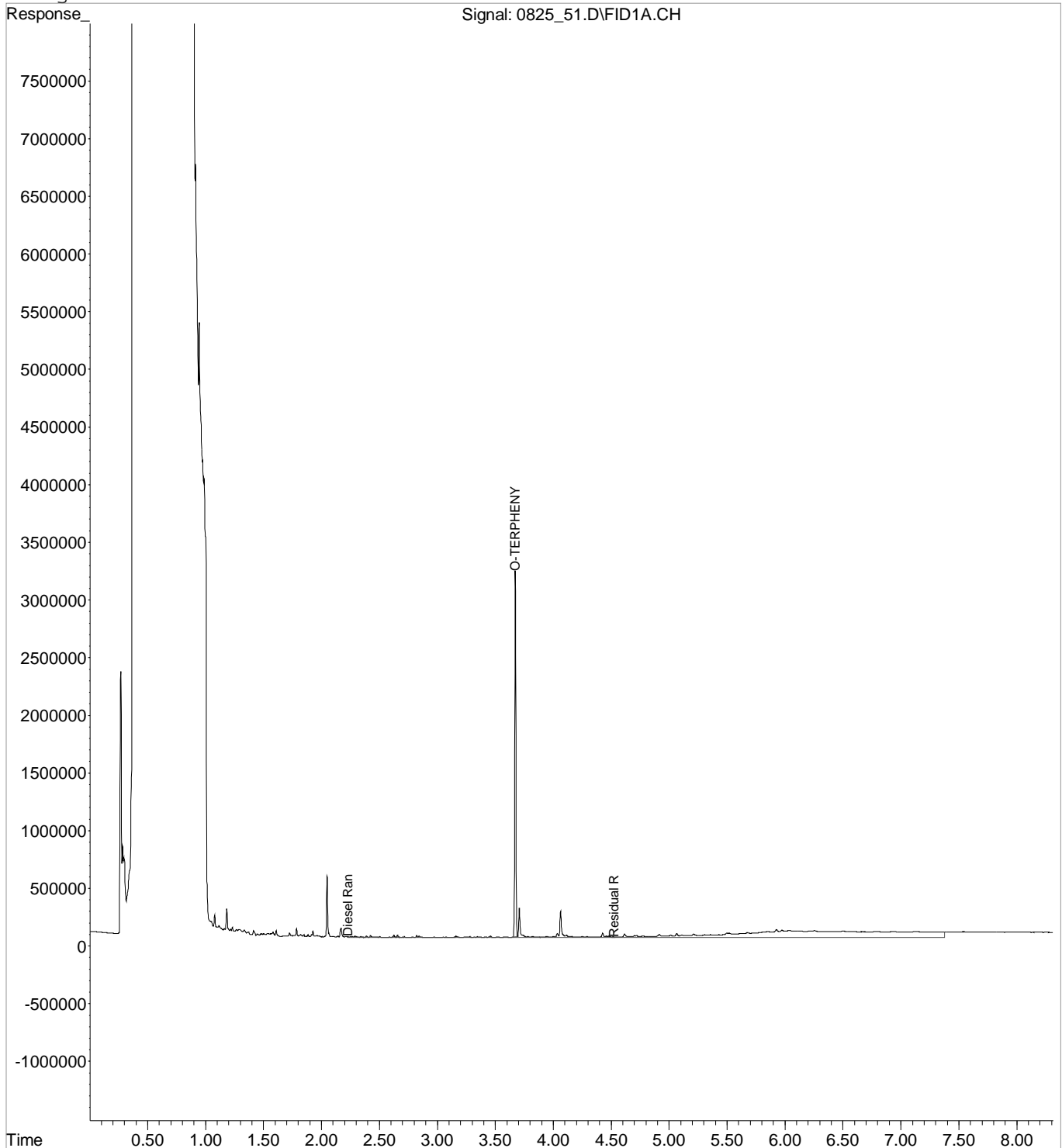
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082518\0825 51.D Vial: 36
Acq On : 26 Aug 2018 11:25 am Operator: 647
Sample : L1019065-08 1x WG1156678 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 26 15:33 2018 Quant Results File: EP02H24BR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H24BR.M (Chemstation Integrator)
Title :
Last Update : Sat Aug 25 05:22:49 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

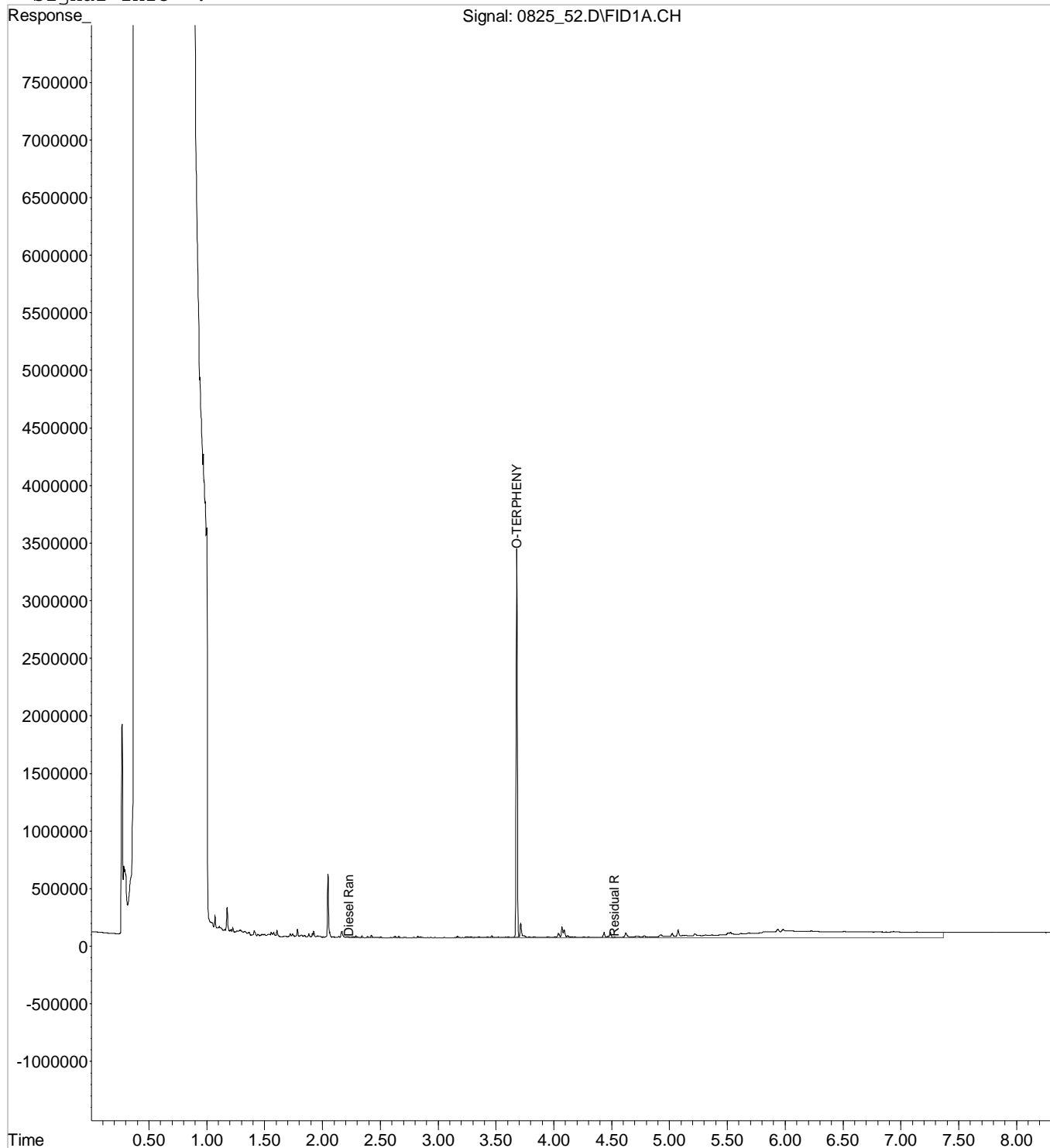
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082518\0825 52.D Vial: 37
Acq On : 26 Aug 2018 11:39 am Operator: 647
Sample : L1019065-09 1x WG1156678 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 26 15:33 2018 Quant Results File: EP02H24BR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H24BR.M (Chemstation Integrator)
Title :
Last Update : Sat Aug 25 05:22:49 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

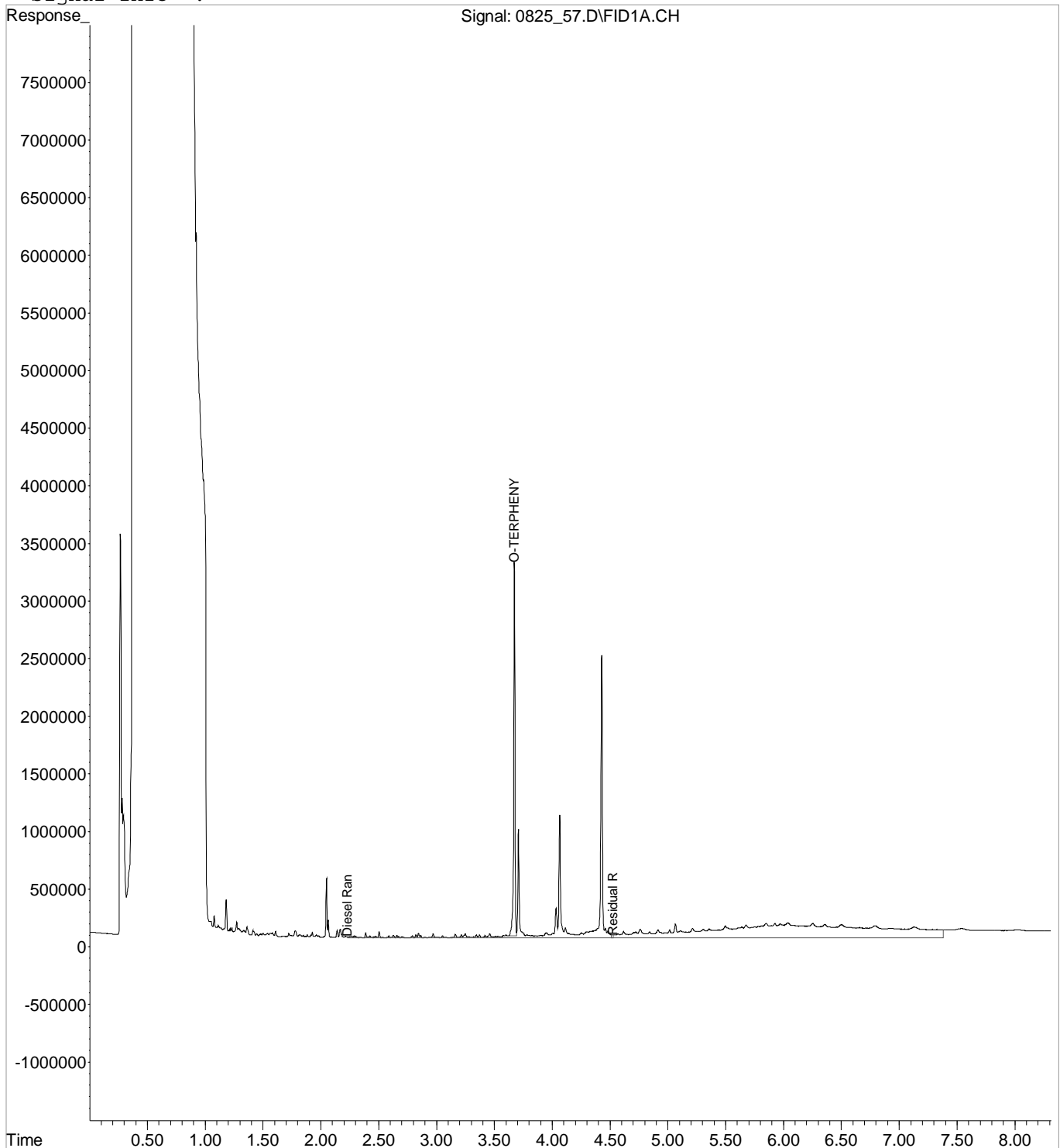
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\MSDCHEM\1\DATA\082518\0825 57.D Vial: 39
Acq On : 26 Aug 2018 12:47 pm Operator: 647
Sample : L1019065-10 1x WG1156678 Inst : SVGC2
Misc : SOIL all M.I.s on ranges are corrections Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 26 16:19 2018 Quant Results File: EP02H24BR.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02H24BR.M (Chemstation Integrator)
Title :
Last Update : Sat Aug 25 05:22:49 2018
Response via : Single Level Calibration
DataAcq Meth : RACER10.M

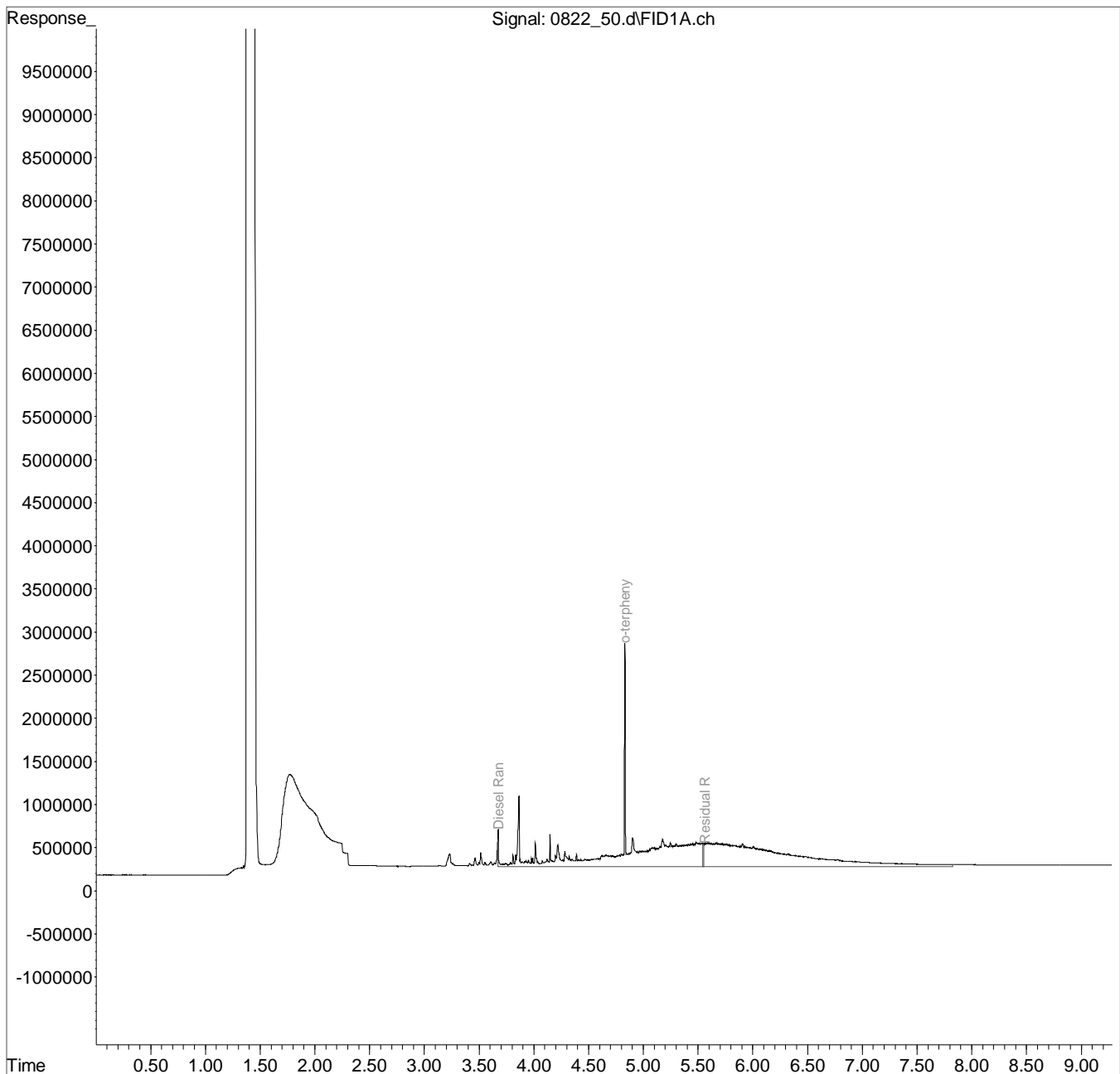
Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\082218\
Data File : 0822_50.d
Signal(s) : FID1A.ch
Acq On : 23 Aug 2018 1:35 am
Operator : 647
Sample : L1019065-11 1x WG1155335
Misc : water M.I.s on ranges are corrections
ALS Vial : 38 Sample Multiplier: 1
InstName : SVGC27

Integration File: events.e
Quant Time: Aug 23 11:11:59 2018
Quant Method : C:\msdchem\1\methods\EP27G27R.M
Quant Title :
QLast Update : Fri Jul 27 14:22:17 2018
Response via : Initial Calibration
Integrator: ChemStation

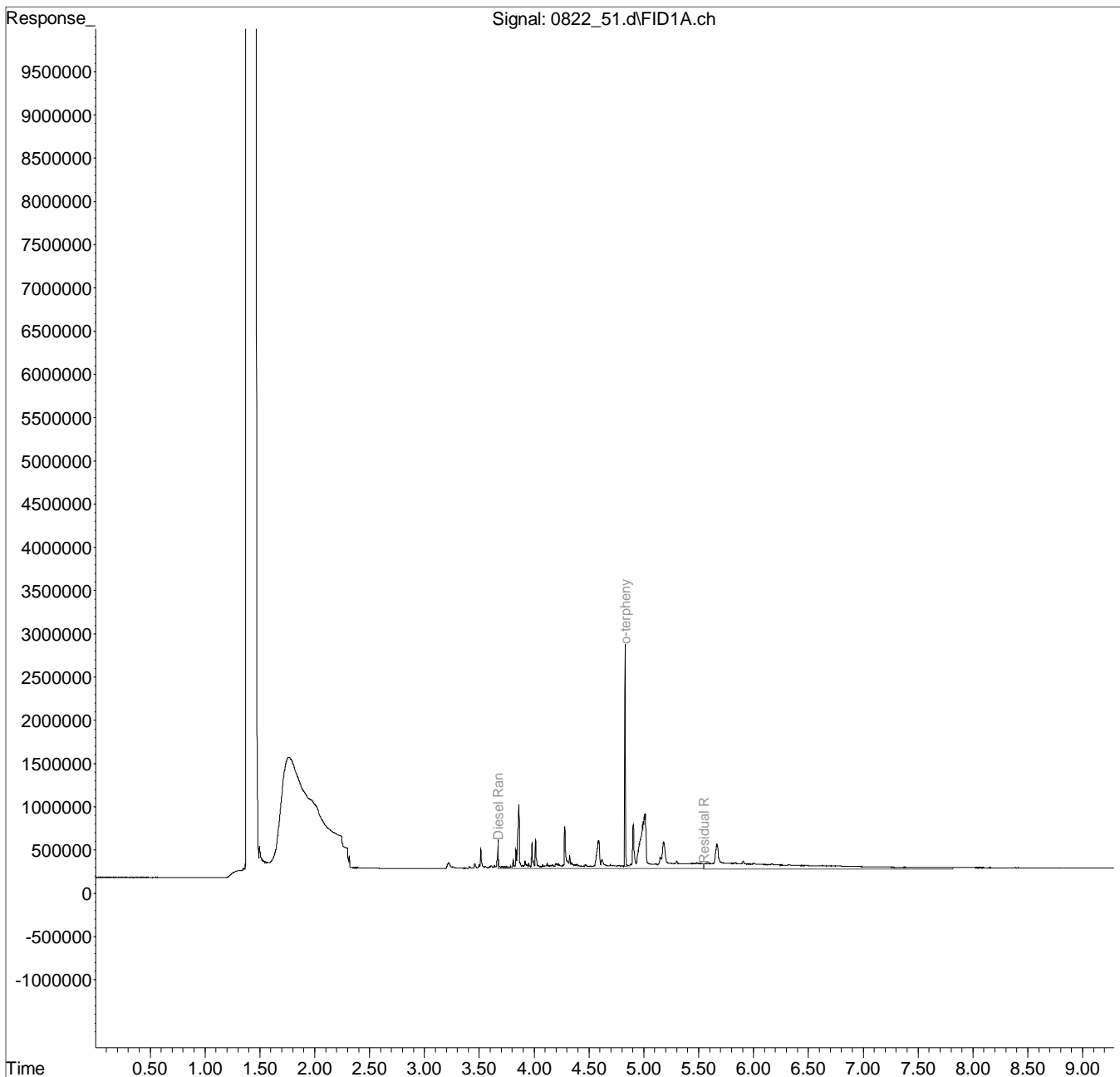
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\082218\
 Data File : 0822_51.d
 Signal(s) : FID1A.ch
 Acq On : 23 Aug 2018 1:53 am
 Operator : 647
 Sample : L1019065-12 1x WG1155335
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 39 Sample Multiplier: 1
 InstName : SVGC27

Integration File: events.e
 Quant Time: Aug 23 11:12:28 2018
 Quant Method : C:\msdchem\1\methods\EP27G27R.M
 Quant Title :
 QLast Update : Fri Jul 27 14:22:17 2018
 Response via : Initial Calibration
 Integrator: ChemStation

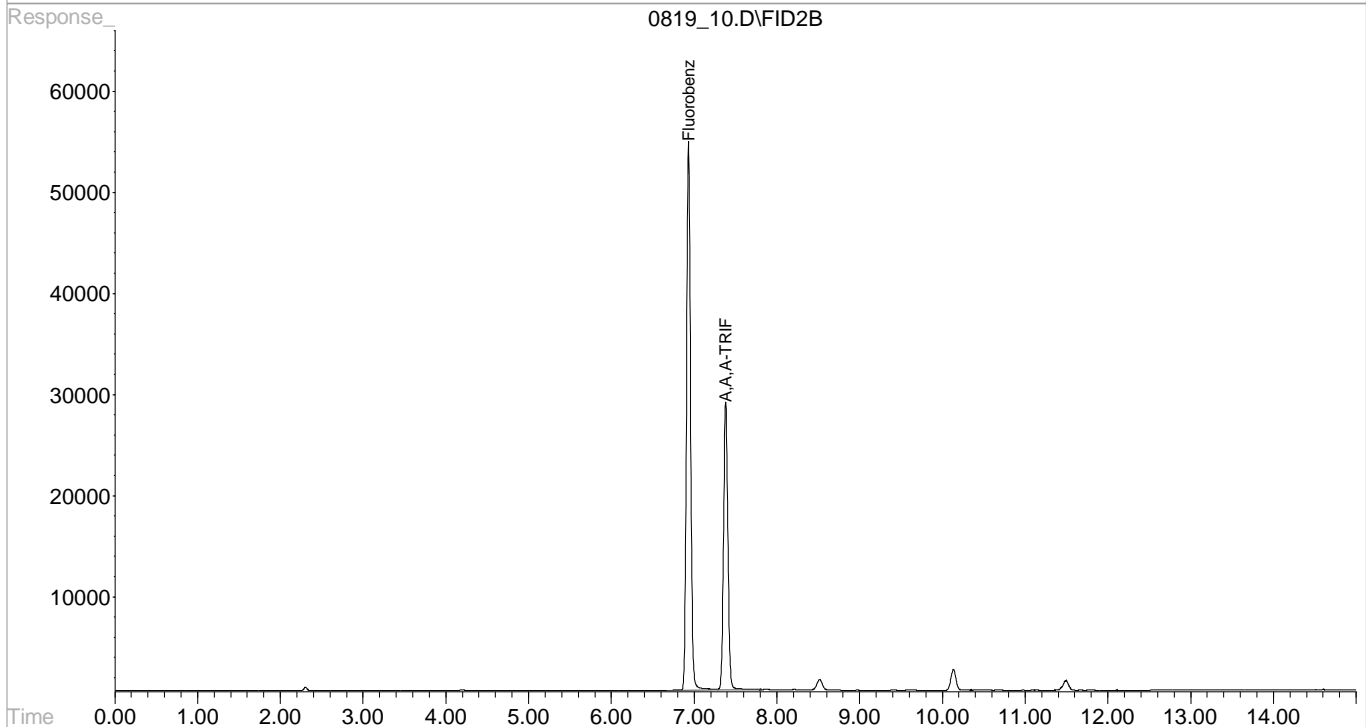
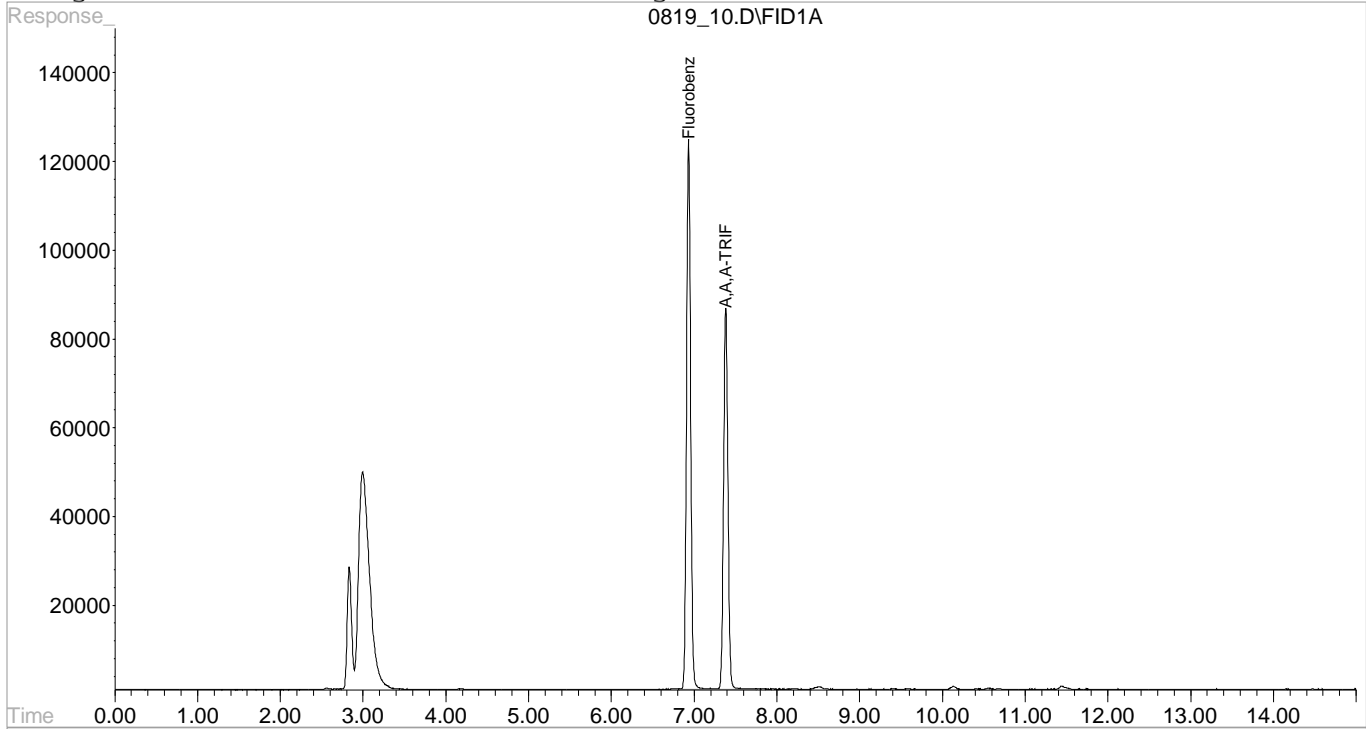
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\081918\0819 10.D\FID1A.CH Vial: 10
 Signal #2 : C:\HPCHEM\1\DATA\081918\0819 10.D\FID2B.CH
 Acq On : 19 Aug 2018 7:14 am Operator: 605
 Sample : L1019065-12 1x WG1154426 Inst : VOCGC5
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Aug 22 15:45 2018 Quant Results File: BG05H14R.RES

Quant Method : C:\HPCHEM\1\METHODS\BG05H14R.M (Chemstation Integrator)
 Title : BTEX/GRO VOCGC04
 Last Update : Wed Aug 15 08:43:11 2018
 Response via : Single Level Calibration
 DataAcq Meth : VGC5-1.M

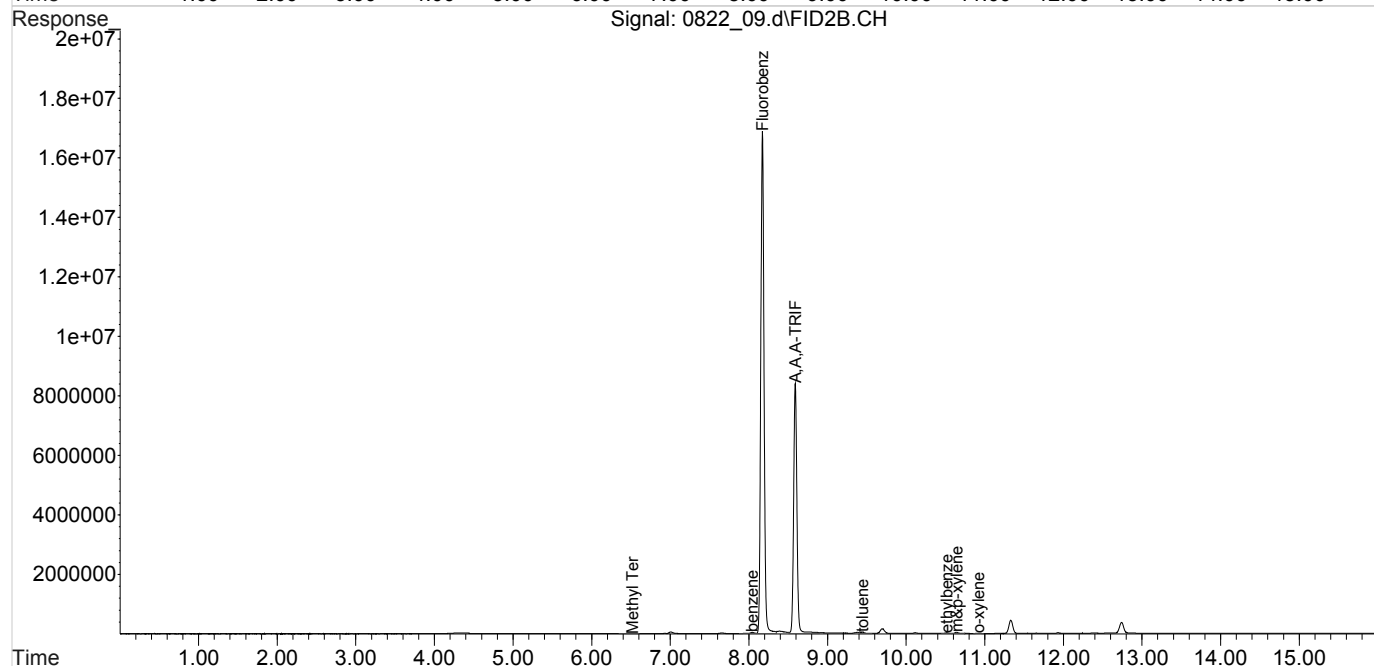
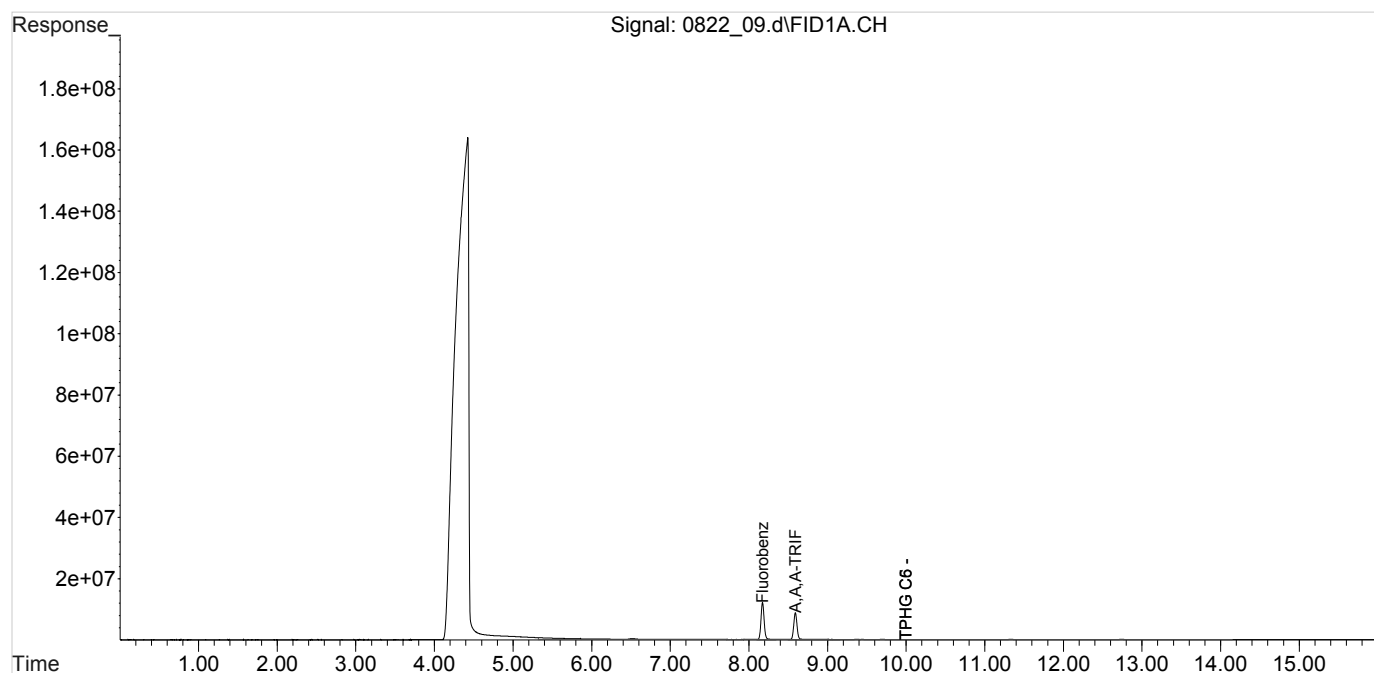
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\082218\
Data File : 0822_09.d
Signal(s) : Signal #1: FID1A.CH Signal #2: FID2B.CH
Acq On : 22 Aug 2018 12:58 pm
Operator : 772
Sample : L1019065-01C 25x WG1155618
Misc : soil
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 24.25

Integration File signal 1: BTEX.E
Integration File signal 2: EVENTS3.E
Quant Time: Aug 23 11:15:30 2018
Quant Method : C:\msdchem\1\methods\BG12H08R.M
Quant Title : WIS GRO VOCGC12
QLast Update : Thu Aug 09 09:04:15 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

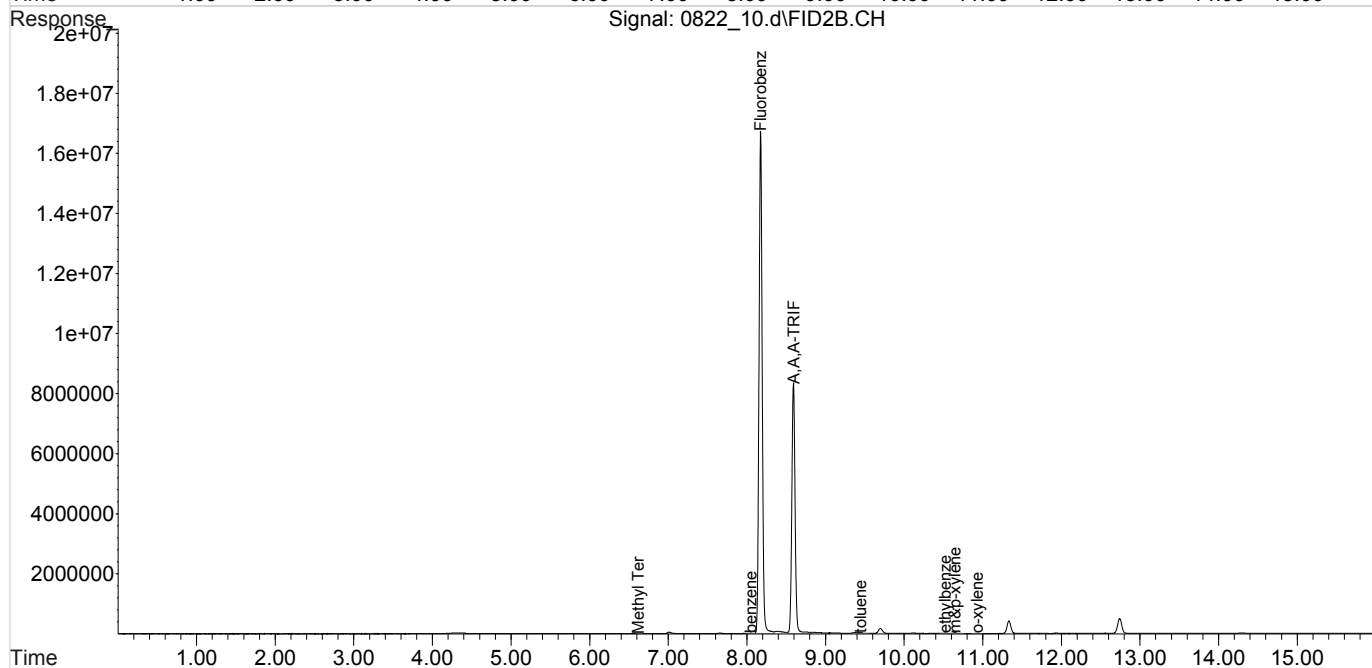
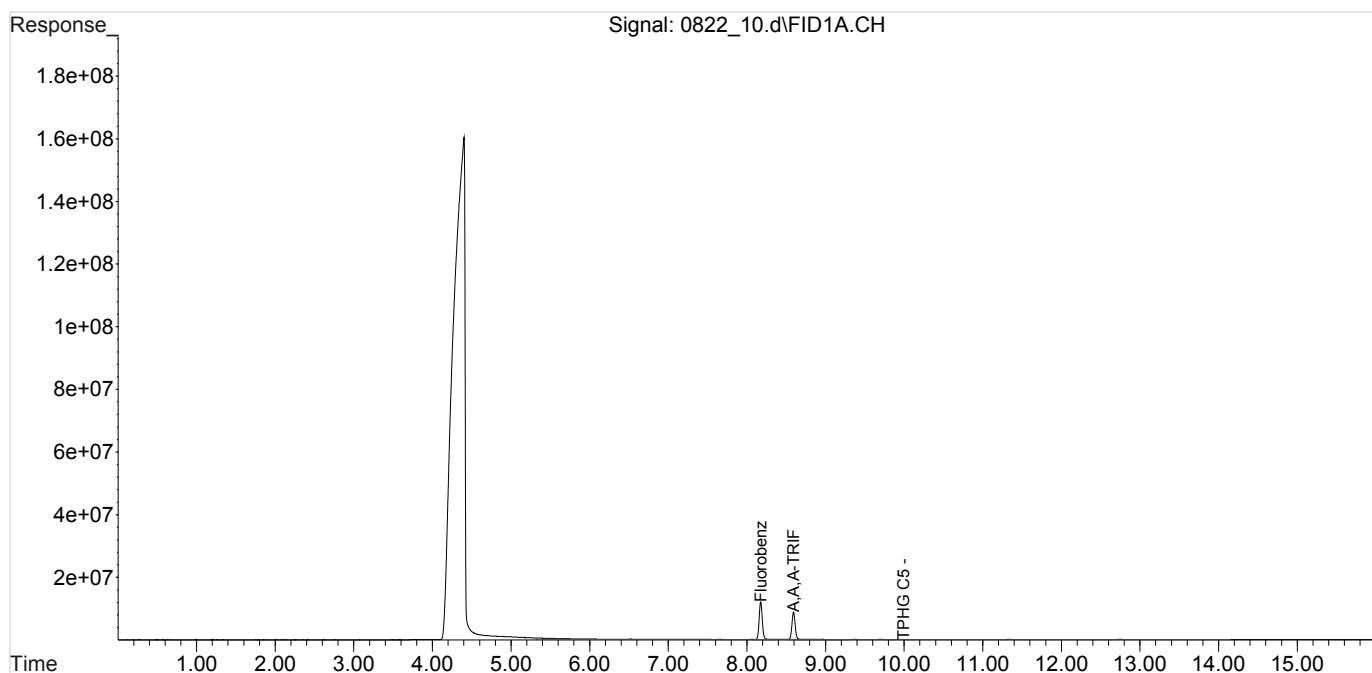
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\082218\
Data File : 0822_10.d
Signal(s) : Signal #1: FID1A.CH Signal #2: FID2B.CH
Acq On : 22 Aug 2018 13:19 pm
Operator : 772
Sample : L1019065-02C 25x WG1155618
Misc : soil
ALS Vial : 10 (Sig #1); 0 (Sig #2) Sample Multiplier: 21.75

Integration File signal 1: BTEX.E
Integration File signal 2: EVENTS3.E
Quant Time: Aug 23 11:15:34 2018
Quant Method : C:\msdchem\1\methods\BG12H08R.M
Quant Title : WIS GRO VOCGC12
QLast Update : Thu Aug 09 09:04:15 2018
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



August 31, 2018

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1020170
Samples Received: 08/23/2018
Project Number: 1896120 04
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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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Sc: Sample Chain of Custody

115

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

SAMPLE SUMMARY



B-18-09(2.0-2.5) L1020170-01 Solid

Collected by
K. Teague
Collected date/time
08/20/18 12:30
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157158	1	08/25/18 06:37	08/25/18 06:46	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:11	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 09:29	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156936	1.04	08/20/18 12:30	08/24/18 19:32	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1158548	1.04	08/20/18 12:30	08/29/18 16:48	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	1	08/29/18 20:32	08/30/18 05:18	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 04:16	DMG

1
Cp

2
Tc

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Ss

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Cn

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Sr

B-18-09(9.5-10.0) L1020170-02 Solid

Collected by
K. Teague
Collected date/time
08/20/18 13:00
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157158	1	08/25/18 06:37	08/25/18 06:46	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:18	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 09:31	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1	08/20/18 13:00	08/25/18 00:14	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1	08/20/18 13:00	08/30/18 00:51	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	1	08/29/18 20:32	08/30/18 05:31	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 04:37	DMG

6
Qc

7
Gl

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Al

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Sc

B-18-19(9.5-10.0) L1020170-03 Solid

Collected by
K. Teague
Collected date/time
08/20/18 14:15
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157158	1	08/25/18 06:37	08/25/18 06:46	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:21	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 09:39	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1.07	08/20/18 14:15	08/25/18 00:32	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1.07	08/20/18 14:15	08/30/18 01:11	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	1	08/29/18 20:32	08/30/18 08:06	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 04:59	DMG

B-18-20(12.0-12.5) L1020170-04 Solid

Collected by
K. Teague
Collected date/time
08/20/18 14:00
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157153	1	08/25/18 07:23	08/25/18 07:32	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:24	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 09:42	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1	08/20/18 14:00	08/25/18 00:51	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1	08/20/18 14:00	08/30/18 01:30	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	1	08/29/18 20:32	08/30/18 08:19	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 05:20	DMG

B-18-21(7.5-8.0) L1020170-05 Solid

Collected by
K. Teague
Collected date/time
08/20/18 15:30
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157153	1	08/25/18 07:23	08/25/18 07:32	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:26	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 09:45	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1	08/20/18 15:30	08/25/18 01:09	DWR

SAMPLE SUMMARY



B-18-21(7.5-8.0) L1020170-05 Solid

Collected by
K. Teague
Collected date/time
08/20/18 15:30
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1	08/20/18 15:30	08/30/18 01:49	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	10	08/29/18 20:32	08/30/18 10:46	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 08:30	DMG

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

B-18-24(2.0-2.5) L1020170-06 Solid

Collected by
K. Teague
Collected date/time
08/21/18 08:15
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157153	1	08/25/18 07:23	08/25/18 07:32	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:29	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 09:47	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1.06	08/21/18 08:15	08/25/18 01:27	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1.05	08/21/18 08:15	08/30/18 02:09	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	1	08/29/18 20:32	08/31/18 00:41	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 05:41	DMG

B-18-24(13.5-14.0) L1020170-07 Solid

Collected by
K. Teague
Collected date/time
08/21/18 09:10
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157153	1	08/25/18 07:23	08/25/18 07:32	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:31	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 09:50	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	20	08/21/18 09:10	08/25/18 01:46	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	20	08/21/18 09:10	08/30/18 02:28	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	100	08/29/18 20:32	08/31/18 01:33	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	20	08/28/18 10:54	08/29/18 21:01	KM

B-18-24(9.0-9.5) L1020170-08 Solid

Collected by
K. Teague
Collected date/time
08/21/18 08:56
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157153	1	08/25/18 07:23	08/25/18 07:32	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:34	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 09:53	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1.09	08/21/18 08:56	08/25/18 02:04	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1.09	08/21/18 08:56	08/30/18 02:47	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	50	08/29/18 20:32	08/31/18 01:20	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 08:09	DMG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	20	08/28/18 10:54	08/29/18 21:23	KM

B-18-24(22.5-23.0) L1020170-09 Solid

Collected by
K. Teague
Collected date/time
08/21/18 09:30
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157153	1	08/25/18 07:23	08/25/18 07:32	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:36	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 09:55	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1	08/21/18 09:30	08/25/18 02:23	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1	08/21/18 09:30	08/30/18 03:07	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	1	08/29/18 20:32	08/30/18 07:16	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 06:23	DMG

SAMPLE SUMMARY



B-18-25(2-2.5) L1020170-10 Solid

Collected by
K. Teague
Collected date/time
08/21/18 10:45
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157153	1	08/25/18 07:23	08/25/18 07:32	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:39	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 09:58	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1.02	08/21/18 10:45	08/25/18 02:42	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1.02	08/21/18 10:45	08/30/18 03:27	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	20	08/29/18 20:32	08/31/18 01:07	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 08:51	DMG

1
Cp

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Tc

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Ss

4
Cn

5
Sr

B-18-25(9.5-10) L1020170-11 Solid

Collected by
K. Teague
Collected date/time
08/21/18 11:10
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157153	1	08/25/18 07:23	08/25/18 07:32	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:42	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 10:01	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1	08/21/18 11:10	08/25/18 03:00	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1	08/21/18 11:10	08/30/18 03:46	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	1	08/29/18 20:32	08/30/18 07:28	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 06:44	DMG

6
Qc

7
Gl

8
Al

9
Sc

DUP-04-20180821 L1020170-12 Solid

Collected by
K. Teague
Collected date/time
08/21/18 00:00
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157153	1	08/25/18 07:23	08/25/18 07:32	KS
Mercury by Method 7471B	WG1157003	1	08/24/18 13:46	08/27/18 13:49	ABL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 10:03	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1.04	08/21/18 00:00	08/25/18 03:18	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1.04	08/21/18 00:00	08/30/18 04:06	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	10	08/29/18 20:32	08/30/18 10:32	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 09:12	DMG

B-18-09 L1020170-13 GW

Collected by
K. Teague
Collected date/time
08/20/18 17:00
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1156752	1	08/24/18 09:14	08/26/18 11:13	EL
Metals (ICPMS) by Method 6020A	WG1156843	1	08/28/18 14:48	08/29/18 12:44	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156644	1	08/24/18 07:43	08/24/18 07:43	JCP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157624	1	08/26/18 17:17	08/28/18 01:14	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156689	1	08/24/18 10:29	08/24/18 20:26	DMG

B-18-10 L1020170-14 GW

Collected by
K. Teague
Collected date/time
08/20/18 16:30
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1156752	1	08/24/18 09:14	08/26/18 11:51	EL
Metals (ICPMS) by Method 6020A	WG1156843	1	08/28/18 14:48	08/29/18 12:48	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156644	1	08/24/18 08:03	08/24/18 08:03	JCP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157624	2	08/26/18 17:17	08/28/18 02:13	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156689	1	08/24/18 10:29	08/24/18 20:47	DMG

SAMPLE SUMMARY



B-18-11 L1020170-15 GW

Collected by
K. Teague
Collected date/time
08/20/18 12:15
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1156752	1	08/24/18 09:14	08/26/18 11:53	EL
Metals (ICPMS) by Method 6020A	WG1156843	1	08/28/18 14:48	08/29/18 13:02	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156644	1	08/24/18 08:22	08/24/18 08:22	JCP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157624	1	08/26/18 17:17	08/28/18 02:33	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157625	1	08/26/18 17:10	08/28/18 05:10	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156689	1	08/24/18 10:29	08/24/18 21:07	DMG

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

B-18-19 L1020170-16 GW

Collected by
K. Teague
Collected date/time
08/20/18 17:00
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1156752	1	08/24/18 09:14	08/26/18 11:55	EL
Metals (ICPMS) by Method 6020A	WG1156843	1	08/28/18 14:48	08/29/18 13:07	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156644	1	08/24/18 09:17	08/24/18 09:17	JCP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157624	1	08/26/18 17:17	08/28/18 02:53	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156689	1	08/24/18 10:29	08/24/18 21:28	DMG

B-18-21 L1020170-17 GW

Collected by
K. Teague
Collected date/time
08/21/18 07:35
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1156752	1	08/24/18 09:14	08/26/18 12:01	EL
Metals (ICPMS) by Method 6020A	WG1156843	1	08/28/18 14:48	08/29/18 12:21	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156644	1	08/24/18 09:37	08/24/18 09:37	JCP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157624	1	08/26/18 17:17	08/28/18 03:12	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156689	1	08/24/18 10:29	08/24/18 21:49	DMG

B-18-24 L1020170-18 GW

Collected by
K. Teague
Collected date/time
08/21/18 09:50
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1156752	1	08/24/18 09:14	08/26/18 12:03	EL
Metals (ICPMS) by Method 6020A	WG1156843	1	08/28/18 14:48	08/29/18 13:11	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156644	1	08/24/18 09:57	08/24/18 09:57	JCP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157624	10	08/26/18 17:17	08/30/18 06:35	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156689	1	08/24/18 10:29	08/24/18 22:09	DMG

RB-04-20180821 L1020170-19 GW

Collected by
K. Teague
Collected date/time
08/21/18 11:20
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1156752	1	08/24/18 09:14	08/26/18 12:06	EL
Metals (ICPMS) by Method 6020A	WG1156843	1	08/28/18 14:48	08/29/18 13:16	JPD
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156644	1	08/24/18 10:17	08/24/18 10:17	JCP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157624	1	08/26/18 17:17	08/28/18 04:51	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1156689	1	08/24/18 10:29	08/24/18 22:30	DMG

SAMPLE SUMMARY



TB-13-20180822 L1020170-20 GW

Collected by
K. Teague
Collected date/time
08/22/18 00:00
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157010	1	08/24/18 14:36	08/24/18 14:36	DWR

1
Cp

2
Tc

3
Ss

TB-14-20180822 L1020170-21 GW

Collected by
K. Teague
Collected date/time
08/22/18 00:00
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1156644	1	08/24/18 04:43	08/24/18 04:43	JCP

4
Cn

5
Sr

B-18-18(67.5-68.0) L1020170-22 Solid

Collected by
K. Teague
Collected date/time
08/21/18 14:30
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157153	1	08/25/18 07:23	08/25/18 07:32	KS
Mercury by Method 7471B	WG1157584	1	08/26/18 12:46	08/28/18 12:52	EL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 10:11	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1	08/21/18 14:30	08/25/18 03:37	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1	08/21/18 14:30	08/30/18 04:25	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	1	08/29/18 20:32	08/30/18 07:41	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 07:05	DMG

6
Qc

7
Gl

8
Al

9
Sc

B-18-18(52.5-53.0) L1020170-23 Solid

Collected by
K. Teague
Collected date/time
08/21/18 14:10
Received date/time
08/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1157158	1	08/25/18 06:37	08/25/18 06:46	KS
Mercury by Method 7471B	WG1157584	1	08/26/18 12:46	08/28/18 12:54	EL
Metals (ICP) by Method 6010C	WG1156987	1	08/26/18 20:19	08/27/18 10:14	CCE
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1157215	1	08/21/18 14:10	08/25/18 03:55	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159139	1	08/21/18 14:10	08/30/18 04:45	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158427	1	08/29/18 20:32	08/30/18 07:53	MG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1157649	1	08/28/18 10:54	08/29/18 07:26	DMG



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.

Mark W. Beasley
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.3		1	08/25/2018 06:46	WG1157158

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0249	1	08/27/2018 13:11	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.49	1	08/27/2018 09:29	WG1156987
Barium	81.4		0.623	1	08/27/2018 09:29	WG1156987
Cadmium	ND		0.623	1	08/27/2018 09:29	WG1156987
Chromium	12.0		1.25	1	08/27/2018 09:29	WG1156987
Lead	6.05		0.623	1	08/27/2018 09:29	WG1156987
Selenium	ND		2.49	1	08/27/2018 09:29	WG1156987
Silver	ND		1.25	1	08/27/2018 09:29	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0324	1.04	08/24/2018 19:32	WG1156936
Acrylonitrile	ND		0.0162	1.04	08/24/2018 19:32	WG1156936
Benzene	ND		0.00130	1.04	08/24/2018 19:32	WG1156936
Bromobenzene	ND		0.0162	1.04	08/24/2018 19:32	WG1156936
Bromodichloromethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
Bromoform	ND		0.0324	1.04	08/24/2018 19:32	WG1156936
Bromomethane	ND		0.0162	1.04	08/24/2018 19:32	WG1156936
n-Butylbenzene	ND		0.0162	1.04	08/24/2018 19:32	WG1156936
sec-Butylbenzene	ND		0.0162	1.04	08/24/2018 19:32	WG1156936
tert-Butylbenzene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
Carbon tetrachloride	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
Chlorobenzene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
Chlorodibromomethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
Chloroethane	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
Chloroform	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
Chloromethane	ND		0.0162	1.04	08/24/2018 19:32	WG1156936
2-Chlorotoluene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
4-Chlorotoluene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
1,2-Dibromo-3-Chloropropane	ND		0.0324	1.04	08/24/2018 19:32	WG1156936
1,2-Dibromoethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
Dibromomethane	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
1,2-Dichlorobenzene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
1,3-Dichlorobenzene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
1,4-Dichlorobenzene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
Dichlorodifluoromethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
1,1-Dichloroethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
1,2-Dichloroethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
1,1-Dichloroethene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
cis-1,2-Dichloroethene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
trans-1,2-Dichloroethene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
1,2-Dichloropropane	ND		0.00648	1.04	08/29/2018 16:48	WG1158548
1,1-Dichloropropene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
1,3-Dichloropropane	ND		0.00648	1.04	08/24/2018 19:32	WG1156936

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/20/18 12:30

L1020170

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
trans-1,3-Dichloropropene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
2,2-Dichloropropane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
Di-isopropyl ether	ND		0.00130	1.04	08/24/2018 19:32	WG1156936
Ethylbenzene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
Hexachloro-1,3-butadiene	ND		0.0324	1.04	08/24/2018 19:32	WG1156936
Isopropylbenzene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
p-Isopropyltoluene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
2-Butanone (MEK)	0.0380		0.0324	1.04	08/24/2018 19:32	WG1156936
Methylene Chloride	ND		0.0324	1.04	08/24/2018 19:32	WG1156936
4-Methyl-2-pentanone (MIBK)	ND		0.0324	1.04	08/24/2018 19:32	WG1156936
Methyl tert-butyl ether	ND		0.00130	1.04	08/24/2018 19:32	WG1156936
Naphthalene	ND		0.0162	1.04	08/24/2018 19:32	WG1156936
n-Propylbenzene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
Styrene	ND		0.0162	1.04	08/24/2018 19:32	WG1156936
1,1,1,2-Tetrachloroethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
1,1,2,2-Tetrachloroethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
1,1,2-Trichlorotrifluoroethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
Tetrachloroethene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
Toluene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
1,2,3-Trichlorobenzene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
1,2,4-Trichlorobenzene	ND		0.0162	1.04	08/24/2018 19:32	WG1156936
1,1,1-Trichloroethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
1,1,2-Trichloroethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
Trichloroethene	ND		0.00130	1.04	08/29/2018 16:48	WG1158548
Trichlorofluoromethane	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
1,2,3-Trichloropropane	ND		0.0162	1.04	08/24/2018 19:32	WG1156936
1,2,4-Trimethylbenzene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
1,2,3-Trimethylbenzene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
Vinyl chloride	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
1,3,5-Trimethylbenzene	ND		0.00648	1.04	08/24/2018 19:32	WG1156936
o-Xylene	ND		0.00324	1.04	08/24/2018 19:32	WG1156936
m&p-Xylene	ND		0.00518	1.04	08/29/2018 16:48	WG1158548
(S) Toluene-d8	106		75.0-131		08/24/2018 19:32	WG1156936
(S) Toluene-d8	99.6		75.0-131		08/29/2018 16:48	WG1158548
(S) Dibromofluoromethane	109		65.0-129		08/24/2018 19:32	WG1156936
(S) Dibromofluoromethane	109		65.0-129		08/29/2018 16:48	WG1158548
(S) 4-Bromofluorobenzene	102		67.0-138		08/24/2018 19:32	WG1156936
(S) 4-Bromofluorobenzene	110		67.0-138		08/29/2018 16:48	WG1158548

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.98	1	08/30/2018 05:18	WG1158427
Residual Range Organics (RRO)	ND		12.5	1	08/30/2018 05:18	WG1158427
(S) o-Terphenyl	92.6		18.0-148		08/30/2018 05:18	WG1158427

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Acenaphthene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Acenaphthylene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Benzo(a)anthracene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Benzo(a)pyrene	ND		0.00747	1	08/29/2018 04:16	WG1157649



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Benzo(g,h,i)perylene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Benzo(k)fluoranthene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Chrysene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Dibenz(a,h)anthracene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Fluoranthene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Fluorene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Naphthalene	ND		0.0249	1	08/29/2018 04:16	WG1157649
Phenanthrene	ND		0.00747	1	08/29/2018 04:16	WG1157649
Pyrene	ND		0.00747	1	08/29/2018 04:16	WG1157649
1-Methylnaphthalene	ND		0.0249	1	08/29/2018 04:16	WG1157649
2-Methylnaphthalene	ND		0.0249	1	08/29/2018 04:16	WG1157649
2-Chloronaphthalene	ND		0.0249	1	08/29/2018 04:16	WG1157649
<i>(S)</i> Nitrobenzene-d5	78.3		14.0-149		08/29/2018 04:16	WG1157649
<i>(S)</i> 2-Fluorobiphenyl	68.2		34.0-125		08/29/2018 04:16	WG1157649
<i>(S)</i> p-Terphenyl-d14	65.8		23.0-120		08/29/2018 04:16	WG1157649

- 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
Total Solids	77.4		1	08/25/2018 06:46	WG1157158

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0259	1	08/27/2018 13:18	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.59	1	08/27/2018 09:31	WG1156987
Barium	78.6		0.646	1	08/27/2018 09:31	WG1156987
Cadmium	ND		0.646	1	08/27/2018 09:31	WG1156987
Chromium	11.7		1.29	1	08/27/2018 09:31	WG1156987
Lead	3.24		0.646	1	08/27/2018 09:31	WG1156987
Selenium	ND		2.59	1	08/27/2018 09:31	WG1156987
Silver	ND		1.29	1	08/27/2018 09:31	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND	JO	0.0323	1	08/30/2018 00:51	WG1159139
Acrylonitrile	ND		0.0162	1	08/25/2018 00:14	WG1157215
Benzene	ND		0.00129	1	08/25/2018 00:14	WG1157215
Bromobenzene	ND		0.0162	1	08/25/2018 00:14	WG1157215
Bromodichloromethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
Bromoform	ND		0.0323	1	08/25/2018 00:14	WG1157215
Bromomethane	ND		0.0162	1	08/25/2018 00:14	WG1157215
n-Butylbenzene	ND		0.0162	1	08/25/2018 00:14	WG1157215
sec-Butylbenzene	ND		0.0162	1	08/25/2018 00:14	WG1157215
tert-Butylbenzene	ND		0.00646	1	08/25/2018 00:14	WG1157215
Carbon tetrachloride	ND		0.00646	1	08/25/2018 00:14	WG1157215
Chlorobenzene	ND		0.00323	1	08/25/2018 00:14	WG1157215
Chlorodibromomethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
Chloroethane	ND		0.00646	1	08/25/2018 00:14	WG1157215
Chloroform	ND		0.00323	1	08/25/2018 00:14	WG1157215
Chloromethane	ND		0.0162	1	08/25/2018 00:14	WG1157215
2-Chlorotoluene	ND		0.00323	1	08/25/2018 00:14	WG1157215
4-Chlorotoluene	ND		0.00646	1	08/25/2018 00:14	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0323	1	08/25/2018 00:14	WG1157215
1,2-Dibromoethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
Dibromomethane	ND		0.00646	1	08/25/2018 00:14	WG1157215
1,2-Dichlorobenzene	ND		0.00646	1	08/25/2018 00:14	WG1157215
1,3-Dichlorobenzene	ND		0.00646	1	08/25/2018 00:14	WG1157215
1,4-Dichlorobenzene	ND		0.00646	1	08/25/2018 00:14	WG1157215
Dichlorodifluoromethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
1,1-Dichloroethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
1,2-Dichloroethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
1,1-Dichloroethene	ND		0.00323	1	08/25/2018 00:14	WG1157215
cis-1,2-Dichloroethene	ND		0.00323	1	08/25/2018 00:14	WG1157215
trans-1,2-Dichloroethene	ND		0.00646	1	08/25/2018 00:14	WG1157215
1,2-Dichloropropane	ND		0.00646	1	08/25/2018 00:14	WG1157215
1,1-Dichloropropene	ND		0.00323	1	08/25/2018 00:14	WG1157215
1,3-Dichloropropane	ND		0.00646	1	08/25/2018 00:14	WG1157215

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 08/20/18 13:00

L1020170

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00323	1	08/25/2018 00:14	WG1157215
trans-1,3-Dichloropropene	ND		0.00646	1	08/25/2018 00:14	WG1157215
2,2-Dichloropropane	ND		0.00323	1	08/25/2018 00:14	WG1157215
Di-isopropyl ether	ND		0.00129	1	08/25/2018 00:14	WG1157215
Ethylbenzene	ND		0.00323	1	08/25/2018 00:14	WG1157215
Hexachloro-1,3-butadiene	ND		0.0323	1	08/25/2018 00:14	WG1157215
Isopropylbenzene	ND		0.00323	1	08/25/2018 00:14	WG1157215
p-Isopropyltoluene	ND		0.00646	1	08/25/2018 00:14	WG1157215
2-Butanone (MEK)	ND		0.0323	1	08/25/2018 00:14	WG1157215
Methylene Chloride	ND		0.0323	1	08/25/2018 00:14	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0323	1	08/25/2018 00:14	WG1157215
Methyl tert-butyl ether	ND		0.00129	1	08/25/2018 00:14	WG1157215
Naphthalene	ND		0.0162	1	08/25/2018 00:14	WG1157215
n-Propylbenzene	ND		0.00646	1	08/25/2018 00:14	WG1157215
Styrene	ND		0.0162	1	08/25/2018 00:14	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
Tetrachloroethene	ND		0.00323	1	08/25/2018 00:14	WG1157215
Toluene	ND		0.00646	1	08/25/2018 00:14	WG1157215
1,2,3-Trichlorobenzene	ND		0.00323	1	08/25/2018 00:14	WG1157215
1,2,4-Trichlorobenzene	ND		0.0162	1	08/25/2018 00:14	WG1157215
1,1,1-Trichloroethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
1,1,2-Trichloroethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
Trichloroethene	ND		0.00129	1	08/25/2018 00:14	WG1157215
Trichlorofluoromethane	ND		0.00323	1	08/25/2018 00:14	WG1157215
1,2,3-Trichloropropane	ND		0.0162	1	08/25/2018 00:14	WG1157215
1,2,4-Trimethylbenzene	ND		0.00646	1	08/25/2018 00:14	WG1157215
1,2,3-Trimethylbenzene	ND		0.00646	1	08/25/2018 00:14	WG1157215
Vinyl chloride	ND		0.00323	1	08/25/2018 00:14	WG1157215
1,3,5-Trimethylbenzene	ND		0.00646	1	08/25/2018 00:14	WG1157215
o-Xylene	ND		0.00323	1	08/25/2018 00:14	WG1157215
m&p-Xylene	ND		0.00517	1	08/25/2018 00:14	WG1157215
(S) Toluene-d8	103		75.0-131		08/25/2018 00:14	WG1157215
(S) Toluene-d8	113		75.0-131		08/30/2018 00:51	WG1159139
(S) Dibromofluoromethane	107		65.0-129		08/25/2018 00:14	WG1157215
(S) Dibromofluoromethane	90.9		65.0-129		08/30/2018 00:51	WG1159139
(S) 4-Bromofluorobenzene	107		67.0-138		08/25/2018 00:14	WG1157215
(S) 4-Bromofluorobenzene	108		67.0-138		08/30/2018 00:51	WG1159139

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.17	1	08/30/2018 05:31	WG1158427
Residual Range Organics (RRO)	ND		12.9	1	08/30/2018 05:31	WG1158427
(S) o-Terphenyl	62.1		18.0-148		08/30/2018 05:31	WG1158427

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Acenaphthene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Acenaphthylene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Benzo(a)anthracene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Benzo(a)pyrene	ND		0.00776	1	08/29/2018 04:37	WG1157649



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Benzo(g,h,i)perylene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Benzo(k)fluoranthene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Chrysene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Dibenz(a,h)anthracene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Fluoranthene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Fluorene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Naphthalene	ND		0.0259	1	08/29/2018 04:37	WG1157649
Phenanthrene	ND		0.00776	1	08/29/2018 04:37	WG1157649
Pyrene	ND		0.00776	1	08/29/2018 04:37	WG1157649
1-Methylnaphthalene	ND		0.0259	1	08/29/2018 04:37	WG1157649
2-Methylnaphthalene	ND		0.0259	1	08/29/2018 04:37	WG1157649
2-Chloronaphthalene	ND		0.0259	1	08/29/2018 04:37	WG1157649
(S) Nitrobenzene-d5	87.2		14.0-149		08/29/2018 04:37	WG1157649
(S) 2-Fluorobiphenyl	72.8		34.0-125		08/29/2018 04:37	WG1157649
(S) p-Terphenyl-d14	68.2		23.0-120		08/29/2018 04:37	WG1157649

- 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	83.2		1	08/25/2018 06:46	WG1157158

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0240	1	08/27/2018 13:21	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.40	1	08/27/2018 09:39	WG1156987
Barium	64.8		0.601	1	08/27/2018 09:39	WG1156987
Cadmium	ND		0.601	1	08/27/2018 09:39	WG1156987
Chromium	10.8		1.20	1	08/27/2018 09:39	WG1156987
Lead	6.58		0.601	1	08/27/2018 09:39	WG1156987
Selenium	ND		2.40	1	08/27/2018 09:39	WG1156987
Silver	ND		1.20	1	08/27/2018 09:39	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	JO	0.0322	1.07	08/30/2018 01:11	WG1159139
Acrylonitrile	ND		0.0161	1.07	08/25/2018 00:32	WG1157215
Benzene	ND		0.00129	1.07	08/25/2018 00:32	WG1157215
Bromobenzene	ND		0.0161	1.07	08/25/2018 00:32	WG1157215
Bromodichloromethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
Bromoform	ND		0.0322	1.07	08/25/2018 00:32	WG1157215
Bromomethane	ND		0.0161	1.07	08/25/2018 00:32	WG1157215
n-Butylbenzene	ND		0.0161	1.07	08/25/2018 00:32	WG1157215
sec-Butylbenzene	ND		0.0161	1.07	08/25/2018 00:32	WG1157215
tert-Butylbenzene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
Carbon tetrachloride	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
Chlorobenzene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
Chlorodibromomethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
Chloroethane	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
Chloroform	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
Chloromethane	ND		0.0161	1.07	08/25/2018 00:32	WG1157215
2-Chlorotoluene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
4-Chlorotoluene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0322	1.07	08/25/2018 00:32	WG1157215
1,2-Dibromoethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
Dibromomethane	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
1,2-Dichlorobenzene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
1,3-Dichlorobenzene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
1,4-Dichlorobenzene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
Dichlorodifluoromethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
1,1-Dichloroethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
1,2-Dichloroethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
1,1-Dichloroethene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
cis-1,2-Dichloroethene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
trans-1,2-Dichloroethene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
1,2-Dichloropropane	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
1,1-Dichloropropene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
1,3-Dichloropropane	ND		0.00643	1.07	08/25/2018 00:32	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
trans-1,3-Dichloropropene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
2,2-Dichloropropane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
Di-isopropyl ether	ND		0.00129	1.07	08/25/2018 00:32	WG1157215
Ethylbenzene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
Hexachloro-1,3-butadiene	ND		0.0322	1.07	08/25/2018 00:32	WG1157215
Isopropylbenzene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
p-Isopropyltoluene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
2-Butanone (MEK)	ND		0.0322	1.07	08/25/2018 00:32	WG1157215
Methylene Chloride	ND		0.0322	1.07	08/25/2018 00:32	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0322	1.07	08/25/2018 00:32	WG1157215
Methyl tert-butyl ether	ND		0.00129	1.07	08/25/2018 00:32	WG1157215
Naphthalene	ND		0.0161	1.07	08/25/2018 00:32	WG1157215
n-Propylbenzene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
Styrene	ND		0.0161	1.07	08/25/2018 00:32	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
Tetrachloroethene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
Toluene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
1,2,3-Trichlorobenzene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
1,2,4-Trichlorobenzene	ND		0.0161	1.07	08/25/2018 00:32	WG1157215
1,1,1-Trichloroethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
1,1,2-Trichloroethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
Trichloroethene	ND		0.00129	1.07	08/25/2018 00:32	WG1157215
Trichlorofluoromethane	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
1,2,3-Trichloropropane	ND		0.0161	1.07	08/25/2018 00:32	WG1157215
1,2,4-Trimethylbenzene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
1,2,3-Trimethylbenzene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
Vinyl chloride	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
1,3,5-Trimethylbenzene	ND		0.00643	1.07	08/25/2018 00:32	WG1157215
o-Xylene	ND		0.00322	1.07	08/25/2018 00:32	WG1157215
m&p-Xylene	ND		0.00515	1.07	08/25/2018 00:32	WG1157215
(S) Toluene-d8	105		75.0-131		08/25/2018 00:32	WG1157215
(S) Toluene-d8	114		75.0-131		08/30/2018 01:11	WG1159139
(S) Dibromofluoromethane	97.5		65.0-129		08/25/2018 00:32	WG1157215
(S) Dibromofluoromethane	90.8		65.0-129		08/30/2018 01:11	WG1159139
(S) 4-Bromofluorobenzene	109		67.0-138		08/25/2018 00:32	WG1157215
(S) 4-Bromofluorobenzene	106		67.0-138		08/30/2018 01:11	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.81	1	08/30/2018 08:06	WG1158427
Residual Range Organics (RRO)	ND		12.0	1	08/30/2018 08:06	WG1158427
(S) o-Terphenyl	76.6		18.0-148		08/30/2018 08:06	WG1158427

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Acenaphthene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Acenaphthylene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Benzo(a)anthracene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Benzo(a)pyrene	ND		0.00721	1	08/29/2018 04:59	WG1157649



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Benzo(g,h,i)perylene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Benzo(k)fluoranthene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Chrysene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Dibenz(a,h)anthracene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Fluoranthene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Fluorene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Naphthalene	ND		0.0240	1	08/29/2018 04:59	WG1157649
Phenanthrene	ND		0.00721	1	08/29/2018 04:59	WG1157649
Pyrene	ND		0.00721	1	08/29/2018 04:59	WG1157649
1-Methylnaphthalene	ND		0.0240	1	08/29/2018 04:59	WG1157649
2-Methylnaphthalene	ND		0.0240	1	08/29/2018 04:59	WG1157649
2-Chloronaphthalene	ND		0.0240	1	08/29/2018 04:59	WG1157649
<i>(S)</i> Nitrobenzene-d5	77.5		14.0-149		08/29/2018 04:59	WG1157649
<i>(S)</i> 2-Fluorobiphenyl	68.3		34.0-125		08/29/2018 04:59	WG1157649
<i>(S)</i> p-Terphenyl-d14	71.9		23.0-120		08/29/2018 04:59	WG1157649

- 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	81.1		1	08/25/2018 07:32	WG1157153

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0247	1	08/27/2018 13:24	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.47	1	08/27/2018 09:42	WG1156987
Barium	88.5		0.617	1	08/27/2018 09:42	WG1156987
Cadmium	ND		0.617	1	08/27/2018 09:42	WG1156987
Chromium	12.9		1.23	1	08/27/2018 09:42	WG1156987
Lead	4.43		0.617	1	08/27/2018 09:42	WG1156987
Selenium	ND		2.47	1	08/27/2018 09:42	WG1156987
Silver	ND		1.23	1	08/27/2018 09:42	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	JO	0.0308	1	08/30/2018 01:30	WG1159139
Acrylonitrile	ND		0.0154	1	08/25/2018 00:51	WG1157215
Benzene	ND		0.00123	1	08/25/2018 00:51	WG1157215
Bromobenzene	ND		0.0154	1	08/25/2018 00:51	WG1157215
Bromodichloromethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
Bromoform	ND		0.0308	1	08/25/2018 00:51	WG1157215
Bromomethane	ND		0.0154	1	08/25/2018 00:51	WG1157215
n-Butylbenzene	ND		0.0154	1	08/25/2018 00:51	WG1157215
sec-Butylbenzene	ND		0.0154	1	08/25/2018 00:51	WG1157215
tert-Butylbenzene	ND		0.00617	1	08/25/2018 00:51	WG1157215
Carbon tetrachloride	ND		0.00617	1	08/25/2018 00:51	WG1157215
Chlorobenzene	ND		0.00308	1	08/25/2018 00:51	WG1157215
Chlorodibromomethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
Chloroethane	ND		0.00617	1	08/25/2018 00:51	WG1157215
Chloroform	ND		0.00308	1	08/25/2018 00:51	WG1157215
Chloromethane	ND		0.0154	1	08/25/2018 00:51	WG1157215
2-Chlorotoluene	ND		0.00308	1	08/25/2018 00:51	WG1157215
4-Chlorotoluene	ND		0.00617	1	08/25/2018 00:51	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0308	1	08/25/2018 00:51	WG1157215
1,2-Dibromoethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
Dibromomethane	ND		0.00617	1	08/25/2018 00:51	WG1157215
1,2-Dichlorobenzene	ND		0.00617	1	08/25/2018 00:51	WG1157215
1,3-Dichlorobenzene	ND		0.00617	1	08/25/2018 00:51	WG1157215
1,4-Dichlorobenzene	ND		0.00617	1	08/25/2018 00:51	WG1157215
Dichlorodifluoromethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
1,1-Dichloroethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
1,2-Dichloroethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
1,1-Dichloroethene	ND		0.00308	1	08/25/2018 00:51	WG1157215
cis-1,2-Dichloroethene	ND		0.00308	1	08/25/2018 00:51	WG1157215
trans-1,2-Dichloroethene	ND		0.00617	1	08/25/2018 00:51	WG1157215
1,2-Dichloropropane	ND		0.00617	1	08/25/2018 00:51	WG1157215
1,1-Dichloropropene	ND		0.00308	1	08/25/2018 00:51	WG1157215
1,3-Dichloropropane	ND		0.00617	1	08/25/2018 00:51	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/20/18 14:00

L1020170

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00308	1	08/25/2018 00:51	WG1157215
trans-1,3-Dichloropropene	ND		0.00617	1	08/25/2018 00:51	WG1157215
2,2-Dichloropropane	ND		0.00308	1	08/25/2018 00:51	WG1157215
Di-isopropyl ether	ND		0.00123	1	08/25/2018 00:51	WG1157215
Ethylbenzene	ND		0.00308	1	08/25/2018 00:51	WG1157215
Hexachloro-1,3-butadiene	ND		0.0308	1	08/25/2018 00:51	WG1157215
Isopropylbenzene	ND		0.00308	1	08/25/2018 00:51	WG1157215
p-Isopropyltoluene	ND		0.00617	1	08/25/2018 00:51	WG1157215
2-Butanone (MEK)	ND		0.0308	1	08/25/2018 00:51	WG1157215
Methylene Chloride	ND		0.0308	1	08/25/2018 00:51	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0308	1	08/25/2018 00:51	WG1157215
Methyl tert-butyl ether	ND		0.00123	1	08/25/2018 00:51	WG1157215
Naphthalene	ND		0.0154	1	08/25/2018 00:51	WG1157215
n-Propylbenzene	ND		0.00617	1	08/25/2018 00:51	WG1157215
Styrene	ND		0.0154	1	08/25/2018 00:51	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
Tetrachloroethene	ND		0.00308	1	08/25/2018 00:51	WG1157215
Toluene	ND		0.00617	1	08/25/2018 00:51	WG1157215
1,2,3-Trichlorobenzene	ND		0.00308	1	08/25/2018 00:51	WG1157215
1,2,4-Trichlorobenzene	ND		0.0154	1	08/25/2018 00:51	WG1157215
1,1,1-Trichloroethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
1,1,2-Trichloroethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
Trichloroethene	ND		0.00123	1	08/25/2018 00:51	WG1157215
Trichlorofluoromethane	ND		0.00308	1	08/25/2018 00:51	WG1157215
1,2,3-Trichloropropane	ND		0.0154	1	08/25/2018 00:51	WG1157215
1,2,4-Trimethylbenzene	ND		0.00617	1	08/25/2018 00:51	WG1157215
1,2,3-Trimethylbenzene	ND		0.00617	1	08/25/2018 00:51	WG1157215
Vinyl chloride	ND		0.00308	1	08/25/2018 00:51	WG1157215
1,3,5-Trimethylbenzene	ND		0.00617	1	08/25/2018 00:51	WG1157215
o-Xylene	ND		0.00308	1	08/25/2018 00:51	WG1157215
m&p-Xylene	ND		0.00493	1	08/25/2018 00:51	WG1157215
(S) Toluene-d8	104		75.0-131		08/25/2018 00:51	WG1157215
(S) Toluene-d8	114		75.0-131		08/30/2018 01:30	WG1159139
(S) Dibromofluoromethane	101		65.0-129		08/25/2018 00:51	WG1157215
(S) Dibromofluoromethane	90.7		65.0-129		08/30/2018 01:30	WG1159139
(S) 4-Bromofluorobenzene	105		67.0-138		08/25/2018 00:51	WG1157215
(S) 4-Bromofluorobenzene	102		67.0-138		08/30/2018 01:30	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.93	1	08/30/2018 08:19	WG1158427
Residual Range Organics (RRO)	ND		12.3	1	08/30/2018 08:19	WG1158427
(S) o-Terphenyl	79.3		18.0-148		08/30/2018 08:19	WG1158427

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Acenaphthene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Acenaphthylene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Benzo(a)anthracene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Benzo(a)pyrene	ND		0.00740	1	08/29/2018 05:20	WG1157649



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Benzo(g,h,i)perylene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Benzo(k)fluoranthene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Chrysene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Dibenz(a,h)anthracene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Fluoranthene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Fluorene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Naphthalene	ND		0.0247	1	08/29/2018 05:20	WG1157649
Phenanthrene	ND		0.00740	1	08/29/2018 05:20	WG1157649
Pyrene	ND		0.00740	1	08/29/2018 05:20	WG1157649
1-Methylnaphthalene	ND		0.0247	1	08/29/2018 05:20	WG1157649
2-Methylnaphthalene	ND		0.0247	1	08/29/2018 05:20	WG1157649
2-Chloronaphthalene	ND		0.0247	1	08/29/2018 05:20	WG1157649
<i>(S)</i> Nitrobenzene-d5	67.9		14.0-149		08/29/2018 05:20	WG1157649
<i>(S)</i> 2-Fluorobiphenyl	56.8		34.0-125		08/29/2018 05:20	WG1157649
<i>(S)</i> p-Terphenyl-d14	53.2		23.0-120		08/29/2018 05:20	WG1157649

- 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	88.1		1	08/25/2018 07:32	WG1157153

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0227	1	08/27/2018 13:26	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.27	1	08/27/2018 09:45	WG1156987
Barium	79.4		0.567	1	08/27/2018 09:45	WG1156987
Cadmium	ND		0.567	1	08/27/2018 09:45	WG1156987
Chromium	11.2		1.13	1	08/27/2018 09:45	WG1156987
Lead	8.14		0.567	1	08/27/2018 09:45	WG1156987
Selenium	ND		2.27	1	08/27/2018 09:45	WG1156987
Silver	ND		1.13	1	08/27/2018 09:45	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	JO	0.0284	1	08/30/2018 01:49	WG1159139
Acrylonitrile	ND		0.0142	1	08/25/2018 01:09	WG1157215
Benzene	ND		0.00113	1	08/25/2018 01:09	WG1157215
Bromobenzene	ND		0.0142	1	08/25/2018 01:09	WG1157215
Bromodichloromethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
Bromoform	ND		0.0284	1	08/25/2018 01:09	WG1157215
Bromomethane	ND		0.0142	1	08/25/2018 01:09	WG1157215
n-Butylbenzene	ND		0.0142	1	08/25/2018 01:09	WG1157215
sec-Butylbenzene	ND		0.0142	1	08/25/2018 01:09	WG1157215
tert-Butylbenzene	ND		0.00567	1	08/25/2018 01:09	WG1157215
Carbon tetrachloride	ND		0.00567	1	08/25/2018 01:09	WG1157215
Chlorobenzene	ND		0.00284	1	08/25/2018 01:09	WG1157215
Chlorodibromomethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
Chloroethane	ND		0.00567	1	08/25/2018 01:09	WG1157215
Chloroform	ND		0.00284	1	08/25/2018 01:09	WG1157215
Chloromethane	ND		0.0142	1	08/25/2018 01:09	WG1157215
2-Chlorotoluene	ND		0.00284	1	08/25/2018 01:09	WG1157215
4-Chlorotoluene	ND		0.00567	1	08/25/2018 01:09	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0284	1	08/25/2018 01:09	WG1157215
1,2-Dibromoethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
Dibromomethane	ND		0.00567	1	08/25/2018 01:09	WG1157215
1,2-Dichlorobenzene	ND		0.00567	1	08/25/2018 01:09	WG1157215
1,3-Dichlorobenzene	ND		0.00567	1	08/25/2018 01:09	WG1157215
1,4-Dichlorobenzene	ND		0.00567	1	08/25/2018 01:09	WG1157215
Dichlorodifluoromethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
1,1-Dichloroethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
1,2-Dichloroethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
1,1-Dichloroethene	ND		0.00284	1	08/25/2018 01:09	WG1157215
cis-1,2-Dichloroethene	ND		0.00284	1	08/25/2018 01:09	WG1157215
trans-1,2-Dichloroethene	ND		0.00567	1	08/25/2018 01:09	WG1157215
1,2-Dichloropropane	ND		0.00567	1	08/25/2018 01:09	WG1157215
1,1-Dichloropropene	ND		0.00284	1	08/25/2018 01:09	WG1157215
1,3-Dichloropropane	ND		0.00567	1	08/25/2018 01:09	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/20/18 15:30

L1020170

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00284	1	08/25/2018 01:09	WG1157215
trans-1,3-Dichloropropene	ND		0.00567	1	08/25/2018 01:09	WG1157215
2,2-Dichloropropane	ND		0.00284	1	08/25/2018 01:09	WG1157215
Di-isopropyl ether	ND		0.00113	1	08/25/2018 01:09	WG1157215
Ethylbenzene	ND		0.00284	1	08/25/2018 01:09	WG1157215
Hexachloro-1,3-butadiene	ND		0.0284	1	08/25/2018 01:09	WG1157215
Isopropylbenzene	ND		0.00284	1	08/25/2018 01:09	WG1157215
p-Isopropyltoluene	ND		0.00567	1	08/25/2018 01:09	WG1157215
2-Butanone (MEK)	ND		0.0284	1	08/25/2018 01:09	WG1157215
Methylene Chloride	ND		0.0284	1	08/25/2018 01:09	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0284	1	08/25/2018 01:09	WG1157215
Methyl tert-butyl ether	ND		0.00113	1	08/25/2018 01:09	WG1157215
Naphthalene	ND		0.0142	1	08/25/2018 01:09	WG1157215
n-Propylbenzene	ND		0.00567	1	08/25/2018 01:09	WG1157215
Styrene	ND		0.0142	1	08/25/2018 01:09	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
Tetrachloroethene	ND		0.00284	1	08/25/2018 01:09	WG1157215
Toluene	ND		0.00567	1	08/25/2018 01:09	WG1157215
1,2,3-Trichlorobenzene	ND		0.00284	1	08/25/2018 01:09	WG1157215
1,2,4-Trichlorobenzene	ND		0.0142	1	08/25/2018 01:09	WG1157215
1,1,1-Trichloroethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
1,1,2-Trichloroethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
Trichloroethene	ND		0.00113	1	08/25/2018 01:09	WG1157215
Trichlorofluoromethane	ND		0.00284	1	08/25/2018 01:09	WG1157215
1,2,3-Trichloropropane	ND		0.0142	1	08/25/2018 01:09	WG1157215
1,2,4-Trimethylbenzene	ND		0.00567	1	08/25/2018 01:09	WG1157215
1,2,3-Trimethylbenzene	ND		0.00567	1	08/25/2018 01:09	WG1157215
Vinyl chloride	ND		0.00284	1	08/25/2018 01:09	WG1157215
1,3,5-Trimethylbenzene	ND		0.00567	1	08/25/2018 01:09	WG1157215
o-Xylene	ND		0.00284	1	08/25/2018 01:09	WG1157215
m&p-Xylene	ND		0.00454	1	08/25/2018 01:09	WG1157215
(S) Toluene-d8	104		75.0-131		08/25/2018 01:09	WG1157215
(S) Toluene-d8	113		75.0-131		08/30/2018 01:49	WG1159139
(S) Dibromofluoromethane	102		65.0-129		08/25/2018 01:09	WG1157215
(S) Dibromofluoromethane	91.1		65.0-129		08/30/2018 01:49	WG1159139
(S) 4-Bromofluorobenzene	107		67.0-138		08/25/2018 01:09	WG1157215
(S) 4-Bromofluorobenzene	107		67.0-138		08/30/2018 01:49	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND	J3 J5	45.4	10	08/30/2018 10:46	WG1158427
Residual Range Organics (RRO)	ND	J3 J5	113	10	08/30/2018 10:46	WG1158427
(S) o-Terphenyl	96.4		18.0-148		08/30/2018 10:46	WG1158427

Sample Narrative:

L1020170-05 WG1158427: Dilution due to matrix impact during extract concentration procedure



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Acenaphthene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Acenaphthylene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Benzo(a)anthracene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Benzo(a)pyrene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Benzo(b)fluoranthene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Benzo(g,h,i)perylene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Benzo(k)fluoranthene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Chrysene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Dibenz(a,h)anthracene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Fluoranthene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Fluorene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Naphthalene	ND		0.0227	1	08/29/2018 08:30	WG1157649
Phenanthrene	ND		0.00681	1	08/29/2018 08:30	WG1157649
Pyrene	ND		0.00681	1	08/29/2018 08:30	WG1157649
1-Methylnaphthalene	ND		0.0227	1	08/29/2018 08:30	WG1157649
2-Methylnaphthalene	ND		0.0227	1	08/29/2018 08:30	WG1157649
2-Chloronaphthalene	ND		0.0227	1	08/29/2018 08:30	WG1157649
(S) Nitrobenzene-d5	57.3		14.0-149		08/29/2018 08:30	WG1157649
(S) 2-Fluorobiphenyl	67.7		34.0-125		08/29/2018 08:30	WG1157649
(S) p-Terphenyl-d14	71.2		23.0-120		08/29/2018 08:30	WG1157649

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	81.2		1	08/25/2018 07:32	WG1157153

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0246	1	08/27/2018 13:29	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.46	1	08/27/2018 09:47	WG1156987
Barium	80.2		0.616	1	08/27/2018 09:47	WG1156987
Cadmium	ND		0.616	1	08/27/2018 09:47	WG1156987
Chromium	9.72		1.23	1	08/27/2018 09:47	WG1156987
Lead	7.42		0.616	1	08/27/2018 09:47	WG1156987
Selenium	ND		2.46	1	08/27/2018 09:47	WG1156987
Silver	ND		1.23	1	08/27/2018 09:47	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	JO	0.0323	1.05	08/30/2018 02:09	WG1159139
Acrylonitrile	ND		0.0163	1.06	08/25/2018 01:27	WG1157215
Benzene	ND		0.00131	1.06	08/25/2018 01:27	WG1157215
Bromobenzene	ND		0.0163	1.06	08/25/2018 01:27	WG1157215
Bromodichloromethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
Bromoform	ND		0.0327	1.06	08/25/2018 01:27	WG1157215
Bromomethane	ND		0.0163	1.06	08/25/2018 01:27	WG1157215
n-Butylbenzene	ND		0.0163	1.06	08/25/2018 01:27	WG1157215
sec-Butylbenzene	ND		0.0163	1.06	08/25/2018 01:27	WG1157215
tert-Butylbenzene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
Carbon tetrachloride	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
Chlorobenzene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
Chlorodibromomethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
Chloroethane	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
Chloroform	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
Chloromethane	ND		0.0163	1.06	08/25/2018 01:27	WG1157215
2-Chlorotoluene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
4-Chlorotoluene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0327	1.06	08/25/2018 01:27	WG1157215
1,2-Dibromoethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
Dibromomethane	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
1,2-Dichlorobenzene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
1,3-Dichlorobenzene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
1,4-Dichlorobenzene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
Dichlorodifluoromethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
1,1-Dichloroethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
1,2-Dichloroethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
1,1-Dichloroethene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
cis-1,2-Dichloroethene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
trans-1,2-Dichloroethene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
1,2-Dichloropropane	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
1,1-Dichloropropene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
1,3-Dichloropropane	ND		0.00653	1.06	08/25/2018 01:27	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
trans-1,3-Dichloropropene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
2,2-Dichloropropane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
Di-isopropyl ether	ND		0.00131	1.06	08/25/2018 01:27	WG1157215
Ethylbenzene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
Hexachloro-1,3-butadiene	ND		0.0327	1.06	08/25/2018 01:27	WG1157215
Isopropylbenzene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
p-Isopropyltoluene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
2-Butanone (MEK)	ND		0.0327	1.06	08/25/2018 01:27	WG1157215
Methylene Chloride	ND		0.0327	1.06	08/25/2018 01:27	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0327	1.06	08/25/2018 01:27	WG1157215
Methyl tert-butyl ether	ND		0.00131	1.06	08/25/2018 01:27	WG1157215
Naphthalene	ND		0.0163	1.06	08/25/2018 01:27	WG1157215
n-Propylbenzene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
Styrene	ND		0.0163	1.06	08/25/2018 01:27	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
Tetrachloroethene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
Toluene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
1,2,3-Trichlorobenzene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
1,2,4-Trichlorobenzene	ND		0.0163	1.06	08/25/2018 01:27	WG1157215
1,1,1-Trichloroethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
1,1,2-Trichloroethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
Trichloroethene	ND		0.00131	1.06	08/25/2018 01:27	WG1157215
Trichlorofluoromethane	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
1,2,3-Trichloropropane	ND		0.0163	1.06	08/25/2018 01:27	WG1157215
1,2,4-Trimethylbenzene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
1,2,3-Trimethylbenzene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
Vinyl chloride	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
1,3,5-Trimethylbenzene	ND		0.00653	1.06	08/25/2018 01:27	WG1157215
o-Xylene	ND		0.00327	1.06	08/25/2018 01:27	WG1157215
m&p-Xylene	ND		0.00522	1.06	08/25/2018 01:27	WG1157215
(S) Toluene-d8	105		75.0-131		08/25/2018 01:27	WG1157215
(S) Toluene-d8	115		75.0-131		08/30/2018 02:09	WG1159139
(S) Dibromofluoromethane	101		65.0-129		08/25/2018 01:27	WG1157215
(S) Dibromofluoromethane	91.6		65.0-129		08/30/2018 02:09	WG1159139
(S) 4-Bromofluorobenzene	108		67.0-138		08/25/2018 01:27	WG1157215
(S) 4-Bromofluorobenzene	108		67.0-138		08/30/2018 02:09	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	39.3		4.93	1	08/31/2018 00:41	WG1158427
Residual Range Organics (RRO)	ND		12.3	1	08/31/2018 00:41	WG1158427
(S) o-Terphenyl	39.5		18.0-148		08/31/2018 00:41	WG1158427

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Acenaphthene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Acenaphthylene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Benzo(a)anthracene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Benzo(a)pyrene	ND		0.00739	1	08/29/2018 05:41	WG1157649



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Benzo(g,h,i)perylene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Benzo(k)fluoranthene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Chrysene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Dibenz(a,h)anthracene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Fluoranthene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Fluorene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Naphthalene	ND		0.0246	1	08/29/2018 05:41	WG1157649
Phenanthrene	ND		0.00739	1	08/29/2018 05:41	WG1157649
Pyrene	ND		0.00739	1	08/29/2018 05:41	WG1157649
1-Methylnaphthalene	ND		0.0246	1	08/29/2018 05:41	WG1157649
2-Methylnaphthalene	ND		0.0246	1	08/29/2018 05:41	WG1157649
2-Chloronaphthalene	ND		0.0246	1	08/29/2018 05:41	WG1157649
<i>(S)</i> Nitrobenzene-d5	75.9		14.0-149		08/29/2018 05:41	WG1157649
<i>(S)</i> 2-Fluorobiphenyl	63.7		34.0-125		08/29/2018 05:41	WG1157649
<i>(S)</i> p-Terphenyl-d14	59.4		23.0-120		08/29/2018 05:41	WG1157649

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	78.6		1	08/25/2018 07:32	WG1157153

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0254	1	08/27/2018 13:31	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.54	1	08/27/2018 09:50	WG1156987
Barium	94.5		0.636	1	08/27/2018 09:50	WG1156987
Cadmium	ND		0.636	1	08/27/2018 09:50	WG1156987
Chromium	14.2		1.27	1	08/27/2018 09:50	WG1156987
Lead	3.70		0.636	1	08/27/2018 09:50	WG1156987
Selenium	ND		2.54	1	08/27/2018 09:50	WG1156987
Silver	ND		1.27	1	08/27/2018 09:50	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	J0	0.636	20	08/30/2018 02:28	WG1159139
Acrylonitrile	ND		0.318	20	08/25/2018 01:46	WG1157215
Benzene	ND		0.0254	20	08/25/2018 01:46	WG1157215
Bromobenzene	ND		0.318	20	08/25/2018 01:46	WG1157215
Bromodichloromethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
Bromoform	ND		0.636	20	08/25/2018 01:46	WG1157215
Bromomethane	ND		0.318	20	08/25/2018 01:46	WG1157215
n-Butylbenzene	2.68	J5	0.318	20	08/25/2018 01:46	WG1157215
sec-Butylbenzene	1.82		0.318	20	08/25/2018 01:46	WG1157215
tert-Butylbenzene	ND		0.127	20	08/25/2018 01:46	WG1157215
Carbon tetrachloride	ND		0.127	20	08/25/2018 01:46	WG1157215
Chlorobenzene	ND		0.0636	20	08/25/2018 01:46	WG1157215
Chlorodibromomethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
Chloroethane	ND		0.127	20	08/25/2018 01:46	WG1157215
Chloroform	ND		0.0636	20	08/25/2018 01:46	WG1157215
Chloromethane	ND		0.318	20	08/25/2018 01:46	WG1157215
2-Chlorotoluene	ND		0.0636	20	08/25/2018 01:46	WG1157215
4-Chlorotoluene	ND		0.127	20	08/25/2018 01:46	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.636	20	08/25/2018 01:46	WG1157215
1,2-Dibromoethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
Dibromomethane	ND		0.127	20	08/25/2018 01:46	WG1157215
1,2-Dichlorobenzene	ND		0.127	20	08/25/2018 01:46	WG1157215
1,3-Dichlorobenzene	ND		0.127	20	08/25/2018 01:46	WG1157215
1,4-Dichlorobenzene	ND		0.127	20	08/25/2018 01:46	WG1157215
Dichlorodifluoromethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
1,1-Dichloroethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
1,2-Dichloroethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
1,1-Dichloroethene	ND		0.0636	20	08/25/2018 01:46	WG1157215
cis-1,2-Dichloroethene	ND		0.0636	20	08/25/2018 01:46	WG1157215
trans-1,2-Dichloroethene	ND		0.127	20	08/25/2018 01:46	WG1157215
1,2-Dichloropropane	ND		0.127	20	08/25/2018 01:46	WG1157215
1,1-Dichloropropene	ND		0.0636	20	08/25/2018 01:46	WG1157215
1,3-Dichloropropane	ND		0.127	20	08/25/2018 01:46	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/21/18 09:10

L1020170

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.0636	20	08/25/2018 01:46	WG1157215
trans-1,3-Dichloropropene	ND		0.127	20	08/25/2018 01:46	WG1157215
2,2-Dichloropropane	ND		0.0636	20	08/25/2018 01:46	WG1157215
Di-isopropyl ether	ND		0.0254	20	08/25/2018 01:46	WG1157215
Ethylbenzene	1.31		0.0636	20	08/25/2018 01:46	WG1157215
Hexachloro-1,3-butadiene	ND		0.636	20	08/25/2018 01:46	WG1157215
Isopropylbenzene	1.11		0.0636	20	08/25/2018 01:46	WG1157215
p-Isopropyltoluene	2.82		0.127	20	08/25/2018 01:46	WG1157215
2-Butanone (MEK)	ND	J5	0.636	20	08/25/2018 01:46	WG1157215
Methylene Chloride	ND		0.636	20	08/25/2018 01:46	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.636	20	08/25/2018 01:46	WG1157215
Methyl tert-butyl ether	ND		0.0254	20	08/25/2018 01:46	WG1157215
Naphthalene	19.7	V	0.318	20	08/25/2018 01:46	WG1157215
n-Propylbenzene	2.39		0.127	20	08/25/2018 01:46	WG1157215
Styrene	ND		0.318	20	08/25/2018 01:46	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
Tetrachloroethene	ND		0.0636	20	08/25/2018 01:46	WG1157215
Toluene	ND		0.127	20	08/25/2018 01:46	WG1157215
1,2,3-Trichlorobenzene	ND		0.0636	20	08/25/2018 01:46	WG1157215
1,2,4-Trichlorobenzene	ND		0.318	20	08/25/2018 01:46	WG1157215
1,1,1-Trichloroethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
1,1,2-Trichloroethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
Trichloroethene	ND		0.0254	20	08/25/2018 01:46	WG1157215
Trichlorofluoromethane	ND		0.0636	20	08/25/2018 01:46	WG1157215
1,2,3-Trichloropropane	ND		0.318	20	08/25/2018 01:46	WG1157215
1,2,4-Trimethylbenzene	19.0	V	0.127	20	08/25/2018 01:46	WG1157215
1,2,3-Trimethylbenzene	8.52		0.127	20	08/25/2018 01:46	WG1157215
Vinyl chloride	ND		0.0636	20	08/25/2018 01:46	WG1157215
1,3,5-Trimethylbenzene	0.942		0.127	20	08/25/2018 01:46	WG1157215
o-Xylene	ND		0.0636	20	08/25/2018 01:46	WG1157215
m&p-Xylene	1.26		0.102	20	08/25/2018 01:46	WG1157215
(S) Toluene-d8	99.9		75.0-131		08/25/2018 01:46	WG1157215
(S) Toluene-d8	112		75.0-131		08/30/2018 02:28	WG1159139
(S) Dibromofluoromethane	109		65.0-129		08/25/2018 01:46	WG1157215
(S) Dibromofluoromethane	96.3		65.0-129		08/30/2018 02:28	WG1159139
(S) 4-Bromofluorobenzene	118		67.0-138		08/25/2018 01:46	WG1157215
(S) 4-Bromofluorobenzene	102		67.0-138		08/30/2018 02:28	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Sample Narrative:

L1020170-07 WG1157215: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	9070		509	100	08/31/2018 01:33	WG1158427
Residual Range Organics (RRO)	ND		1270	100	08/31/2018 01:33	WG1158427
(S) o-Terphenyl	770	J7	18.0-148		08/31/2018 01:33	WG1158427

Sample Narrative:

L1020170-07 WG1158427: Dilution due to matrix



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.153	20	08/29/2018 21:01	WG1157649
Acenaphthene	5.07		0.153	20	08/29/2018 21:01	WG1157649
Acenaphthylene	ND		0.153	20	08/29/2018 21:01	WG1157649
Benzo(a)anthracene	ND		0.153	20	08/29/2018 21:01	WG1157649
Benzo(a)pyrene	ND		0.153	20	08/29/2018 21:01	WG1157649
Benzo(b)fluoranthene	ND		0.153	20	08/29/2018 21:01	WG1157649
Benzo(g,h,i)perylene	ND		0.153	20	08/29/2018 21:01	WG1157649
Benzo(k)fluoranthene	ND		0.153	20	08/29/2018 21:01	WG1157649
Chrysene	ND		0.153	20	08/29/2018 21:01	WG1157649
Dibenz(a,h)anthracene	ND		0.153	20	08/29/2018 21:01	WG1157649
Fluoranthene	ND		0.153	20	08/29/2018 21:01	WG1157649
Fluorene	7.35		0.153	20	08/29/2018 21:01	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.153	20	08/29/2018 21:01	WG1157649
Naphthalene	19.1		0.509	20	08/29/2018 21:01	WG1157649
Phenanthrene	14.1		0.153	20	08/29/2018 21:01	WG1157649
Pyrene	0.626		0.153	20	08/29/2018 21:01	WG1157649
1-Methylnaphthalene	81.6		0.509	20	08/29/2018 21:01	WG1157649
2-Methylnaphthalene	94.0		0.509	20	08/29/2018 21:01	WG1157649
2-Chloronaphthalene	ND		0.509	20	08/29/2018 21:01	WG1157649
(S) Nitrobenzene-d5	4860	J7	14.0-149		08/29/2018 21:01	WG1157649
(S) 2-Fluorobiphenyl	72.0	J7	34.0-125		08/29/2018 21:01	WG1157649
(S) p-Terphenyl-d14	102	J7	23.0-120		08/29/2018 21:01	WG1157649

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

L1020170-07 WG1157649: Dilution due to matrix



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.7		1	08/25/2018 07:32	WG1157153

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0218	1	08/27/2018 13:34	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.18	1	08/27/2018 09:53	WG1156987
Barium	91.1		0.546	1	08/27/2018 09:53	WG1156987
Cadmium	ND		0.546	1	08/27/2018 09:53	WG1156987
Chromium	14.7		1.09	1	08/27/2018 09:53	WG1156987
Lead	4.10		0.546	1	08/27/2018 09:53	WG1156987
Selenium	ND		2.18	1	08/27/2018 09:53	WG1156987
Silver	ND		1.09	1	08/27/2018 09:53	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	JO	0.0297	1.09	08/30/2018 02:47	WG1159139
Acrylonitrile	ND		0.0149	1.09	08/25/2018 02:04	WG1157215
Benzene	ND		0.00119	1.09	08/25/2018 02:04	WG1157215
Bromobenzene	ND		0.0149	1.09	08/25/2018 02:04	WG1157215
Bromodichloromethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
Bromoform	ND		0.0297	1.09	08/25/2018 02:04	WG1157215
Bromomethane	ND		0.0149	1.09	08/25/2018 02:04	WG1157215
n-Butylbenzene	ND		0.0149	1.09	08/25/2018 02:04	WG1157215
sec-Butylbenzene	ND		0.0149	1.09	08/25/2018 02:04	WG1157215
tert-Butylbenzene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
Carbon tetrachloride	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
Chlorobenzene	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
Chlorodibromomethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
Chloroethane	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
Chloroform	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
Chloromethane	ND		0.0149	1.09	08/25/2018 02:04	WG1157215
2-Chlorotoluene	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
4-Chlorotoluene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0297	1.09	08/25/2018 02:04	WG1157215
1,2-Dibromoethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
Dibromomethane	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
1,2-Dichlorobenzene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
1,3-Dichlorobenzene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
1,4-Dichlorobenzene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
Dichlorodifluoromethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
1,1-Dichloroethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
1,2-Dichloroethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
1,1-Dichloroethene	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
cis-1,2-Dichloroethene	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
trans-1,2-Dichloroethene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
1,2-Dichloropropane	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
1,1-Dichloropropene	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
1,3-Dichloropropane	ND		0.00595	1.09	08/25/2018 02:04	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
trans-1,3-Dichloropropene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
2,2-Dichloropropane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
Di-isopropyl ether	ND		0.00119	1.09	08/25/2018 02:04	WG1157215
Ethylbenzene	ND		0.00297	1.09	08/30/2018 02:47	WG1159139
Hexachloro-1,3-butadiene	ND		0.0297	1.09	08/25/2018 02:04	WG1157215
Isopropylbenzene	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
p-Isopropyltoluene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
2-Butanone (MEK)	ND		0.0297	1.09	08/25/2018 02:04	WG1157215
Methylene Chloride	ND		0.0297	1.09	08/25/2018 02:04	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0297	1.09	08/25/2018 02:04	WG1157215
Methyl tert-butyl ether	ND		0.00119	1.09	08/25/2018 02:04	WG1157215
Naphthalene	ND		0.0149	1.09	08/30/2018 02:47	WG1159139
n-Propylbenzene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
Styrene	ND		0.0149	1.09	08/25/2018 02:04	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
Tetrachloroethene	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
Toluene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
1,2,3-Trichlorobenzene	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
1,2,4-Trichlorobenzene	ND		0.0149	1.09	08/25/2018 02:04	WG1157215
1,1,1-Trichloroethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
1,1,2-Trichloroethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
Trichloroethene	ND		0.00119	1.09	08/25/2018 02:04	WG1157215
Trichlorofluoromethane	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
1,2,3-Trichloropropane	ND		0.0149	1.09	08/25/2018 02:04	WG1157215
1,2,4-Trimethylbenzene	ND		0.00595	1.09	08/30/2018 02:47	WG1159139
1,2,3-Trimethylbenzene	ND		0.00595	1.09	08/30/2018 02:47	WG1159139
Vinyl chloride	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
1,3,5-Trimethylbenzene	ND		0.00595	1.09	08/25/2018 02:04	WG1157215
o-Xylene	ND		0.00297	1.09	08/25/2018 02:04	WG1157215
m&p-Xylene	ND		0.00476	1.09	08/25/2018 02:04	WG1157215
(S) Toluene-d8	106		75.0-131		08/25/2018 02:04	WG1157215
(S) Toluene-d8	113		75.0-131		08/30/2018 02:47	WG1159139
(S) Dibromofluoromethane	102		65.0-129		08/25/2018 02:04	WG1157215
(S) Dibromofluoromethane	89.7		65.0-129		08/30/2018 02:47	WG1159139
(S) 4-Bromofluorobenzene	106		67.0-138		08/25/2018 02:04	WG1157215
(S) 4-Bromofluorobenzene	108		67.0-138		08/30/2018 02:47	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2700		218	50	08/31/2018 01:20	WG1158427
Residual Range Organics (RRO)	ND		546	50	08/31/2018 01:20	WG1158427
(S) o-Terphenyl	150	J7	18.0-148		08/31/2018 01:20	WG1158427

Sample Narrative:

L1020170-08 WG1158427: Dilution due to matrix



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.131	20	08/29/2018 21:23	WG1157649
Acenaphthene	ND		0.131	20	08/29/2018 21:23	WG1157649
Acenaphthylene	ND		0.131	20	08/29/2018 21:23	WG1157649
Benzo(a)anthracene	0.0312		0.00655	1	08/29/2018 08:09	WG1157649
Benzo(a)pyrene	ND		0.00655	1	08/29/2018 08:09	WG1157649
Benzo(b)fluoranthene	ND		0.00655	1	08/29/2018 08:09	WG1157649
Benzo(g,h,i)perylene	ND		0.00655	1	08/29/2018 08:09	WG1157649
Benzo(k)fluoranthene	ND		0.00655	1	08/29/2018 08:09	WG1157649
Chrysene	ND		0.00655	1	08/29/2018 08:09	WG1157649
Dibenz(a,h)anthracene	ND		0.00655	1	08/29/2018 08:09	WG1157649
Fluoranthene	ND		0.131	20	08/29/2018 21:23	WG1157649
Fluorene	ND		0.131	20	08/29/2018 21:23	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00655	1	08/29/2018 08:09	WG1157649
Naphthalene	ND		0.0218	1	08/29/2018 08:09	WG1157649
Phenanthrene	ND		0.131	20	08/29/2018 21:23	WG1157649
Pyrene	ND		0.00655	1	08/29/2018 08:09	WG1157649
1-Methylnaphthalene	ND		0.0218	1	08/29/2018 08:09	WG1157649
2-Methylnaphthalene	ND		0.0218	1	08/29/2018 08:09	WG1157649
2-Chloronaphthalene	ND		0.436	20	08/29/2018 21:23	WG1157649
(S) Nitrobenzene-d5	58.3	J7	14.0-149		08/29/2018 21:23	WG1157649
(S) Nitrobenzene-d5	96.2		14.0-149		08/29/2018 08:09	WG1157649
(S) 2-Fluorobiphenyl	17.6	J2	34.0-125		08/29/2018 08:09	WG1157649
(S) 2-Fluorobiphenyl	82.6	J7	34.0-125		08/29/2018 21:23	WG1157649
(S) p-Terphenyl-d14	102		23.0-120		08/29/2018 08:09	WG1157649
(S) p-Terphenyl-d14	73.7	J7	23.0-120		08/29/2018 21:23	WG1157649

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

L1020170-08 WG1157649: IS/SURR failed on lower dilution.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.3		1	08/25/2018 07:32	WG1157153

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0269	1	08/27/2018 13:36	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.69	1	08/27/2018 09:55	WG1156987
Barium	76.3		0.673	1	08/27/2018 09:55	WG1156987
Cadmium	ND		0.673	1	08/27/2018 09:55	WG1156987
Chromium	11.7		1.35	1	08/27/2018 09:55	WG1156987
Lead	2.86		0.673	1	08/27/2018 09:55	WG1156987
Selenium	ND		2.69	1	08/27/2018 09:55	WG1156987
Silver	ND		1.35	1	08/27/2018 09:55	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	JO	0.0337	1	08/30/2018 03:07	WG1159139
Acrylonitrile	ND		0.0168	1	08/25/2018 02:23	WG1157215
Benzene	ND		0.00135	1	08/25/2018 02:23	WG1157215
Bromobenzene	ND		0.0168	1	08/25/2018 02:23	WG1157215
Bromodichloromethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
Bromoform	ND		0.0337	1	08/25/2018 02:23	WG1157215
Bromomethane	ND		0.0168	1	08/25/2018 02:23	WG1157215
n-Butylbenzene	ND		0.0168	1	08/25/2018 02:23	WG1157215
sec-Butylbenzene	ND		0.0168	1	08/25/2018 02:23	WG1157215
tert-Butylbenzene	ND		0.00673	1	08/25/2018 02:23	WG1157215
Carbon tetrachloride	ND		0.00673	1	08/25/2018 02:23	WG1157215
Chlorobenzene	ND		0.00337	1	08/25/2018 02:23	WG1157215
Chlorodibromomethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
Chloroethane	ND		0.00673	1	08/25/2018 02:23	WG1157215
Chloroform	ND		0.00337	1	08/25/2018 02:23	WG1157215
Chloromethane	ND		0.0168	1	08/25/2018 02:23	WG1157215
2-Chlorotoluene	ND		0.00337	1	08/25/2018 02:23	WG1157215
4-Chlorotoluene	ND		0.00673	1	08/25/2018 02:23	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0337	1	08/25/2018 02:23	WG1157215
1,2-Dibromoethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
Dibromomethane	ND		0.00673	1	08/25/2018 02:23	WG1157215
1,2-Dichlorobenzene	ND		0.00673	1	08/25/2018 02:23	WG1157215
1,3-Dichlorobenzene	ND		0.00673	1	08/25/2018 02:23	WG1157215
1,4-Dichlorobenzene	ND		0.00673	1	08/25/2018 02:23	WG1157215
Dichlorodifluoromethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
1,1-Dichloroethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
1,2-Dichloroethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
1,1-Dichloroethene	ND		0.00337	1	08/25/2018 02:23	WG1157215
cis-1,2-Dichloroethene	ND		0.00337	1	08/25/2018 02:23	WG1157215
trans-1,2-Dichloroethene	ND		0.00673	1	08/25/2018 02:23	WG1157215
1,2-Dichloropropane	ND		0.00673	1	08/25/2018 02:23	WG1157215
1,1-Dichloropropene	ND		0.00337	1	08/25/2018 02:23	WG1157215
1,3-Dichloropropane	ND		0.00673	1	08/25/2018 02:23	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00337	1	08/25/2018 02:23	WG1157215
trans-1,3-Dichloropropene	ND		0.00673	1	08/25/2018 02:23	WG1157215
2,2-Dichloropropane	ND		0.00337	1	08/25/2018 02:23	WG1157215
Di-isopropyl ether	ND		0.00135	1	08/25/2018 02:23	WG1157215
Ethylbenzene	ND		0.00337	1	08/25/2018 02:23	WG1157215
Hexachloro-1,3-butadiene	ND		0.0337	1	08/25/2018 02:23	WG1157215
Isopropylbenzene	ND		0.00337	1	08/25/2018 02:23	WG1157215
p-Isopropyltoluene	ND		0.00673	1	08/25/2018 02:23	WG1157215
2-Butanone (MEK)	ND		0.0337	1	08/25/2018 02:23	WG1157215
Methylene Chloride	ND		0.0337	1	08/25/2018 02:23	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0337	1	08/25/2018 02:23	WG1157215
Methyl tert-butyl ether	ND		0.00135	1	08/25/2018 02:23	WG1157215
Naphthalene	ND		0.0168	1	08/25/2018 02:23	WG1157215
n-Propylbenzene	ND		0.00673	1	08/25/2018 02:23	WG1157215
Styrene	ND		0.0168	1	08/25/2018 02:23	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
Tetrachloroethene	ND		0.00337	1	08/25/2018 02:23	WG1157215
Toluene	ND		0.00673	1	08/25/2018 02:23	WG1157215
1,2,3-Trichlorobenzene	ND		0.00337	1	08/25/2018 02:23	WG1157215
1,2,4-Trichlorobenzene	ND		0.0168	1	08/25/2018 02:23	WG1157215
1,1,1-Trichloroethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
1,1,2-Trichloroethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
Trichloroethene	ND		0.00135	1	08/25/2018 02:23	WG1157215
Trichlorofluoromethane	ND		0.00337	1	08/25/2018 02:23	WG1157215
1,2,3-Trichloropropane	ND		0.0168	1	08/25/2018 02:23	WG1157215
1,2,4-Trimethylbenzene	ND		0.00673	1	08/30/2018 03:07	WG1159139
1,2,3-Trimethylbenzene	ND		0.00673	1	08/25/2018 02:23	WG1157215
Vinyl chloride	ND		0.00337	1	08/25/2018 02:23	WG1157215
1,3,5-Trimethylbenzene	ND		0.00673	1	08/25/2018 02:23	WG1157215
o-Xylene	ND		0.00337	1	08/25/2018 02:23	WG1157215
m&p-Xylene	ND		0.00538	1	08/25/2018 02:23	WG1157215
(S) Toluene-d8	108		75.0-131		08/25/2018 02:23	WG1157215
(S) Toluene-d8	113		75.0-131		08/30/2018 03:07	WG1159139
(S) Dibromofluoromethane	99.6		65.0-129		08/25/2018 02:23	WG1157215
(S) Dibromofluoromethane	91.2		65.0-129		08/30/2018 03:07	WG1159139
(S) 4-Bromofluorobenzene	106		67.0-138		08/25/2018 02:23	WG1157215
(S) 4-Bromofluorobenzene	108		67.0-138		08/30/2018 03:07	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.38	1	08/30/2018 07:16	WG1158427
Residual Range Organics (RRO)	ND		13.5	1	08/30/2018 07:16	WG1158427
(S) o-Terphenyl	76.7		18.0-148		08/30/2018 07:16	WG1158427

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Acenaphthene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Acenaphthylene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Benzo(a)anthracene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Benzo(a)pyrene	ND		0.00808	1	08/29/2018 06:23	WG1157649



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Benzo(g,h,i)perylene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Benzo(k)fluoranthene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Chrysene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Dibenz(a,h)anthracene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Fluoranthene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Fluorene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Naphthalene	ND		0.0269	1	08/29/2018 06:23	WG1157649
Phenanthrene	ND		0.00808	1	08/29/2018 06:23	WG1157649
Pyrene	ND		0.00808	1	08/29/2018 06:23	WG1157649
1-Methylnaphthalene	ND		0.0269	1	08/29/2018 06:23	WG1157649
2-Methylnaphthalene	ND		0.0269	1	08/29/2018 06:23	WG1157649
2-Chloronaphthalene	ND		0.0269	1	08/29/2018 06:23	WG1157649
<i>(S)</i> Nitrobenzene-d5	93.9		14.0-149		08/29/2018 06:23	WG1157649
<i>(S)</i> 2-Fluorobiphenyl	80.2		34.0-125		08/29/2018 06:23	WG1157649
<i>(S)</i> p-Terphenyl-d14	80.9		23.0-120		08/29/2018 06:23	WG1157649

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	89.9		1	08/25/2018 07:32	WG1157153

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0222	1	08/27/2018 13:39	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.31		2.22	1	08/27/2018 09:58	WG1156987
Barium	95.3		0.556	1	08/27/2018 09:58	WG1156987
Cadmium	ND		0.556	1	08/27/2018 09:58	WG1156987
Chromium	10.8		1.11	1	08/27/2018 09:58	WG1156987
Lead	19.4		0.556	1	08/27/2018 09:58	WG1156987
Selenium	ND		2.22	1	08/27/2018 09:58	WG1156987
Silver	ND		1.11	1	08/27/2018 09:58	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	JO	0.0283	1.02	08/30/2018 03:27	WG1159139
Acrylonitrile	ND		0.0142	1.02	08/25/2018 02:42	WG1157215
Benzene	ND		0.00113	1.02	08/25/2018 02:42	WG1157215
Bromobenzene	ND		0.0142	1.02	08/25/2018 02:42	WG1157215
Bromodichloromethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
Bromoform	ND		0.0283	1.02	08/25/2018 02:42	WG1157215
Bromomethane	ND		0.0142	1.02	08/25/2018 02:42	WG1157215
n-Butylbenzene	ND		0.0142	1.02	08/25/2018 02:42	WG1157215
sec-Butylbenzene	ND		0.0142	1.02	08/25/2018 02:42	WG1157215
tert-Butylbenzene	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
Carbon tetrachloride	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
Chlorobenzene	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
Chlorodibromomethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
Chloroethane	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
Chloroform	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
Chloromethane	ND		0.0142	1.02	08/25/2018 02:42	WG1157215
2-Chlorotoluene	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
4-Chlorotoluene	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0283	1.02	08/25/2018 02:42	WG1157215
1,2-Dibromoethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
Dibromomethane	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
1,2-Dichlorobenzene	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
1,3-Dichlorobenzene	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
1,4-Dichlorobenzene	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
Dichlorodifluoromethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
1,1-Dichloroethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
1,2-Dichloroethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
1,1-Dichloroethene	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
cis-1,2-Dichloroethene	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
trans-1,2-Dichloroethene	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
1,2-Dichloropropane	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
1,1-Dichloropropene	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
1,3-Dichloropropane	ND		0.00567	1.02	08/25/2018 02:42	WG1157215

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
trans-1,3-Dichloropropene	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
2,2-Dichloropropane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
Di-isopropyl ether	ND		0.00113	1.02	08/25/2018 02:42	WG1157215
Ethylbenzene	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
Hexachloro-1,3-butadiene	ND		0.0283	1.02	08/25/2018 02:42	WG1157215
Isopropylbenzene	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
p-Isopropyltoluene	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
2-Butanone (MEK)	ND		0.0283	1.02	08/25/2018 02:42	WG1157215
Methylene Chloride	ND		0.0283	1.02	08/25/2018 02:42	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0283	1.02	08/25/2018 02:42	WG1157215
Methyl tert-butyl ether	ND		0.00113	1.02	08/25/2018 02:42	WG1157215
Naphthalene	0.0160		0.0142	1.02	08/25/2018 02:42	WG1157215
n-Propylbenzene	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
Styrene	ND		0.0142	1.02	08/25/2018 02:42	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
Tetrachloroethene	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
Toluene	0.0225		0.00567	1.02	08/25/2018 02:42	WG1157215
1,2,3-Trichlorobenzene	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
1,2,4-Trichlorobenzene	ND		0.0142	1.02	08/25/2018 02:42	WG1157215
1,1,1-Trichloroethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
1,1,2-Trichloroethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
Trichloroethene	ND		0.00113	1.02	08/25/2018 02:42	WG1157215
Trichlorofluoromethane	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
1,2,3-Trichloropropane	ND		0.0142	1.02	08/25/2018 02:42	WG1157215
1,2,4-Trimethylbenzene	0.0133	B	0.00567	1.02	08/25/2018 02:42	WG1157215
1,2,3-Trimethylbenzene	0.0104		0.00567	1.02	08/25/2018 02:42	WG1157215
Vinyl chloride	ND		0.00283	1.02	08/25/2018 02:42	WG1157215
1,3,5-Trimethylbenzene	ND		0.00567	1.02	08/25/2018 02:42	WG1157215
o-Xylene	0.0154		0.00283	1.02	08/25/2018 02:42	WG1157215
m&p-Xylene	0.0200		0.00454	1.02	08/25/2018 02:42	WG1157215
(S) Toluene-d8	107		75.0-131		08/25/2018 02:42	WG1157215
(S) Toluene-d8	113		75.0-131		08/30/2018 03:27	WG1159139
(S) Dibromofluoromethane	97.2		65.0-129		08/25/2018 02:42	WG1157215
(S) Dibromofluoromethane	90.6		65.0-129		08/30/2018 03:27	WG1159139
(S) 4-Bromofluorobenzene	107		67.0-138		08/25/2018 02:42	WG1157215
(S) 4-Bromofluorobenzene	104		67.0-138		08/30/2018 03:27	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		88.9	20	08/31/2018 01:07	WG1158427
Residual Range Organics (RRO)	276		222	20	08/31/2018 01:07	WG1158427
(S) o-Terphenyl	74.8	J7	18.0-148		08/31/2018 01:07	WG1158427

Sample Narrative:

L1020170-10 WG1158427: Cannot run at lower dilution due to viscosity of extract



Collected date/time: 08/21/18 10:45

L1020170

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0123		0.00667	1	08/29/2018 08:51	WG1157649
Acenaphthene	ND		0.00667	1	08/29/2018 08:51	WG1157649
Acenaphthylene	ND		0.00667	1	08/29/2018 08:51	WG1157649
Benzo(a)anthracene	0.0304		0.00667	1	08/29/2018 08:51	WG1157649
Benzo(a)pyrene	0.0491		0.00667	1	08/29/2018 08:51	WG1157649
Benzo(b)fluoranthene	0.0610		0.00667	1	08/29/2018 08:51	WG1157649
Benzo(g,h,i)perylene	0.0546		0.00667	1	08/29/2018 08:51	WG1157649
Benzo(k)fluoranthene	0.0213		0.00667	1	08/29/2018 08:51	WG1157649
Chrysene	0.0375		0.00667	1	08/29/2018 08:51	WG1157649
Dibenz(a,h)anthracene	0.00933		0.00667	1	08/29/2018 08:51	WG1157649
Fluoranthene	0.0484		0.00667	1	08/29/2018 08:51	WG1157649
Fluorene	ND		0.00667	1	08/29/2018 08:51	WG1157649
Indeno(1,2,3-cd)pyrene	0.0318		0.00667	1	08/29/2018 08:51	WG1157649
Naphthalene	0.0380		0.0222	1	08/29/2018 08:51	WG1157649
Phenanthrene	0.0312		0.00667	1	08/29/2018 08:51	WG1157649
Pyrene	0.0613		0.00667	1	08/29/2018 08:51	WG1157649
1-Methylnaphthalene	0.0412		0.0222	1	08/29/2018 08:51	WG1157649
2-Methylnaphthalene	0.0441		0.0222	1	08/29/2018 08:51	WG1157649
2-Chloronaphthalene	ND		0.0222	1	08/29/2018 08:51	WG1157649
(S) Nitrobenzene-d5	57.8		14.0-149		08/29/2018 08:51	WG1157649
(S) 2-Fluorobiphenyl	77.9		34.0-125		08/29/2018 08:51	WG1157649
(S) p-Terphenyl-d14	83.1		23.0-120		08/29/2018 08:51	WG1157649

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
Total Solids	82.5		1	08/25/2018 07:32	WG1157153

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0242	1	08/27/2018 13:42	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.42	1	08/27/2018 10:01	WG1156987
Barium	103		0.606	1	08/27/2018 10:01	WG1156987
Cadmium	ND		0.606	1	08/27/2018 10:01	WG1156987
Chromium	15.2		1.21	1	08/27/2018 10:01	WG1156987
Lead	4.61		0.606	1	08/27/2018 10:01	WG1156987
Selenium	ND		2.42	1	08/27/2018 10:01	WG1156987
Silver	ND		1.21	1	08/27/2018 10:01	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND	JO	0.0303	1	08/30/2018 03:46	WG1159139
Acrylonitrile	ND		0.0152	1	08/25/2018 03:00	WG1157215
Benzene	ND		0.00121	1	08/25/2018 03:00	WG1157215
Bromobenzene	ND		0.0152	1	08/25/2018 03:00	WG1157215
Bromodichloromethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
Bromoform	ND		0.0303	1	08/25/2018 03:00	WG1157215
Bromomethane	ND		0.0152	1	08/25/2018 03:00	WG1157215
n-Butylbenzene	ND		0.0152	1	08/25/2018 03:00	WG1157215
sec-Butylbenzene	ND		0.0152	1	08/25/2018 03:00	WG1157215
tert-Butylbenzene	ND		0.00606	1	08/25/2018 03:00	WG1157215
Carbon tetrachloride	ND		0.00606	1	08/25/2018 03:00	WG1157215
Chlorobenzene	ND		0.00303	1	08/25/2018 03:00	WG1157215
Chlorodibromomethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
Chloroethane	ND		0.00606	1	08/25/2018 03:00	WG1157215
Chloroform	ND		0.00303	1	08/25/2018 03:00	WG1157215
Chloromethane	ND		0.0152	1	08/25/2018 03:00	WG1157215
2-Chlorotoluene	ND		0.00303	1	08/25/2018 03:00	WG1157215
4-Chlorotoluene	ND		0.00606	1	08/25/2018 03:00	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0303	1	08/25/2018 03:00	WG1157215
1,2-Dibromoethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
Dibromomethane	ND		0.00606	1	08/25/2018 03:00	WG1157215
1,2-Dichlorobenzene	ND		0.00606	1	08/25/2018 03:00	WG1157215
1,3-Dichlorobenzene	ND		0.00606	1	08/25/2018 03:00	WG1157215
1,4-Dichlorobenzene	ND		0.00606	1	08/25/2018 03:00	WG1157215
Dichlorodifluoromethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
1,1-Dichloroethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
1,2-Dichloroethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
1,1-Dichloroethene	ND		0.00303	1	08/25/2018 03:00	WG1157215
cis-1,2-Dichloroethene	ND		0.00303	1	08/25/2018 03:00	WG1157215
trans-1,2-Dichloroethene	ND		0.00606	1	08/25/2018 03:00	WG1157215
1,2-Dichloropropane	ND		0.00606	1	08/25/2018 03:00	WG1157215
1,1-Dichloropropene	ND		0.00303	1	08/25/2018 03:00	WG1157215
1,3-Dichloropropane	ND		0.00606	1	08/25/2018 03:00	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00303	1	08/25/2018 03:00	WG1157215
trans-1,3-Dichloropropene	ND		0.00606	1	08/25/2018 03:00	WG1157215
2,2-Dichloropropane	ND		0.00303	1	08/25/2018 03:00	WG1157215
Di-isopropyl ether	ND		0.00121	1	08/25/2018 03:00	WG1157215
Ethylbenzene	ND		0.00303	1	08/25/2018 03:00	WG1157215
Hexachloro-1,3-butadiene	ND		0.0303	1	08/25/2018 03:00	WG1157215
Isopropylbenzene	ND		0.00303	1	08/25/2018 03:00	WG1157215
p-Isopropyltoluene	ND		0.00606	1	08/25/2018 03:00	WG1157215
2-Butanone (MEK)	ND		0.0303	1	08/25/2018 03:00	WG1157215
Methylene Chloride	ND		0.0303	1	08/25/2018 03:00	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0303	1	08/25/2018 03:00	WG1157215
Methyl tert-butyl ether	ND		0.00121	1	08/25/2018 03:00	WG1157215
Naphthalene	ND		0.0152	1	08/25/2018 03:00	WG1157215
n-Propylbenzene	ND		0.00606	1	08/25/2018 03:00	WG1157215
Styrene	ND		0.0152	1	08/25/2018 03:00	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
Tetrachloroethene	ND		0.00303	1	08/25/2018 03:00	WG1157215
Toluene	ND		0.00606	1	08/25/2018 03:00	WG1157215
1,2,3-Trichlorobenzene	ND		0.00303	1	08/25/2018 03:00	WG1157215
1,2,4-Trichlorobenzene	ND		0.0152	1	08/25/2018 03:00	WG1157215
1,1,1-Trichloroethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
1,1,2-Trichloroethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
Trichloroethene	ND		0.00121	1	08/25/2018 03:00	WG1157215
Trichlorofluoromethane	ND		0.00303	1	08/25/2018 03:00	WG1157215
1,2,3-Trichloropropane	ND		0.0152	1	08/25/2018 03:00	WG1157215
1,2,4-Trimethylbenzene	ND		0.00606	1	08/25/2018 03:00	WG1157215
1,2,3-Trimethylbenzene	ND		0.00606	1	08/25/2018 03:00	WG1157215
Vinyl chloride	ND		0.00303	1	08/25/2018 03:00	WG1157215
1,3,5-Trimethylbenzene	ND		0.00606	1	08/25/2018 03:00	WG1157215
o-Xylene	ND		0.00303	1	08/25/2018 03:00	WG1157215
m&p-Xylene	ND		0.00485	1	08/25/2018 03:00	WG1157215
(S) Toluene-d8	105		75.0-131		08/25/2018 03:00	WG1157215
(S) Toluene-d8	115		75.0-131		08/30/2018 03:46	WG1159139
(S) Dibromofluoromethane	96.0		65.0-129		08/25/2018 03:00	WG1157215
(S) Dibromofluoromethane	90.2		65.0-129		08/30/2018 03:46	WG1159139
(S) 4-Bromofluorobenzene	107		67.0-138		08/25/2018 03:00	WG1157215
(S) 4-Bromofluorobenzene	102		67.0-138		08/30/2018 03:46	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.85	1	08/30/2018 07:28	WG1158427
Residual Range Organics (RRO)	ND		12.1	1	08/30/2018 07:28	WG1158427
(S) o-Terphenyl	83.5		18.0-148		08/30/2018 07:28	WG1158427

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Acenaphthene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Acenaphthylene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Benzo(a)anthracene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Benzo(a)pyrene	ND		0.00727	1	08/29/2018 06:44	WG1157649



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Benzo(g,h,i)perylene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Benzo(k)fluoranthene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Chrysene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Dibenz(a,h)anthracene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Fluoranthene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Fluorene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Naphthalene	ND		0.0242	1	08/29/2018 06:44	WG1157649
Phenanthrene	ND		0.00727	1	08/29/2018 06:44	WG1157649
Pyrene	ND		0.00727	1	08/29/2018 06:44	WG1157649
1-Methylnaphthalene	ND		0.0242	1	08/29/2018 06:44	WG1157649
2-Methylnaphthalene	ND		0.0242	1	08/29/2018 06:44	WG1157649
2-Chloronaphthalene	ND		0.0242	1	08/29/2018 06:44	WG1157649
<i>(S)</i> Nitrobenzene-d5	67.9		14.0-149		08/29/2018 06:44	WG1157649
<i>(S)</i> 2-Fluorobiphenyl	59.5		34.0-125		08/29/2018 06:44	WG1157649
<i>(S)</i> p-Terphenyl-d14	54.4		23.0-120		08/29/2018 06:44	WG1157649

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
Total Solids	85.7		1	08/25/2018 07:32	WG1157153

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Mercury	ND		0.0233	1	08/27/2018 13:49	WG1157003

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Arsenic	ND		2.33	1	08/27/2018 10:03	WG1156987
Barium	83.5		0.584	1	08/27/2018 10:03	WG1156987
Cadmium	ND		0.584	1	08/27/2018 10:03	WG1156987
Chromium	11.9		1.17	1	08/27/2018 10:03	WG1156987
Lead	20.0		0.584	1	08/27/2018 10:03	WG1156987
Selenium	ND		2.33	1	08/27/2018 10:03	WG1156987
Silver	ND		1.17	1	08/27/2018 10:03	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Acetone	ND	JO	0.0303	1.04	08/30/2018 04:06	WG1159139
Acrylonitrile	ND		0.0152	1.04	08/25/2018 03:18	WG1157215
Benzene	ND		0.00121	1.04	08/25/2018 03:18	WG1157215
Bromobenzene	ND		0.0152	1.04	08/25/2018 03:18	WG1157215
Bromodichloromethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
Bromoform	ND		0.0303	1.04	08/25/2018 03:18	WG1157215
Bromomethane	ND		0.0152	1.04	08/25/2018 03:18	WG1157215
n-Butylbenzene	ND		0.0152	1.04	08/25/2018 03:18	WG1157215
sec-Butylbenzene	ND		0.0152	1.04	08/25/2018 03:18	WG1157215
tert-Butylbenzene	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
Carbon tetrachloride	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
Chlorobenzene	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
Chlorodibromomethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
Chloroethane	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
Chloroform	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
Chloromethane	ND		0.0152	1.04	08/25/2018 03:18	WG1157215
2-Chlorotoluene	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
4-Chlorotoluene	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0303	1.04	08/25/2018 03:18	WG1157215
1,2-Dibromoethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
Dibromomethane	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
1,2-Dichlorobenzene	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
1,3-Dichlorobenzene	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
1,4-Dichlorobenzene	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
Dichlorodifluoromethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
1,1-Dichloroethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
1,2-Dichloroethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
1,1-Dichloroethene	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
cis-1,2-Dichloroethene	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
trans-1,2-Dichloroethene	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
1,2-Dichloropropane	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
1,1-Dichloropropene	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
1,3-Dichloropropane	ND		0.00607	1.04	08/25/2018 03:18	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
trans-1,3-Dichloropropene	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
2,2-Dichloropropane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
Di-isopropyl ether	ND		0.00121	1.04	08/25/2018 03:18	WG1157215
Ethylbenzene	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
Hexachloro-1,3-butadiene	ND		0.0303	1.04	08/25/2018 03:18	WG1157215
Isopropylbenzene	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
p-Isopropyltoluene	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
2-Butanone (MEK)	ND		0.0303	1.04	08/25/2018 03:18	WG1157215
Methylene Chloride	ND		0.0303	1.04	08/25/2018 03:18	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0303	1.04	08/25/2018 03:18	WG1157215
Methyl tert-butyl ether	ND		0.00121	1.04	08/25/2018 03:18	WG1157215
Naphthalene	ND		0.0152	1.04	08/25/2018 03:18	WG1157215
n-Propylbenzene	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
Styrene	ND		0.0152	1.04	08/25/2018 03:18	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
Tetrachloroethene	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
Toluene	0.0134		0.00607	1.04	08/25/2018 03:18	WG1157215
1,2,3-Trichlorobenzene	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
1,2,4-Trichlorobenzene	ND		0.0152	1.04	08/25/2018 03:18	WG1157215
1,1,1-Trichloroethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
1,1,2-Trichloroethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
Trichloroethene	ND		0.00121	1.04	08/25/2018 03:18	WG1157215
Trichlorofluoromethane	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
1,2,3-Trichloropropane	ND		0.0152	1.04	08/25/2018 03:18	WG1157215
1,2,4-Trimethylbenzene	0.0102	B	0.00607	1.04	08/25/2018 03:18	WG1157215
1,2,3-Trimethylbenzene	0.00727		0.00607	1.04	08/25/2018 03:18	WG1157215
Vinyl chloride	ND		0.00303	1.04	08/25/2018 03:18	WG1157215
1,3,5-Trimethylbenzene	ND		0.00607	1.04	08/25/2018 03:18	WG1157215
o-Xylene	0.00850		0.00303	1.04	08/25/2018 03:18	WG1157215
m&p-Xylene	0.0141		0.00486	1.04	08/25/2018 03:18	WG1157215
(S) Toluene-d8	105		75.0-131		08/25/2018 03:18	WG1157215
(S) Toluene-d8	115		75.0-131		08/30/2018 04:06	WG1159139
(S) Dibromofluoromethane	100		65.0-129		08/25/2018 03:18	WG1157215
(S) Dibromofluoromethane	89.9		65.0-129		08/30/2018 04:06	WG1159139
(S) 4-Bromofluorobenzene	106		67.0-138		08/25/2018 03:18	WG1157215
(S) 4-Bromofluorobenzene	103		67.0-138		08/30/2018 04:06	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		46.7	10	08/30/2018 10:32	WG1158427
Residual Range Organics (RRO)	ND		117	10	08/30/2018 10:32	WG1158427
(S) o-Terphenyl	106		18.0-148		08/30/2018 10:32	WG1158427

Sample Narrative:

L1020170-12 WG1158427: Dilution due to matrix impact during extract concentration procedure



Collected date/time: 08/21/18 00:00

L1020170

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00843		0.00700	1	08/29/2018 09:12	WG1157649
Acenaphthene	ND		0.00700	1	08/29/2018 09:12	WG1157649
Acenaphthylene	ND		0.00700	1	08/29/2018 09:12	WG1157649
Benzo(a)anthracene	0.0139		0.00700	1	08/29/2018 09:12	WG1157649
Benzo(a)pyrene	0.0202		0.00700	1	08/29/2018 09:12	WG1157649
Benzo(b)fluoranthene	0.0314		0.00700	1	08/29/2018 09:12	WG1157649
Benzo(g,h,i)perylene	0.0308		0.00700	1	08/29/2018 09:12	WG1157649
Benzo(k)fluoranthene	0.00783		0.00700	1	08/29/2018 09:12	WG1157649
Chrysene	0.0173		0.00700	1	08/29/2018 09:12	WG1157649
Dibenz(a,h)anthracene	ND		0.00700	1	08/29/2018 09:12	WG1157649
Fluoranthene	0.0235		0.00700	1	08/29/2018 09:12	WG1157649
Fluorene	ND		0.00700	1	08/29/2018 09:12	WG1157649
Indeno(1,2,3-cd)pyrene	0.0138		0.00700	1	08/29/2018 09:12	WG1157649
Naphthalene	0.0294		0.0233	1	08/29/2018 09:12	WG1157649
Phenanthrene	0.0198		0.00700	1	08/29/2018 09:12	WG1157649
Pyrene	0.0249		0.00700	1	08/29/2018 09:12	WG1157649
1-Methylnaphthalene	0.0274		0.0233	1	08/29/2018 09:12	WG1157649
2-Methylnaphthalene	0.0310		0.0233	1	08/29/2018 09:12	WG1157649
2-Chloronaphthalene	ND		0.0233	1	08/29/2018 09:12	WG1157649
(S) Nitrobenzene-d5	55.0		14.0-149		08/29/2018 09:12	WG1157649
(S) 2-Fluorobiphenyl	69.0		34.0-125		08/29/2018 09:12	WG1157649
(S) p-Terphenyl-d14	70.9		23.0-120		08/29/2018 09:12	WG1157649

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/20/18 17:00

L1020170

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/26/2018 11:13	WG1156752

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	2.28		2.00	1	08/29/2018 12:44	WG1156843
Barium,Dissolved	28.8		5.00	1	08/29/2018 12:44	WG1156843
Cadmium,Dissolved	ND		1.00	1	08/29/2018 12:44	WG1156843
Chromium,Dissolved	ND		2.00	1	08/29/2018 12:44	WG1156843
Lead,Dissolved	ND		2.00	1	08/29/2018 12:44	WG1156843
Selenium,Dissolved	ND		2.00	1	08/29/2018 12:44	WG1156843
Silver,Dissolved	ND		2.00	1	08/29/2018 12:44	WG1156843

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/24/2018 07:43	WG1156644
Acrolein	ND		50.0	1	08/24/2018 07:43	WG1156644
Acrylonitrile	ND		10.0	1	08/24/2018 07:43	WG1156644
Benzene	ND		1.00	1	08/24/2018 07:43	WG1156644
Bromobenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
Bromodichloromethane	ND		1.00	1	08/24/2018 07:43	WG1156644
Bromoform	ND		1.00	1	08/24/2018 07:43	WG1156644
Bromomethane	ND		5.00	1	08/24/2018 07:43	WG1156644
n-Butylbenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
sec-Butylbenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
tert-Butylbenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
Carbon tetrachloride	ND		1.00	1	08/24/2018 07:43	WG1156644
Chlorobenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
Chlorodibromomethane	ND		1.00	1	08/24/2018 07:43	WG1156644
Chloroethane	ND		5.00	1	08/24/2018 07:43	WG1156644
Chloroform	ND		5.00	1	08/24/2018 07:43	WG1156644
Chloromethane	ND		2.50	1	08/24/2018 07:43	WG1156644
2-Chlorotoluene	ND		1.00	1	08/24/2018 07:43	WG1156644
4-Chlorotoluene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/24/2018 07:43	WG1156644
1,2-Dibromoethane	ND		1.00	1	08/24/2018 07:43	WG1156644
Dibromomethane	ND		1.00	1	08/24/2018 07:43	WG1156644
1,2-Dichlorobenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,3-Dichlorobenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,4-Dichlorobenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
Dichlorodifluoromethane	ND	<u>J4</u>	5.00	1	08/24/2018 07:43	WG1156644
1,1-Dichloroethane	ND		1.00	1	08/24/2018 07:43	WG1156644
1,2-Dichloroethane	ND		1.00	1	08/24/2018 07:43	WG1156644
1,1-Dichloroethene	ND		1.00	1	08/24/2018 07:43	WG1156644
cis-1,2-Dichloroethene	ND		1.00	1	08/24/2018 07:43	WG1156644
trans-1,2-Dichloroethene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,2-Dichloropropane	ND		1.00	1	08/24/2018 07:43	WG1156644
1,1-Dichloropropene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,3-Dichloropropane	ND		1.00	1	08/24/2018 07:43	WG1156644
cis-1,3-Dichloropropene	ND		1.00	1	08/24/2018 07:43	WG1156644
trans-1,3-Dichloropropene	ND		1.00	1	08/24/2018 07:43	WG1156644
2,2-Dichloropropane	ND		1.00	1	08/24/2018 07:43	WG1156644
Di-isopropyl ether	ND		1.00	1	08/24/2018 07:43	WG1156644
Ethylbenzene	ND		1.00	1	08/24/2018 07:43	WG1156644

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/20/18 17:00

L1020170

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/24/2018 07:43	WG1156644
Isopropylbenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
p-Isopropyltoluene	ND		1.00	1	08/24/2018 07:43	WG1156644
2-Butanone (MEK)	ND		10.0	1	08/24/2018 07:43	WG1156644
Methylene Chloride	ND		5.00	1	08/24/2018 07:43	WG1156644
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/24/2018 07:43	WG1156644
Methyl tert-butyl ether	ND		1.00	1	08/24/2018 07:43	WG1156644
Naphthalene	ND		5.00	1	08/24/2018 07:43	WG1156644
n-Propylbenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
Styrene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/24/2018 07:43	WG1156644
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/24/2018 07:43	WG1156644
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/24/2018 07:43	WG1156644
Tetrachloroethene	ND		1.00	1	08/24/2018 07:43	WG1156644
Toluene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,2,3-Trichlorobenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,2,4-Trichlorobenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,1,1-Trichloroethane	ND		1.00	1	08/24/2018 07:43	WG1156644
1,1,2-Trichloroethane	ND		1.00	1	08/24/2018 07:43	WG1156644
Trichloroethene	ND		1.00	1	08/24/2018 07:43	WG1156644
Trichlorofluoromethane	ND		5.00	1	08/24/2018 07:43	WG1156644
1,2,3-Trichloropropane	ND		2.50	1	08/24/2018 07:43	WG1156644
1,2,4-Trimethylbenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,2,3-Trimethylbenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
1,3,5-Trimethylbenzene	ND		1.00	1	08/24/2018 07:43	WG1156644
Vinyl chloride	ND		1.00	1	08/24/2018 07:43	WG1156644
o-Xylene	ND		1.00	1	08/24/2018 07:43	WG1156644
m&p-Xylene	ND		2.00	1	08/24/2018 07:43	WG1156644
(S) Toluene-d8	98.7		80.0-120		08/24/2018 07:43	WG1156644
(S) Dibromofluoromethane	104		75.0-120		08/24/2018 07:43	WG1156644
(S) 4-Bromofluorobenzene	100		77.0-126		08/24/2018 07:43	WG1156644

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/28/2018 01:14	WG1157624
Residual Range Organics (RRO)	329		250	1	08/28/2018 01:14	WG1157624
(S) o-Terphenyl	97.9		52.0-156		08/28/2018 01:14	WG1157624

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Acenaphthene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Acenaphthylene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Benzo(a)anthracene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Benzo(a)pyrene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Benzo(b)fluoranthene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Benzo(g,h,i)perylene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Benzo(k)fluoranthene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Chrysene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Dibenz(a,h)anthracene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Fluoranthene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Fluorene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/24/2018 20:26	WG1156689



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/24/2018 20:26	WG1156689
Phenanthrene	ND		0.0500	1	08/24/2018 20:26	WG1156689
Pyrene	ND		0.0500	1	08/24/2018 20:26	WG1156689
1-Methylnaphthalene	ND		0.250	1	08/24/2018 20:26	WG1156689
2-Methylnaphthalene	ND		0.250	1	08/24/2018 20:26	WG1156689
2-Chloronaphthalene	ND		0.250	1	08/24/2018 20:26	WG1156689
(S) Nitrobenzene-d5	92.1		31.0-160		08/24/2018 20:26	WG1156689
(S) 2-Fluorobiphenyl	90.0		48.0-148		08/24/2018 20:26	WG1156689
(S) p-Terphenyl-d14	91.6		37.0-146		08/24/2018 20:26	WG1156689

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/26/2018 11:51	WG1156752

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	2.63		2.00	1	08/29/2018 12:48	WG1156843
Barium,Dissolved	31.7		5.00	1	08/29/2018 12:48	WG1156843
Cadmium,Dissolved	ND		1.00	1	08/29/2018 12:48	WG1156843
Chromium,Dissolved	ND		2.00	1	08/29/2018 12:48	WG1156843
Lead,Dissolved	ND		2.00	1	08/29/2018 12:48	WG1156843
Selenium,Dissolved	ND		2.00	1	08/29/2018 12:48	WG1156843
Silver,Dissolved	ND		2.00	1	08/29/2018 12:48	WG1156843

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/24/2018 08:03	WG1156644
Acrolein	ND	<u>JO</u>	50.0	1	08/24/2018 08:03	WG1156644
Acrylonitrile	ND		10.0	1	08/24/2018 08:03	WG1156644
Benzene	ND		1.00	1	08/24/2018 08:03	WG1156644
Bromobenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
Bromodichloromethane	ND		1.00	1	08/24/2018 08:03	WG1156644
Bromoform	ND		1.00	1	08/24/2018 08:03	WG1156644
Bromomethane	ND		5.00	1	08/24/2018 08:03	WG1156644
n-Butylbenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
sec-Butylbenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
tert-Butylbenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
Carbon tetrachloride	ND		1.00	1	08/24/2018 08:03	WG1156644
Chlorobenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
Chlorodibromomethane	ND		1.00	1	08/24/2018 08:03	WG1156644
Chloroethane	ND		5.00	1	08/24/2018 08:03	WG1156644
Chloroform	ND		5.00	1	08/24/2018 08:03	WG1156644
Chloromethane	ND		2.50	1	08/24/2018 08:03	WG1156644
2-Chlorotoluene	ND		1.00	1	08/24/2018 08:03	WG1156644
4-Chlorotoluene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/24/2018 08:03	WG1156644
1,2-Dibromoethane	ND		1.00	1	08/24/2018 08:03	WG1156644
Dibromomethane	ND		1.00	1	08/24/2018 08:03	WG1156644
1,2-Dichlorobenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,3-Dichlorobenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,4-Dichlorobenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
Dichlorodifluoromethane	ND	<u>J4</u>	5.00	1	08/24/2018 08:03	WG1156644
1,1-Dichloroethane	ND		1.00	1	08/24/2018 08:03	WG1156644
1,2-Dichloroethane	ND		1.00	1	08/24/2018 08:03	WG1156644
1,1-Dichloroethene	ND		1.00	1	08/24/2018 08:03	WG1156644
cis-1,2-Dichloroethene	ND		1.00	1	08/24/2018 08:03	WG1156644
trans-1,2-Dichloroethene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,2-Dichloropropane	ND		1.00	1	08/24/2018 08:03	WG1156644
1,1-Dichloropropene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,3-Dichloropropane	ND		1.00	1	08/24/2018 08:03	WG1156644
cis-1,3-Dichloropropene	ND		1.00	1	08/24/2018 08:03	WG1156644
trans-1,3-Dichloropropene	ND		1.00	1	08/24/2018 08:03	WG1156644
2,2-Dichloropropane	ND		1.00	1	08/24/2018 08:03	WG1156644
Di-isopropyl ether	ND		1.00	1	08/24/2018 08:03	WG1156644
Ethylbenzene	ND		1.00	1	08/24/2018 08:03	WG1156644

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

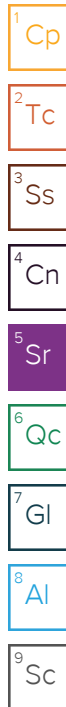


Collected date/time: 08/20/18 16:30

L1020170

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/24/2018 08:03	WG1156644
Isopropylbenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
p-Isopropyltoluene	ND		1.00	1	08/24/2018 08:03	WG1156644
2-Butanone (MEK)	ND		10.0	1	08/24/2018 08:03	WG1156644
Methylene Chloride	ND		5.00	1	08/24/2018 08:03	WG1156644
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/24/2018 08:03	WG1156644
Methyl tert-butyl ether	ND		1.00	1	08/24/2018 08:03	WG1156644
Naphthalene	ND		5.00	1	08/24/2018 08:03	WG1156644
n-Propylbenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
Styrene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/24/2018 08:03	WG1156644
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/24/2018 08:03	WG1156644
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/24/2018 08:03	WG1156644
Tetrachloroethene	ND		1.00	1	08/24/2018 08:03	WG1156644
Toluene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,2,3-Trichlorobenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,2,4-Trichlorobenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,1,1-Trichloroethane	ND		1.00	1	08/24/2018 08:03	WG1156644
1,1,2-Trichloroethane	ND		1.00	1	08/24/2018 08:03	WG1156644
Trichloroethene	ND		1.00	1	08/24/2018 08:03	WG1156644
Trichlorofluoromethane	ND		5.00	1	08/24/2018 08:03	WG1156644
1,2,3-Trichloropropane	ND		2.50	1	08/24/2018 08:03	WG1156644
1,2,4-Trimethylbenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,2,3-Trimethylbenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
1,3,5-Trimethylbenzene	ND		1.00	1	08/24/2018 08:03	WG1156644
Vinyl chloride	ND		1.00	1	08/24/2018 08:03	WG1156644
o-Xylene	ND		1.00	1	08/24/2018 08:03	WG1156644
m&p-Xylene	ND		2.00	1	08/24/2018 08:03	WG1156644
(S) Toluene-d8	97.4		80.0-120		08/24/2018 08:03	WG1156644
(S) Dibromofluoromethane	104		75.0-120		08/24/2018 08:03	WG1156644
(S) 4-Bromofluorobenzene	97.0		77.0-126		08/24/2018 08:03	WG1156644



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		400	2	08/28/2018 02:13	WG1157624
Residual Range Organics (RRO)	ND		500	2	08/28/2018 02:13	WG1157624
(S) o-Terphenyl	73.2		52.0-156		08/28/2018 02:13	WG1157624

Sample Narrative:

L1020170-14 WG1157624: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Acenaphthene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Acenaphthylene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Benzo(a)anthracene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Benzo(a)pyrene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Benzo(b)fluoranthene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Benzo(g,h,i)perylene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Benzo(k)fluoranthene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Chrysene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Dibenz(a,h)anthracene	ND		0.0500	1	08/24/2018 20:47	WG1156689



Collected date/time: 08/20/18 16:30

L1020170

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluoranthene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Fluorene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Naphthalene	ND		0.250	1	08/24/2018 20:47	WG1156689
Phenanthrene	ND		0.0500	1	08/24/2018 20:47	WG1156689
Pyrene	ND		0.0500	1	08/24/2018 20:47	WG1156689
1-Methylnaphthalene	ND		0.250	1	08/24/2018 20:47	WG1156689
2-Methylnaphthalene	ND		0.250	1	08/24/2018 20:47	WG1156689
2-Chloronaphthalene	ND		0.250	1	08/24/2018 20:47	WG1156689
(S) Nitrobenzene-d5	86.8		31.0-160		08/24/2018 20:47	WG1156689
(S) 2-Fluorobiphenyl	88.9		48.0-148		08/24/2018 20:47	WG1156689
(S) p-Terphenyl-d14	86.3		37.0-146		08/24/2018 20:47	WG1156689

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/26/2018 11:53	WG1156752

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	2.42		2.00	1	08/29/2018 13:02	WG1156843
Barium,Dissolved	38.3		5.00	1	08/29/2018 13:02	WG1156843
Cadmium,Dissolved	ND		1.00	1	08/29/2018 13:02	WG1156843
Chromium,Dissolved	ND		2.00	1	08/29/2018 13:02	WG1156843
Lead,Dissolved	ND		2.00	1	08/29/2018 13:02	WG1156843
Selenium,Dissolved	ND		2.00	1	08/29/2018 13:02	WG1156843
Silver,Dissolved	ND		2.00	1	08/29/2018 13:02	WG1156843

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/24/2018 08:22	WG1156644
Acrolein	ND	<u>JO</u>	50.0	1	08/24/2018 08:22	WG1156644
Acrylonitrile	ND		10.0	1	08/24/2018 08:22	WG1156644
Benzene	ND		1.00	1	08/24/2018 08:22	WG1156644
Bromobenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
Bromodichloromethane	ND		1.00	1	08/24/2018 08:22	WG1156644
Bromoform	ND		1.00	1	08/24/2018 08:22	WG1156644
Bromomethane	ND		5.00	1	08/24/2018 08:22	WG1156644
n-Butylbenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
sec-Butylbenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
tert-Butylbenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
Carbon tetrachloride	ND		1.00	1	08/24/2018 08:22	WG1156644
Chlorobenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
Chlorodibromomethane	ND		1.00	1	08/24/2018 08:22	WG1156644
Chloroethane	ND		5.00	1	08/24/2018 08:22	WG1156644
Chloroform	ND		5.00	1	08/24/2018 08:22	WG1156644
Chloromethane	ND		2.50	1	08/24/2018 08:22	WG1156644
2-Chlorotoluene	ND		1.00	1	08/24/2018 08:22	WG1156644
4-Chlorotoluene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/24/2018 08:22	WG1156644
1,2-Dibromoethane	ND		1.00	1	08/24/2018 08:22	WG1156644
Dibromomethane	ND		1.00	1	08/24/2018 08:22	WG1156644
1,2-Dichlorobenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,3-Dichlorobenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,4-Dichlorobenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
Dichlorodifluoromethane	ND	<u>J4</u>	5.00	1	08/24/2018 08:22	WG1156644
1,1-Dichloroethane	ND		1.00	1	08/24/2018 08:22	WG1156644
1,2-Dichloroethane	ND		1.00	1	08/24/2018 08:22	WG1156644
1,1-Dichloroethene	ND		1.00	1	08/24/2018 08:22	WG1156644
cis-1,2-Dichloroethene	ND		1.00	1	08/24/2018 08:22	WG1156644
trans-1,2-Dichloroethene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,2-Dichloropropane	ND		1.00	1	08/24/2018 08:22	WG1156644
1,1-Dichloropropene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,3-Dichloropropane	ND		1.00	1	08/24/2018 08:22	WG1156644
cis-1,3-Dichloropropene	ND		1.00	1	08/24/2018 08:22	WG1156644
trans-1,3-Dichloropropene	ND		1.00	1	08/24/2018 08:22	WG1156644
2,2-Dichloropropane	ND		1.00	1	08/24/2018 08:22	WG1156644
Di-isopropyl ether	ND		1.00	1	08/24/2018 08:22	WG1156644
Ethylbenzene	ND		1.00	1	08/24/2018 08:22	WG1156644

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/24/2018 08:22	WG1156644
Isopropylbenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
p-Isopropyltoluene	ND		1.00	1	08/24/2018 08:22	WG1156644
2-Butanone (MEK)	ND		10.0	1	08/24/2018 08:22	WG1156644
Methylene Chloride	ND		5.00	1	08/24/2018 08:22	WG1156644
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/24/2018 08:22	WG1156644
Methyl tert-butyl ether	ND		1.00	1	08/24/2018 08:22	WG1156644
Naphthalene	ND		5.00	1	08/24/2018 08:22	WG1156644
n-Propylbenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
Styrene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/24/2018 08:22	WG1156644
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/24/2018 08:22	WG1156644
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/24/2018 08:22	WG1156644
Tetrachloroethene	ND		1.00	1	08/24/2018 08:22	WG1156644
Toluene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,2,3-Trichlorobenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,2,4-Trichlorobenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,1,1-Trichloroethane	ND		1.00	1	08/24/2018 08:22	WG1156644
1,1,2-Trichloroethane	ND		1.00	1	08/24/2018 08:22	WG1156644
Trichloroethene	ND		1.00	1	08/24/2018 08:22	WG1156644
Trichlorofluoromethane	ND		5.00	1	08/24/2018 08:22	WG1156644
1,2,3-Trichloropropane	ND		2.50	1	08/24/2018 08:22	WG1156644
1,2,4-Trimethylbenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,2,3-Trimethylbenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
1,3,5-Trimethylbenzene	ND		1.00	1	08/24/2018 08:22	WG1156644
Vinyl chloride	ND		1.00	1	08/24/2018 08:22	WG1156644
o-Xylene	ND		1.00	1	08/24/2018 08:22	WG1156644
m&p-Xylene	ND		2.00	1	08/24/2018 08:22	WG1156644
(S) Toluene-d8	93.5		80.0-120		08/24/2018 08:22	WG1156644
(S) Dibromofluoromethane	105		75.0-120		08/24/2018 08:22	WG1156644
(S) 4-Bromofluorobenzene	99.9		77.0-126		08/24/2018 08:22	WG1156644

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/28/2018 02:33	WG1157624
Residual Range Organics (RRO)	550		250	1	08/28/2018 02:33	WG1157624
(S) o-Terphenyl	97.4		52.0-156		08/28/2018 02:33	WG1157624

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/28/2018 05:10	WG1157625
Residual Range Organics (RRO)	ND		250	1	08/28/2018 05:10	WG1157625
(S) o-Terphenyl	81.6		52.0-156		08/28/2018 05:10	WG1157625

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Acenaphthene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Acenaphthylene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Benzo(a)anthracene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Benzo(a)pyrene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Benzo(b)fluoranthene	ND		0.0500	1	08/24/2018 21:07	WG1156689



Collected date/time: 08/20/18 12:15

L1020170

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Benzo(k)fluoranthene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Chrysene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Dibenz(a,h)anthracene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Fluoranthene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Fluorene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Naphthalene	ND		0.250	1	08/24/2018 21:07	WG1156689
Phenanthrene	ND		0.0500	1	08/24/2018 21:07	WG1156689
Pyrene	ND		0.0500	1	08/24/2018 21:07	WG1156689
1-Methylnaphthalene	ND		0.250	1	08/24/2018 21:07	WG1156689
2-Methylnaphthalene	ND		0.250	1	08/24/2018 21:07	WG1156689
2-Chloronaphthalene	ND		0.250	1	08/24/2018 21:07	WG1156689
(S) Nitrobenzene-d5	91.6		31.0-160		08/24/2018 21:07	WG1156689
(S) 2-Fluorobiphenyl	93.2		48.0-148		08/24/2018 21:07	WG1156689
(S) p-Terphenyl-d14	90.5		37.0-146		08/24/2018 21:07	WG1156689

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/26/2018 11:55	WG1156752

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	4.80		2.00	1	08/29/2018 13:07	WG1156843
Barium,Dissolved	32.9		5.00	1	08/29/2018 13:07	WG1156843
Cadmium,Dissolved	ND		1.00	1	08/29/2018 13:07	WG1156843
Chromium,Dissolved	ND		2.00	1	08/29/2018 13:07	WG1156843
Lead,Dissolved	ND		2.00	1	08/29/2018 13:07	WG1156843
Selenium,Dissolved	ND		2.00	1	08/29/2018 13:07	WG1156843
Silver,Dissolved	ND		2.00	1	08/29/2018 13:07	WG1156843

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/24/2018 09:17	WG1156644
Acrolein	ND	<u>JO</u>	50.0	1	08/24/2018 09:17	WG1156644
Acrylonitrile	ND		10.0	1	08/24/2018 09:17	WG1156644
Benzene	ND		1.00	1	08/24/2018 09:17	WG1156644
Bromobenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
Bromodichloromethane	ND		1.00	1	08/24/2018 09:17	WG1156644
Bromoform	ND		1.00	1	08/24/2018 09:17	WG1156644
Bromomethane	ND		5.00	1	08/24/2018 09:17	WG1156644
n-Butylbenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
sec-Butylbenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
tert-Butylbenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
Carbon tetrachloride	ND		1.00	1	08/24/2018 09:17	WG1156644
Chlorobenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
Chlorodibromomethane	ND		1.00	1	08/24/2018 09:17	WG1156644
Chloroethane	ND		5.00	1	08/24/2018 09:17	WG1156644
Chloroform	ND		5.00	1	08/24/2018 09:17	WG1156644
Chloromethane	ND		2.50	1	08/24/2018 09:17	WG1156644
2-Chlorotoluene	ND		1.00	1	08/24/2018 09:17	WG1156644
4-Chlorotoluene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/24/2018 09:17	WG1156644
1,2-Dibromoethane	ND		1.00	1	08/24/2018 09:17	WG1156644
Dibromomethane	ND		1.00	1	08/24/2018 09:17	WG1156644
1,2-Dichlorobenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,3-Dichlorobenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,4-Dichlorobenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
Dichlorodifluoromethane	ND	<u>J4</u>	5.00	1	08/24/2018 09:17	WG1156644
1,1-Dichloroethane	ND		1.00	1	08/24/2018 09:17	WG1156644
1,2-Dichloroethane	ND		1.00	1	08/24/2018 09:17	WG1156644
1,1-Dichloroethene	ND		1.00	1	08/24/2018 09:17	WG1156644
cis-1,2-Dichloroethene	ND		1.00	1	08/24/2018 09:17	WG1156644
trans-1,2-Dichloroethene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,2-Dichloropropane	ND		1.00	1	08/24/2018 09:17	WG1156644
1,1-Dichloropropene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,3-Dichloropropane	ND		1.00	1	08/24/2018 09:17	WG1156644
cis-1,3-Dichloropropene	ND		1.00	1	08/24/2018 09:17	WG1156644
trans-1,3-Dichloropropene	ND		1.00	1	08/24/2018 09:17	WG1156644
2,2-Dichloropropane	ND		1.00	1	08/24/2018 09:17	WG1156644
Di-isopropyl ether	ND		1.00	1	08/24/2018 09:17	WG1156644
Ethylbenzene	ND		1.00	1	08/24/2018 09:17	WG1156644

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

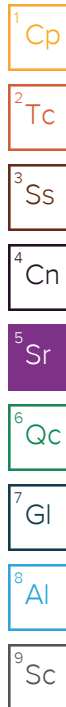


Collected date/time: 08/20/18 17:00

L1020170

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/24/2018 09:17	WG1156644
Isopropylbenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
p-Isopropyltoluene	ND		1.00	1	08/24/2018 09:17	WG1156644
2-Butanone (MEK)	ND		10.0	1	08/24/2018 09:17	WG1156644
Methylene Chloride	ND		5.00	1	08/24/2018 09:17	WG1156644
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/24/2018 09:17	WG1156644
Methyl tert-butyl ether	ND		1.00	1	08/24/2018 09:17	WG1156644
Naphthalene	ND		5.00	1	08/24/2018 09:17	WG1156644
n-Propylbenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
Styrene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/24/2018 09:17	WG1156644
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/24/2018 09:17	WG1156644
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/24/2018 09:17	WG1156644
Tetrachloroethene	ND		1.00	1	08/24/2018 09:17	WG1156644
Toluene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,2,3-Trichlorobenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,2,4-Trichlorobenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,1,1-Trichloroethane	ND		1.00	1	08/24/2018 09:17	WG1156644
1,1,2-Trichloroethane	ND		1.00	1	08/24/2018 09:17	WG1156644
Trichloroethene	ND		1.00	1	08/24/2018 09:17	WG1156644
Trichlorofluoromethane	ND		5.00	1	08/24/2018 09:17	WG1156644
1,2,3-Trichloropropane	ND		2.50	1	08/24/2018 09:17	WG1156644
1,2,4-Trimethylbenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,2,3-Trimethylbenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
1,3,5-Trimethylbenzene	ND		1.00	1	08/24/2018 09:17	WG1156644
Vinyl chloride	ND		1.00	1	08/24/2018 09:17	WG1156644
o-Xylene	ND		1.00	1	08/24/2018 09:17	WG1156644
m&p-Xylene	ND		2.00	1	08/24/2018 09:17	WG1156644
(S) Toluene-d8	102		80.0-120		08/24/2018 09:17	WG1156644
(S) Dibromofluoromethane	104		75.0-120		08/24/2018 09:17	WG1156644
(S) 4-Bromofluorobenzene	98.2		77.0-126		08/24/2018 09:17	WG1156644



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	294		200	1	08/28/2018 02:53	WG1157624
Residual Range Organics (RRO)	500		250	1	08/28/2018 02:53	WG1157624
(S) o-Terphenyl	96.8		52.0-156		08/28/2018 02:53	WG1157624

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Acenaphthene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Acenaphthylene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Benzo(a)anthracene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Benzo(a)pyrene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Benzo(b)fluoranthene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Benzo(g,h,i)perylene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Benzo(k)fluoranthene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Chrysene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Dibenz(a,h)anthracene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Fluoranthene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Fluorene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/24/2018 21:28	WG1156689



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/24/2018 21:28	WG1156689
Phenanthrene	ND		0.0500	1	08/24/2018 21:28	WG1156689
Pyrene	ND		0.0500	1	08/24/2018 21:28	WG1156689
1-Methylnaphthalene	ND		0.250	1	08/24/2018 21:28	WG1156689
2-Methylnaphthalene	ND		0.250	1	08/24/2018 21:28	WG1156689
2-Chloronaphthalene	ND		0.250	1	08/24/2018 21:28	WG1156689
(S) Nitrobenzene-d5	78.4		31.0-160		08/24/2018 21:28	WG1156689
(S) 2-Fluorobiphenyl	91.1		48.0-148		08/24/2018 21:28	WG1156689
(S) p-Terphenyl-d14	85.3		37.0-146		08/24/2018 21:28	WG1156689

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/26/2018 12:01	WG1156752

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	10.1		2.00	1	08/29/2018 12:21	WG1156843
Barium,Dissolved	39.6		5.00	1	08/29/2018 12:21	WG1156843
Cadmium,Dissolved	ND		1.00	1	08/29/2018 12:21	WG1156843
Chromium,Dissolved	ND		2.00	1	08/29/2018 12:21	WG1156843
Lead,Dissolved	ND		2.00	1	08/29/2018 12:21	WG1156843
Selenium,Dissolved	ND		2.00	1	08/29/2018 12:21	WG1156843
Silver,Dissolved	ND		2.00	1	08/29/2018 12:21	WG1156843

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/24/2018 09:37	WG1156644
Acrolein	ND	<u>JO</u>	50.0	1	08/24/2018 09:37	WG1156644
Acrylonitrile	ND		10.0	1	08/24/2018 09:37	WG1156644
Benzene	ND		1.00	1	08/24/2018 09:37	WG1156644
Bromobenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
Bromodichloromethane	ND		1.00	1	08/24/2018 09:37	WG1156644
Bromoform	ND		1.00	1	08/24/2018 09:37	WG1156644
Bromomethane	ND		5.00	1	08/24/2018 09:37	WG1156644
n-Butylbenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
sec-Butylbenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
tert-Butylbenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
Carbon tetrachloride	ND		1.00	1	08/24/2018 09:37	WG1156644
Chlorobenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
Chlorodibromomethane	ND		1.00	1	08/24/2018 09:37	WG1156644
Chloroethane	ND		5.00	1	08/24/2018 09:37	WG1156644
Chloroform	ND		5.00	1	08/24/2018 09:37	WG1156644
Chloromethane	ND		2.50	1	08/24/2018 09:37	WG1156644
2-Chlorotoluene	ND		1.00	1	08/24/2018 09:37	WG1156644
4-Chlorotoluene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/24/2018 09:37	WG1156644
1,2-Dibromoethane	ND		1.00	1	08/24/2018 09:37	WG1156644
Dibromomethane	ND		1.00	1	08/24/2018 09:37	WG1156644
1,2-Dichlorobenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,3-Dichlorobenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,4-Dichlorobenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
Dichlorodifluoromethane	ND	<u>J4</u>	5.00	1	08/24/2018 09:37	WG1156644
1,1-Dichloroethane	ND		1.00	1	08/24/2018 09:37	WG1156644
1,2-Dichloroethane	ND		1.00	1	08/24/2018 09:37	WG1156644
1,1-Dichloroethene	ND		1.00	1	08/24/2018 09:37	WG1156644
cis-1,2-Dichloroethene	ND		1.00	1	08/24/2018 09:37	WG1156644
trans-1,2-Dichloroethene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,2-Dichloropropane	ND		1.00	1	08/24/2018 09:37	WG1156644
1,1-Dichloropropene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,3-Dichloropropane	ND		1.00	1	08/24/2018 09:37	WG1156644
cis-1,3-Dichloropropene	ND		1.00	1	08/24/2018 09:37	WG1156644
trans-1,3-Dichloropropene	ND		1.00	1	08/24/2018 09:37	WG1156644
2,2-Dichloropropane	ND		1.00	1	08/24/2018 09:37	WG1156644
Di-isopropyl ether	ND		1.00	1	08/24/2018 09:37	WG1156644
Ethylbenzene	ND		1.00	1	08/24/2018 09:37	WG1156644

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/24/2018 09:37	WG1156644
Isopropylbenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
p-Isopropyltoluene	ND		1.00	1	08/24/2018 09:37	WG1156644
2-Butanone (MEK)	ND		10.0	1	08/24/2018 09:37	WG1156644
Methylene Chloride	ND		5.00	1	08/24/2018 09:37	WG1156644
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/24/2018 09:37	WG1156644
Methyl tert-butyl ether	ND		1.00	1	08/24/2018 09:37	WG1156644
Naphthalene	ND		5.00	1	08/24/2018 09:37	WG1156644
n-Propylbenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
Styrene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/24/2018 09:37	WG1156644
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/24/2018 09:37	WG1156644
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/24/2018 09:37	WG1156644
Tetrachloroethene	ND		1.00	1	08/24/2018 09:37	WG1156644
Toluene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,2,3-Trichlorobenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,2,4-Trichlorobenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,1,1-Trichloroethane	ND		1.00	1	08/24/2018 09:37	WG1156644
1,1,2-Trichloroethane	ND		1.00	1	08/24/2018 09:37	WG1156644
Trichloroethene	ND		1.00	1	08/24/2018 09:37	WG1156644
Trichlorofluoromethane	ND		5.00	1	08/24/2018 09:37	WG1156644
1,2,3-Trichloropropane	ND		2.50	1	08/24/2018 09:37	WG1156644
1,2,4-Trimethylbenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,2,3-Trimethylbenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
1,3,5-Trimethylbenzene	ND		1.00	1	08/24/2018 09:37	WG1156644
Vinyl chloride	ND		1.00	1	08/24/2018 09:37	WG1156644
o-Xylene	ND		1.00	1	08/24/2018 09:37	WG1156644
m&p-Xylene	ND		2.00	1	08/24/2018 09:37	WG1156644
(S) Toluene-d8	102		80.0-120		08/24/2018 09:37	WG1156644
(S) Dibromofluoromethane	102		75.0-120		08/24/2018 09:37	WG1156644
(S) 4-Bromofluorobenzene	100		77.0-126		08/24/2018 09:37	WG1156644

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	398		200	1	08/28/2018 03:12	WG1157624
Residual Range Organics (RRO)	577		250	1	08/28/2018 03:12	WG1157624
(S) o-Terphenyl	101		52.0-156		08/28/2018 03:12	WG1157624

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Acenaphthene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Acenaphthylene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Benzo(a)anthracene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Benzo(a)pyrene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Benzo(b)fluoranthene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Benzo(g,h,i)perylene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Benzo(k)fluoranthene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Chrysene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Dibenz(a,h)anthracene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Fluoranthene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Fluorene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/24/2018 21:49	WG1156689



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/24/2018 21:49	WG1156689
Phenanthrene	ND		0.0500	1	08/24/2018 21:49	WG1156689
Pyrene	ND		0.0500	1	08/24/2018 21:49	WG1156689
1-Methylnaphthalene	ND		0.250	1	08/24/2018 21:49	WG1156689
2-Methylnaphthalene	ND		0.250	1	08/24/2018 21:49	WG1156689
2-Chloronaphthalene	ND		0.250	1	08/24/2018 21:49	WG1156689
(S) Nitrobenzene-d5	85.8		31.0-160		08/24/2018 21:49	WG1156689
(S) 2-Fluorobiphenyl	87.4		48.0-148		08/24/2018 21:49	WG1156689
(S) p-Terphenyl-d14	82.1		37.0-146		08/24/2018 21:49	WG1156689

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/26/2018 12:03	WG1156752

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	4.41		2.00	1	08/29/2018 13:11	WG1156843
Barium,Dissolved	135		5.00	1	08/29/2018 13:11	WG1156843
Cadmium,Dissolved	ND		1.00	1	08/29/2018 13:11	WG1156843
Chromium,Dissolved	ND		2.00	1	08/29/2018 13:11	WG1156843
Lead,Dissolved	ND		2.00	1	08/29/2018 13:11	WG1156843
Selenium,Dissolved	ND		2.00	1	08/29/2018 13:11	WG1156843
Silver,Dissolved	ND		2.00	1	08/29/2018 13:11	WG1156843

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/24/2018 09:57	WG1156644
Acrolein	ND	<u>JO</u>	50.0	1	08/24/2018 09:57	WG1156644
Acrylonitrile	ND		10.0	1	08/24/2018 09:57	WG1156644
Benzene	ND		1.00	1	08/24/2018 09:57	WG1156644
Bromobenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
Bromodichloromethane	ND		1.00	1	08/24/2018 09:57	WG1156644
Bromoform	ND		1.00	1	08/24/2018 09:57	WG1156644
Bromomethane	ND		5.00	1	08/24/2018 09:57	WG1156644
n-Butylbenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
sec-Butylbenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
tert-Butylbenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
Carbon tetrachloride	ND		1.00	1	08/24/2018 09:57	WG1156644
Chlorobenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
Chlorodibromomethane	ND		1.00	1	08/24/2018 09:57	WG1156644
Chloroethane	ND		5.00	1	08/24/2018 09:57	WG1156644
Chloroform	ND		5.00	1	08/24/2018 09:57	WG1156644
Chloromethane	ND		2.50	1	08/24/2018 09:57	WG1156644
2-Chlorotoluene	ND		1.00	1	08/24/2018 09:57	WG1156644
4-Chlorotoluene	ND		1.00	1	08/24/2018 09:57	WG1156644
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/24/2018 09:57	WG1156644
1,2-Dibromoethane	ND		1.00	1	08/24/2018 09:57	WG1156644
Dibromomethane	ND		1.00	1	08/24/2018 09:57	WG1156644
1,2-Dichlorobenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
1,3-Dichlorobenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
1,4-Dichlorobenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
Dichlorodifluoromethane	ND	<u>J4</u>	5.00	1	08/24/2018 09:57	WG1156644
1,1-Dichloroethane	ND		1.00	1	08/24/2018 09:57	WG1156644
1,2-Dichloroethane	ND		1.00	1	08/24/2018 09:57	WG1156644
1,1-Dichloroethene	ND		1.00	1	08/24/2018 09:57	WG1156644
cis-1,2-Dichloroethene	ND		1.00	1	08/24/2018 09:57	WG1156644
trans-1,2-Dichloroethene	ND		1.00	1	08/24/2018 09:57	WG1156644
1,2-Dichloropropane	ND		1.00	1	08/24/2018 09:57	WG1156644
1,1-Dichloropropene	ND		1.00	1	08/24/2018 09:57	WG1156644
1,3-Dichloropropane	ND		1.00	1	08/24/2018 09:57	WG1156644
cis-1,3-Dichloropropene	ND		1.00	1	08/24/2018 09:57	WG1156644
trans-1,3-Dichloropropene	ND		1.00	1	08/24/2018 09:57	WG1156644
2,2-Dichloropropane	ND		1.00	1	08/24/2018 09:57	WG1156644
Di-isopropyl ether	ND		1.00	1	08/24/2018 09:57	WG1156644
Ethylbenzene	ND		1.00	1	08/24/2018 09:57	WG1156644

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	ND		1.00	1	08/24/2018 09:57	WG1156644
Isopropylbenzene	1.83		1.00	1	08/24/2018 09:57	WG1156644
p-Isopropyltoluene	1.84		1.00	1	08/24/2018 09:57	WG1156644
2-Butanone (MEK)	ND		10.0	1	08/24/2018 09:57	WG1156644
Methylene Chloride	ND		5.00	1	08/24/2018 09:57	WG1156644
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/24/2018 09:57	WG1156644
Methyl tert-butyl ether	ND		1.00	1	08/24/2018 09:57	WG1156644
Naphthalene	40.0		5.00	1	08/24/2018 09:57	WG1156644
n-Propylbenzene	2.97		1.00	1	08/24/2018 09:57	WG1156644
Styrene	ND		1.00	1	08/24/2018 09:57	WG1156644
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/24/2018 09:57	WG1156644
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/24/2018 09:57	WG1156644
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/24/2018 09:57	WG1156644
Tetrachloroethene	ND		1.00	1	08/24/2018 09:57	WG1156644
Toluene	ND		1.00	1	08/24/2018 09:57	WG1156644
1,2,3-Trichlorobenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
1,2,4-Trichlorobenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
1,1,1-Trichloroethane	ND		1.00	1	08/24/2018 09:57	WG1156644
1,1,2-Trichloroethane	ND		1.00	1	08/24/2018 09:57	WG1156644
Trichloroethene	ND		1.00	1	08/24/2018 09:57	WG1156644
Trichlorofluoromethane	ND		5.00	1	08/24/2018 09:57	WG1156644
1,2,3-Trichloropropane	ND		2.50	1	08/24/2018 09:57	WG1156644
1,2,4-Trimethylbenzene	21.5		1.00	1	08/24/2018 09:57	WG1156644
1,2,3-Trimethylbenzene	2.74		1.00	1	08/24/2018 09:57	WG1156644
1,3,5-Trimethylbenzene	ND		1.00	1	08/24/2018 09:57	WG1156644
Vinyl chloride	ND		1.00	1	08/24/2018 09:57	WG1156644
o-Xylene	ND		1.00	1	08/24/2018 09:57	WG1156644
m&p-Xylene	3.10		2.00	1	08/24/2018 09:57	WG1156644
(S) Toluene-d8	98.2		80.0-120		08/24/2018 09:57	WG1156644
(S) Dibromofluoromethane	104		75.0-120		08/24/2018 09:57	WG1156644
(S) 4-Bromofluorobenzene	98.7		77.0-126		08/24/2018 09:57	WG1156644

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	38900		2000	10	08/30/2018 06:35	WG1157624
Residual Range Organics (RRO)	9270		2500	10	08/30/2018 06:35	WG1157624
(S) o-Terphenyl	36.1	J2	52.0-156		08/30/2018 06:35	WG1157624

Sample Narrative:

L1020170-18 WG1157624: Surrogate failure due to matrix interference

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.568		0.0500	1	08/24/2018 22:09	WG1156689
Acenaphthene	1.32		0.0500	1	08/24/2018 22:09	WG1156689
Acenaphthylene	ND		0.0500	1	08/24/2018 22:09	WG1156689
Benzo(a)anthracene	ND		0.0500	1	08/24/2018 22:09	WG1156689
Benzo(a)pyrene	ND		0.0500	1	08/24/2018 22:09	WG1156689
Benzo(b)fluoranthene	ND		0.0500	1	08/24/2018 22:09	WG1156689
Benzo(g,h,i)perylene	ND		0.0500	1	08/24/2018 22:09	WG1156689
Benzo(k)fluoranthene	ND		0.0500	1	08/24/2018 22:09	WG1156689
Chrysene	ND		0.0500	1	08/24/2018 22:09	WG1156689
Dibenz(a,h)anthracene	ND		0.0500	1	08/24/2018 22:09	WG1156689



Collected date/time: 08/21/18 09:50

L1020170

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluoranthene	ND		0.0500	1	08/24/2018 22:09	WG1156689
Fluorene	2.20		0.0500	1	08/24/2018 22:09	WG1156689
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/24/2018 22:09	WG1156689
Naphthalene	21.6		0.250	1	08/24/2018 22:09	WG1156689
Phenanthrene	2.82		0.0500	1	08/24/2018 22:09	WG1156689
Pyrene	ND		0.0500	1	08/24/2018 22:09	WG1156689
1-Methylnaphthalene	47.1		0.250	1	08/24/2018 22:09	WG1156689
2-Methylnaphthalene	47.4		0.250	1	08/24/2018 22:09	WG1156689
2-Chloronaphthalene	ND		0.250	1	08/24/2018 22:09	WG1156689
(S) Nitrobenzene-d5	97.9		31.0-160		08/24/2018 22:09	WG1156689
(S) 2-Fluorobiphenyl	76.3		48.0-148		08/24/2018 22:09	WG1156689
(S) p-Terphenyl-d14	87.9		37.0-146		08/24/2018 22:09	WG1156689

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury,Dissolved	ND		0.200	1	08/26/2018 12:06	WG1156752

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic,Dissolved	ND		2.00	1	08/29/2018 13:16	WG1156843
Barium,Dissolved	ND		5.00	1	08/29/2018 13:16	WG1156843
Cadmium,Dissolved	ND		1.00	1	08/29/2018 13:16	WG1156843
Chromium,Dissolved	ND		2.00	1	08/29/2018 13:16	WG1156843
Lead,Dissolved	ND		2.00	1	08/29/2018 13:16	WG1156843
Selenium,Dissolved	ND		2.00	1	08/29/2018 13:16	WG1156843
Silver,Dissolved	ND		2.00	1	08/29/2018 13:16	WG1156843

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/24/2018 10:17	WG1156644
Acrolein	ND	<u>JO</u>	50.0	1	08/24/2018 10:17	WG1156644
Acrylonitrile	ND		10.0	1	08/24/2018 10:17	WG1156644
Benzene	ND		1.00	1	08/24/2018 10:17	WG1156644
Bromobenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
Bromodichloromethane	ND		1.00	1	08/24/2018 10:17	WG1156644
Bromoform	ND		1.00	1	08/24/2018 10:17	WG1156644
Bromomethane	ND		5.00	1	08/24/2018 10:17	WG1156644
n-Butylbenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
sec-Butylbenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
tert-Butylbenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
Carbon tetrachloride	ND		1.00	1	08/24/2018 10:17	WG1156644
Chlorobenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
Chlorodibromomethane	ND		1.00	1	08/24/2018 10:17	WG1156644
Chloroethane	ND		5.00	1	08/24/2018 10:17	WG1156644
Chloroform	ND		5.00	1	08/24/2018 10:17	WG1156644
Chloromethane	ND		2.50	1	08/24/2018 10:17	WG1156644
2-Chlorotoluene	ND		1.00	1	08/24/2018 10:17	WG1156644
4-Chlorotoluene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/24/2018 10:17	WG1156644
1,2-Dibromoethane	ND		1.00	1	08/24/2018 10:17	WG1156644
Dibromomethane	ND		1.00	1	08/24/2018 10:17	WG1156644
1,2-Dichlorobenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,3-Dichlorobenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,4-Dichlorobenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
Dichlorodifluoromethane	ND	<u>J4</u>	5.00	1	08/24/2018 10:17	WG1156644
1,1-Dichloroethane	ND		1.00	1	08/24/2018 10:17	WG1156644
1,2-Dichloroethane	ND		1.00	1	08/24/2018 10:17	WG1156644
1,1-Dichloroethene	ND		1.00	1	08/24/2018 10:17	WG1156644
cis-1,2-Dichloroethene	ND		1.00	1	08/24/2018 10:17	WG1156644
trans-1,2-Dichloroethene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,2-Dichloropropane	ND		1.00	1	08/24/2018 10:17	WG1156644
1,1-Dichloropropene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,3-Dichloropropane	ND		1.00	1	08/24/2018 10:17	WG1156644
cis-1,3-Dichloropropene	ND		1.00	1	08/24/2018 10:17	WG1156644
trans-1,3-Dichloropropene	ND		1.00	1	08/24/2018 10:17	WG1156644
2,2-Dichloropropane	ND		1.00	1	08/24/2018 10:17	WG1156644
Di-isopropyl ether	ND		1.00	1	08/24/2018 10:17	WG1156644
Ethylbenzene	ND		1.00	1	08/24/2018 10:17	WG1156644

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Hexachloro-1,3-butadiene	ND		1.00	1	08/24/2018 10:17	WG1156644
Isopropylbenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
p-Isopropyltoluene	ND		1.00	1	08/24/2018 10:17	WG1156644
2-Butanone (MEK)	ND		10.0	1	08/24/2018 10:17	WG1156644
Methylene Chloride	ND		5.00	1	08/24/2018 10:17	WG1156644
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/24/2018 10:17	WG1156644
Methyl tert-butyl ether	ND		1.00	1	08/24/2018 10:17	WG1156644
Naphthalene	ND		5.00	1	08/24/2018 10:17	WG1156644
n-Propylbenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
Styrene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/24/2018 10:17	WG1156644
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/24/2018 10:17	WG1156644
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/24/2018 10:17	WG1156644
Tetrachloroethene	ND		1.00	1	08/24/2018 10:17	WG1156644
Toluene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,2,3-Trichlorobenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,2,4-Trichlorobenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,1,1-Trichloroethane	ND		1.00	1	08/24/2018 10:17	WG1156644
1,1,2-Trichloroethane	ND		1.00	1	08/24/2018 10:17	WG1156644
Trichloroethene	ND		1.00	1	08/24/2018 10:17	WG1156644
Trichlorofluoromethane	ND		5.00	1	08/24/2018 10:17	WG1156644
1,2,3-Trichloropropane	ND		2.50	1	08/24/2018 10:17	WG1156644
1,2,4-Trimethylbenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,2,3-Trimethylbenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
1,3,5-Trimethylbenzene	ND		1.00	1	08/24/2018 10:17	WG1156644
Vinyl chloride	ND		1.00	1	08/24/2018 10:17	WG1156644
o-Xylene	ND		1.00	1	08/24/2018 10:17	WG1156644
m&p-Xylene	ND		2.00	1	08/24/2018 10:17	WG1156644
(S) Toluene-d8	97.4		80.0-120		08/24/2018 10:17	WG1156644
(S) Dibromofluoromethane	104		75.0-120		08/24/2018 10:17	WG1156644
(S) 4-Bromofluorobenzene	100		77.0-126		08/24/2018 10:17	WG1156644

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	08/28/2018 04:51	WG1157624
Residual Range Organics (RRO)	ND		250	1	08/28/2018 04:51	WG1157624
(S) o-Terphenyl	99.5		52.0-156		08/28/2018 04:51	WG1157624

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Acenaphthene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Acenaphthylene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Benzo(a)anthracene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Benzo(a)pyrene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Benzo(b)fluoranthene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Benzo(g,h,i)perylene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Benzo(k)fluoranthene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Chrysene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Dibenz(a,h)anthracene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Fluoranthene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Fluorene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/24/2018 22:30	WG1156689



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		0.250	1	08/24/2018 22:30	WG1156689
Phenanthrene	ND		0.0500	1	08/24/2018 22:30	WG1156689
Pyrene	ND		0.0500	1	08/24/2018 22:30	WG1156689
1-Methylnaphthalene	ND		0.250	1	08/24/2018 22:30	WG1156689
2-Methylnaphthalene	ND		0.250	1	08/24/2018 22:30	WG1156689
2-Chloronaphthalene	ND		0.250	1	08/24/2018 22:30	WG1156689
<i>(S)</i> Nitrobenzene-d5	73.7		31.0-160		08/24/2018 22:30	WG1156689
<i>(S)</i> 2-Fluorobiphenyl	86.3		48.0-148		08/24/2018 22:30	WG1156689
<i>(S)</i> p-Terphenyl-d14	87.9		37.0-146		08/24/2018 22:30	WG1156689

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/24/2018 14:36	WG1157010
Acrolein	ND		50.0	1	08/24/2018 14:36	WG1157010
Acrylonitrile	ND		10.0	1	08/24/2018 14:36	WG1157010
Benzene	ND		1.00	1	08/24/2018 14:36	WG1157010
Bromobenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
Bromodichloromethane	ND		1.00	1	08/24/2018 14:36	WG1157010
Bromoform	ND		1.00	1	08/24/2018 14:36	WG1157010
Bromomethane	ND		5.00	1	08/24/2018 14:36	WG1157010
n-Butylbenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
sec-Butylbenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
tert-Butylbenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
Carbon tetrachloride	ND		1.00	1	08/24/2018 14:36	WG1157010
Chlorobenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
Chlorodibromomethane	ND		1.00	1	08/24/2018 14:36	WG1157010
Chloroethane	ND		5.00	1	08/24/2018 14:36	WG1157010
Chloroform	ND		5.00	1	08/24/2018 14:36	WG1157010
Chloromethane	ND		2.50	1	08/24/2018 14:36	WG1157010
2-Chlorotoluene	ND		1.00	1	08/24/2018 14:36	WG1157010
4-Chlorotoluene	ND		1.00	1	08/24/2018 14:36	WG1157010
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/24/2018 14:36	WG1157010
1,2-Dibromoethane	ND		1.00	1	08/24/2018 14:36	WG1157010
Dibromomethane	ND		1.00	1	08/24/2018 14:36	WG1157010
1,2-Dichlorobenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
1,3-Dichlorobenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
1,4-Dichlorobenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
Dichlorodifluoromethane	ND		5.00	1	08/24/2018 14:36	WG1157010
1,1-Dichloroethane	ND		1.00	1	08/24/2018 14:36	WG1157010
1,2-Dichloroethane	ND		1.00	1	08/24/2018 14:36	WG1157010
1,1-Dichloroethene	ND		1.00	1	08/24/2018 14:36	WG1157010
cis-1,2-Dichloroethene	ND		1.00	1	08/24/2018 14:36	WG1157010
trans-1,2-Dichloroethene	ND		1.00	1	08/24/2018 14:36	WG1157010
1,2-Dichloropropane	ND		1.00	1	08/24/2018 14:36	WG1157010
1,1-Dichloropropene	ND		1.00	1	08/24/2018 14:36	WG1157010
1,3-Dichloropropane	ND		1.00	1	08/24/2018 14:36	WG1157010
cis-1,3-Dichloropropene	ND		1.00	1	08/24/2018 14:36	WG1157010
trans-1,3-Dichloropropene	ND		1.00	1	08/24/2018 14:36	WG1157010
2,2-Dichloropropane	ND		1.00	1	08/24/2018 14:36	WG1157010
Di-isopropyl ether	ND		1.00	1	08/24/2018 14:36	WG1157010
Ethylbenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
Hexachloro-1,3-butadiene	ND		1.00	1	08/24/2018 14:36	WG1157010
Isopropylbenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
p-Isopropyltoluene	ND		1.00	1	08/24/2018 14:36	WG1157010
2-Butanone (MEK)	ND		10.0	1	08/24/2018 14:36	WG1157010
Methylene Chloride	ND		5.00	1	08/24/2018 14:36	WG1157010
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/24/2018 14:36	WG1157010
Methyl tert-butyl ether	ND		1.00	1	08/24/2018 14:36	WG1157010
Naphthalene	ND		5.00	1	08/24/2018 14:36	WG1157010
n-Propylbenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
Styrene	ND		1.00	1	08/24/2018 14:36	WG1157010
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/24/2018 14:36	WG1157010
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/24/2018 14:36	WG1157010
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/24/2018 14:36	WG1157010
Tetrachloroethene	ND		1.00	1	08/24/2018 14:36	WG1157010
Toluene	ND		1.00	1	08/24/2018 14:36	WG1157010
1,2,3-Trichlorobenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
1,2,4-Trichlorobenzene	ND		1.00	1	08/24/2018 14:36	WG1157010

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/24/2018 14:36	WG1157010
1,1,2-Trichloroethane	ND		1.00	1	08/24/2018 14:36	WG1157010
Trichloroethene	ND		1.00	1	08/24/2018 14:36	WG1157010
Trichlorofluoromethane	ND		5.00	1	08/24/2018 14:36	WG1157010
1,2,3-Trichloropropane	ND		2.50	1	08/24/2018 14:36	WG1157010
1,2,4-Trimethylbenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
1,2,3-Trimethylbenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
1,3,5-Trimethylbenzene	ND		1.00	1	08/24/2018 14:36	WG1157010
Vinyl chloride	ND		1.00	1	08/24/2018 14:36	WG1157010
o-Xylene	ND		1.00	1	08/24/2018 14:36	WG1157010
m&p-Xylene	ND		2.00	1	08/24/2018 14:36	WG1157010
(S) Toluene-d8	98.4		80.0-120		08/24/2018 14:36	WG1157010
(S) Dibromofluoromethane	101		75.0-120		08/24/2018 14:36	WG1157010
(S) 4-Bromofluorobenzene	101		77.0-126		08/24/2018 14:36	WG1157010

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	08/24/2018 04:43	WG1156644
Acrolein	ND	<u>JO</u>	50.0	1	08/24/2018 04:43	WG1156644
Acrylonitrile	ND		10.0	1	08/24/2018 04:43	WG1156644
Benzene	ND		1.00	1	08/24/2018 04:43	WG1156644
Bromobenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
Bromodichloromethane	ND		1.00	1	08/24/2018 04:43	WG1156644
Bromoform	ND		1.00	1	08/24/2018 04:43	WG1156644
Bromomethane	ND		5.00	1	08/24/2018 04:43	WG1156644
n-Butylbenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
sec-Butylbenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
tert-Butylbenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
Carbon tetrachloride	ND		1.00	1	08/24/2018 04:43	WG1156644
Chlorobenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
Chlorodibromomethane	ND		1.00	1	08/24/2018 04:43	WG1156644
Chloroethane	ND		5.00	1	08/24/2018 04:43	WG1156644
Chloroform	ND		5.00	1	08/24/2018 04:43	WG1156644
Chloromethane	ND		2.50	1	08/24/2018 04:43	WG1156644
2-Chlorotoluene	ND		1.00	1	08/24/2018 04:43	WG1156644
4-Chlorotoluene	ND		1.00	1	08/24/2018 04:43	WG1156644
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/24/2018 04:43	WG1156644
1,2-Dibromoethane	ND		1.00	1	08/24/2018 04:43	WG1156644
Dibromomethane	ND		1.00	1	08/24/2018 04:43	WG1156644
1,2-Dichlorobenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
1,3-Dichlorobenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
1,4-Dichlorobenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
Dichlorodifluoromethane	ND	<u>J4</u>	5.00	1	08/24/2018 04:43	WG1156644
1,1-Dichloroethane	ND		1.00	1	08/24/2018 04:43	WG1156644
1,2-Dichloroethane	ND		1.00	1	08/24/2018 04:43	WG1156644
1,1-Dichloroethene	ND		1.00	1	08/24/2018 04:43	WG1156644
cis-1,2-Dichloroethene	ND		1.00	1	08/24/2018 04:43	WG1156644
trans-1,2-Dichloroethene	ND		1.00	1	08/24/2018 04:43	WG1156644
1,2-Dichloropropane	ND		1.00	1	08/24/2018 04:43	WG1156644
1,1-Dichloropropene	ND		1.00	1	08/24/2018 04:43	WG1156644
1,3-Dichloropropane	ND		1.00	1	08/24/2018 04:43	WG1156644
cis-1,3-Dichloropropene	ND		1.00	1	08/24/2018 04:43	WG1156644
trans-1,3-Dichloropropene	ND		1.00	1	08/24/2018 04:43	WG1156644
2,2-Dichloropropane	ND		1.00	1	08/24/2018 04:43	WG1156644
Di-isopropyl ether	ND		1.00	1	08/24/2018 04:43	WG1156644
Ethylbenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
Hexachloro-1,3-butadiene	ND		1.00	1	08/24/2018 04:43	WG1156644
Isopropylbenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
p-Isopropyltoluene	ND		1.00	1	08/24/2018 04:43	WG1156644
2-Butanone (MEK)	ND		10.0	1	08/24/2018 04:43	WG1156644
Methylene Chloride	ND		5.00	1	08/24/2018 04:43	WG1156644
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/24/2018 04:43	WG1156644
Methyl tert-butyl ether	ND		1.00	1	08/24/2018 04:43	WG1156644
Naphthalene	ND		5.00	1	08/24/2018 04:43	WG1156644
n-Propylbenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
Styrene	ND		1.00	1	08/24/2018 04:43	WG1156644
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/24/2018 04:43	WG1156644
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/24/2018 04:43	WG1156644
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/24/2018 04:43	WG1156644
Tetrachloroethene	ND		1.00	1	08/24/2018 04:43	WG1156644
Toluene	ND		1.00	1	08/24/2018 04:43	WG1156644
1,2,3-Trichlorobenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
1,2,4-Trichlorobenzene	ND		1.00	1	08/24/2018 04:43	WG1156644

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	08/24/2018 04:43	WG1156644
1,1,2-Trichloroethane	ND		1.00	1	08/24/2018 04:43	WG1156644
Trichloroethene	ND		1.00	1	08/24/2018 04:43	WG1156644
Trichlorofluoromethane	ND		5.00	1	08/24/2018 04:43	WG1156644
1,2,3-Trichloropropane	ND		2.50	1	08/24/2018 04:43	WG1156644
1,2,4-Trimethylbenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
1,2,3-Trimethylbenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
1,3,5-Trimethylbenzene	ND		1.00	1	08/24/2018 04:43	WG1156644
Vinyl chloride	ND		1.00	1	08/24/2018 04:43	WG1156644
o-Xylene	ND		1.00	1	08/24/2018 04:43	WG1156644
m&p-Xylene	ND		2.00	1	08/24/2018 04:43	WG1156644
(S) Toluene-d8	97.5		80.0-120		08/24/2018 04:43	WG1156644
(S) Dibromofluoromethane	104		75.0-120		08/24/2018 04:43	WG1156644
(S) 4-Bromofluorobenzene	96.4		77.0-126		08/24/2018 04:43	WG1156644

- 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	87.3		1	08/25/2018 07:32	WG1157153

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0229	1	08/28/2018 12:52	WG1157584

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.29	1	08/27/2018 10:11	WG1156987
Barium	62.1		0.573	1	08/27/2018 10:11	WG1156987
Cadmium	ND		0.573	1	08/27/2018 10:11	WG1156987
Chromium	12.4		1.15	1	08/27/2018 10:11	WG1156987
Lead	2.94		0.573	1	08/27/2018 10:11	WG1156987
Selenium	ND		2.29	1	08/27/2018 10:11	WG1156987
Silver	ND		1.15	1	08/27/2018 10:11	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	JO	0.0286	1	08/30/2018 04:25	WG1159139
Acrylonitrile	ND		0.0143	1	08/25/2018 03:37	WG1157215
Benzene	ND		0.00115	1	08/25/2018 03:37	WG1157215
Bromobenzene	ND		0.0143	1	08/25/2018 03:37	WG1157215
Bromodichloromethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
Bromoform	ND		0.0286	1	08/25/2018 03:37	WG1157215
Bromomethane	ND		0.0143	1	08/25/2018 03:37	WG1157215
n-Butylbenzene	ND		0.0143	1	08/25/2018 03:37	WG1157215
sec-Butylbenzene	ND		0.0143	1	08/25/2018 03:37	WG1157215
tert-Butylbenzene	ND		0.00573	1	08/25/2018 03:37	WG1157215
Carbon tetrachloride	ND		0.00573	1	08/25/2018 03:37	WG1157215
Chlorobenzene	ND		0.00286	1	08/25/2018 03:37	WG1157215
Chlorodibromomethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
Chloroethane	ND		0.00573	1	08/25/2018 03:37	WG1157215
Chloroform	ND		0.00286	1	08/25/2018 03:37	WG1157215
Chloromethane	ND		0.0143	1	08/25/2018 03:37	WG1157215
2-Chlorotoluene	ND		0.00286	1	08/25/2018 03:37	WG1157215
4-Chlorotoluene	ND		0.00573	1	08/25/2018 03:37	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0286	1	08/25/2018 03:37	WG1157215
1,2-Dibromoethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
Dibromomethane	ND		0.00573	1	08/25/2018 03:37	WG1157215
1,2-Dichlorobenzene	ND		0.00573	1	08/25/2018 03:37	WG1157215
1,3-Dichlorobenzene	ND		0.00573	1	08/25/2018 03:37	WG1157215
1,4-Dichlorobenzene	ND		0.00573	1	08/25/2018 03:37	WG1157215
Dichlorodifluoromethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
1,1-Dichloroethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
1,2-Dichloroethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
1,1-Dichloroethene	ND		0.00286	1	08/25/2018 03:37	WG1157215
cis-1,2-Dichloroethene	ND		0.00286	1	08/25/2018 03:37	WG1157215
trans-1,2-Dichloroethene	ND		0.00573	1	08/25/2018 03:37	WG1157215
1,2-Dichloropropane	ND		0.00573	1	08/25/2018 03:37	WG1157215
1,1-Dichloropropene	ND		0.00286	1	08/25/2018 03:37	WG1157215
1,3-Dichloropropane	ND		0.00573	1	08/25/2018 03:37	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/21/18 14:30

L1020170

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00286	1	08/25/2018 03:37	WG1157215
trans-1,3-Dichloropropene	ND		0.00573	1	08/25/2018 03:37	WG1157215
2,2-Dichloropropane	ND		0.00286	1	08/25/2018 03:37	WG1157215
Di-isopropyl ether	ND		0.00115	1	08/25/2018 03:37	WG1157215
Ethylbenzene	ND		0.00286	1	08/25/2018 03:37	WG1157215
Hexachloro-1,3-butadiene	ND		0.0286	1	08/25/2018 03:37	WG1157215
Isopropylbenzene	ND		0.00286	1	08/25/2018 03:37	WG1157215
p-Isopropyltoluene	ND		0.00573	1	08/25/2018 03:37	WG1157215
2-Butanone (MEK)	ND		0.0286	1	08/25/2018 03:37	WG1157215
Methylene Chloride	ND		0.0286	1	08/25/2018 03:37	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0286	1	08/25/2018 03:37	WG1157215
Methyl tert-butyl ether	ND		0.00115	1	08/25/2018 03:37	WG1157215
Naphthalene	ND		0.0143	1	08/25/2018 03:37	WG1157215
n-Propylbenzene	ND		0.00573	1	08/25/2018 03:37	WG1157215
Styrene	ND		0.0143	1	08/25/2018 03:37	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
Tetrachloroethene	ND		0.00286	1	08/25/2018 03:37	WG1157215
Toluene	ND		0.00573	1	08/25/2018 03:37	WG1157215
1,2,3-Trichlorobenzene	ND		0.00286	1	08/25/2018 03:37	WG1157215
1,2,4-Trichlorobenzene	ND		0.0143	1	08/25/2018 03:37	WG1157215
1,1,1-Trichloroethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
1,1,2-Trichloroethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
Trichloroethene	ND		0.00115	1	08/25/2018 03:37	WG1157215
Trichlorofluoromethane	ND		0.00286	1	08/25/2018 03:37	WG1157215
1,2,3-Trichloropropane	ND		0.0143	1	08/25/2018 03:37	WG1157215
1,2,4-Trimethylbenzene	ND		0.00573	1	08/25/2018 03:37	WG1157215
1,2,3-Trimethylbenzene	ND		0.00573	1	08/25/2018 03:37	WG1157215
Vinyl chloride	ND		0.00286	1	08/25/2018 03:37	WG1157215
1,3,5-Trimethylbenzene	ND		0.00573	1	08/25/2018 03:37	WG1157215
o-Xylene	ND		0.00286	1	08/25/2018 03:37	WG1157215
m&p-Xylene	ND		0.00458	1	08/25/2018 03:37	WG1157215
(S) Toluene-d8	104		75.0-131		08/25/2018 03:37	WG1157215
(S) Toluene-d8	113		75.0-131		08/30/2018 04:25	WG1159139
(S) Dibromofluoromethane	99.1		65.0-129		08/25/2018 03:37	WG1157215
(S) Dibromofluoromethane	89.2		65.0-129		08/30/2018 04:25	WG1159139
(S) 4-Bromofluorobenzene	105		67.0-138		08/25/2018 03:37	WG1157215
(S) 4-Bromofluorobenzene	106		67.0-138		08/30/2018 04:25	WG1159139

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.58	1	08/30/2018 07:41	WG1158427
Residual Range Organics (RRO)	ND		11.5	1	08/30/2018 07:41	WG1158427
(S) o-Terphenyl	88.5		18.0-148		08/30/2018 07:41	WG1158427

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Acenaphthene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Acenaphthylene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Benzo(a)anthracene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Benzo(a)pyrene	ND		0.00687	1	08/29/2018 07:05	WG1157649



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Benzo(g,h,i)perylene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Benzo(k)fluoranthene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Chrysene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Dibenz(a,h)anthracene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Fluoranthene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Fluorene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Naphthalene	ND		0.0229	1	08/29/2018 07:05	WG1157649
Phenanthrene	ND		0.00687	1	08/29/2018 07:05	WG1157649
Pyrene	ND		0.00687	1	08/29/2018 07:05	WG1157649
1-Methylnaphthalene	ND		0.0229	1	08/29/2018 07:05	WG1157649
2-Methylnaphthalene	ND		0.0229	1	08/29/2018 07:05	WG1157649
2-Chloronaphthalene	ND		0.0229	1	08/29/2018 07:05	WG1157649
(S) Nitrobenzene-d5	79.6		14.0-149		08/29/2018 07:05	WG1157649
(S) 2-Fluorobiphenyl	70.5		34.0-125		08/29/2018 07:05	WG1157649
(S) p-Terphenyl-d14	73.6		23.0-120		08/29/2018 07:05	WG1157649

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	77.8		1	08/25/2018 06:46	WG1157158

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0257	1	08/28/2018 12:54	WG1157584

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.57	1	08/27/2018 10:14	WG1156987
Barium	122		0.643	1	08/27/2018 10:14	WG1156987
Cadmium	ND		0.643	1	08/27/2018 10:14	WG1156987
Chromium	16.3		1.29	1	08/27/2018 10:14	WG1156987
Lead	4.52		0.643	1	08/27/2018 10:14	WG1156987
Selenium	ND		2.57	1	08/27/2018 10:14	WG1156987
Silver	ND		1.29	1	08/27/2018 10:14	WG1156987

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND	JO	0.0321	1	08/30/2018 04:45	WG1159139
Acrylonitrile	ND		0.0161	1	08/25/2018 03:55	WG1157215
Benzene	ND		0.00129	1	08/25/2018 03:55	WG1157215
Bromobenzene	ND		0.0161	1	08/25/2018 03:55	WG1157215
Bromodichloromethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
Bromoform	ND		0.0321	1	08/25/2018 03:55	WG1157215
Bromomethane	ND		0.0161	1	08/25/2018 03:55	WG1157215
n-Butylbenzene	ND		0.0161	1	08/25/2018 03:55	WG1157215
sec-Butylbenzene	ND		0.0161	1	08/25/2018 03:55	WG1157215
tert-Butylbenzene	ND		0.00643	1	08/25/2018 03:55	WG1157215
Carbon tetrachloride	ND		0.00643	1	08/25/2018 03:55	WG1157215
Chlorobenzene	ND		0.00321	1	08/25/2018 03:55	WG1157215
Chlorodibromomethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
Chloroethane	ND		0.00643	1	08/25/2018 03:55	WG1157215
Chloroform	ND		0.00321	1	08/25/2018 03:55	WG1157215
Chloromethane	ND		0.0161	1	08/25/2018 03:55	WG1157215
2-Chlorotoluene	ND		0.00321	1	08/25/2018 03:55	WG1157215
4-Chlorotoluene	ND		0.00643	1	08/25/2018 03:55	WG1157215
1,2-Dibromo-3-Chloropropane	ND		0.0321	1	08/25/2018 03:55	WG1157215
1,2-Dibromoethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
Dibromomethane	ND		0.00643	1	08/25/2018 03:55	WG1157215
1,2-Dichlorobenzene	ND		0.00643	1	08/25/2018 03:55	WG1157215
1,3-Dichlorobenzene	ND		0.00643	1	08/25/2018 03:55	WG1157215
1,4-Dichlorobenzene	ND		0.00643	1	08/25/2018 03:55	WG1157215
Dichlorodifluoromethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
1,1-Dichloroethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
1,2-Dichloroethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
1,1-Dichloroethene	ND		0.00321	1	08/25/2018 03:55	WG1157215
cis-1,2-Dichloroethene	ND		0.00321	1	08/25/2018 03:55	WG1157215
trans-1,2-Dichloroethene	ND		0.00643	1	08/25/2018 03:55	WG1157215
1,2-Dichloropropane	0.0184		0.00643	1	08/25/2018 03:55	WG1157215
1,1-Dichloropropene	ND		0.00321	1	08/25/2018 03:55	WG1157215
1,3-Dichloropropane	ND		0.00643	1	08/25/2018 03:55	WG1157215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00321	1	08/25/2018 03:55	WG1157215
trans-1,3-Dichloropropene	ND		0.00643	1	08/25/2018 03:55	WG1157215
2,2-Dichloropropane	ND		0.00321	1	08/25/2018 03:55	WG1157215
Di-isopropyl ether	ND		0.00129	1	08/25/2018 03:55	WG1157215
Ethylbenzene	ND		0.00321	1	08/25/2018 03:55	WG1157215
Hexachloro-1,3-butadiene	ND		0.0321	1	08/25/2018 03:55	WG1157215
Isopropylbenzene	ND		0.00321	1	08/25/2018 03:55	WG1157215
p-Isopropyltoluene	ND		0.00643	1	08/25/2018 03:55	WG1157215
2-Butanone (MEK)	ND		0.0321	1	08/25/2018 03:55	WG1157215
Methylene Chloride	ND		0.0321	1	08/25/2018 03:55	WG1157215
4-Methyl-2-pentanone (MIBK)	ND		0.0321	1	08/25/2018 03:55	WG1157215
Methyl tert-butyl ether	ND		0.00129	1	08/25/2018 03:55	WG1157215
Naphthalene	ND		0.0161	1	08/25/2018 03:55	WG1157215
n-Propylbenzene	ND		0.00643	1	08/25/2018 03:55	WG1157215
Styrene	ND		0.0161	1	08/25/2018 03:55	WG1157215
1,1,1,2-Tetrachloroethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
1,1,2,2-Tetrachloroethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
1,1,2-Trichlorotrifluoroethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
Tetrachloroethene	ND		0.00321	1	08/25/2018 03:55	WG1157215
Toluene	ND		0.00643	1	08/25/2018 03:55	WG1157215
1,2,3-Trichlorobenzene	ND		0.00321	1	08/25/2018 03:55	WG1157215
1,2,4-Trichlorobenzene	ND		0.0161	1	08/25/2018 03:55	WG1157215
1,1,1-Trichloroethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
1,1,2-Trichloroethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
Trichloroethene	ND		0.00129	1	08/25/2018 03:55	WG1157215
Trichlorofluoromethane	ND		0.00321	1	08/25/2018 03:55	WG1157215
1,2,3-Trichloropropane	ND		0.0161	1	08/25/2018 03:55	WG1157215
1,2,4-Trimethylbenzene	ND		0.00643	1	08/25/2018 03:55	WG1157215
1,2,3-Trimethylbenzene	ND		0.00643	1	08/25/2018 03:55	WG1157215
Vinyl chloride	ND		0.00321	1	08/25/2018 03:55	WG1157215
1,3,5-Trimethylbenzene	ND		0.00643	1	08/25/2018 03:55	WG1157215
o-Xylene	ND		0.00321	1	08/25/2018 03:55	WG1157215
m&p-Xylene	ND		0.00514	1	08/25/2018 03:55	WG1157215
(S) Toluene-d8	105		75.0-131		08/25/2018 03:55	WG1157215
(S) Toluene-d8	116		75.0-131		08/30/2018 04:45	WG1159139
(S) Dibromofluoromethane	98.8		65.0-129		08/25/2018 03:55	WG1157215
(S) Dibromofluoromethane	90.3		65.0-129		08/30/2018 04:45	WG1159139
(S) 4-Bromofluorobenzene	107		67.0-138		08/25/2018 03:55	WG1157215
(S) 4-Bromofluorobenzene	105		67.0-138		08/30/2018 04:45	WG1159139

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		5.14	1	08/30/2018 07:53	WG1158427
Residual Range Organics (RRO)	ND		12.9	1	08/30/2018 07:53	WG1158427
(S) o-Terphenyl	78.3		18.0-148		08/30/2018 07:53	WG1158427

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Acenaphthene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Acenaphthylene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Benzo(a)anthracene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Benzo(a)pyrene	ND		0.00771	1	08/29/2018 07:26	WG1157649



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Benzo(g,h,i)perylene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Benzo(k)fluoranthene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Chrysene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Dibenz(a,h)anthracene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Fluoranthene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Fluorene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Indeno(1,2,3-cd)pyrene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Naphthalene	ND		0.0257	1	08/29/2018 07:26	WG1157649
Phenanthrene	ND		0.00771	1	08/29/2018 07:26	WG1157649
Pyrene	ND		0.00771	1	08/29/2018 07:26	WG1157649
1-Methylnaphthalene	ND		0.0257	1	08/29/2018 07:26	WG1157649
2-Methylnaphthalene	ND		0.0257	1	08/29/2018 07:26	WG1157649
2-Chloronaphthalene	ND		0.0257	1	08/29/2018 07:26	WG1157649
<i>(S)</i> Nitrobenzene-d5	75.2		14.0-149		08/29/2018 07:26	WG1157649
<i>(S)</i> 2-Fluorobiphenyl	64.2		34.0-125		08/29/2018 07:26	WG1157649
<i>(S)</i> p-Terphenyl-d14	62.6		23.0-120		08/29/2018 07:26	WG1157649

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3336824-1 08/25/18 07:32

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1020170-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1020170-04 08/25/18 07:32 • (DUP) R3336824-3 08/25/18 07:32

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	81.1	80.5	1	0.703		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3336824-2 08/25/18 07:32

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	99.9	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3336817-1 08/25/18 06:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1019807-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1019807-01 08/25/18 06:46 • (DUP) R3336817-3 08/25/18 06:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	67.2	61.7	1	8.57		10

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3336817-2 08/25/18 06:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	



Method Blank (MB)

(MB) R3336730-1 08/26/18 11:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.0490	0.200

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336730-2 08/26/18 11:09 • (LCSD) R3336730-3 08/26/18 11:11

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 %
Mercury,Dissolved	3.00	2.87	2.75	95.8	91.8	80.0-120			4.32	20

⁷Gl

⁸Al

L1020170-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020170-13 08/26/18 11:13 • (MS) R3336730-4 08/26/18 11:36 • (MSD) R3336730-5 08/26/18 11:38

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 %
Mercury,Dissolved	3.00	ND	2.79	2.80	93.1	93.3	1	75.0-125			0.229	20

⁹Sc



Method Blank (MB)

(MB) R3336942-1 08/27/18 12:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Mercury	0.00478	↓	0.00280	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336942-2 08/27/18 12:16 • (LCSD) R3336942-3 08/27/18 12:18

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	0.259	0.245	86.2	81.8	80.0-120			5.22	20

L1020024-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020024-07 08/27/18 12:40 • (MS) R3336942-4 08/27/18 12:48 • (MSD) R3336942-5 08/27/18 12:50

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	0.378	0.0573	0.397	0.362	89.6	80.5	1	75.0-125			9.10	20



Method Blank (MB)

(MB) R3337314-1 08/28/18 12:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.00280	0.0200

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337314-2 08/28/18 12:29 • (LCSD) R3337314-3 08/28/18 12:31

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.300	0.344	0.333	115	111	80.0-120			3.25	20

L1020288-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020288-03 08/28/18 12:34 • (MS) R3337314-4 08/28/18 12:36 • (MSD) R3337314-5 08/28/18 12:44

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
Mercury	0.363	0.0849	0.407	0.558	88.8	130	1	75.0-125		J3 J5	31.1	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336990-1 08/27/18 09:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.740	2.00
Silver	U		0.280	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336990-2 08/27/18 09:11 • (LCSD) R3336990-3 08/27/18 09:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	97.5	96.8	97.5	96.8	80.0-120			0.724	20
Barium	100	103	103	103	103	80.0-120			0.184	20
Cadmium	100	98.3	97.9	98.3	97.9	80.0-120			0.387	20
Chromium	100	100	99.7	100	99.7	80.0-120			0.614	20
Lead	100	98.7	99.0	98.7	99.0	80.0-120			0.328	20
Selenium	100	97.2	97.1	97.2	97.1	80.0-120			0.173	20
Silver	20.0	19.0	18.8	94.9	93.9	80.0-120			1.06	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1020157-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020157-01 08/27/18 09:16 • (MS) R3336990-6 08/27/18 09:23 • (MSD) R3336990-7 08/27/18 09:26

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 %
Arsenic	100	5.86	96.3	110	90.4	104	1	75.0-125			13.2	20
Barium	100	86.8	187	221	100	134	1	75.0-125		J5	16.9	20
Cadmium	100	ND	91.0	103	91.0	103	1	75.0-125			12.8	20
Chromium	100	12.3	104	117	92.2	105	1	75.0-125			11.1	20
Lead	100	7.02	101	115	93.9	108	1	75.0-125			12.6	20
Selenium	100	ND	88.6	102	88.6	102	1	75.0-125			13.8	20
Silver	20.0	ND	17.5	19.8	87.7	98.9	1	75.0-125			12.0	20



Method Blank (MB)

(MB) R3337676-1 08/29/18 12:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		0.250	2.00
Barium,Dissolved	U		0.360	5.00
Cadmium,Dissolved	U		0.160	1.00
Chromium,Dissolved	U		0.540	2.00
Lead,Dissolved	U		0.240	2.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337676-2 08/29/18 12:12 • (LCSD) R3337676-3 08/29/18 12:16

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 %
Arsenic,Dissolved	50.0	47.4	46.9	94.7	93.9	80.0-120			0.901	20
Barium,Dissolved	50.0	45.4	45.0	90.8	89.9	80.0-120			0.956	20
Cadmium,Dissolved	50.0	46.3	46.5	92.7	93.1	80.0-120			0.458	20
Chromium,Dissolved	50.0	48.0	48.3	96.1	96.6	80.0-120			0.539	20
Lead,Dissolved	50.0	47.2	48.0	94.4	96.0	80.0-120			1.65	20
Selenium,Dissolved	50.0	46.5	48.4	92.9	96.9	80.0-120			4.16	20
Silver,Dissolved	50.0	47.1	46.8	94.2	93.5	80.0-120			0.733	20

L1020170-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020170-17 08/29/18 12:21 • (MS) R3337676-5 08/29/18 12:30 • (MSD) R3337676-6 08/29/18 12:35

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 %
Arsenic,Dissolved	50.0	10.1	56.1	57.0	91.9	93.7	1	75.0-125			1.56	20
Barium,Dissolved	50.0	39.6	82.7	83.7	86.2	88.1	1	75.0-125			1.15	20
Cadmium,Dissolved	50.0	ND	46.4	47.7	92.8	95.4	1	75.0-125			2.69	20
Chromium,Dissolved	50.0	ND	46.9	47.1	93.8	94.2	1	75.0-125			0.449	20
Lead,Dissolved	50.0	ND	47.6	48.1	94.1	95.0	1	75.0-125			0.932	20
Selenium,Dissolved	50.0	ND	45.5	49.1	89.1	96.3	1	75.0-125			7.62	20
Silver,Dissolved	50.0	ND	47.1	47.9	94.2	95.7	1	75.0-125			1.61	20



Method Blank (MB)

(MB) R3337292-3 08/24/18 04:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	U		0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3337292-3 08/24/18 04:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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
n-Propylbenzene	U		0.349	1.00
Styrene	U		0.307	1.00
1,1,1,2-Tetrachloroethane	U		0.385	1.00
Naphthalene	U		1.00	5.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
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
Toluene	U		0.412	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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	98.8			80.0-120
(S) Dibromofluoromethane	104			75.0-120
(S) 4-Bromofluorobenzene	100			77.0-126

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) R3337292-1 08/24/18 03:03 • (LCSD) R3337292-2 08/24/18 03:23

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 %
Acetone	125	139	131	111	105	19.0-160			6.28	27
Acrolein	125	99.5	101	79.6	81.1	10.0-160			1.85	26
Acrylonitrile	125	116	109	92.7	87.3	55.0-149			5.98	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337292-1 08/24/18 03:03 • (LCSD) R3337292-2 08/24/18 03:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromobenzene	25.0	25.4	25.6	102	102	73.0-121			0.630	20
Bromodichloromethane	25.0	25.6	24.4	103	97.8	75.0-120			4.73	20
Bromoform	25.0	27.0	27.4	108	109	68.0-132			1.22	20
Bromomethane	25.0	26.8	25.8	107	103	10.0-160			3.59	25
n-Butylbenzene	25.0	25.3	25.3	101	101	73.0-125			0.0706	20
sec-Butylbenzene	25.0	25.8	25.8	103	103	75.0-125			0.0322	20
tert-Butylbenzene	25.0	25.5	25.5	102	102	76.0-124			0.0637	20
Carbon tetrachloride	25.0	26.9	26.2	107	105	68.0-126			2.47	20
Chlorobenzene	25.0	27.2	25.6	109	103	80.0-121			6.02	20
Chlorodibromomethane	25.0	25.1	24.1	101	96.4	77.0-125			4.14	20
Chloroethane	25.0	22.4	21.2	89.5	84.6	47.0-150			5.56	20
Chloroform	25.0	26.9	25.8	108	103	73.0-120			4.20	20
Chloromethane	25.0	26.1	26.4	104	106	41.0-142			1.12	20
2-Chlorotoluene	25.0	25.1	26.0	100	104	76.0-123			3.56	20
Benzene	25.0	26.3	25.7	105	103	70.0-123			2.52	20
4-Chlorotoluene	25.0	25.4	26.6	102	106	75.0-122			4.69	20
1,2-Dibromo-3-Chloropropane	25.0	25.5	23.3	102	93.1	58.0-134			9.19	20
1,2-Dibromoethane	25.0	25.5	24.8	102	99.1	80.0-122			2.92	20
Dibromomethane	25.0	24.3	23.9	97.3	95.6	80.0-120			1.84	20
1,2-Dichlorobenzene	25.0	26.6	25.7	106	103	79.0-121			3.13	20
1,3-Dichlorobenzene	25.0	27.9	29.4	111	118	79.0-120			5.31	20
1,4-Dichlorobenzene	25.0	23.1	23.1	92.6	92.6	79.0-120			0.0280	20
Dichlorodifluoromethane	25.0	38.5	36.6	154	146	51.0-149	J4		5.23	20
1,1-Dichloroethane	25.0	24.1	23.7	96.2	94.7	70.0-126			1.62	20
1,2-Dichloroethane	25.0	26.6	25.5	106	102	70.0-128			4.30	20
1,1-Dichloroethene	25.0	27.2	27.3	109	109	71.0-124			0.332	20
cis-1,2-Dichloroethene	25.0	25.1	24.4	100	97.7	73.0-120			2.58	20
trans-1,2-Dichloroethene	25.0	27.0	26.1	108	105	73.0-120			3.34	20
1,2-Dichloropropane	25.0	23.7	23.0	94.9	92.1	77.0-125			2.94	20
1,1-Dichloropropene	25.0	28.6	27.8	115	111	74.0-126			2.85	20
1,3-Dichloropropane	25.0	26.0	25.0	104	100	80.0-120			3.84	20
cis-1,3-Dichloropropene	25.0	26.1	25.0	104	100	80.0-123			4.11	20
trans-1,3-Dichloropropene	25.0	26.6	25.7	106	103	78.0-124			3.17	20
2,2-Dichloropropane	25.0	29.3	28.4	117	114	58.0-130			2.88	20
Di-isopropyl ether	25.0	24.2	23.4	96.9	93.4	58.0-138			3.61	20
Hexachloro-1,3-butadiene	25.0	26.6	26.5	106	106	54.0-138			0.243	20
Isopropylbenzene	25.0	26.7	27.6	107	110	76.0-127			3.06	20
p-Isopropyltoluene	25.0	25.5	25.7	102	103	76.0-125			0.982	20
2-Butanone (MEK)	125	132	126	106	101	44.0-160			4.53	20
Methylene Chloride	25.0	26.2	24.8	105	99.2	67.0-120			5.36	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) R3337292-1 08/24/18 03:03 • (LCSD) R3337292-2 08/24/18 03:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	125	119	112	95.2	89.5	68.0-142			6.22	20
Ethylbenzene	25.0	27.8	25.1	111	100	79.0-123			10.1	20
n-Propylbenzene	25.0	26.6	27.1	107	109	77.0-124			1.90	20
Styrene	25.0	26.1	26.3	104	105	73.0-130			0.779	20
1,1,1,2-Tetrachloroethane	25.0	25.1	24.9	101	99.5	75.0-125			1.13	20
1,1,2,2-Tetrachloroethane	25.0	23.8	24.7	95.1	98.6	65.0-130			3.65	20
Tetrachloroethene	25.0	28.4	26.7	114	107	72.0-132			6.25	20
1,1,2-Trichlorotrifluoroethane	25.0	31.3	31.0	125	124	69.0-132			0.960	20
1,2,3-Trichlorobenzene	25.0	25.7	26.5	103	106	50.0-138			3.33	20
1,2,4-Trichlorobenzene	25.0	26.8	27.6	107	110	57.0-137			3.03	20
1,1,1-Trichloroethane	25.0	28.1	27.5	113	110	73.0-124			2.35	20
1,1,2-Trichloroethane	25.0	25.2	24.9	101	99.6	80.0-120			1.02	20
Trichloroethene	25.0	26.2	25.8	105	103	78.0-124			1.59	20
Trichlorofluoromethane	25.0	29.2	27.3	117	109	59.0-147			6.71	20
1,2,3-Trichloropropane	25.0	25.8	26.7	103	107	73.0-130			3.47	20
Methyl tert-butyl ether	25.0	26.2	24.8	105	99.4	68.0-125			5.46	20
1,2,3-Trimethylbenzene	25.0	25.4	25.9	102	104	77.0-120			1.74	20
1,2,4-Trimethylbenzene	25.0	25.5	25.8	102	103	76.0-121			1.15	20
1,3,5-Trimethylbenzene	25.0	23.3	26.7	93.3	107	76.0-122			13.4	20
Naphthalene	25.0	23.8	24.5	95.3	97.9	54.0-135			2.72	20
Vinyl chloride	25.0	25.2	24.6	101	98.5	67.0-131			2.28	20
o-Xylene	25.0	27.3	26.4	109	105	80.0-122			3.38	20
m&p-Xylenes	50.0	52.1	50.5	104	101	80.0-122			3.13	20
Toluene	25.0	25.2	24.9	101	99.6	79.0-120			1.17	20
(S) Toluene-d8				98.5	95.4	80.0-120				
(S) Dibromofluoromethane				106	102	75.0-120				
(S) 4-Bromofluorobenzene				98.8	105	77.0-126				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336915-3 08/24/18 12:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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 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
Hexachloro-1,3-butadiene	0.301	U	0.256	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3336915-3 08/24/18 12:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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		0.412	1.00
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
o-Xylene	U		0.341	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
m&p-Xylenes	U		0.719	2.00
Vinyl chloride	U		0.259	1.00
(S) Toluene-d8	100			80.0-120
(S) Dibromofluoromethane	104			75.0-120
(S) 4-Bromofluorobenzene	97.6			77.0-126

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) R3336915-1 08/24/18 11:21 • (LCSD) R3336915-2 08/24/18 11:41

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 %
Acetone	125	121	137	96.6	109	19.0-160			12.4	27
Acrolein	125	102	114	81.2	91.6	10.0-160			12.0	26
Acrylonitrile	125	109	111	87.4	89.0	55.0-149			1.83	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336915-1 08/24/18 11:21 • (LCSD) R3336915-2 08/24/18 11:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Benzene	25.0	26.0	26.3	104	105	70.0-123			1.01	20
Bromobenzene	25.0	25.4	25.8	102	103	73.0-121			1.52	20
Bromodichloromethane	25.0	24.9	25.2	99.4	101	75.0-120			1.52	20
Bromoform	25.0	28.0	27.5	112	110	68.0-132			1.90	20
Bromomethane	25.0	26.6	25.4	106	101	10.0-160			4.63	25
n-Butylbenzene	25.0	25.2	25.2	101	101	73.0-125			0.0876	20
sec-Butylbenzene	25.0	26.2	26.1	105	104	75.0-125			0.631	20
tert-Butylbenzene	25.0	26.0	25.4	104	102	76.0-124			2.30	20
Carbon tetrachloride	25.0	25.8	25.1	103	100	68.0-126			2.90	20
Chlorobenzene	25.0	26.3	26.7	105	107	80.0-121			1.48	20
Chlorodibromomethane	25.0	24.5	25.0	98.2	100	77.0-125			1.97	20
Chloroethane	25.0	22.7	22.6	90.7	90.5	47.0-150			0.289	20
Chloroform	25.0	25.9	25.8	103	103	73.0-120			0.170	20
Chloromethane	25.0	23.8	24.5	95.3	98.1	41.0-142			2.83	20
2-Chlorotoluene	25.0	26.0	26.3	104	105	76.0-123			1.26	20
4-Chlorotoluene	25.0	26.6	25.9	107	104	75.0-122			2.88	20
1,2-Dibromo-3-Chloropropane	25.0	24.0	24.3	95.9	97.1	58.0-134			1.28	20
1,2-Dibromoethane	25.0	25.2	26.7	101	107	80.0-122			6.10	20
Dibromomethane	25.0	24.8	26.7	99.1	107	80.0-120			7.30	20
1,2-Dichlorobenzene	25.0	26.1	27.1	104	108	79.0-121			3.98	20
1,3-Dichlorobenzene	25.0	27.7	28.6	111	114	79.0-120			2.89	20
1,4-Dichlorobenzene	25.0	23.6	23.8	94.2	95.0	79.0-120			0.820	20
Dichlorodifluoromethane	25.0	33.9	33.0	136	132	51.0-149			2.79	20
1,1-Dichloroethane	25.0	23.6	23.4	94.5	93.7	70.0-126			0.851	20
1,2-Dichloroethane	25.0	25.8	26.0	103	104	70.0-128			0.805	20
1,1-Dichloroethene	25.0	25.1	25.8	101	103	71.0-124			2.40	20
cis-1,2-Dichloroethene	25.0	24.5	24.8	97.8	99.2	73.0-120			1.36	20
trans-1,2-Dichloroethene	25.0	26.4	27.1	106	108	73.0-120			2.39	20
1,2-Dichloropropane	25.0	23.3	23.9	93.1	95.7	77.0-125			2.76	20
1,1-Dichloropropene	25.0	27.5	28.1	110	112	74.0-126			2.15	20
1,3-Dichloropropane	25.0	26.0	26.0	104	104	80.0-120			0.136	20
cis-1,3-Dichloropropene	25.0	25.9	26.5	103	106	80.0-123			2.57	20
trans-1,3-Dichloropropene	25.0	26.5	26.4	106	105	78.0-124			0.488	20
2,2-Dichloropropane	25.0	28.7	28.3	115	113	58.0-130			1.46	20
Di-isopropyl ether	25.0	23.4	23.1	93.7	92.3	58.0-138			1.47	20
Ethylbenzene	25.0	26.2	27.3	105	109	79.0-123			4.15	20
Hexachloro-1,3-butadiene	25.0	27.5	27.0	110	108	54.0-138			1.82	20
Isopropylbenzene	25.0	27.3	27.4	109	110	76.0-127			0.380	20
p-Isopropyltoluene	25.0	26.0	26.3	104	105	76.0-125			1.02	20
2-Butanone (MEK)	125	109	114	87.2	91.2	44.0-160			4.47	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) R3336915-1 08/24/18 11:21 • (LCSD) R3336915-2 08/24/18 11:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Methylene Chloride	25.0	25.9	25.3	104	101	67.0-120			2.22	20
4-Methyl-2-pentanone (MIBK)	125	116	118	92.7	94.8	68.0-142			2.22	20
Methyl tert-butyl ether	25.0	25.8	25.3	103	101	68.0-125			1.80	20
Naphthalene	25.0	24.1	24.5	96.2	98.1	54.0-135			1.89	20
n-Propylbenzene	25.0	27.7	27.5	111	110	77.0-124			0.903	20
Styrene	25.0	26.6	26.6	106	106	73.0-130			0.00868	20
1,1,1,2-Tetrachloroethane	25.0	24.7	25.6	98.8	103	75.0-125			3.77	20
1,1,2,2-Tetrachloroethane	25.0	25.9	25.8	103	103	65.0-130			0.307	20
o-Xylene	25.0	26.6	27.1	106	108	80.0-122			2.03	20
m&p-Xylenes	50.0	50.8	51.7	102	103	80.0-122			1.66	20
Tetrachloroethene	25.0	26.5	27.5	106	110	72.0-132			3.75	20
Toluene	25.0	25.2	25.8	101	103	79.0-120			2.12	20
1,1,2-Trichlorotrifluoroethane	25.0	28.7	27.9	115	112	69.0-132			2.88	20
1,2,3-Trichlorobenzene	25.0	25.5	25.9	102	104	50.0-138			1.43	20
1,2,4-Trichlorobenzene	25.0	26.9	26.7	108	107	57.0-137			0.810	20
1,1,1-Trichloroethane	25.0	26.7	27.1	107	108	73.0-124			1.51	20
1,1,2-Trichloroethane	25.0	25.6	26.2	102	105	80.0-120			2.57	20
Trichloroethene	25.0	24.4	26.4	97.7	105	78.0-124			7.63	20
Trichlorofluoromethane	25.0	28.4	29.0	114	116	59.0-147			2.19	20
1,2,3-Trichloropropane	25.0	27.7	26.0	111	104	73.0-130			6.29	20
1,2,3-Trimethylbenzene	25.0	25.3	25.6	101	102	77.0-120			1.26	20
1,2,4-Trimethylbenzene	25.0	25.8	26.4	103	106	76.0-121			2.56	20
1,3,5-Trimethylbenzene	25.0	24.1	24.1	96.3	96.3	76.0-122			0.0206	20
Vinyl chloride	25.0	23.7	23.4	94.7	93.8	67.0-131			0.997	20
<i>(S) Toluene-d8</i>				98.1	99.3	80.0-120				
<i>(S) Dibromofluoromethane</i>				105	103	75.0-120				
<i>(S) 4-Bromofluorobenzene</i>				101	103	77.0-126				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3337323-2 08/24/18 11:02

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
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250
p-Isopropyltoluene	U		0.00233	0.00500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3337323-2 08/24/18 11:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichlorofluoromethane	U		0.000500	0.00250
1,2,3-Trichloropropane	U		0.00510	0.0125
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
Vinyl chloride	U		0.000683	0.00250
o-Xylene	U		0.00100	0.00250
(S) Toluene-d8	105			75.0-131
(S) Dibromofluoromethane	102			65.0-129
(S) 4-Bromofluorobenzene	94.5			67.0-138

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3337323-1 08/24/18 10:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.597	95.6	10.0-160	
Acrylonitrile	0.625	0.542	86.8	45.0-153	
Benzene	0.125	0.124	99.4	70.0-123	
Bromobenzene	0.125	0.110	88.4	73.0-121	
Bromodichloromethane	0.125	0.120	96.2	73.0-121	
Bromoform	0.125	0.118	94.4	64.0-132	
Bromomethane	0.125	0.108	86.4	56.0-147	



Laboratory Control Sample (LCS)

(LCS) R3337323-1 08/24/18 10:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
n-Butylbenzene	0.125	0.124	99.2	68.0-135	
sec-Butylbenzene	0.125	0.113	90.6	74.0-130	
tert-Butylbenzene	0.125	0.111	88.5	75.0-127	
Carbon tetrachloride	0.125	0.134	107	66.0-128	
Chlorobenzene	0.125	0.125	99.8	76.0-128	
Chlorodibromomethane	0.125	0.115	92.0	74.0-127	
Chloroethane	0.125	0.118	94.5	61.0-134	
Chloroform	0.125	0.121	96.4	72.0-123	
Chloromethane	0.125	0.108	86.4	51.0-138	
2-Chlorotoluene	0.125	0.114	91.0	75.0-124	
4-Chlorotoluene	0.125	0.123	98.6	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.117	93.5	59.0-130	
1,2-Dibromoethane	0.125	0.109	87.6	74.0-128	
Dibromomethane	0.125	0.122	97.6	75.0-122	
1,2-Dichlorobenzene	0.125	0.122	97.8	76.0-124	
1,3-Dichlorobenzene	0.125	0.118	94.7	76.0-125	
1,4-Dichlorobenzene	0.125	0.112	89.8	77.0-121	
Dichlorodifluoromethane	0.125	0.125	100	43.0-156	
1,1-Dichloroethane	0.125	0.122	97.7	70.0-127	
1,2-Dichloroethane	0.125	0.123	98.5	65.0-131	
1,1-Dichloroethene	0.125	0.107	85.9	65.0-131	
cis-1,2-Dichloroethene	0.125	0.115	92.3	73.0-125	
trans-1,2-Dichloroethene	0.125	0.105	84.0	71.0-125	
1,1-Dichloropropene	0.125	0.118	94.1	73.0-125	
1,3-Dichloropropane	0.125	0.121	96.4	80.0-125	
cis-1,3-Dichloropropene	0.125	0.117	93.2	76.0-127	
trans-1,3-Dichloropropene	0.125	0.111	89.0	73.0-127	
2,2-Dichloropropane	0.125	0.119	95.3	59.0-135	
Di-isopropyl ether	0.125	0.124	99.1	60.0-136	
Ethylbenzene	0.125	0.124	99.3	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.117	93.8	57.0-150	
Isopropylbenzene	0.125	0.114	91.6	72.0-127	
p-Isopropyltoluene	0.125	0.114	91.3	72.0-133	
2-Butanone (MEK)	0.625	0.535	85.5	30.0-160	
Methylene Chloride	0.125	0.118	94.4	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.659	105	56.0-143	
Methyl tert-butyl ether	0.125	0.115	92.4	66.0-132	
Naphthalene	0.125	0.120	96.3	59.0-130	
n-Propylbenzene	0.125	0.111	89.1	74.0-126	
Styrene	0.125	0.113	90.6	72.0-127	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3337323-1 08/24/18 10:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
1,1,1,2-Tetrachloroethane	0.125	0.114	91.2	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.124	99.2	68.0-128	
Tetrachloroethene	0.125	0.0981	78.5	70.0-136	
Toluene	0.125	0.118	94.2	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.110	88.3	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.128	102	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.118	94.7	62.0-137	
1,1,1-Trichloroethane	0.125	0.121	96.6	69.0-126	
1,1,2-Trichloroethane	0.125	0.124	99.4	78.0-123	
Trichlorofluoromethane	0.125	0.114	91.2	61.0-142	
1,2,3-Trichloropropane	0.125	0.115	92.1	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.113	90.6	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.115	92.0	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.115	91.9	73.0-127	
Vinyl chloride	0.125	0.111	88.6	63.0-134	
o-Xylene	0.125	0.129	103	79.0-124	
(S) Toluene-d8			104	75.0-131	
(S) Dibromofluoromethane			104	65.0-129	
(S) 4-Bromofluorobenzene			96.4	67.0-138	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1019728-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019728-08 08/24/18 15:24 • (MS) R3337323-3 08/24/18 19:51 • (MSD) R3337323-4 08/24/18 20:10

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	0.660	U	0.279	0.196	42.3	29.7	1	10.0-160			35.1	40
Acrylonitrile	0.660	U	0.289	0.181	43.8	27.4	1	10.0-160	J3		46.2	40
Benzene	0.132	U	0.0253	0.0224	19.2	17.0	1	10.0-149			12.0	37
Bromobenzene	0.132	U	0.0378	0.0405	28.6	30.7	1	10.0-156			7.02	38
Bromodichloromethane	0.132	U	0.0422	0.0424	31.9	32.1	1	10.0-143			0.659	37
Bromoform	0.132	U	0.0551	0.0593	41.7	44.9	1	10.0-146			7.29	36
Bromomethane	0.132	U	0.00896	0.00847	6.78	6.42	1	10.0-149	J6	J6	5.60	38
n-Butylbenzene	0.132	U	0.0305	0.0310	23.1	23.5	1	10.0-160			1.69	40
sec-Butylbenzene	0.132	U	0.0273	0.0267	20.7	20.2	1	10.0-159			2.20	39
tert-Butylbenzene	0.132	U	0.0275	0.0279	20.8	21.1	1	10.0-156			1.30	39
Carbon tetrachloride	0.132	U	0.0207	0.0232	15.7	17.6	1	10.0-145			11.2	37
Chlorobenzene	0.132	U	0.0358	0.0340	27.1	25.7	1	10.0-152			5.39	39
Chlorodibromomethane	0.132	U	0.0429	0.0540	32.5	40.9	1	10.0-146			22.9	37
Chloroethane	0.132	U	0.00717	0.00780	5.43	5.91	1	10.0-146	J6	J6	8.40	40



L1019728-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019728-08 08/24/18 15:24 • (MS) R3337323-3 08/24/18 19:51 • (MSD) R3337323-4 08/24/18 20:10

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 %
Chloroform	0.132	U	0.0320	0.0310	24.3	23.5	1	10.0-146			3.17	37
Chloromethane	0.132	U	0.0116	0.0106	8.79	8.05	1	10.0-159	J6	J6	8.83	37
2-Chlorotoluene	0.132	U	0.0340	0.0329	25.7	24.9	1	10.0-159			3.12	38
4-Chlorotoluene	0.132	U	0.0343	0.0346	26.0	26.2	1	10.0-155			0.724	39
1,2-Dibromo-3-Chloropropane	0.132	U	0.0583	0.0513	44.2	38.8	1	10.0-151			12.8	39
1,2-Dibromoethane	0.132	U	0.0452	0.0484	34.3	36.7	1	10.0-148			6.81	34
Dibromomethane	0.132	U	0.0484	0.0434	36.7	32.9	1	10.0-147			10.9	35
1,2-Dichlorobenzene	0.132	U	0.0441	0.0427	33.4	32.3	1	10.0-155			3.24	37
1,3-Dichlorobenzene	0.132	U	0.0371	0.0398	28.1	30.1	1	10.0-153			6.85	38
1,4-Dichlorobenzene	0.132	U	0.0386	0.0372	29.2	28.2	1	10.0-151			3.68	38
Dichlorodifluoromethane	0.132	U	0.0120	0.0102	9.08	7.71	1	10.0-160	J6	J6	16.3	35
1,1-Dichloroethane	0.132	U	0.0253	0.0218	19.1	16.5	1	10.0-147			14.5	37
1,2-Dichloroethane	0.132	U	0.0410	0.0412	31.1	31.2	1	10.0-148			0.350	35
1,1-Dichloroethene	0.132	U	0.0123	0.0141	9.30	10.7	1	10.0-155	J6		14.1	37
cis-1,2-Dichloroethene	0.132	U	0.0273	0.0281	20.7	21.3	1	10.0-149			2.60	37
trans-1,2-Dichloroethene	0.132	U	0.0134	0.0150	10.1	11.4	1	10.0-150			11.8	37
1,1-Dichloropropene	0.132	U	0.0124	0.0156	9.39	11.8	1	10.0-153	J6		22.8	35
1,3-Dichloropropane	0.132	U	0.0454	0.0491	34.4	37.2	1	10.0-154			7.82	35
cis-1,3-Dichloropropene	0.132	U	0.0349	0.0427	26.5	32.3	1	10.0-151			20.0	37
trans-1,3-Dichloropropene	0.132	U	0.0432	0.0566	32.7	42.8	1	10.0-148			26.8	37
2,2-Dichloropropane	0.132	U	0.0235	0.0225	17.8	17.1	1	10.0-138			4.18	36
Di-isopropyl ether	0.132	U	0.0383	0.0312	29.0	23.6	1	10.0-147			20.6	36
Ethylbenzene	0.132	U	0.0281	0.0260	21.2	19.7	1	10.0-160			7.77	38
Hexachloro-1,3-butadiene	0.132	U	0.0299	0.0346	22.6	26.2	1	10.0-160			14.7	40
Isopropylbenzene	0.132	U	0.0266	0.0267	20.1	20.2	1	10.0-155			0.519	38
p-Isopropyltoluene	0.132	U	0.0266	0.0285	20.2	21.6	1	10.0-160			6.82	40
2-Butanone (MEK)	0.660	U	0.444	0.318	67.2	48.2	1	10.0-160			33.0	40
Methylene Chloride	0.132	U	0.0285	0.0263	21.6	19.9	1	10.0-141			8.14	37
4-Methyl-2-pentanone (MIBK)	0.660	U	0.352	0.322	53.4	48.7	1	10.0-160			9.11	35
Methyl tert-butyl ether	0.132	U	0.0440	0.0393	33.3	29.7	1	11.0-147			11.3	35
Naphthalene	0.132	U	0.0468	0.0550	35.4	41.6	1	10.0-160			16.1	36
n-Propylbenzene	0.132	U	0.0258	0.0252	19.6	19.1	1	10.0-158			2.43	38
Styrene	0.132	U	0.0378	0.0383	28.6	29.0	1	10.0-160			1.30	40
1,1,1,2-Tetrachloroethane	0.132	U	0.0428	0.0404	32.4	30.6	1	10.0-149			5.84	39
1,1,2,2-Tetrachloroethane	0.132	U	0.0615	0.0538	46.6	40.7	1	10.0-160			13.4	35
Tetrachloroethene	0.132	U	0.0191	0.0207	14.4	15.6	1	10.0-156			8.04	39
Toluene	0.132	U	0.0249	0.0300	18.8	22.7	1	10.0-156			18.6	38
1,1,2-Trichlorotrifluoroethane	0.132	U	0.0122	0.0140	9.24	10.6	1	10.0-160	J6		13.7	36
1,2,3-Trichlorobenzene	0.132	U	0.0431	0.0506	32.6	38.4	1	10.0-160			16.2	40

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1019728-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019728-08 08/24/18 15:24 • (MS) R3337323-3 08/24/18 19:51 • (MSD) R3337323-4 08/24/18 20:10

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 %
1,2,4-Trichlorobenzene	0.132	U	0.0369	0.0449	27.9	34.0	1	10.0-160			19.7	40
1,1,1-Trichloroethane	0.132	U	0.0239	0.0206	18.1	15.6	1	10.0-144			14.9	35
1,1,2-Trichloroethane	0.132	U	0.0487	0.0561	36.9	42.5	1	10.0-160			14.1	35
Trichlorofluoromethane	0.132	U	0.0103	0.0105	7.83	7.94	1	10.0-160	J6	J6	1.39	40
1,2,3-Trichloropropane	0.132	U	0.0621	0.0672	47.0	50.9	1	10.0-156			7.97	35
1,2,3-Trimethylbenzene	0.132	U	0.0333	0.0330	25.2	25.0	1	10.0-160			0.813	36
1,2,4-Trimethylbenzene	0.132	U	0.0311	0.0306	23.5	23.2	1	10.0-160			1.46	36
1,3,5-Trimethylbenzene	0.132	U	0.0280	0.0284	21.2	21.5	1	10.0-160			1.34	38
Vinyl chloride	0.132	U	0.00874	0.00920	6.62	6.96	1	10.0-160	J6	J6	5.05	37
o-Xylene	0.132	U	0.0312	0.0294	23.6	22.2	1	10.0-156			6.08	40
(S) Toluene-d8					105	116		75.0-131				
(S) Dibromofluoromethane					103	98.6		65.0-129				
(S) 4-Bromofluorobenzene					99.7	97.1		67.0-138				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3337688-3 08/24/18 22:06

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
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
p-Isopropyltoluene	U		0.00233	0.00500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3337688-3 08/24/18 22:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
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	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	0.00221	↓	0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
Vinyl chloride	U		0.000683	0.00250
o-Xylene	U		0.00100	0.00250
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	108			75.0-131
(S) Dibromofluoromethane	89.4			65.0-129
(S) 4-Bromofluorobenzene	106			67.0-138

- 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) R3337688-1 08/24/18 20:22 • (LCSD) R3337688-2 08/24/18 20:41

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	%	%	%			%	%
Acrylonitrile	0.625	0.707	0.620	113	99.3	45.0-153			13.0	22
Benzene	0.125	0.120	0.124	95.8	99.1	70.0-123			3.37	20
Bromobenzene	0.125	0.125	0.131	99.9	105	73.0-121			4.76	20
Bromodichloromethane	0.125	0.124	0.125	99.1	100	73.0-121			1.05	20
Bromoform	0.125	0.130	0.133	104	106	64.0-132			1.72	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337688-1 08/24/18 20:22 • (LCSD) R3337688-2 08/24/18 20:41

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 %
Bromomethane	0.125	0.116	0.112	92.6	90.0	56.0-147			2.87	20
n-Butylbenzene	0.125	0.120	0.123	95.9	98.3	68.0-135			2.52	20
sec-Butylbenzene	0.125	0.124	0.132	99.2	105	74.0-130			5.88	20
tert-Butylbenzene	0.125	0.120	0.126	96.3	101	75.0-127			4.92	20
Carbon tetrachloride	0.125	0.140	0.141	112	113	66.0-128			0.916	20
Chlorobenzene	0.125	0.128	0.132	102	106	76.0-128			3.53	20
Chlorodibromomethane	0.125	0.132	0.135	105	108	74.0-127			2.08	20
Chloroethane	0.125	0.124	0.116	99.4	92.8	61.0-134			6.83	20
Chloroform	0.125	0.123	0.125	98.6	100	72.0-123			1.68	20
Chloromethane	0.125	0.117	0.118	93.3	94.4	51.0-138			1.11	20
2-Chlorotoluene	0.125	0.127	0.132	101	106	75.0-124			4.34	20
4-Chlorotoluene	0.125	0.121	0.129	96.6	103	75.0-124			6.25	20
1,2-Dibromo-3-Chloropropane	0.125	0.144	0.123	115	98.0	59.0-130			16.1	20
1,2-Dibromoethane	0.125	0.122	0.126	98.0	101	74.0-128			2.92	20
Dibromomethane	0.125	0.121	0.118	96.4	94.4	75.0-122			2.09	20
1,2-Dichlorobenzene	0.125	0.126	0.126	101	100	76.0-124			0.259	20
1,3-Dichlorobenzene	0.125	0.123	0.125	98.6	100	76.0-125			1.51	20
1,4-Dichlorobenzene	0.125	0.123	0.125	98.2	100	77.0-121			1.77	20
Dichlorodifluoromethane	0.125	0.134	0.132	108	106	43.0-156			1.62	20
1,1-Dichloroethane	0.125	0.129	0.128	104	102	70.0-127			1.45	20
1,2-Dichloroethane	0.125	0.120	0.122	95.7	97.9	65.0-131			2.30	20
1,1-Dichloroethene	0.125	0.123	0.122	98.3	97.3	65.0-131			1.01	20
cis-1,2-Dichloroethene	0.125	0.124	0.123	98.9	98.4	73.0-125			0.465	20
trans-1,2-Dichloroethene	0.125	0.128	0.123	103	98.6	71.0-125			4.01	20
1,2-Dichloropropane	0.125	0.124	0.126	98.8	101	74.0-125			2.24	20
1,1-Dichloropropene	0.125	0.125	0.122	100	97.5	73.0-125			2.69	20
1,3-Dichloropropane	0.125	0.131	0.134	105	107	80.0-125			2.39	20
cis-1,3-Dichloropropene	0.125	0.125	0.130	100	104	76.0-127			4.14	20
trans-1,3-Dichloropropene	0.125	0.130	0.134	104	107	73.0-127			3.11	20
2,2-Dichloropropane	0.125	0.122	0.115	97.8	91.9	59.0-135			6.16	20
Di-isopropyl ether	0.125	0.121	0.119	97.2	94.8	60.0-136			2.41	20
Ethylbenzene	0.125	0.132	0.136	105	108	74.0-126			2.87	20
Hexachloro-1,3-butadiene	0.125	0.112	0.110	89.9	88.3	57.0-150			1.71	20
Isopropylbenzene	0.125	0.125	0.133	99.9	106	72.0-127			6.23	20
p-Isopropyltoluene	0.125	0.125	0.132	100	106	72.0-133			5.21	20
2-Butanone (MEK)	0.625	0.829	0.701	133	112	30.0-160			16.8	24
Methylene Chloride	0.125	0.117	0.108	93.5	86.0	68.0-123			8.29	20
4-Methyl-2-pentanone (MIBK)	0.625	0.697	0.661	112	106	56.0-143			5.26	20
Methyl tert-butyl ether	0.125	0.122	0.116	98.0	92.5	66.0-132			5.78	20
Naphthalene	0.125	0.135	0.115	108	92.4	59.0-130			15.7	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) R3337688-1 08/24/18 20:22 • (LCSD) R3337688-2 08/24/18 20:41

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 %
n-Propylbenzene	0.125	0.120	0.126	96.2	101	74.0-126			4.63	20
Styrene	0.125	0.120	0.129	96.4	103	72.0-127			6.51	20
1,1,1,2-Tetrachloroethane	0.125	0.129	0.129	103	103	74.0-129			0.369	20
1,1,2,2-Tetrachloroethane	0.125	0.118	0.114	94.8	91.5	68.0-128			3.57	20
Tetrachloroethene	0.125	0.134	0.139	107	111	70.0-136			3.50	20
Toluene	0.125	0.123	0.129	98.5	104	75.0-121			4.98	20
1,1,2-Trichlorotrifluoroethane	0.125	0.123	0.120	98.7	96.1	61.0-139			2.72	20
1,2,3-Trichlorobenzene	0.125	0.112	0.103	89.8	82.7	59.0-139			8.21	20
1,2,4-Trichlorobenzene	0.125	0.119	0.110	94.9	87.9	62.0-137			7.69	20
1,1,1-Trichloroethane	0.125	0.126	0.126	101	101	69.0-126			0.266	20
1,1,2-Trichloroethane	0.125	0.130	0.134	104	107	78.0-123			2.85	20
Trichloroethene	0.125	0.134	0.139	107	111	76.0-126			3.64	20
Trichlorofluoromethane	0.125	0.142	0.139	114	112	61.0-142			2.03	20
1,2,3-Trichloropropane	0.125	0.130	0.125	104	100	67.0-129			3.37	20
1,2,3-Trimethylbenzene	0.125	0.122	0.124	97.6	99.5	74.0-124			1.88	20
1,2,4-Trimethylbenzene	0.125	0.136	0.132	109	105	70.0-126			3.06	20
1,3,5-Trimethylbenzene	0.125	0.129	0.132	103	105	73.0-127			1.72	20
Vinyl chloride	0.125	0.115	0.112	91.6	89.6	63.0-134			2.19	20
o-Xylene	0.125	0.132	0.136	105	109	79.0-124			2.94	20
m&p-Xylenes	0.250	0.258	0.264	103	106	76.0-126			2.50	20
(S) Toluene-d8				106	107	75.0-131				
(S) Dibromofluoromethane				98.7	99.4	65.0-129				
(S) 4-Bromofluorobenzene				101	102	67.0-138				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

L1020170-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020170-07 08/25/18 01:46 • (MS) R3337688-4 08/25/18 05:09 • (MSD) R3337688-5 08/25/18 05:28

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.795	ND	17.3	17.5	109	110	20	10.0-160			1.57	40
Benzene	0.159	ND	2.75	2.80	86.6	88.2	20	10.0-149			1.81	37
Bromobenzene	0.159	ND	2.84	3.00	89.4	94.3	20	10.0-156			5.32	38
Bromodichloromethane	0.159	ND	2.95	3.08	92.6	96.7	20	10.0-143			4.33	37
Bromoform	0.159	ND	3.09	3.20	97.3	101	20	10.0-146			3.34	36
Bromomethane	0.159	ND	2.31	2.34	72.6	73.5	20	10.0-149			1.23	38
n-Butylbenzene	0.159	2.68	8.37	6.52	179	121	20	10.0-160	J5		24.8	40
sec-Butylbenzene	0.159	1.82	5.76	5.03	124	101	20	10.0-159			13.5	39
tert-Butylbenzene	0.159	ND	2.59	2.69	81.6	84.6	20	10.0-156			3.65	39
Carbon tetrachloride	0.159	ND	3.26	3.29	103	103	20	10.0-145			0.870	37



L1020170-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020170-07 08/25/18 01:46 • (MS) R3337688-4 08/25/18 05:09 • (MSD) R3337688-5 08/25/18 05:28

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 %
Chlorobenzene	0.159	ND	2.48	2.75	77.9	86.6	20	10.0-152			10.6	39
Chlorodibromomethane	0.159	ND	2.76	3.02	86.8	95.0	20	10.0-146			9.12	37
Chloroethane	0.159	ND	2.56	2.54	80.4	80.0	20	10.0-146			0.481	40
Chloroform	0.159	ND	2.94	2.91	92.4	91.5	20	10.0-146			0.943	37
Chloromethane	0.159	ND	2.47	2.51	77.5	78.9	20	10.0-159			1.76	37
2-Chlorotoluene	0.159	ND	2.54	2.65	79.9	83.5	20	10.0-159			4.40	38
4-Chlorotoluene	0.159	ND	2.68	2.69	84.3	84.7	20	10.0-155			0.506	39
1,2-Dibromo-3-Chloropropane	0.159	ND	2.99	3.00	94.0	94.3	20	10.0-151			0.245	39
1,2-Dibromoethane	0.159	ND	2.74	2.99	86.2	93.9	20	10.0-148			8.60	34
Dibromomethane	0.159	ND	3.05	3.05	96.1	95.8	20	10.0-147			0.295	35
1,2-Dichlorobenzene	0.159	ND	2.67	2.72	84.0	85.5	20	10.0-155			1.86	37
1,3-Dichlorobenzene	0.159	ND	2.59	2.71	81.6	85.2	20	10.0-153			4.31	38
1,4-Dichlorobenzene	0.159	ND	2.62	2.66	82.3	83.8	20	10.0-151			1.79	38
Dichlorodifluoromethane	0.159	ND	3.85	3.77	121	119	20	10.0-160			2.03	35
1,1-Dichloroethane	0.159	ND	2.99	3.03	94.0	95.4	20	10.0-147			1.49	37
1,2-Dichloroethane	0.159	ND	3.09	3.10	97.2	97.5	20	10.0-148			0.317	35
1,1-Dichloroethene	0.159	ND	2.88	2.87	90.6	90.3	20	10.0-155			0.318	37
cis-1,2-Dichloroethene	0.159	ND	2.81	2.84	88.5	89.5	20	10.0-149			1.08	37
trans-1,2-Dichloroethene	0.159	ND	2.82	2.82	88.7	88.7	20	10.0-150			0.0674	37
1,2-Dichloropropane	0.159	ND	2.92	2.96	92.0	93.0	20	10.0-148			1.09	37
1,1-Dichloropropene	0.159	ND	2.62	2.64	82.5	83.0	20	10.0-153			0.604	35
1,3-Dichloropropane	0.159	ND	2.85	3.04	89.6	95.7	20	10.0-154			6.53	35
cis-1,3-Dichloropropene	0.159	ND	2.60	2.84	81.8	89.3	20	10.0-151			8.80	37
trans-1,3-Dichloropropene	0.159	ND	2.59	2.86	81.4	89.9	20	10.0-148			9.90	37
2,2-Dichloropropane	0.159	ND	3.16	3.01	99.5	94.8	20	10.0-138			4.85	36
Di-isopropyl ether	0.159	ND	2.85	2.84	89.5	89.4	20	10.0-147			0.105	36
Ethylbenzene	0.159	1.31	3.84	3.96	79.7	83.4	20	10.0-160			3.02	38
Hexachloro-1,3-butadiene	0.159	ND	2.25	2.64	70.7	83.1	20	10.0-160			16.1	40
Isopropylbenzene	0.159	1.11	3.99	3.90	90.7	87.7	20	10.0-155			2.37	38
p-Isopropyltoluene	0.159	2.82	7.40	6.14	144	104	20	10.0-160			18.7	40
2-Butanone (MEK)	0.795	ND	25.6	32.4	161	204	20	10.0-160	J5	J5	23.4	40
Methylene Chloride	0.159	ND	2.60	2.59	81.7	81.6	20	10.0-141			0.0773	37
4-Methyl-2-pentanone (MIBK)	0.795	ND	17.2	18.1	109	114	20	10.0-160			4.82	35
Methyl tert-butyl ether	0.159	ND	2.85	2.89	89.6	90.8	20	11.0-147			1.31	35
Naphthalene	0.159	19.7	25.1	23.4	167	115	20	10.0-160	V		6.90	36
n-Propylbenzene	0.159	2.39	5.63	5.14	102	86.4	20	10.0-158			9.12	38
Styrene	0.159	ND	2.75	2.91	86.6	91.6	20	10.0-160			5.71	40
1,1,1,2-Tetrachloroethane	0.159	ND	2.41	2.64	75.8	83.0	20	10.0-149			9.00	39
1,1,2,2-Tetrachloroethane	0.159	ND	3.54	4.23	111	133	20	10.0-160			17.9	35

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1020170-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020170-07 08/25/18 01:46 • (MS) R3337688-4 08/25/18 05:09 • (MSD) R3337688-5 08/25/18 05:28

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 %
Tetrachloroethene	0.159	ND	2.42	2.62	76.1	82.4	20	10.0-156			8.00	39
Toluene	0.159	ND	2.36	2.58	74.1	81.1	20	10.0-156			9.01	38
1,1,2-Trichlorotrifluoroethane	0.159	ND	2.71	2.76	85.3	86.8	20	10.0-160			1.75	36
1,2,3-Trichlorobenzene	0.159	ND	2.49	2.72	78.2	85.6	20	10.0-160			9.02	40
1,2,4-Trichlorobenzene	0.159	ND	2.50	2.74	78.7	86.3	20	10.0-160			9.22	40
1,1,1-Trichloroethane	0.159	ND	2.90	2.87	91.2	90.1	20	10.0-144			1.13	35
1,1,2-Trichloroethane	0.159	ND	3.77	3.73	119	117	20	10.0-160			1.01	35
Trichloroethene	0.159	ND	2.86	2.88	89.8	90.5	20	10.0-156			0.735	38
Trichlorofluoromethane	0.159	ND	3.12	3.12	98.0	98.1	20	10.0-160			0.160	40
1,2,3-Trichloropropane	0.159	ND	2.69	3.10	84.5	97.4	20	10.0-156			14.2	35
1,2,3-Trimethylbenzene	0.159	8.52	12.9	10.6	139	66.1	20	10.0-160			19.7	36
1,2,4-Trimethylbenzene	0.159	19.0	26.7	21.4	240	73.8	20	10.0-160	V		22.0	36
1,3,5-Trimethylbenzene	0.159	0.942	3.77	3.55	89.0	82.1	20	10.0-160			5.98	38
Vinyl chloride	0.159	ND	2.31	2.41	72.7	75.8	20	10.0-160			4.11	37
o-Xylene	0.159	ND	2.61	2.80	80.9	87.0	20	10.0-156			7.21	40
m&p-Xylenes	0.318	1.26	6.24	6.56	78.4	83.4	20	10.0-156			5.01	40
(S) Toluene-d8					95.2	101		75.0-131				
(S) Dibromofluoromethane					113	111		65.0-129				
(S) 4-Bromofluorobenzene					130	126		67.0-138				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

OS: Non-target compounds too high to run at a lower dilution.



Method Blank (MB)

(MB) R3337668-3 08/29/18 10:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
1,2-Dichloropropane	U		0.00127	0.00500
Trichloroethene	U		0.000400	0.00100
m&p-Xylenes	U		0.00150	0.00400
(S) Toluene-d8	105			75.0-131
(S) Dibromofluoromethane	90.8			65.0-129
(S) 4-Bromofluorobenzene	106			67.0-138

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337668-1 08/29/18 08:50 • (LCSD) R3337668-2 08/29/18 09:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,2-Dichloropropane	0.125	0.135	0.131	108	105	74.0-125			2.86	20
Trichloroethene	0.125	0.125	0.128	100	102	76.0-126			1.72	20
m&p-Xylenes	0.250	0.237	0.233	94.7	93.1	76.0-126			1.67	20
(S) Toluene-d8				98.1	100	75.0-131				
(S) Dibromofluoromethane				108	107	65.0-129				
(S) 4-Bromofluorobenzene				102	101	67.0-138				

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3337890-3 08/30/18 00:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Ethylbenzene	U		0.000530	0.00250
Naphthalene	U		0.00312	0.0125
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
(S) Toluene-d8	113			75.0-131
(S) Dibromofluoromethane	91.4			65.0-129
(S) 4-Bromofluorobenzene	108			67.0-138

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) R3337890-1 08/29/18 22:45 • (LCSD) R3337890-2 08/29/18 23:04

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	0.487	0.507	77.9	81.1	10.0-160			3.98	31
Ethylbenzene	0.125	0.121	0.119	97.0	95.0	74.0-126			2.14	20
Naphthalene	0.125	0.128	0.120	102	95.6	59.0-130			6.46	20
1,2,3-Trimethylbenzene	0.125	0.127	0.119	101	95.4	74.0-124			6.06	20
1,2,4-Trimethylbenzene	0.125	0.105	0.0983	84.1	78.6	70.0-126			6.75	20
(S) Toluene-d8				106	107	75.0-131				
(S) Dibromofluoromethane				97.2	97.9	65.0-129				
(S) 4-Bromofluorobenzene				105	102	67.0-138				



Method Blank (MB)

(MB) R3337171-1 08/27/18 12:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	82.5			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337171-2 08/27/18 12:54 • (LCSD) R3337171-3 08/27/18 13:14

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	736	717	98.1	95.6	50.0-150			2.62	20
Residual Range Organics (RRO)	750	712	693	94.9	92.4	50.0-150			2.70	20
(S) o-Terphenyl				101	106	52.0-156				

L1020170-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020170-13 08/28/18 01:14 • (MS) R3337171-4 08/28/18 01:34 • (MSD) R3337171-5 08/28/18 01:54

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	%	%		%			%	%
Diesel Range Organics (DRO)	714	ND	830	983	101	122	1	50.0-150			16.9	20
Residual Range Organics (RRO)	714	329	1120	1190	111	121	1	50.0-150			6.06	20
(S) o-Terphenyl					109	104		52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT [L1020170-01,02,03,04,05,06,07,08,09,10,11,12,22,23](#)

Method Blank (MB)

(MB) R3337999-1 08/30/18 04:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	88.4			18.0-148

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) R3337999-2 08/30/18 04:53 • (LCSD) R3337999-3 08/30/18 05:05

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 %
Diesel Range Organics (DRO)	25.0	24.6	28.0	98.4	112	50.0-150			12.9	20
Residual Range Organics (RRO)	25.0	22.3	25.8	89.2	103	50.0-150			14.6	20
(S) o-Terphenyl				90.8	98.8	18.0-148				

L1020170-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020170-05 08/30/18 10:46 • (MS) R3337999-4 08/30/18 10:59 • (MSD) R3337999-5 08/30/18 11:13

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	28.4	ND	83.5	36.1	235	67.6	10	50.0-150	J5	J3	79.3	20
Residual Range Organics (RRO)	28.4	ND	286	80.9	806	82.8	10	50.0-150	J5	J3	112	20
(S) o-Terphenyl					92.0	96.1		18.0-148				

Sample Narrative:

OS: Dilution due to matrix impact during extract concentration procedure



Method Blank (MB)

(MB) R3337172-1 08/27/18 13:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	115	J	83.3	250
(S) o-Terphenyl	83.0			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337172-2 08/27/18 13:54 • (LCSD) R3337172-3 08/27/18 14:14

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	741	702	98.8	93.6	50.0-150			5.41	20
Residual Range Organics (RRO)	750	744	707	99.2	94.3	50.0-150			5.10	20
(S) o-Terphenyl				96.5	84.5	52.0-156				

L1020953-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020953-02 08/28/18 18:07 • (MS) R3337587-1 08/28/18 18:26 • (MSD) R3337587-2 08/28/18 18:46

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	%	%		%			%	%
Diesel Range Organics (DRO)	714	ND	678	663	95.0	92.9	1	50.0-150			2.24	20
Residual Range Organics (RRO)	714	ND	722	673	101	94.3	1	50.0-150			7.03	20
(S) o-Terphenyl					96.8	103		52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3336603-2 08/24/18 15:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	0.00237	J	0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	U		0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	80.5			31.0-160
(S) 2-Fluorobiphenyl	77.0			48.0-148
(S) p-Terphenyl-d14	73.0			37.0-146

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) R3336603-3 08/24/18 15:56 • (LCSD) R3336603-1 08/24/18 15:06

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 %
Anthracene	2.00	1.61	1.59	80.5	79.5	64.0-142			1.25	20
Acenaphthene	2.00	1.65	1.50	82.5	75.0	66.0-132			9.52	20
Acenaphthylene	2.00	1.69	1.55	84.5	77.5	65.0-132			8.64	20
Benzo(a)anthracene	2.00	1.55	1.43	77.5	71.5	59.0-134			8.05	20
Benzo(a)pyrene	2.00	1.57	1.45	78.5	72.5	61.0-145			7.95	20
Benzo(b)fluoranthene	2.00	1.47	1.40	73.5	70.0	57.0-136			4.88	20
Benzo(g,h,i)perylene	2.00	1.48	1.39	74.0	69.5	54.0-140			6.27	20
Benzo(k)fluoranthene	2.00	1.62	1.48	81.0	74.0	57.0-141			9.03	20
Chrysene	2.00	1.63	1.50	81.5	75.0	63.0-140			8.31	20
Dibenz(a,h)anthracene	2.00	1.51	1.41	75.5	70.5	49.0-141			6.85	20
Fluoranthene	2.00	1.74	1.58	87.0	79.0	65.0-143			9.64	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336603-3 08/24/18 15:56 • (LCSD) R3336603-1 08/24/18 15:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	1.65	1.51	82.5	75.5	64.0-129			8.86	20
Indeno(1,2,3-cd)pyrene	2.00	1.51	1.41	75.5	70.5	53.0-141			6.85	20
Naphthalene	2.00	1.51	1.40	75.5	70.0	68.0-129			7.56	20
Phenanthrene	2.00	1.64	1.50	82.0	75.0	62.0-132			8.92	20
Pyrene	2.00	1.52	1.42	76.0	71.0	58.0-156			6.80	20
1-Methylnaphthalene	2.00	1.62	1.48	81.0	74.0	68.0-137			9.03	20
2-Methylnaphthalene	2.00	1.54	1.41	77.0	70.5	68.0-134			8.81	20
2-Chloronaphthalene	2.00	1.67	1.55	83.5	77.5	65.0-129			7.45	20
(S) Nitrobenzene-d5				86.5	79.5	31.0-160				
(S) 2-Fluorobiphenyl				83.5	76.5	48.0-148				
(S) p-Terphenyl-d14				77.0	71.5	37.0-146				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1019319-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019319-01 08/24/18 16:17 • (MS) R3336603-4 08/24/18 16:38 • (MSD) R3336603-5 08/24/18 16:58

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	2.00	ND	1.66	1.78	83.0	89.0	1	60.0-142			6.98	20
Acenaphthene	2.00	ND	1.68	1.81	84.0	90.5	1	46.0-149			7.45	20
Acenaphthylene	2.00	ND	1.72	1.85	86.0	92.5	1	54.0-142			7.28	20
Benzo(a)anthracene	2.00	ND	1.58	1.73	79.0	86.5	1	55.0-134			9.06	20
Benzo(a)pyrene	2.00	ND	1.64	1.76	82.0	88.0	1	58.0-136			7.06	20
Benzo(b)fluoranthene	2.00	ND	1.54	1.65	77.0	82.5	1	54.0-130			6.90	20
Benzo(g,h,i)perylene	2.00	ND	1.56	1.68	78.0	84.0	1	46.0-135			7.41	20
Benzo(k)fluoranthene	2.00	ND	1.70	1.84	85.0	92.0	1	52.0-131			7.91	20
Chrysene	2.00	ND	1.71	1.86	85.5	93.0	1	55.0-137			8.40	20
Dibenz(a,h)anthracene	2.00	ND	1.59	1.71	79.5	85.5	1	36.0-140			7.27	20
Fluoranthene	2.00	ND	1.80	1.93	90.0	96.5	1	58.0-144			6.97	20
Fluorene	2.00	ND	1.70	1.83	85.0	91.5	1	49.0-142			7.37	20
Indeno(1,2,3-cd)pyrene	2.00	ND	1.58	1.70	79.0	85.0	1	46.0-134			7.32	20
Naphthalene	2.00	0.349	1.87	2.00	76.0	82.6	1	29.0-154			6.72	20
Phenanthrene	2.00	ND	1.69	1.83	84.5	91.5	1	44.0-145			7.95	20
Pyrene	2.00	ND	1.59	1.73	79.5	86.5	1	62.0-150			8.43	20
1-Methylnaphthalene	2.00	ND	1.73	1.85	86.5	92.5	1	26.0-160			6.70	20
2-Methylnaphthalene	2.00	ND	1.81	1.91	90.5	95.5	1	51.0-150			5.38	20
2-Chloronaphthalene	2.00	ND	1.73	1.85	86.5	92.5	1	57.0-136			6.70	20
(S) Nitrobenzene-d5					85.0	89.0		31.0-160				
(S) 2-Fluorobiphenyl					85.5	89.0		48.0-148				
(S) p-Terphenyl-d14					80.5	85.0		37.0-146				



Method Blank (MB)

(MB) R3337631-3 08/29/18 01:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	95.2			14.0-149
(S) 2-Fluorobiphenyl	83.7			34.0-125
(S) p-Terphenyl-d14	86.7			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337631-1 08/29/18 00:45 • (LCSD) R3337631-2 08/29/18 01:06

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 %
Anthracene	0.0800	0.0582	0.0601	72.8	75.1	50.0-126			3.21	20
Acenaphthene	0.0800	0.0621	0.0631	77.6	78.9	50.0-120			1.60	20
Acenaphthylene	0.0800	0.0610	0.0623	76.3	77.9	50.0-120			2.11	20
Benzo(a)anthracene	0.0800	0.0626	0.0642	78.3	80.3	45.0-120			2.52	20
Benzo(a)pyrene	0.0800	0.0536	0.0570	67.0	71.3	42.0-120			6.15	20
Benzo(b)fluoranthene	0.0800	0.0677	0.0674	84.6	84.3	42.0-121			0.444	20
Benzo(g,h,i)perylene	0.0800	0.0658	0.0679	82.3	84.9	45.0-125			3.14	20
Benzo(k)fluoranthene	0.0800	0.0638	0.0692	79.8	86.5	49.0-125			8.12	20
Chrysene	0.0800	0.0620	0.0644	77.5	80.5	49.0-122			3.80	20
Dibenz(a,h)anthracene	0.0800	0.0695	0.0717	86.9	89.6	47.0-125			3.12	20
Fluoranthene	0.0800	0.0664	0.0676	83.0	84.5	49.0-129			1.79	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3337631-1 08/29/18 00:45 • (LCSD) R3337631-2 08/29/18 01:06

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 %
Fluorene	0.0800	0.0634	0.0648	79.3	81.0	49.0-120			2.18	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0679	0.0699	84.9	87.4	46.0-125			2.90	20
Naphthalene	0.0800	0.0619	0.0636	77.4	79.5	50.0-120			2.71	20
Phenanthrene	0.0800	0.0585	0.0604	73.1	75.5	47.0-120			3.20	20
Pyrene	0.0800	0.0627	0.0645	78.4	80.6	43.0-123			2.83	20
1-Methylnaphthalene	0.0800	0.0685	0.0718	85.6	89.8	51.0-121			4.70	20
2-Methylnaphthalene	0.0800	0.0666	0.0695	83.3	86.9	50.0-120			4.26	20
2-Chloronaphthalene	0.0800	0.0581	0.0596	72.6	74.5	50.0-120			2.55	20
<i>(S) Nitrobenzene-d5</i>				96.9	95.7	14.0-149				
<i>(S) 2-Fluorobiphenyl</i>				81.5	81.3	34.0-125				
<i>(S) p-Terphenyl-d14</i>				82.9	83.1	23.0-120				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



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.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
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.



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

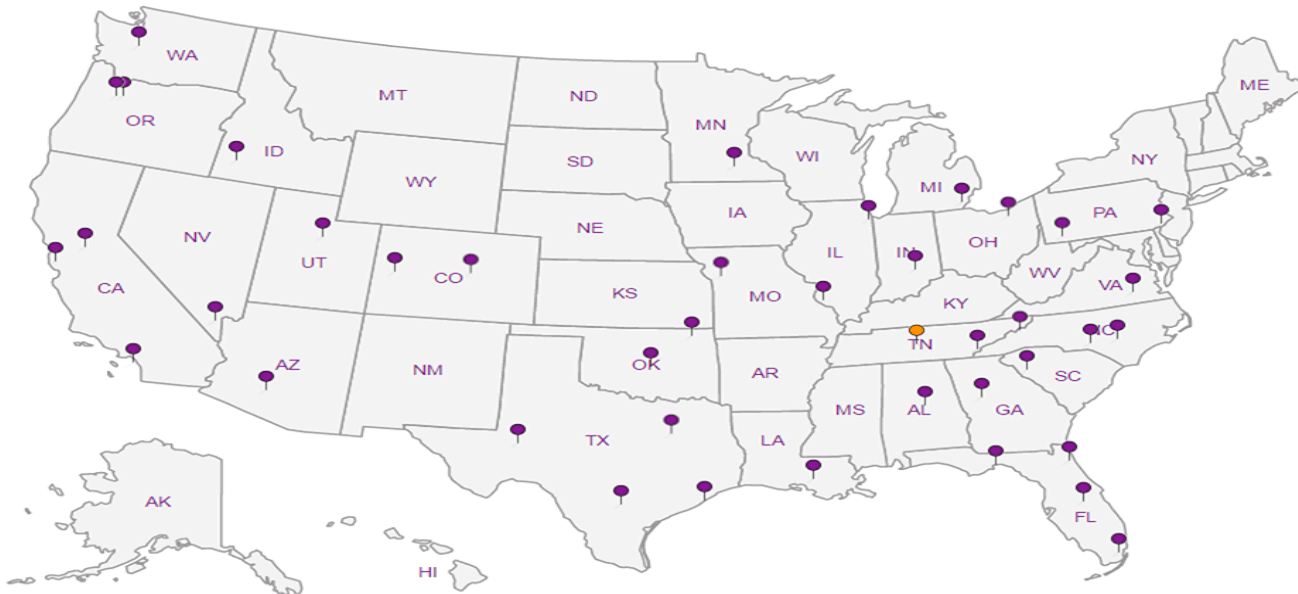
Third Party Federal Accreditations

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.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Accounts Payable
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
KatieTeague@kennedyjenks.com

Project
 Description: **BNSF - Wishram Railyard, WA**

City/State Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Client Project #
189612004

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Date Results Needed

Immediately Packed on ice N Y

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

Face Analytical
 National Center for Testing & Innovation

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859

QR Code

L# **1020170**

H068

Acctnum: **BNSF1KEN**

Template: **T138670**

Prelogin: **P663876**

TSR: **134 - Mark W. Beasley**

PB: **7-23-186**

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	Remarks	Sample # (lab only)
B-18-09(2.0-2.5)	Grab	SS	2.0-2.5	8/20/18	1230	3	X	X	X				01
B-18-09(9.5-10.0)		SS	9.5-10.0		1300								02
B-18-19(9.5-10.0)		SS	9.5-10.0		1415								03
B-18-20(12.0-12.5)		SS	12.0-12.5		1400								04
B-18-21(7.5-8.0)		SS	7.5-8.0		1530								05
B-18-24(2.0-2.5)		SS	2.0-2.5	8/21/18	0815								06
B-18-24(13.5-14.0)		SS	13.5-14.0		0910								07
B-18-24(9.0-9.5)		SS	9.0-9.5		0856								08
B-18-24(22.5-23.0)		SS	22.5-23.0		0930								09
B-18-25(2.0-2.5)		SS	2.0-2.5		1045								10

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: **Include Dx and Gx chromatograms**
No spaces in sample names, metals field filtered
RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____
 Flow _____ Other _____

Samples returned via:
 UPS FedEx Courier

Tracking# **4492 6218 1800, 4492 6218 4300**

Relinquished by: (Signature) Date: **8/22/18** Time: **0800**

Received by: (Signature) **FedEx** Trip Blank Received: **Yes** No
4 (2 HCl) HCL/MeOH
(2 MeOH) TBR

Temp: **3.15** °C Bottles Received: **97**

Relinquished by: (Signature) Date: Time: Received by: (Signature) Date: Time: Hold: Condition: **OK / OK**

Sample Receipt Checklist:
 COC Seal Present/Intact: 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

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Accounts Payable
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 3



12065 Lebinon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
Katie.Teague@kennedyjenks.com,

Project
Description: BNSF - Wishram Railyard, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1890120-04

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)

Quote #

Same Day ___ Five Day ___
Next Day ___ 5 Day (Rad Only) ___
Two Day ___ 10 Day (Rad Only) ___
Three Day ___

Date Results Needed

No.
of
Cntrs

Immediately
Packed on ice N ___ Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRAB, TS 4ozClr-NoPres	NWTPHGX 40ml/NaHSO4/Syr/MeOH	TPHDx no SGT, PAHs 4ozClr-NoPres	TPHDx with SGT 4ozClr-NoPres	V8260C 40mlAmb/MeOH5ml/Syr	Remarks	Sample # (lab only)
B-18-25(9.5-10.0)	Grab	SS	9.5700	8/21/18	1110	3	X		X		X		21
DUP-04-20180821	1	SS	—	—	—	3	1		1		1		22
B-18-18(67.5-68.0)		SS	67.5-68		1430	3	X		X		X		22
B-18-18(62.5-53.0)		SS	52.5-53		1410	3	X		X		X		23
		SS											
		SS											
		SS											
		SS											
		SS											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: Include Dx and Gx chromatograms

No spaces in sample name, metals field filled
AD SCREEN: <0.5 mR/hr

pH ___ Temp ___
Flow ___ Other ___

Samples returned via:
___ UPS ___ FedEx ___ Courier ___

Tracking# 4492 6218 1860, 4492 6218 4300

Sample Receipt Checklist

COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VDA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received: Yes No
4 (2 HCL, 2 MeOH)
HCL/MeOH
TBR

Temp: 3.15 °C
Bottles Received: 97

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Date: 8/23/18
Time: 8:45

Hold:

Condition:
NCS / OK

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Accounts Payable
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
KatieTeague@kennedyjenks.com

Project Description: **BNSF - Wishram Rail yard, WA**

City/State Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Client Project #
1890120-04
 Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
K. Teague
 Collected by (signature):

 Immediately Packed on Ice N Y

Site/Facility ID #
 P.O. #
 Quote #
 Date Results Needed

Sample ID Comp/Grab Matrix * Depth Date Time No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
B-18-09	Grab	SS	n/a	8/20/18	1700	7
B-18-10		SS			1630	7
B-18-11		SS			1215	9
B-18-19		SS			1700	7
B-18-21				8/21/18	0735	7
B-18-24					0950	7
RB-04-20180821		N			1120	1
TB-13-20180822				8/22/18		1
TB-14-20180822				8/22/18		1
B-18-09MS/MSD	Grab	GW		8/20/18	1700	3

Analysis / Container / Preservative

Analysis	Container	Preservative
MRCRAB, 754ozClr-NoPres Poly bottle		
NWTPHGX 40ml/NaHSO4/Syr/MeOH		
TPHDx no SGT, PAHs 4ozClr-NoPres 40ml-Amb RT + WT		
TPHDx with SGT 4ozClr-NoPres		
V8260C 40mlAmb/MeOH5ml/Syr HCl		

Chain of Custody Page 3 of 3

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859

L# **1020170**
 Table #
 Acctnum: **BNSF1KEN**
 Template: **T138670**
 Prelogin: **P663876**
 TSR: **134 - Mark W. Beasley**
 PB: **7-23186**
 Shipped Via: **FedEx Ground**

Remarks	Sample # (lab only)
	13
	14
	15
	16
	17
	18
	19
	20
	21
	23

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: **Include Dx and Gx chromatograms**
No spaces in sample names, metals samples
field filtered.
 pH _____ Temp _____
 Flow _____ Other _____
LAB SCREEN: <0.5 mR/hr
 Samples returned via:
 UPS FedEx Courier

Sample Receipt Checklist

COC Seal Present/Intact:	Y	N
COC Signed/Accurate:	Y	N
Bottles arrive intact:	Y	N
Correct bottles used:	Y	N
Sufficient volume sent:	Y	N
YCA Zero Headspace:	Y	N
Preservation Correct/Checked:	Y	N

Relinquished by: (Signature)

 Date: **8/22/18**
 Time: **0800**

Received by: (Signature)
FedEx
 Trip Blank Received: **Yes** No
4 (2 HCl) (2 MeOH) HCL/MeOH TBR
 Temp: **3.15** °C
 Bottles Received: **97**

Received for lab by: (Signature)

 Date: **8/23/18**
 Time: **8:45**
 Hold:
 Condition: **NCF / OK**



Login #:1020170	Client:BNSF1KEN	Date:08/23/18	Evaluated by:Matthew Lockhart
-----------------	-----------------	---------------	-------------------------------

Non-Conformance (check applicable items)

Sample Integrity		Chain of Custody Clarification	
Parameter(s) past holding time	X	Login Clarification Needed	If Broken Container:
Improper temperature		Chain of custody is incomplete	Insufficient packing material around container
Improper container type		Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation		Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courier)
Insufficient sample volume.		Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.		Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.		Trip Blank not received.	If no Chain of Custody:
Broken container	X	Client did not "X" analysis.	Received by:
Broken container:		Chain of Custody is missing	Date/Time:
Sufficient sample remains			Temp./Cont. Rec./pH:
			Carrier:
			Tracking#

Login Comments: 1) Client did not x analysis for B-18-18 (67.5-68.0) and b-18-18 (52.5-53.0)
 2) Client wants to run MS/MSD for NWTPHDXLVINOSGT and PAHSIMLVID. While we were sent extra containers for NWTPHDXLVINOSGT, we did not receive extra containers for PAHSIMLVID.

Client informed by:	Call	Email	Voice Mail	Date: 8/23/18	Time: 1610
TSR Initials: MB	Client Contact: Katie T.				

Login Instructions:

- 1) See attached revised COC
- 2) Only MS/MSD NWTPHDXLVINOSGT

Groundwater Analytical Reports
15 to 17 November 2016

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L873914
Samples Received: 11/19/2016
Project Number: 1696120
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Jason Romer
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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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

SAMPLE SUMMARY

RMD-4-20161115 L873914-01 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:02	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 21:54	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG928432	1	11/22/16 08:32	11/22/16 19:09	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 17:42	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 00:54	11/27/16 00:54	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG929129	1	11/23/16 12:07	11/23/16 12:07	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 13:06	11/27/16 13:06	ACG
Wet Chemistry by Method 350.1	WG928968	1	11/23/16 09:43	11/23/16 09:43	DR
Wet Chemistry by Method 353.2	WG928611	5	11/22/16 11:39	11/22/16 11:39	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:13	11/22/16 14:13	MZ
Wet Chemistry by Method 9056A	WG928411	1	11/23/16 11:10	11/23/16 11:10	SAM

Collected by AR / JS Collected date/time 11/15/16 13:22 Received date/time 11/19/16 09:00

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

WMW-18-20161115 L873914-02 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:18	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 21:57	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG928430	1	11/22/16 01:42	11/22/16 18:06	JF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 17:58	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 01:25	11/27/16 01:25	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG929129	1	11/23/16 12:09	11/23/16 12:09	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 13:19	11/27/16 13:19	ACG
Wet Chemistry by Method 350.1	WG928968	1	11/23/16 09:46	11/23/16 09:46	DR
Wet Chemistry by Method 353.2	WG928611	1	11/22/16 11:40	11/22/16 11:40	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:14	11/22/16 14:14	MZ
Wet Chemistry by Method 9056A	WG928411	1	11/23/16 11:25	11/23/16 11:25	SAM

Collected by AR / JS Collected date/time 11/15/16 15:40 Received date/time 11/19/16 09:00

RMD-3-20161115 L873914-03 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:21	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:00	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG928432	1	11/22/16 08:32	11/22/16 19:31	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 18:14	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 01:55	11/27/16 01:55	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG929129	1	11/23/16 12:13	11/23/16 12:13	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 13:31	11/27/16 13:31	ACG
Wet Chemistry by Method 350.1	WG928968	1	11/23/16 09:48	11/23/16 09:48	DR
Wet Chemistry by Method 353.2	WG928611	1	11/22/16 11:42	11/22/16 11:42	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:14	11/22/16 14:14	MZ
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 16:45	11/23/16 16:45	SAM

Collected by AR / JS Collected date/time 11/15/16 16:30 Received date/time 11/19/16 09:00

WMW-16-20161116 L873914-04 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:24	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:08	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG928430	1	11/22/16 01:42	11/22/16 19:39	JF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 18:30	CLG

Collected by AR / JS Collected date/time 11/16/16 08:50 Received date/time 11/19/16 09:00

SAMPLE SUMMARY

WMW-16-20161116 L873914-04 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	5	11/20/16 19:54	11/25/16 17:34	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 02:25	11/27/16 02:25	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG929129	1	11/23/16 12:15	11/23/16 12:15	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG929313	10	11/23/16 15:32	11/23/16 15:32	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 13:44	11/27/16 13:44	ACG
Wet Chemistry by Method 350.1	WG928968	1	11/23/16 09:51	11/23/16 09:51	DR
Wet Chemistry by Method 353.2	WG928611	1	11/22/16 11:50	11/22/16 11:50	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:15	11/22/16 14:15	MZ
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 17:16	11/23/16 17:16	SAM

Collected by AR / JS Collected date/time 11/16/16 08:50 Received date/time 11/19/16 09:00

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

RMD-2-20161116 L873914-05 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:26	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:10	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG928432	1	11/22/16 08:32	11/22/16 19:52	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/25/16 17:01	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 02:55	11/27/16 02:55	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG929129	1	11/23/16 12:18	11/23/16 12:18	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG929313	5	11/23/16 15:34	11/23/16 15:34	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 13:57	11/27/16 13:57	ACG
Wet Chemistry by Method 350.1	WG928968	1	11/23/16 09:52	11/23/16 09:52	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:05	11/22/16 09:05	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:15	11/22/16 14:15	MZ
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 17:47	11/23/16 17:47	SAM

Collected by AR / JS Collected date/time 11/16/16 10:45 Received date/time 11/19/16 09:00

WMW-17-20161116 L873914-06 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:29	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:13	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG928432	1	11/22/16 08:32	11/22/16 20:14	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 19:03	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 03:26	11/27/16 03:26	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG929313	1	11/23/16 15:25	11/23/16 15:25	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 14:09	11/27/16 14:09	ACG
Wet Chemistry by Method 350.1	WG928968	1	11/23/16 10:00	11/23/16 10:00	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:07	11/22/16 09:07	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:15	11/22/16 14:15	MZ
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 18:02	11/23/16 18:02	SAM

Collected by AR / JS Collected date/time 11/16/16 12:00 Received date/time 11/19/16 09:00

WMW-14-20161116 L873914-07 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:32	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:16	LTB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 19:19	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 03:57	11/27/16 03:57	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG929313	1	11/23/16 15:27	11/23/16 15:27	MJ

Collected by AR / JS Collected date/time 11/16/16 12:20 Received date/time 11/19/16 09:00

SAMPLE SUMMARY



WMW-14-20161116 L873914-07 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by AR / JS				Collected date/time 11/16/16 12:20	Received date/time 11/19/16 09:00
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 14:22	11/27/16 14:22	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:18	11/23/16 10:18	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:08	11/22/16 09:08	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:16	11/22/16 14:16	MZ
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 18:49	11/23/16 18:49	SAM

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

WMW-11-20161116 L873914-08 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by AR / JS				Collected date/time 11/16/16 14:10	Received date/time 11/19/16 09:00
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:35	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:19	LTB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 19:35	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	5	11/27/16 04:28	11/27/16 04:28	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 11:18	11/28/16 11:18	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG930130	5	11/28/16 14:15	11/28/16 14:15	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 14:35	11/27/16 14:35	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:19	11/23/16 10:19	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:14	11/22/16 09:14	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:16	11/22/16 14:16	MZ
Wet Chemistry by Method 9056A	WG929830	5	11/28/16 13:04	11/28/16 13:04	KCF

- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

WMW-10-20161116 L873914-09 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by AR / JS				Collected date/time 11/16/16 15:05	Received date/time 11/19/16 09:00
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:37	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:21	LTB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/25/16 16:45	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 04:58	11/27/16 04:58	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 11:20	11/28/16 11:20	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 14:47	11/27/16 14:47	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:21	11/23/16 10:21	DR
Wet Chemistry by Method 353.2	WG928612	5	11/22/16 09:15	11/22/16 09:15	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:16	11/22/16 14:16	MZ
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 19:19	11/23/16 19:19	SAM

WMW-1-20161116 L873914-10 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by AR / JS				Collected date/time 11/16/16 15:25	Received date/time 11/19/16 09:00
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:45	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:24	LTB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 20:08	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	5	11/27/16 05:28	11/27/16 05:28	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 11:23	11/28/16 11:23	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG930130	10	11/28/16 14:18	11/28/16 14:18	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 15:00	11/27/16 15:00	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:22	11/23/16 10:22	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:16	11/22/16 09:16	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:16	11/22/16 14:16	MZ
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 19:35	11/23/16 19:35	SAM

SAMPLE SUMMARY

WMW-9-20161116 L873914-11 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:48	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:27	LTB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/25/16 17:17	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 05:59	11/27/16 05:59	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 11:28	11/28/16 11:28	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 15:13	11/27/16 15:13	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:24	11/23/16 10:24	DR
Wet Chemistry by Method 353.2	WG928612	5	11/22/16 09:18	11/22/16 09:18	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:16	11/22/16 14:16	MZ
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 19:50	11/23/16 19:50	SAM

Collected by AR / JS Collected date/time 11/16/16 16:05 Received date/time 11/19/16 09:00

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

WMW-13-20161116 L873914-12 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:51	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:30	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG928430	1	11/22/16 01:42	11/22/16 18:29	JF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 20:40	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 06:29	11/27/16 06:29	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 11:25	11/28/16 11:25	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 15:25	11/27/16 15:25	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:30	11/23/16 10:30	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:19	11/22/16 09:19	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:17	11/22/16 14:17	MZ
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 20:06	11/23/16 20:06	SAM

Collected by AR / JS Collected date/time 11/16/16 16:55 Received date/time 11/19/16 09:00

RMD-1-20161117 L873914-13 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:54	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:32	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG928432	1	11/22/16 08:32	11/22/16 20:36	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 20:56	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 06:59	11/27/16 06:59	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 11:30	11/28/16 11:30	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG930130	5	11/28/16 14:21	11/28/16 14:21	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 15:38	11/27/16 15:38	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:32	11/23/16 10:32	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:20	11/22/16 09:20	DR
Wet Chemistry by Method 4500S2 D-2011	WG928320	1	11/22/16 14:17	11/22/16 14:17	MZ
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 20:21	11/23/16 20:21	SAM

Collected by AR / JS Collected date/time 11/17/16 09:20 Received date/time 11/19/16 09:00

WMW-15-20161117 L873914-14 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:56	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:41	LTB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 21:12	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	5	11/27/16 07:29	11/27/16 07:29	DAH

Collected by AR / JS Collected date/time 11/17/16 11:30 Received date/time 11/19/16 09:00

SAMPLE SUMMARY



WMW-15-20161117 L873914-14 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by AR / JS				Collected date/time 11/17/16 11:30	Received date/time 11/19/16 09:00
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 11:32	11/28/16 11:32	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG930130	2	11/28/16 14:24	11/28/16 14:24	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 15:51	11/27/16 15:51	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:34	11/23/16 10:34	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:22	11/22/16 09:22	DR
Wet Chemistry by Method 4500S2 D-2011	WG928784	1	11/22/16 16:17	11/22/16 16:17	KK
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 20:52	11/23/16 20:52	SAM

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

WMW-5-20161117 L873914-15 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by AR / JS				Collected date/time 11/17/16 11:55	Received date/time 11/19/16 09:00
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 15:59	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:43	LTB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 21:28	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG928373	1	11/27/16 08:00	11/27/16 08:00	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 11:39	11/28/16 11:39	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 16:03	11/27/16 16:03	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:35	11/23/16 10:35	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:27	11/22/16 09:27	DR
Wet Chemistry by Method 4500S2 D-2011	WG928784	1	11/22/16 16:18	11/22/16 16:18	KK
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 21:38	11/23/16 21:38	SAM

WMW-7-20161117 L873914-16 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by AR / JS				Collected date/time 11/17/16 13:45	Received date/time 11/19/16 09:00
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 16:02	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 21:44	LTB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 21:45	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG930020	1	11/28/16 19:17	11/28/16 19:17	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 11:44	11/28/16 11:44	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 16:16	11/27/16 16:16	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:38	11/23/16 10:38	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:28	11/22/16 09:28	DR
Wet Chemistry by Method 4500S2 D-2011	WG928784	1	11/22/16 16:18	11/22/16 16:18	KK
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 21:54	11/23/16 21:54	SAM

WMW-12-20161117 L873914-17 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by AR / JS				Collected date/time 11/17/16 15:35	Received date/time 11/19/16 09:00
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 16:05	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:46	LTB
Semi-Volatile Organic Compounds (GC/MS) by Method 8270D	WG928430	1.11	11/22/16 01:42	11/22/16 18:52	JF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 22:01	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG930020	1	11/28/16 19:40	11/28/16 19:40	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 12:02	11/28/16 12:02	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 20:37	11/27/16 20:37	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:41	11/23/16 10:41	DR
Wet Chemistry by Method 353.2	WG928612	5	11/22/16 09:29	11/22/16 09:29	DR
Wet Chemistry by Method 4500S2 D-2011	WG928784	1	11/22/16 16:18	11/22/16 16:18	KK
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 22:09	11/23/16 22:09	SAM

SAMPLE SUMMARY



WMW-3-20161117 L873914-18 GW

Collected by
AR / JS Collected date/time
11/17/16 16:45 Received date/time
11/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 16:07	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:49	LTB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 22:17	TRF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	5	11/20/16 19:54	11/25/16 17:50	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG930020	1	11/28/16 20:02	11/28/16 20:02	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 12:04	11/28/16 12:04	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929418	1	11/27/16 20:49	11/27/16 20:49	ACG
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:48	11/23/16 10:48	DR
Wet Chemistry by Method 353.2	WG928612	1	11/22/16 09:30	11/22/16 09:30	DR
Wet Chemistry by Method 4500S2 D-2011	WG928784	1	11/22/16 16:19	11/22/16 16:19	KK
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 22:24	11/23/16 22:24	SAM

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

DUP-20161117 L873914-19 GW

Collected by
AR / JS Collected date/time
11/17/16 00:00 Received date/time
11/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG928777	1	11/22/16 13:42	11/26/16 16:10	LTB
Metals (ICP) by Method 6010C	WG928867	1	11/22/16 17:51	11/23/16 22:51	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG928430	1.11	11/22/16 01:42	11/22/16 19:15	JF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG928418	1	11/20/16 19:54	11/22/16 22:33	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG930020	1	11/28/16 20:24	11/28/16 20:24	DAH
Volatile Organic Compounds (GC) by Method RSK175	WG930003	1	11/28/16 12:07	11/28/16 12:07	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG929423	1	11/26/16 06:23	11/26/16 06:23	JAH
Wet Chemistry by Method 350.1	WG928969	1	11/23/16 10:49	11/23/16 10:49	DR
Wet Chemistry by Method 353.2	WG928612	10	11/22/16 09:31	11/22/16 09:31	DR
Wet Chemistry by Method 4500S2 D-2011	WG928784	1	11/22/16 16:19	11/22/16 16:19	KK
Wet Chemistry by Method 9056A	WG928996	1	11/23/16 22:40	11/23/16 22:40	SAM



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jason Romer
Technical Service Representative

Project Narrative

All samples that were analyzed for NWTPH-Dx included Silica Gel Treatment (SGT).

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	11/23/2016 09:43	WG928968

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	5720		500	5	11/22/2016 11:39	WG928611

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	11/22/2016 14:13	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	55900		5000	1	11/23/2016 11:10	WG928411

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	11/26/2016 15:02	WG928777
Lead	ND		5.00	1	11/23/2016 21:54	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:02	WG928777
Manganese,Dissolved	158		10.0	1	11/26/2016 15:02	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	11/27/2016 00:54	WG928373
(S) a,a,a-Trifluorotoluene(FID)	100		62.0-128		11/27/2016 00:54	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	11/23/2016 12:07	WG929129
Ethane	ND		13.0	1	11/23/2016 12:07	WG929129
Ethene	ND		13.0	1	11/23/2016 12:07	WG929129

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/27/2016 13:06	WG929418
Toluene	ND		5.00	1	11/27/2016 13:06	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 13:06	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 13:06	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 13:06	WG929418
(S) Dibromofluoromethane	93.7		79.0-121		11/27/2016 13:06	WG929418
(S) a,a,a-Trifluorotoluene	97.2		90.4-116		11/27/2016 13:06	WG929418
(S) 4-Bromofluorobenzene	96.1		80.1-120		11/27/2016 13:06	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		250	1	11/22/2016 17:42	WG928418
Residual Range Organics (RRO)	ND		500	1	11/22/2016 17:42	WG928418
(S) o-Terphenyl	114		50.0-150		11/22/2016 17:42	WG928418

Sample Narrative:

NWTPHDX L873914-01 WG928418: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	11/22/2016 19:09	WG928432
Acenaphthene	ND		0.0500	1	11/22/2016 19:09	WG928432
Acenaphthylene	ND		0.0500	1	11/22/2016 19:09	WG928432
Benzo(a)anthracene	ND		0.0500	1	11/22/2016 19:09	WG928432
Benzo(a)pyrene	ND		0.0500	1	11/22/2016 19:09	WG928432
Benzo(b)fluoranthene	ND		0.0500	1	11/22/2016 19:09	WG928432
Benzo(g,h,i)perylene	ND		0.0500	1	11/22/2016 19:09	WG928432
Benzo(k)fluoranthene	ND		0.0500	1	11/22/2016 19:09	WG928432
Chrysene	ND		0.0500	1	11/22/2016 19:09	WG928432
Dibenz(a,h)anthracene	ND		0.0500	1	11/22/2016 19:09	WG928432
Fluoranthene	ND		0.0500	1	11/22/2016 19:09	WG928432
Fluorene	ND		0.0500	1	11/22/2016 19:09	WG928432
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/22/2016 19:09	WG928432
Naphthalene	ND		0.250	1	11/22/2016 19:09	WG928432
Phenanthrene	ND		0.0500	1	11/22/2016 19:09	WG928432
Pyrene	ND		0.0500	1	11/22/2016 19:09	WG928432
1-Methylnaphthalene	ND		0.250	1	11/22/2016 19:09	WG928432
2-Methylnaphthalene	ND		0.250	1	11/22/2016 19:09	WG928432
2-Chloronaphthalene	ND		0.250	1	11/22/2016 19:09	WG928432
(S) Nitrobenzene-d5	66.7		18.0-137		11/22/2016 19:09	WG928432
(S) 2-Fluorobiphenyl	93.5		38.8-115		11/22/2016 19:09	WG928432
(S) p-Terphenyl-d14	90.6		33.9-128		11/22/2016 19:09	WG928432

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	11/23/2016 09:46	WG928968

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	877	<u>J6</u>	100	1	11/22/2016 11:40	WG928611

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	11/22/2016 14:14	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	19700		5000	1	11/23/2016 11:25	WG928411

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		10.0	1	11/23/2016 21:57	WG928867
Arsenic,Dissolved	ND		10.0	1	11/26/2016 15:18	WG928777
Iron,Dissolved	155	<u>B</u>	100	1	11/26/2016 15:18	WG928777
Lead	ND		5.00	1	11/23/2016 21:57	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:18	WG928777
Manganese,Dissolved	272		10.0	1	11/26/2016 15:18	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	11/27/2016 01:25	WG928373
(S) a,a,a-Trifluorotoluene(FID)	100		62.0-128		11/27/2016 01:25	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	11/23/2016 12:09	WG929129
Ethane	ND		13.0	1	11/23/2016 12:09	WG929129
Ethene	ND		13.0	1	11/23/2016 12:09	WG929129

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/27/2016 13:19	WG929418
Toluene	ND		5.00	1	11/27/2016 13:19	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 13:19	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 13:19	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 13:19	WG929418
(S) Dibromofluoromethane	91.4		79.0-121		11/27/2016 13:19	WG929418
(S) a,a,a-Trifluorotoluene	95.0		90.4-116		11/27/2016 13:19	WG929418
(S) 4-Bromofluorobenzene	95.1		80.1-120		11/27/2016 13:19	WG929418



Collected date/time: 11/15/16 15:40

L873914

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		250	1	11/22/2016 17:58	WG928418
Residual Range Organics (RRO)	ND		500	1	11/22/2016 17:58	WG928418
(S) o-Terphenyl	115		50.0-150		11/22/2016 17:58	WG928418

Sample Narrative:

NWTPHDX L873914-02 WG928418: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acenaphthene	ND		1.00	1	11/22/2016 18:06	WG928430
Acenaphthylene	ND		1.00	1	11/22/2016 18:06	WG928430
Anthracene	ND		1.00	1	11/22/2016 18:06	WG928430
Benzo(a)anthracene	ND		1.00	1	11/22/2016 18:06	WG928430
Benzo(b)fluoranthene	ND		1.00	1	11/22/2016 18:06	WG928430
Benzo(k)fluoranthene	ND		1.00	1	11/22/2016 18:06	WG928430
Benzo(g,h,i)perylene	ND		1.00	1	11/22/2016 18:06	WG928430
Benzo(a)pyrene	ND		1.00	1	11/22/2016 18:06	WG928430
Chrysene	ND		1.00	1	11/22/2016 18:06	WG928430
Dibenz(a,h)anthracene	ND		1.00	1	11/22/2016 18:06	WG928430
Fluoranthene	ND		1.00	1	11/22/2016 18:06	WG928430
Fluorene	ND		1.00	1	11/22/2016 18:06	WG928430
Indeno(1,2,3-cd)pyrene	ND		1.00	1	11/22/2016 18:06	WG928430
Naphthalene	ND		1.00	1	11/22/2016 18:06	WG928430
Phenanthrene	ND		1.00	1	11/22/2016 18:06	WG928430
Pyrene	ND		1.00	1	11/22/2016 18:06	WG928430
2-Methylphenol	ND		10.0	1	11/22/2016 18:06	WG928430
3&4-Methyl Phenol	ND		10.0	1	11/22/2016 18:06	WG928430
(S) 2-Fluorophenol	68.2		10.0-77.9		11/22/2016 18:06	WG928430
(S) Phenol-d5	53.8		5.00-70.1		11/22/2016 18:06	WG928430
(S) Nitrobenzene-d5	75.7		21.8-123		11/22/2016 18:06	WG928430
(S) 2-Fluorobiphenyl	91.0		29.5-131		11/22/2016 18:06	WG928430
(S) 2,4,6-Tribromophenol	82.9		11.2-130		11/22/2016 18:06	WG928430
(S) p-Terphenyl-d14	95.2		29.3-137		11/22/2016 18:06	WG928430

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	11/23/2016 09:48	WG928968

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	ND		100	1	11/22/2016 11:42	WG928611

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	11/22/2016 14:14	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	5050		5000	1	11/23/2016 16:45	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	1650		100	1	11/26/2016 15:21	WG928777
Lead	ND		5.00	1	11/23/2016 22:00	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:21	WG928777
Manganese,Dissolved	772		10.0	1	11/26/2016 15:21	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	11/27/2016 01:55	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 01:55	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	173		10.0	1	11/23/2016 12:13	WG929129
Ethane	29.9		13.0	1	11/23/2016 12:13	WG929129
Ethene	16.2		13.0	1	11/23/2016 12:13	WG929129

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/27/2016 13:31	WG929418
Toluene	ND		5.00	1	11/27/2016 13:31	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 13:31	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 13:31	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 13:31	WG929418
(S) Dibromofluoromethane	90.8		79.0-121		11/27/2016 13:31	WG929418
(S) a,a,a-Trifluorotoluene	95.2		90.4-116		11/27/2016 13:31	WG929418
(S) 4-Bromofluorobenzene	95.9		80.1-120		11/27/2016 13:31	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		250	1	11/22/2016 18:14	WG928418
Residual Range Organics (RRO)	ND		500	1	11/22/2016 18:14	WG928418
(S) o-Terphenyl	118		50.0-150		11/22/2016 18:14	WG928418

Sample Narrative:

NWTPHDX L873914-03 WG928418: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	11/22/2016 19:31	WG928432
Acenaphthene	ND		0.0500	1	11/22/2016 19:31	WG928432
Acenaphthylene	ND		0.0500	1	11/22/2016 19:31	WG928432
Benzo(a)anthracene	ND		0.0500	1	11/22/2016 19:31	WG928432
Benzo(a)pyrene	ND		0.0500	1	11/22/2016 19:31	WG928432
Benzo(b)fluoranthene	ND		0.0500	1	11/22/2016 19:31	WG928432
Benzo(g,h,i)perylene	ND		0.0500	1	11/22/2016 19:31	WG928432
Benzo(k)fluoranthene	ND		0.0500	1	11/22/2016 19:31	WG928432
Chrysene	ND		0.0500	1	11/22/2016 19:31	WG928432
Dibenz(a,h)anthracene	ND		0.0500	1	11/22/2016 19:31	WG928432
Fluoranthene	ND		0.0500	1	11/22/2016 19:31	WG928432
Fluorene	ND		0.0500	1	11/22/2016 19:31	WG928432
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/22/2016 19:31	WG928432
Naphthalene	ND		0.250	1	11/22/2016 19:31	WG928432
Phenanthrene	ND		0.0500	1	11/22/2016 19:31	WG928432
Pyrene	ND		0.0500	1	11/22/2016 19:31	WG928432
1-Methylnaphthalene	ND		0.250	1	11/22/2016 19:31	WG928432
2-Methylnaphthalene	ND		0.250	1	11/22/2016 19:31	WG928432
2-Chloronaphthalene	ND		0.250	1	11/22/2016 19:31	WG928432
(S) Nitrobenzene-d5	63.0		18.0-137		11/22/2016 19:31	WG928432
(S) 2-Fluorobiphenyl	94.6		38.8-115		11/22/2016 19:31	WG928432
(S) p-Terphenyl-d14	85.6		33.9-128		11/22/2016 19:31	WG928432

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	886		100	1	11/23/2016 09:51	WG928968

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/22/2016 11:50	WG928611

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		50.0	1	11/22/2016 14:15	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	11/23/2016 17:16	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	10400		100	1	11/26/2016 15:24	WG928777
Lead	ND		5.00	1	11/23/2016 22:08	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:24	WG928777
Manganese,Dissolved	3310		10.0	1	11/26/2016 15:24	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	107		100	1	11/27/2016 02:25	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 02:25	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	3140		100	10	11/23/2016 15:32	WG929313
Ethane	ND		13.0	1	11/23/2016 12:15	WG929129
Ethene	ND		13.0	1	11/23/2016 12:15	WG929129

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/27/2016 13:44	WG929418
Toluene	ND		5.00	1	11/27/2016 13:44	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 13:44	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 13:44	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 13:44	WG929418
(S) Dibromofluoromethane	90.4		79.0-121		11/27/2016 13:44	WG929418
(S) a,a,a-Trifluorotoluene	95.5		90.4-116		11/27/2016 13:44	WG929418
(S) 4-Bromofluorobenzene	94.9		80.1-120		11/27/2016 13:44	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	10800		1250	5	11/25/2016 17:34	WG928418
Residual Range Organics (RRO)	2280		500	1	11/22/2016 18:30	WG928418
(S) o-Terphenyl	109		50.0-150		11/22/2016 18:30	WG928418
(S) o-Terphenyl	109		50.0-150		11/25/2016 17:34	WG928418

Sample Narrative:

NWTPHDX L873914-04 WG928418: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		1.00	1	11/22/2016 19:39	WG928430
Acenaphthylene	ND		1.00	1	11/22/2016 19:39	WG928430
Anthracene	ND		1.00	1	11/22/2016 19:39	WG928430
Benzo(a)anthracene	ND		1.00	1	11/22/2016 19:39	WG928430
Benzo(b)fluoranthene	ND		1.00	1	11/22/2016 19:39	WG928430
Benzo(k)fluoranthene	ND		1.00	1	11/22/2016 19:39	WG928430
Benzo(g,h,i)perylene	ND		1.00	1	11/22/2016 19:39	WG928430
Benzo(a)pyrene	ND		1.00	1	11/22/2016 19:39	WG928430
Chrysene	ND		1.00	1	11/22/2016 19:39	WG928430
Dibenz(a,h)anthracene	ND		1.00	1	11/22/2016 19:39	WG928430
Fluoranthene	ND		1.00	1	11/22/2016 19:39	WG928430
Fluorene	ND		1.00	1	11/22/2016 19:39	WG928430
Indeno(1,2,3-cd)pyrene	ND		1.00	1	11/22/2016 19:39	WG928430
Naphthalene	ND		1.00	1	11/22/2016 19:39	WG928430
Phenanthrene	ND		1.00	1	11/22/2016 19:39	WG928430
Pyrene	ND		1.00	1	11/22/2016 19:39	WG928430
2-Methylphenol	ND		10.0	1	11/22/2016 19:39	WG928430
3&4-Methyl Phenol	ND		10.0	1	11/22/2016 19:39	WG928430
(S) 2-Fluorophenol	70.9		10.0-77.9		11/22/2016 19:39	WG928430
(S) Phenol-d5	57.0		5.00-70.1		11/22/2016 19:39	WG928430
(S) Nitrobenzene-d5	83.3		21.8-123		11/22/2016 19:39	WG928430
(S) 2-Fluorobiphenyl	86.4		29.5-131		11/22/2016 19:39	WG928430
(S) 2,4,6-Tribromophenol	105		11.2-130		11/22/2016 19:39	WG928430
(S) p-Terphenyl-d14	98.0		29.3-137		11/22/2016 19:39	WG928430

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	107		100	1	11/23/2016 09:52	WG928968

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	ND		100	1	11/22/2016 09:05	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	11/22/2016 14:15	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	ND		5000	1	11/23/2016 17:47	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	6930		100	1	11/26/2016 15:26	WG928777
Lead	ND		5.00	1	11/23/2016 22:10	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:26	WG928777
Manganese,Dissolved	2820		10.0	1	11/26/2016 15:26	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	270		100	1	11/27/2016 02:55	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 02:55	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	2900		50.0	5	11/23/2016 15:34	WG929313
Ethane	ND		13.0	1	11/23/2016 12:18	WG929129
Ethene	ND		13.0	1	11/23/2016 12:18	WG929129

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/27/2016 13:57	WG929418
Toluene	ND		5.00	1	11/27/2016 13:57	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 13:57	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 13:57	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 13:57	WG929418
(S) Dibromofluoromethane	92.0		79.0-121		11/27/2016 13:57	WG929418
(S) a,a,a-Trifluorotoluene	95.2		90.4-116		11/27/2016 13:57	WG929418
(S) 4-Bromofluorobenzene	97.4		80.1-120		11/27/2016 13:57	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2050		250	1	11/25/2016 17:01	WG928418
Residual Range Organics (RRO)	776		500	1	11/25/2016 17:01	WG928418
(S) o-Terphenyl	134		50.0-150		11/25/2016 17:01	WG928418

Sample Narrative:

NWTPHDX L873914-05 WG928418: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	11/22/2016 19:52	WG928432
Acenaphthene	0.0670		0.0500	1	11/22/2016 19:52	WG928432
Acenaphthylene	ND		0.0500	1	11/22/2016 19:52	WG928432
Benzo(a)anthracene	ND		0.0500	1	11/22/2016 19:52	WG928432
Benzo(a)pyrene	ND		0.0500	1	11/22/2016 19:52	WG928432
Benzo(b)fluoranthene	ND		0.0500	1	11/22/2016 19:52	WG928432
Benzo(g,h,i)perylene	ND		0.0500	1	11/22/2016 19:52	WG928432
Benzo(k)fluoranthene	ND		0.0500	1	11/22/2016 19:52	WG928432
Chrysene	ND		0.0500	1	11/22/2016 19:52	WG928432
Dibenz(a,h)anthracene	ND		0.0500	1	11/22/2016 19:52	WG928432
Fluoranthene	ND		0.0500	1	11/22/2016 19:52	WG928432
Fluorene	0.224		0.0500	1	11/22/2016 19:52	WG928432
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/22/2016 19:52	WG928432
Naphthalene	0.271		0.250	1	11/22/2016 19:52	WG928432
Phenanthrene	ND		0.0500	1	11/22/2016 19:52	WG928432
Pyrene	ND		0.0500	1	11/22/2016 19:52	WG928432
1-Methylnaphthalene	ND		0.250	1	11/22/2016 19:52	WG928432
2-Methylnaphthalene	ND		0.250	1	11/22/2016 19:52	WG928432
2-Chloronaphthalene	ND		0.250	1	11/22/2016 19:52	WG928432
(S) Nitrobenzene-d5	60.6		18.0-137		11/22/2016 19:52	WG928432
(S) 2-Fluorobiphenyl	84.2		38.8-115		11/22/2016 19:52	WG928432
(S) p-Terphenyl-d14	85.2		33.9-128		11/22/2016 19:52	WG928432

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	11/23/2016 10:00	WG928968

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	ND		100	1	11/22/2016 09:07	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	11/22/2016 14:15	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	6480		5000	1	11/23/2016 18:02	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		10.0	1	11/23/2016 22:13	WG928867
Arsenic,Dissolved	ND		10.0	1	11/26/2016 15:29	WG928777
Iron,Dissolved	2100		100	1	11/26/2016 15:29	WG928777
Lead	ND		5.00	1	11/23/2016 22:13	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:29	WG928777
Manganese,Dissolved	849		10.0	1	11/26/2016 15:29	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	115		100	1	11/27/2016 03:26	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 03:26	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	399		10.0	1	11/23/2016 15:25	WG929313
Ethane	ND		13.0	1	11/23/2016 15:25	WG929313
Ethene	ND		13.0	1	11/23/2016 15:25	WG929313

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/27/2016 14:09	WG929418
Toluene	ND		5.00	1	11/27/2016 14:09	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 14:09	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 14:09	WG929418
(S) Toluene-d8	99.9		90.0-115		11/27/2016 14:09	WG929418
(S) Dibromofluoromethane	89.8		79.0-121		11/27/2016 14:09	WG929418
(S) a,a,a-Trifluorotoluene	94.6		90.4-116		11/27/2016 14:09	WG929418
(S) 4-Bromofluorobenzene	95.6		80.1-120		11/27/2016 14:09	WG929418



Collected date/time: 11/16/16 12:00

L873914

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	885		250	1	11/22/2016 19:03	WG928418
Residual Range Organics (RRO)	603		500	1	11/22/2016 19:03	WG928418
(S) o-Terphenyl	119		50.0-150		11/22/2016 19:03	WG928418

Sample Narrative:

NWTPHDX L873914-06 WG928418: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	11/22/2016 20:14	WG928432
Acenaphthene	0.345		0.0500	1	11/22/2016 20:14	WG928432
Acenaphthylene	ND		0.0500	1	11/22/2016 20:14	WG928432
Benzo(a)anthracene	ND		0.0500	1	11/22/2016 20:14	WG928432
Benzo(a)pyrene	ND		0.0500	1	11/22/2016 20:14	WG928432
Benzo(b)fluoranthene	ND		0.0500	1	11/22/2016 20:14	WG928432
Benzo(g,h,i)perylene	ND		0.0500	1	11/22/2016 20:14	WG928432
Benzo(k)fluoranthene	ND		0.0500	1	11/22/2016 20:14	WG928432
Chrysene	ND		0.0500	1	11/22/2016 20:14	WG928432
Dibenz(a,h)anthracene	ND		0.0500	1	11/22/2016 20:14	WG928432
Fluoranthene	ND		0.0500	1	11/22/2016 20:14	WG928432
Fluorene	0.729		0.0500	1	11/22/2016 20:14	WG928432
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/22/2016 20:14	WG928432
Naphthalene	ND		0.250	1	11/22/2016 20:14	WG928432
Phenanthrene	ND		0.0500	1	11/22/2016 20:14	WG928432
Pyrene	ND		0.0500	1	11/22/2016 20:14	WG928432
1-Methylnaphthalene	0.576		0.250	1	11/22/2016 20:14	WG928432
2-Methylnaphthalene	ND		0.250	1	11/22/2016 20:14	WG928432
2-Chloronaphthalene	ND		0.250	1	11/22/2016 20:14	WG928432
(S) Nitrobenzene-d5	66.4		18.0-137		11/22/2016 20:14	WG928432
(S) 2-Fluorobiphenyl	91.6		38.8-115		11/22/2016 20:14	WG928432
(S) p-Terphenyl-d14	87.6		33.9-128		11/22/2016 20:14	WG928432

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ND		100	1	11/23/2016 10:18	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	789		100	1	11/22/2016 09:08	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	11/22/2016 14:16	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	11200		5000	1	11/23/2016 18:49	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	ND		100	1	11/26/2016 15:32	WG928777
Lead	ND		5.00	1	11/23/2016 22:16	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:32	WG928777
Manganese,Dissolved	200		10.0	1	11/26/2016 15:32	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	11/27/2016 03:57	WG928373
(S) a,a,a-Trifluorotoluene(FID)	100		62.0-128		11/27/2016 03:57	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ND		10.0	1	11/23/2016 15:27	WG929313
Ethane	ND		13.0	1	11/23/2016 15:27	WG929313
Ethene	ND		13.0	1	11/23/2016 15:27	WG929313

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	11/27/2016 14:22	WG929418
Toluene	ND		5.00	1	11/27/2016 14:22	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 14:22	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 14:22	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 14:22	WG929418
(S) Dibromofluoromethane	91.2		79.0-121		11/27/2016 14:22	WG929418
(S) a,a,a-Trifluorotoluene	95.8		90.4-116		11/27/2016 14:22	WG929418
(S) 4-Bromofluorobenzene	94.8		80.1-120		11/27/2016 14:22	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		250	1	11/22/2016 19:19	WG928418
Residual Range Organics (RRO)	ND		500	1	11/22/2016 19:19	WG928418
<i>(S) o-Terphenyl</i>	116		50.0-150		11/22/2016 19:19	WG928418

Sample Narrative:

NWTPHDX L873914-07 WG928418: NWTPHDX - SGT was performed

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	319		100	1	11/23/2016 10:19	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/22/2016 09:14	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		50.0	1	11/22/2016 14:16	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	133000		25000	5	11/28/2016 13:04	WG929830

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	2470		100	1	11/26/2016 15:35	WG928777
Lead	ND		5.00	1	11/23/2016 22:19	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:35	WG928777
Manganese,Dissolved	2070		10.0	1	11/26/2016 15:35	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		500	5	11/27/2016 04:28	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 04:28	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	1050		50.0	5	11/28/2016 14:15	WG930130
Ethane	ND		13.0	1	11/28/2016 11:18	WG930003
Ethene	ND		13.0	1	11/28/2016 11:18	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/27/2016 14:35	WG929418
Toluene	ND		5.00	1	11/27/2016 14:35	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 14:35	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 14:35	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 14:35	WG929418
(S) Dibromofluoromethane	94.9		79.0-121		11/27/2016 14:35	WG929418
(S) a,a,a-Trifluorotoluene	96.7		90.4-116		11/27/2016 14:35	WG929418
(S) 4-Bromofluorobenzene	94.2		80.1-120		11/27/2016 14:35	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3460		250	1	11/22/2016 19:35	WG928418
Residual Range Organics (RRO)	3600		500	1	11/22/2016 19:35	WG928418
<i>(S) o-Terphenyl</i>	121		50.0-150		11/22/2016 19:35	WG928418

Sample Narrative:

NWTPHDX L873914-08 WG928418: NWTPHDX - SGT was performed

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/23/2016 10:21	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	12900		500	5	11/22/2016 09:15	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		50.0	1	11/22/2016 14:16	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	38000		5000	1	11/23/2016 19:19	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/26/2016 15:37	WG928777
Lead	ND		5.00	1	11/23/2016 22:21	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:37	WG928777
Manganese,Dissolved	ND		10.0	1	11/26/2016 15:37	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	11/27/2016 04:58	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 04:58	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/28/2016 11:20	WG930003
Ethane	ND		13.0	1	11/28/2016 11:20	WG930003
Ethene	ND		13.0	1	11/28/2016 11:20	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/27/2016 14:47	WG929418
Toluene	ND		5.00	1	11/27/2016 14:47	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 14:47	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 14:47	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 14:47	WG929418
(S) Dibromofluoromethane	91.4		79.0-121		11/27/2016 14:47	WG929418
(S) a,a,a-Trifluorotoluene	95.0		90.4-116		11/27/2016 14:47	WG929418
(S) 4-Bromofluorobenzene	93.8		80.1-120		11/27/2016 14:47	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		250	1	11/25/2016 16:45	WG928418
Residual Range Organics (RRO)	ND		500	1	11/25/2016 16:45	WG928418
<i>(S) o-Terphenyl</i>	132		50.0-150		11/25/2016 16:45	WG928418

Sample Narrative:

NWTPHDX L873914-09 WG928418: NWTPHDX - SGT was performed

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	261		100	1	11/23/2016 10:22	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/22/2016 09:16	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		50.0	1	11/22/2016 14:16	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	11/23/2016 19:35	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	15500		100	1	11/26/2016 15:45	WG928777
Lead	ND		5.00	1	11/23/2016 22:24	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:45	WG928777
Manganese,Dissolved	1750		10.0	1	11/26/2016 15:45	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		500	5	11/27/2016 05:28	WG928373
(S) a,a,a-Trifluorotoluene(FID)	100		62.0-128		11/27/2016 05:28	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	3160		100	10	11/28/2016 14:18	WG930130
Ethane	ND		13.0	1	11/28/2016 11:23	WG930003
Ethene	ND		13.0	1	11/28/2016 11:23	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/27/2016 15:00	WG929418
Toluene	ND		5.00	1	11/27/2016 15:00	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 15:00	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 15:00	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 15:00	WG929418
(S) Dibromofluoromethane	89.3		79.0-121		11/27/2016 15:00	WG929418
(S) a,a,a-Trifluorotoluene	95.5		90.4-116		11/27/2016 15:00	WG929418
(S) 4-Bromofluorobenzene	92.9		80.1-120		11/27/2016 15:00	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3220		250	1	11/22/2016 20:08	WG928418
Residual Range Organics (RRO)	1470		500	1	11/22/2016 20:08	WG928418
<i>(S) o-Terphenyl</i>	124		50.0-150		11/22/2016 20:08	WG928418

Sample Narrative:

NWTPHDX L873914-10 WG928418: NWTPHDX - SGT was performed

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ND		100	1	11/23/2016 10:24	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	6570		500	5	11/22/2016 09:18	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	11/22/2016 14:16	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	59600		5000	1	11/23/2016 19:50	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	ND		100	1	11/26/2016 15:48	WG928777
Lead	ND		5.00	1	11/23/2016 22:27	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:48	WG928777
Manganese,Dissolved	1020		10.0	1	11/26/2016 15:48	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	11/27/2016 05:59	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 05:59	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ND		10.0	1	11/28/2016 11:28	WG930003
Ethane	ND		13.0	1	11/28/2016 11:28	WG930003
Ethene	ND		13.0	1	11/28/2016 11:28	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	11/27/2016 15:13	WG929418
Toluene	ND		5.00	1	11/27/2016 15:13	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 15:13	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 15:13	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 15:13	WG929418
(S) Dibromofluoromethane	90.0		79.0-121		11/27/2016 15:13	WG929418
(S) a,a,a-Trifluorotoluene	96.1		90.4-116		11/27/2016 15:13	WG929418
(S) 4-Bromofluorobenzene	94.4		80.1-120		11/27/2016 15:13	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	411		250	1	11/25/2016 17:17	WG928418
Residual Range Organics (RRO)	ND		500	1	11/25/2016 17:17	WG928418
<i>(S) o-Terphenyl</i>	129		50.0-150		11/25/2016 17:17	WG928418

Sample Narrative:

NWTPHDX L873914-11 WG928418: NWTPHDX - SGT was performed

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	11/23/2016 10:30	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	380		100	1	11/22/2016 09:19	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	11/22/2016 14:17	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	32300		5000	1	11/23/2016 20:06	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	11/26/2016 15:51	WG928777
Lead	ND		5.00	1	11/23/2016 22:30	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:51	WG928777
Manganese,Dissolved	856		10.0	1	11/26/2016 15:51	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	11/27/2016 06:29	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 06:29	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	11/28/2016 11:25	WG930003
Ethane	ND		13.0	1	11/28/2016 11:25	WG930003
Ethene	ND		13.0	1	11/28/2016 11:25	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/27/2016 15:25	WG929418
Toluene	ND		5.00	1	11/27/2016 15:25	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 15:25	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 15:25	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 15:25	WG929418
(S) Dibromofluoromethane	91.1		79.0-121		11/27/2016 15:25	WG929418
(S) a,a,a-Trifluorotoluene	95.9		90.4-116		11/27/2016 15:25	WG929418
(S) 4-Bromofluorobenzene	93.6		80.1-120		11/27/2016 15:25	WG929418



Collected date/time: 11/16/16 16:55

L873914

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		250	1	11/22/2016 20:40	WG928418
Residual Range Organics (RRO)	ND		500	1	11/22/2016 20:40	WG928418
(S) o-Terphenyl	117		50.0-150		11/22/2016 20:40	WG928418

Sample Narrative:

NWTPHDX L873914-12 WG928418: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acenaphthene	ND		1.00	1	11/22/2016 18:29	WG928430
Acenaphthylene	ND		1.00	1	11/22/2016 18:29	WG928430
Anthracene	ND		1.00	1	11/22/2016 18:29	WG928430
Benzo(a)anthracene	ND		1.00	1	11/22/2016 18:29	WG928430
Benzo(b)fluoranthene	ND		1.00	1	11/22/2016 18:29	WG928430
Benzo(k)fluoranthene	ND		1.00	1	11/22/2016 18:29	WG928430
Benzo(g,h,i)perylene	ND		1.00	1	11/22/2016 18:29	WG928430
Benzo(a)pyrene	ND		1.00	1	11/22/2016 18:29	WG928430
Chrysene	ND		1.00	1	11/22/2016 18:29	WG928430
Dibenz(a,h)anthracene	ND		1.00	1	11/22/2016 18:29	WG928430
Fluoranthene	ND		1.00	1	11/22/2016 18:29	WG928430
Fluorene	ND		1.00	1	11/22/2016 18:29	WG928430
Indeno(1,2,3-cd)pyrene	ND		1.00	1	11/22/2016 18:29	WG928430
Naphthalene	ND		1.00	1	11/22/2016 18:29	WG928430
Phenanthrene	ND		1.00	1	11/22/2016 18:29	WG928430
Pyrene	ND		1.00	1	11/22/2016 18:29	WG928430
2-Methylphenol	ND		10.0	1	11/22/2016 18:29	WG928430
3&4-Methyl Phenol	ND		10.0	1	11/22/2016 18:29	WG928430
(S) 2-Fluorophenol	66.8		10.0-77.9		11/22/2016 18:29	WG928430
(S) Phenol-d5	54.3		5.00-70.1		11/22/2016 18:29	WG928430
(S) Nitrobenzene-d5	74.5		21.8-123		11/22/2016 18:29	WG928430
(S) 2-Fluorobiphenyl	90.1		29.5-131		11/22/2016 18:29	WG928430
(S) 2,4,6-Tribromophenol	88.4		11.2-130		11/22/2016 18:29	WG928430
(S) p-Terphenyl-d14	98.0		29.3-137		11/22/2016 18:29	WG928430

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	160		100	1	11/23/2016 10:32	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	ND		100	1	11/22/2016 09:20	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	11/22/2016 14:17	WG928320

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	ND		5000	1	11/23/2016 20:21	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	1470		100	1	11/26/2016 15:54	WG928777
Lead	ND		5.00	1	11/23/2016 22:32	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:54	WG928777
Manganese,Dissolved	2380		10.0	1	11/26/2016 15:54	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	227		100	1	11/27/2016 06:59	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 06:59	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	2960		50.0	5	11/28/2016 14:21	WG930130
Ethane	ND		13.0	1	11/28/2016 11:30	WG930003
Ethene	ND		13.0	1	11/28/2016 11:30	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/27/2016 15:38	WG929418
Toluene	ND		5.00	1	11/27/2016 15:38	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 15:38	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 15:38	WG929418
(S) Toluene-d8	102		90.0-115		11/27/2016 15:38	WG929418
(S) Dibromofluoromethane	90.2		79.0-121		11/27/2016 15:38	WG929418
(S) a,a,a-Trifluorotoluene	94.2		90.4-116		11/27/2016 15:38	WG929418
(S) 4-Bromofluorobenzene	94.9		80.1-120		11/27/2016 15:38	WG929418



Collected date/time: 11/17/16 09:20

L873914

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2500		250	1	11/22/2016 20:56	WG928418
Residual Range Organics (RRO)	825		500	1	11/22/2016 20:56	WG928418
(S) o-Terphenyl	121		50.0-150		11/22/2016 20:56	WG928418

Sample Narrative:

NWTPHDX L873914-13 WG928418: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	11/22/2016 20:36	WG928432
Acenaphthene	0.390		0.0500	1	11/22/2016 20:36	WG928432
Acenaphthylene	ND		0.0500	1	11/22/2016 20:36	WG928432
Benzo(a)anthracene	ND		0.0500	1	11/22/2016 20:36	WG928432
Benzo(a)pyrene	ND		0.0500	1	11/22/2016 20:36	WG928432
Benzo(b)fluoranthene	ND		0.0500	1	11/22/2016 20:36	WG928432
Benzo(g,h,i)perylene	ND		0.0500	1	11/22/2016 20:36	WG928432
Benzo(k)fluoranthene	ND		0.0500	1	11/22/2016 20:36	WG928432
Chrysene	ND		0.0500	1	11/22/2016 20:36	WG928432
Dibenz(a,h)anthracene	ND		0.0500	1	11/22/2016 20:36	WG928432
Fluoranthene	ND		0.0500	1	11/22/2016 20:36	WG928432
Fluorene	0.450		0.0500	1	11/22/2016 20:36	WG928432
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/22/2016 20:36	WG928432
Naphthalene	0.416		0.250	1	11/22/2016 20:36	WG928432
Phenanthrene	ND		0.0500	1	11/22/2016 20:36	WG928432
Pyrene	ND		0.0500	1	11/22/2016 20:36	WG928432
1-Methylnaphthalene	5.92		0.250	1	11/22/2016 20:36	WG928432
2-Methylnaphthalene	ND		0.250	1	11/22/2016 20:36	WG928432
2-Chloronaphthalene	ND		0.250	1	11/22/2016 20:36	WG928432
(S) Nitrobenzene-d5	62.1		18.0-137		11/22/2016 20:36	WG928432
(S) 2-Fluorobiphenyl	80.6		38.8-115		11/22/2016 20:36	WG928432
(S) p-Terphenyl-d14	76.8		33.9-128		11/22/2016 20:36	WG928432

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	548		100	1	11/23/2016 10:34	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/22/2016 09:22	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		50.0	1	11/22/2016 16:17	WG928784

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	10100		5000	1	11/23/2016 20:52	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	1800		100	1	11/26/2016 15:56	WG928777
Lead	ND		5.00	1	11/23/2016 22:41	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:56	WG928777
Manganese,Dissolved	1650		10.0	1	11/26/2016 15:56	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		500	5	11/27/2016 07:29	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 07:29	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	651		20.0	2	11/28/2016 14:24	WG930130
Ethane	ND		13.0	1	11/28/2016 11:32	WG930003
Ethene	ND		13.0	1	11/28/2016 11:32	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/27/2016 15:51	WG929418
Toluene	ND		5.00	1	11/27/2016 15:51	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 15:51	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 15:51	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 15:51	WG929418
(S) Dibromofluoromethane	93.9		79.0-121		11/27/2016 15:51	WG929418
(S) a,a,a-Trifluorotoluene	96.6		90.4-116		11/27/2016 15:51	WG929418
(S) 4-Bromofluorobenzene	95.4		80.1-120		11/27/2016 15:51	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2240		250	1	11/22/2016 21:12	WG928418
Residual Range Organics (RRO)	1440		500	1	11/22/2016 21:12	WG928418
<i>(S) o-Terphenyl</i>	117		50.0-150		11/22/2016 21:12	WG928418

Sample Narrative:

NWTPHDX L873914-14 WG928418: NWTPHDX - SGT was performed

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	11/23/2016 10:35	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	1080		100	1	11/22/2016 09:27	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	11/22/2016 16:18	WG928784

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	10700		5000	1	11/23/2016 21:38	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	11/26/2016 15:59	WG928777
Lead	ND		5.00	1	11/23/2016 22:43	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 15:59	WG928777
Manganese,Dissolved	ND		10.0	1	11/26/2016 15:59	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	11/27/2016 08:00	WG928373
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		11/27/2016 08:00	WG928373

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	11/28/2016 11:39	WG930003
Ethane	ND		13.0	1	11/28/2016 11:39	WG930003
Ethene	ND		13.0	1	11/28/2016 11:39	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/27/2016 16:03	WG929418
Toluene	ND		5.00	1	11/27/2016 16:03	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 16:03	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 16:03	WG929418
(S) Toluene-d8	100		90.0-115		11/27/2016 16:03	WG929418
(S) Dibromofluoromethane	91.3		79.0-121		11/27/2016 16:03	WG929418
(S) a,a,a-Trifluorotoluene	94.0		90.4-116		11/27/2016 16:03	WG929418
(S) 4-Bromofluorobenzene	93.7		80.1-120		11/27/2016 16:03	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		250	1	11/22/2016 21:28	WG928418
Residual Range Organics (RRO)	ND		500	1	11/22/2016 21:28	WG928418
<i>(S) o-Terphenyl</i>	117		50.0-150		11/22/2016 21:28	WG928418

Sample Narrative:

NWTPHDX L873914-15 WG928418: NWTPHDX - SGT was performed

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	11/23/2016 10:38	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	659		100	1	11/22/2016 09:28	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	11/22/2016 16:18	WG928784

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	11400		5000	1	11/23/2016 21:54	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	2790		100	1	11/26/2016 16:02	WG928777
Lead	ND		5.00	1	11/23/2016 21:44	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 16:02	WG928777
Manganese,Dissolved	1660		10.0	1	11/26/2016 16:02	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	110	<u>B</u>	100	1	11/28/2016 19:17	WG930020
(S) a,a,a-Trifluorotoluene(FID)	96.1		62.0-128		11/28/2016 19:17	WG930020

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	394		10.0	1	11/28/2016 11:44	WG930003
Ethane	ND		13.0	1	11/28/2016 11:44	WG930003
Ethene	ND		13.0	1	11/28/2016 11:44	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/27/2016 16:16	WG929418
Toluene	ND		5.00	1	11/27/2016 16:16	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 16:16	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 16:16	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 16:16	WG929418
(S) Dibromofluoromethane	89.4		79.0-121		11/27/2016 16:16	WG929418
(S) a,a,a-Trifluorotoluene	95.6		90.4-116		11/27/2016 16:16	WG929418
(S) 4-Bromofluorobenzene	93.1		80.1-120		11/27/2016 16:16	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1350		250	1	11/22/2016 21:45	WG928418
Residual Range Organics (RRO)	ND		500	1	11/22/2016 21:45	WG928418
<i>(S) o-Terphenyl</i>	118		50.0-150		11/22/2016 21:45	WG928418

Sample Narrative:

NWTPHDX L873914-16 WG928418: NWTPHDX - SGT was performed

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/23/2016 10:41	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	15600		500	5	11/22/2016 09:29	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		50.0	1	11/22/2016 16:18	WG928784

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	32600		5000	1	11/23/2016 22:09	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/26/2016 16:05	WG928777
Lead	ND		5.00	1	11/23/2016 22:46	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 16:05	WG928777
Manganese,Dissolved	225		10.0	1	11/26/2016 16:05	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	11/28/2016 19:40	WG930020
(S) a,a,a-Trifluorotoluene(FID)	95.6		62.0-128		11/28/2016 19:40	WG930020

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/28/2016 12:02	WG930003
Ethane	ND		13.0	1	11/28/2016 12:02	WG930003
Ethene	ND		13.0	1	11/28/2016 12:02	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/27/2016 20:37	WG929418
Toluene	ND		5.00	1	11/27/2016 20:37	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 20:37	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 20:37	WG929418
(S) Toluene-d8	102		90.0-115		11/27/2016 20:37	WG929418
(S) Dibromofluoromethane	88.1		79.0-121		11/27/2016 20:37	WG929418
(S) a,a,a-Trifluorotoluene	106		90.4-116		11/27/2016 20:37	WG929418
(S) 4-Bromofluorobenzene	97.8		80.1-120		11/27/2016 20:37	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		250	1	11/22/2016 22:01	WG928418
Residual Range Organics (RRO)	ND		500	1	11/22/2016 22:01	WG928418
(S) o-Terphenyl	115		50.0-150		11/22/2016 22:01	WG928418

Sample Narrative:

NWTPHDX L873914-17 WG928418: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acenaphthene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Acenaphthylene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Anthracene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Benzo(a)anthracene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Benzo(b)fluoranthene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Benzo(k)fluoranthene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Benzo(g,h,i)perylene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Benzo(a)pyrene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Chrysene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Dibenz(a,h)anthracene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Fluoranthene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Fluorene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Indeno(1,2,3-cd)pyrene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Naphthalene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Phenanthrene	ND		1.11	1.11	11/22/2016 18:52	WG928430
Pyrene	ND		1.11	1.11	11/22/2016 18:52	WG928430
2-Methylphenol	ND		11.1	1.11	11/22/2016 18:52	WG928430
3&4-Methyl Phenol	ND		11.1	1.11	11/22/2016 18:52	WG928430
(S) 2-Fluorophenol	71.3		10.0-77.9		11/22/2016 18:52	WG928430
(S) Phenol-d5	56.8		5.00-70.1		11/22/2016 18:52	WG928430
(S) Nitrobenzene-d5	79.8		21.8-123		11/22/2016 18:52	WG928430
(S) 2-Fluorobiphenyl	93.7		29.5-131		11/22/2016 18:52	WG928430
(S) 2,4,6-Tribromophenol	90.1		11.2-130		11/22/2016 18:52	WG928430
(S) p-Terphenyl-d14	96.4		29.3-137		11/22/2016 18:52	WG928430

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	413		100	1	11/23/2016 10:48	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/22/2016 09:30	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		50.0	1	11/22/2016 16:19	WG928784

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	7840		5000	1	11/23/2016 22:24	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	10400		100	1	11/26/2016 16:07	WG928777
Lead	ND		5.00	1	11/23/2016 22:49	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 16:07	WG928777
Manganese,Dissolved	5030		10.0	1	11/26/2016 16:07	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	123	<u>B</u>	100	1	11/28/2016 20:02	WG930020
(S) a,a,a-Trifluorotoluene(FID)	95.9		62.0-128		11/28/2016 20:02	WG930020

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	283		10.0	1	11/28/2016 12:04	WG930003
Ethane	ND		13.0	1	11/28/2016 12:04	WG930003
Ethene	ND		13.0	1	11/28/2016 12:04	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/27/2016 20:49	WG929418
Toluene	ND		5.00	1	11/27/2016 20:49	WG929418
Ethylbenzene	ND		1.00	1	11/27/2016 20:49	WG929418
Total Xylenes	ND		3.00	1	11/27/2016 20:49	WG929418
(S) Toluene-d8	101		90.0-115		11/27/2016 20:49	WG929418
(S) Dibromofluoromethane	94.7		79.0-121		11/27/2016 20:49	WG929418
(S) a,a,a-Trifluorotoluene	95.2		90.4-116		11/27/2016 20:49	WG929418
(S) 4-Bromofluorobenzene	97.1		80.1-120		11/27/2016 20:49	WG929418



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	7380		1250	5	11/25/2016 17:50	WG928418
Residual Range Organics (RRO)	3690		500	1	11/22/2016 22:17	WG928418
(S) o-Terphenyl	116		50.0-150		11/22/2016 22:17	WG928418
(S) o-Terphenyl	122		50.0-150		11/25/2016 17:50	WG928418

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Sample Narrative:

NWTPHDX L873914-18 WG928418: NWTPHDX - SGT was performed



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/23/2016 10:49	WG928969

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	15900		1000	10	11/22/2016 09:31	WG928612

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		50.0	1	11/22/2016 16:19	WG928784

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	32300		5000	1	11/23/2016 22:40	WG928996

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/26/2016 16:10	WG928777
Lead	ND		5.00	1	11/23/2016 22:51	WG928867
Lead,Dissolved	ND		5.00	1	11/26/2016 16:10	WG928777
Manganese,Dissolved	217		10.0	1	11/26/2016 16:10	WG928777

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	11/28/2016 20:24	WG930020
(S) a,a,a-Trifluorotoluene(FID)	95.7		62.0-128		11/28/2016 20:24	WG930020

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/28/2016 12:07	WG930003
Ethane	ND		13.0	1	11/28/2016 12:07	WG930003
Ethene	ND		13.0	1	11/28/2016 12:07	WG930003

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/26/2016 06:23	WG929423
Toluene	ND		5.00	1	11/26/2016 06:23	WG929423
Ethylbenzene	ND		1.00	1	11/26/2016 06:23	WG929423
Total Xylenes	ND		3.00	1	11/26/2016 06:23	WG929423
(S) Toluene-d8	106		90.0-115		11/26/2016 06:23	WG929423
(S) Dibromofluoromethane	99.5		79.0-121		11/26/2016 06:23	WG929423
(S) a,a,a-Trifluorotoluene	103		90.4-116		11/26/2016 06:23	WG929423
(S) 4-Bromofluorobenzene	104		80.1-120		11/26/2016 06:23	WG929423



Collected date/time: 11/17/16 00:00

L873914

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		250	1	11/22/2016 22:33	WG928418
Residual Range Organics (RRO)	ND		500	1	11/22/2016 22:33	WG928418
(S) o-Terphenyl	118		50.0-150		11/22/2016 22:33	WG928418

Sample Narrative:

NWTPHDX L873914-19 WG928418: NWTPHDX - SGT was performed

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acenaphthene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Acenaphthylene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Anthracene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Benzo(a)anthracene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Benzo(b)fluoranthene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Benzo(k)fluoranthene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Benzo(g,h,i)perylene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Benzo(a)pyrene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Chrysene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Dibenz(a,h)anthracene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Fluoranthene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Fluorene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Indeno(1,2,3-cd)pyrene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Naphthalene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Phenanthrene	ND		1.11	1.11	11/22/2016 19:15	WG928430
Pyrene	ND		1.11	1.11	11/22/2016 19:15	WG928430
2-Methylphenol	ND		11.1	1.11	11/22/2016 19:15	WG928430
3&4-Methyl Phenol	ND		11.1	1.11	11/22/2016 19:15	WG928430
(S) 2-Fluorophenol	67.1		10.0-77.9		11/22/2016 19:15	WG928430
(S) Phenol-d5	53.7		5.00-70.1		11/22/2016 19:15	WG928430
(S) Nitrobenzene-d5	72.3		21.8-123		11/22/2016 19:15	WG928430
(S) 2-Fluorobiphenyl	86.9		29.5-131		11/22/2016 19:15	WG928430
(S) 2,4,6-Tribromophenol	80.0		11.2-130		11/22/2016 19:15	WG928430
(S) p-Terphenyl-d14	91.0		29.3-137		11/22/2016 19:15	WG928430

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3179929-1 11/22/16 11:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L873856-01 Original Sample (OS) • Duplicate (DUP)

(OS) L873856-01 11/22/16 11:26 • (DUP) R3179929-4 11/22/16 11:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	ND	1	0.000		20

L873914-03 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-03 11/22/16 11:42 • (DUP) R3179929-6 11/22/16 11:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3179929-2 11/22/16 11:09 • (LCSD) R3179929-3 11/22/16 11:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	5220	5250	104	105	90.0-110			0.550	20

L873914-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L873914-02 11/22/16 11:40 • (MS) R3179929-5 11/22/16 11:41

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	5000	877	5350	89.0	1	90.0-110	J6

L873914-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L873914-03 11/22/16 11:42 • (MS) R3179929-7 11/22/16 11:48 • (MSD) R3179929-8 11/22/16 11:49

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	ND	4750	4720	95.0	94.0	1	90.0-110			0.570	20



Method Blank (MB)

(MB) R3179928-1 11/22/16 09:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L873914-05 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-05 11/22/16 09:05 • (DUP) R3179928-4 11/22/16 09:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	ND	1	0.000		20

L873914-13 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-13 11/22/16 09:20 • (DUP) R3179928-6 11/22/16 09:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3179928-2 11/22/16 09:02 • (LCSD) R3179928-3 11/22/16 09:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	5140	5150	103	103	90.0-110			0.000	20

L873914-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L873914-07 11/22/16 09:08 • (MS) R3179928-5 11/22/16 09:09

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	5000	789	5680	98.0	1	90.0-110	

L873942-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L873942-02 11/22/16 09:33 • (MS) R3179928-7 11/22/16 09:34 • (MSD) R3179928-8 11/22/16 09:40

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	ND	5080	5080	102	102	1	90.0-110			0.000	20



Method Blank (MB)

(MB) R3179936-1 11/22/16 14:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L873914-13 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-13 11/22/16 14:17 • (DUP) R3179936-6 11/22/16 14:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3179936-2 11/22/16 14:10 • (LCSD) R3179936-3 11/22/16 14:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	527	517	105	103	85-115			2	20

L873914-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L873914-01 11/22/16 14:13 • (MS) R3179936-4 11/22/16 14:14 • (MSD) R3179936-5 11/22/16 14:14

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfide	1000	ND	839	838	84	84	1	80-120			0	20



Method Blank (MB)

(MB) R3180022-1 11/22/16 16:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L873914-16 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-16 11/22/16 16:18 • (DUP) R3180022-4 11/22/16 16:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0		20

L874111-08 Original Sample (OS) • Duplicate (DUP)

(OS) L874111-08 11/22/16 16:23 • (DUP) R3180022-5 11/22/16 16:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	10.0	26.0	1	89	J P1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180022-2 11/22/16 16:11 • (LCSD) R3180022-3 11/22/16 16:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	555	563	111	113	85-115			1	20



Method Blank (MB)

(MB) R3180407-1 11/23/16 07:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L873910-02 Original Sample (OS) • Duplicate (DUP)

(OS) L873910-02 11/23/16 13:24 • (DUP) R3180407-7 11/23/16 13:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	265000	265000	5	0		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180407-2 11/23/16 07:51 • (LCSD) R3180407-3 11/23/16 08:06

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	39600	39500	99	99	80-120			0	15

L873914-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L873914-02 11/23/16 11:25 • (MS) R3180407-5 11/23/16 11:54 • (MSD) R3180407-4 11/23/16 11:39

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfate	50000	19700	70400	70000	101	100	1	80-120			1	15



Method Blank (MB)

(MB) R3180403-1 11/23/16 07:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L873914-03 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-03 11/23/16 16:45 • (DUP) R3180403-4 11/23/16 17:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	5050	5050	1	0		15

L873914-13 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-13 11/23/16 20:21 • (DUP) R3180403-6 11/23/16 20:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	ND	0.000	1	0		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180403-2 11/23/16 07:35 • (LCSD) R3180403-3 11/23/16 07:51

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	39200	39200	98	98	80-120			0	15

L873914-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L873914-04 11/23/16 17:16 • (MS) R3180403-5 11/23/16 17:31

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	ND	54700	100	1	80-120	

L873914-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L873914-19 11/23/16 22:40 • (MS) R3180403-7 11/23/16 22:55 • (MSD) R3180403-8 11/23/16 23:11

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfate	50000	32300	79800	80800	95	97	1	80-120			1	15



Method Blank (MB)

(MB) R3180866-1 11/28/16 11:19

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L873684-01 Original Sample (OS) • Duplicate (DUP)

(OS) L873684-01 11/28/16 14:09 • (DUP) R3180866-4 11/28/16 14:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	34800	34600	1	0		15

L874361-01 Original Sample (OS) • Duplicate (DUP)

(OS) L874361-01 11/28/16 18:38 • (DUP) R3180866-6 11/28/16 18:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	14600	14600	1	0		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180866-2 11/28/16 11:34 • (LCSD) R3180866-3 11/28/16 11:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	39400	39500	99	99	80-120			0	15

L873684-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L873684-02 11/28/16 14:39 • (MS) R3180866-5 11/28/16 14:54

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	39500	88400	98	1	80-120	

L874361-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L874361-02 11/28/16 19:37 • (MS) R3180866-7 11/28/16 19:52 • (MSD) R3180866-8 11/28/16 20:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfate	50000	12500	62900	62900	101	101	1	80-120			0	15



Method Blank (MB)

(MB) R3180684-1 11/26/16 14:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		6.50	10.0
Iron,Dissolved	19.0	J	14.1	100
Lead,Dissolved	U		1.90	5.00
Manganese,Dissolved	U		1.20	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180684-2 11/26/16 14:57 • (LCSD) R3180684-3 11/26/16 15:00

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,Dissolved	1000	1120	1130	112	113	80-120			1	20
Iron,Dissolved	10000	10100	10000	101	100	80-120			0	20
Lead,Dissolved	1000	1070	1080	107	108	80-120			1	20
Manganese,Dissolved	1000	984	991	98	99	80-120			1	20

⁶ Qc

⁷ Gl

⁸ Al

L873914-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L873914-01 11/26/16 15:02 • (MS) R3180684-5 11/26/16 15:13 • (MSD) R3180684-6 11/26/16 15:15

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,Dissolved	1000	ND	1160	1160	116	116	1	75-125			0	20
Iron,Dissolved	10000	ND	10100	10000	101	100	1	75-125			0	20
Lead,Dissolved	1000	ND	1090	1100	109	110	1	75-125			0	20
Manganese,Dissolved	1000	158	1140	1140	98	99	1	75-125			1	20

⁹ Sc



Method Blank (MB)

(MB) R3180405-1 11/23/16 21:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		6.50	10.0
Lead	U		1.90	5.00

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180405-2 11/23/16 21:38 • (LCSD) R3180405-3 11/23/16 21:41

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	1000	1000	100	100	80-120			0	20
Lead	1000	976	983	98	98	80-120			1	20

5 Sr

6 Qc

L873914-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L873914-16 11/23/16 21:44 • (MS) R3180405-5 11/23/16 21:49 • (MSD) R3180405-6 11/23/16 21:51

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	1020	1030	101	102	1	75-125			1	20
Lead	1000	ND	975	976	97	98	1	75-125			0	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3181132-2 11/26/16 22:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHG C6 - C12	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	101			62.0-128

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3181132-1 11/26/16 21:05 • (LCSD) R3181132-3 11/26/16 22:38

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5500	5380	5890	97.8	107	66.0-123			9.13	20
(S) a,a,a-Trifluorotoluene(FID)				98.7	99.1	62.0-128				

L873914-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L873914-01 11/27/16 00:54 • (MS) R3181132-4 11/26/16 23:22 • (MSD) R3181132-5 11/26/16 23:53

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5500	ND	2710	2770	49.2	50.4	1	47.5-136			2.36	20
(S) a,a,a-Trifluorotoluene(FID)					99.1	98.9		62.0-128				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3181197-3 11/28/16 16:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHG C6 - C12	49.6	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	95.6			62.0-128

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) R3181197-1 11/28/16 15:35 • (LCSD) R3181197-2 11/28/16 15:57

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5500	4880	5040	88.7	91.6	66.0-123			3.28	20
(S) a,a,a-Trifluorotoluene(FID)				101	102	62.0-128				

L874753-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L874753-13 11/28/16 18:55 • (MS) R3181197-4 11/28/16 17:04 • (MSD) R3181197-5 11/28/16 17:26

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5500	U	5400	5280	98.2	95.9	1	47.5-136			2.38	20
(S) a,a,a-Trifluorotoluene(FID)					103	103		62.0-128				



Method Blank (MB)

(MB) R3180262-1 11/23/16 10:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L873837-06 Original Sample (OS) • Duplicate (DUP)

(OS) L873837-06 11/23/16 12:03 • (DUP) R3180262-3 11/23/16 14:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180262-2 11/23/16 13:53 • (LCSD) R3180262-4 11/23/16 14:06

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	71.8	64.8	106	95.6	85.0-115			10.3	20
Ethane	129	129	118	100	91.2	85.0-115			9.33	20
Ethene	127	128	116	100	91.3	85.0-115			9.50	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3180289-1 11/23/16 15:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L873914-06 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-06 11/23/16 15:25 • (DUP) R3180289-2 11/23/16 15:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	399	417	1	4.34		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180289-3 11/23/16 15:39 • (LCSD) R3180289-4 11/23/16 15:42

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	%	%	%			%	%
Methane	67.8	59.3	60.1	87.4	88.7	85.0-115			1.45	20
Ethane	129	115	117	89.2	90.4	85.0-115			1.33	20
Ethene	127	112	114	88.5	89.6	85.0-115			1.33	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3180839-1 11/28/16 08:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L873914-09 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-09 11/28/16 11:20 • (DUP) R3180839-2 11/28/16 11:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L873914-19 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-19 11/28/16 12:07 • (DUP) R3180839-3 11/28/16 13:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180839-4 11/28/16 13:41 • (LCSD) R3180839-5 11/28/16 13:44

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	68.2	68.5	101	101	85.0-115			0.440	20
Ethane	129	128	129	99.0	99.7	85.0-115			0.750	20
Ethene	127	126	127	98.9	100	85.0-115			1.12	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3180885-1 11/28/16 14:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0

1 Cp

2 Tc

3 Ss

L873914-14 Original Sample (OS) • Duplicate (DUP)

(OS) L873914-14 11/28/16 14:24 • (DUP) R3180885-2 11/28/16 14:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	651	645	2	0.990		20

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180885-3 11/28/16 14:43 • (LCSD) R3180885-4 11/28/16 14:55

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	62.0	61.3	91.4	90.4	85.0-115			1.09	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3181142-3 11/27/16 12:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Toluene	U		0.780	5.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	101			90.0-115
(S) Dibromofluoromethane	89.0			79.0-121
(S) a,a,a-Trifluorotoluene	95.6			90.4-116
(S) 4-Bromofluorobenzene	92.5			80.1-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3181142-1 11/27/16 11:50 • (LCSD) R3181142-2 11/27/16 12:03

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	%	%	%			%	%
Benzene	25.0	22.9	23.5	91.6	94.2	73.0-122			2.79	20
Ethylbenzene	25.0	23.3	24.3	93.1	97.1	80.9-121			4.28	20
Toluene	25.0	22.5	23.0	90.1	91.9	77.9-116			1.97	20
Xylenes, Total	75.0	69.6	71.7	92.8	95.6	79.2-122			3.06	20
(S) Toluene-d8				105	102	90.0-115				
(S) Dibromofluoromethane				93.9	93.6	79.0-121				
(S) a,a,a-Trifluorotoluene				101	97.2	90.4-116				
(S) 4-Bromofluorobenzene				95.8	95.3	80.1-120				

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3180852-3 11/26/16 05:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Toluene	U		0.780	5.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	105			90.0-115
(S) Dibromofluoromethane	99.7			79.0-121
(S) a,a,a-Trifluorotoluene	101			90.4-116
(S) 4-Bromofluorobenzene	102			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) R3180852-1 11/26/16 03:20 • (LCSD) R3180852-2 11/26/16 04:19

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	%	%	%			%	%
Benzene	25.0	25.9	22.4	103	89.7	73.0-122			14.2	20
Ethylbenzene	25.0	25.0	22.3	100	89.2	80.9-121			11.5	20
Toluene	25.0	25.7	22.1	103	88.5	77.9-116			15.1	20
Xylenes, Total	75.0	77.3	68.8	103	91.7	79.2-122			11.6	20
(S) Toluene-d8				105	104	90.0-115				
(S) Dibromofluoromethane				99.0	102	79.0-121				
(S) a,a,a-Trifluorotoluene				99.5	98.5	90.4-116				
(S) 4-Bromofluorobenzene				106	107	80.1-120				

L873951-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L873951-02 11/26/16 07:04 • (MS) R3180852-4 11/26/16 05:21 • (MSD) R3180852-5 11/26/16 05:41

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	%	%		%			%	%
Benzene	25.0	151	1460	1450	105	104	50	58.6-133			0.510	20
Ethylbenzene	25.0	125	1410	1410	103	103	50	62.7-136			0.330	20
Toluene	25.0	ND	1360	1320	109	106	50	67.8-124			2.52	20
Xylenes, Total	75.0	ND	3970	3980	106	106	50	65.6-133			0.200	20
(S) Toluene-d8					106	106		90.0-115				
(S) Dibromofluoromethane					101	101		79.0-121				
(S) a,a,a-Trifluorotoluene					102	99.7		90.4-116				
(S) 4-Bromofluorobenzene					104	106		80.1-120				



Method Blank (MB)

(MB) R3180325-1 11/22/16 16:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		83.3	250
Residual Range Organics (RRO)	U		167	500
(S) o-Terphenyl	114			50.0-150

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180325-2 11/22/16 16:53 • (LCSD) R3180325-3 11/22/16 17:09

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	775	778	103	104	50.0-150			0.360	20
Residual Range Organics (RRO)	750	799	800	107	107	50.0-150			0.130	20
(S) o-Terphenyl				114	115	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) R3180005-3 11/22/16 15:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Anthracene	U		0.00800	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.00700	0.0500
Benzo(a)anthracene	U		0.00830	0.0500
Benzo(a)pyrene	U		0.0158	0.0500
Benzo(b)fluoranthene	0.00315	J	0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0255	0.0500
Chrysene	U		0.0144	0.0500
Dibenz(a,h)anthracene	U		0.00454	0.0500
Fluoranthene	U		0.0165	0.0500
Fluorene	U		0.00898	0.0500
Indeno(1,2,3-cd)pyrene	U		0.00739	0.0500
Naphthalene	0.0179	J	0.0123	0.250
Phenanthrene	U		0.0184	0.0500
Pyrene	U		0.0155	0.0500
1-Methylnaphthalene	U		0.0189	0.250
2-Methylnaphthalene	U		0.0155	0.250
2-Chloronaphthalene	U		0.0165	0.250
(S) Nitrobenzene-d5	64.3			18.0-137
(S) 2-Fluorobiphenyl	86.8			38.8-115
(S) p-Terphenyl-d14	94.1			33.9-128

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) R3180005-1 11/22/16 15:09 • (LCSD) R3180005-2 11/22/16 15:31

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	%	%	%			%	%
Anthracene	2.00	1.51	1.83	75.6	91.5	51.8-119			19.1	20
Acenaphthene	2.00	1.42	1.70	71.2	84.8	50.6-107			17.4	20
Acenaphthylene	2.00	1.44	1.73	71.9	86.3	50.1-108			18.1	20
Benzo(a)anthracene	2.00	1.68	1.84	83.8	92.2	47.4-121			9.57	20
Benzo(a)pyrene	2.00	1.71	1.90	85.6	95.2	49.8-119			10.6	20
Benzo(b)fluoranthene	2.00	1.62	1.82	81.0	90.8	47.4-119			11.4	20.2
Benzo(g,h,i)perylene	2.00	1.55	1.75	77.4	87.7	37.2-129			12.5	21.3
Benzo(k)fluoranthene	2.00	1.72	1.90	86.2	95.1	47.5-122			9.77	20
Chrysene	2.00	1.66	1.88	83.1	94.1	48.6-126			12.4	20
Dibenz(a,h)anthracene	2.00	1.56	1.81	77.8	90.5	34.1-130			15.1	21
Fluoranthene	2.00	1.63	1.91	81.7	95.6	50.9-123			15.7	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180005-1 11/22/16 15:09 • (LCSD) R3180005-2 11/22/16 15:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	1.43	1.72	71.3	85.9	50.2-110			18.6	20
Indeno(1,2,3-cd)pyrene	2.00	1.60	1.83	79.8	91.4	45.3-125			13.6	20
Naphthalene	2.00	1.34	1.54	66.8	76.8	45.7-101			14.0	20
Phenanthrene	2.00	1.38	1.65	69.0	82.5	47.7-113			17.9	20
Pyrene	2.00	1.54	1.82	77.0	91.0	44.5-125			16.6	20
1-Methylnaphthalene	2.00	1.55	1.85	77.7	92.7	48.8-109			17.7	20
2-Methylnaphthalene	2.00	1.43	1.70	71.4	84.9	46.7-107			17.2	20
2-Chloronaphthalene	2.00	1.42	1.67	71.2	83.4	50.3-105			15.9	20
<i>(S) Nitrobenzene-d5</i>				63.2	69.3	18.0-137				
<i>(S) 2-Fluorobiphenyl</i>				80.6	94.4	38.8-115				
<i>(S) p-Terphenyl-d14</i>				88.4	98.5	33.9-128				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3180199-3 11/22/16 12:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acenaphthene	U		0.316	1.00
Acenaphthylene	U		0.309	1.00
Anthracene	U		0.291	1.00
Benzo(a)anthracene	U		0.0975	1.00
Benzo(b)fluoranthene	U		0.0896	1.00
Benzo(k)fluoranthene	U		0.355	1.00
Benzo(g,h,i)perylene	U		0.161	1.00
Benzo(a)pyrene	U		0.340	1.00
Chrysene	U		0.332	1.00
Dibenz(a,h)anthracene	U		0.279	1.00
Fluoranthene	U		0.310	1.00
Fluorene	U		0.323	1.00
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Naphthalene	U		0.372	1.00
Phenanthrene	U		0.366	1.00
Pyrene	U		0.330	1.00
2-Methylphenol	U		0.312	10.0
3&4-Methyl Phenol	U		0.266	10.0
<i>(S) Nitrobenzene-d5</i>	79.0			21.8-123
<i>(S) 2-Fluorobiphenyl</i>	90.8			29.5-131
<i>(S) p-Terphenyl-d14</i>	95.3			29.3-137
<i>(S) Phenol-d5</i>	55.4			5.00-70.1
<i>(S) 2-Fluorophenol</i>	70.2			10.0-77.9
<i>(S) 2,4,6-Tribromophenol</i>	83.8			11.2-130

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) R3180199-1 11/22/16 11:53 • (LCSD) R3180199-2 11/22/16 12:16

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	%	%	%			%	%
Acenaphthene	50.0	45.3	44.8	90.7	89.5	38.7-109			1.29	21.5
Acenaphthylene	50.0	46.9	46.3	93.8	92.6	36.0-106			1.36	21
Anthracene	50.0	45.7	45.0	91.5	89.9	43.6-113			1.75	18.8
Benzo(a)anthracene	50.0	43.6	42.4	87.2	84.9	51.2-112			2.76	20
Benzo(b)fluoranthene	50.0	44.9	44.9	89.9	89.8	47.6-111			0.0800	20
Benzo(k)fluoranthene	50.0	44.2	43.6	88.4	87.1	49.4-114			1.46	20
Benzo(g,h,i)perylene	50.0	45.2	45.6	90.3	91.2	45.2-117			0.910	20
Benzo(a)pyrene	50.0	44.4	44.3	88.9	88.6	45.6-106			0.290	20
Chrysene	50.0	46.2	44.5	92.5	89.1	54.6-120			3.75	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3180199-1 11/22/16 11:53 • (LCSD) R3180199-2 11/22/16 12:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Dibenz(a,h)anthracene	50.0	45.2	44.9	90.4	89.9	42.8-118			0.590	20
Fluoranthene	50.0	45.3	45.2	90.7	90.4	45.9-115			0.240	20
Fluorene	50.0	45.6	44.9	91.2	89.9	41.0-112			1.43	20.2
Indeno(1,2,3-cd)pyrene	50.0	45.6	45.7	91.3	91.3	45.0-116			0.0700	20
Naphthalene	50.0	40.1	39.9	80.1	79.7	32.2-101			0.540	23.8
Phenanthrene	50.0	43.8	43.2	87.6	86.4	46.4-113			1.37	20
Pyrene	50.0	45.5	44.0	91.0	87.9	46.3-117			3.45	20
2-Methylphenol	50.0	39.5	39.2	78.9	78.5	26.4-86.9			0.570	26.5
3&4-Methyl Phenol	50.0	44.3	44.1	88.6	88.1	27.9-92.0			0.580	27
<i>(S) Nitrobenzene-d5</i>				84.7	78.3	21.8-123				
<i>(S) 2-Fluorobiphenyl</i>				97.4	87.4	29.5-131				
<i>(S) p-Terphenyl-d14</i>				102	89.7	29.3-137				
<i>(S) Phenol-d5</i>				57.9	53.7	5.00-70.1				
<i>(S) 2-Fluorophenol</i>				72.1	65.9	10.0-77.9				
<i>(S) 2,4,6-Tribromophenol</i>				104	91.6	11.2-130				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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.
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.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

- 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		

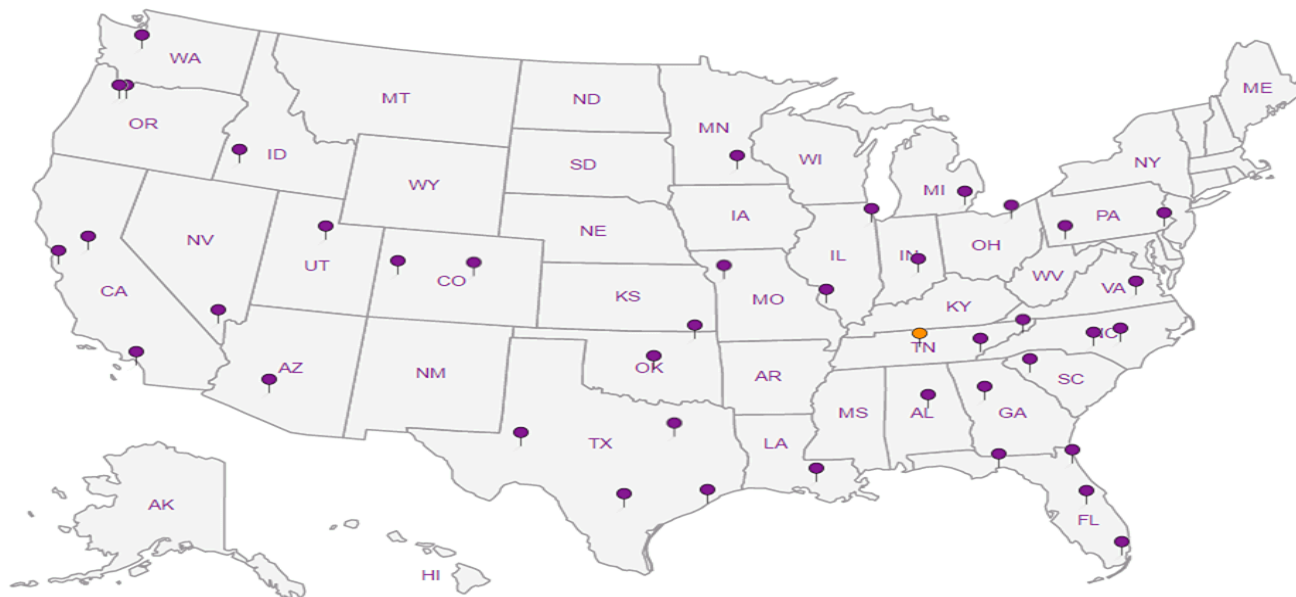
Third Party & Federal Accreditations

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.**



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information & Quote Number:
 Shane DeGross
 605 Puyallup Ave S
 Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: **RyanHultgren@kennedyjenks.com,**
JosephSawdey@Kennedyjenks.com,

Project
 Description: **BNSF - Wishram Railyard, WA**

City/State
 Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Client Project #
1696120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson / Joe Smiley

Site/Facility ID #

P.O. #

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
 Email? ___ No **X** Yes
 FAX? ___ No ___ Yes

Immediately
 Packed on Ice N ___ Y **✓**

Analysis / Container / Preservative	
PAHS ONLY 8270-PAHS + Cresols 100ml/ Amb NoPres	✓
PAHS + Cresols	✓
Discolored Fe Mn, Pb Fe, Mn, Pb + Arsenic	✓
NH3, NO2NO3 250mlHDPE-H2SO4	✓
NWTPHDXLVI 40mlAmb-HCl-BT	✓
NWTPHGX 40mlAmb HCl	✓
RSK175 40mlAmb HCl	✓
Sulfate 125mlHDPE-NoPres	✓
Sulfide 125mlAmb-S-NaOH+ZnAc	✓
Pb ONLY Total Pb 250mlHDPE-HNO3 Pb + Arsenic	✓
V8260BTEX 40mlAmb-HCl	✓

Chain of Custody Page ___ of ___



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
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L# **L873914**
J030
 Acctnum: **BNSF1KEN**
 Template: **T117134**
 Prelogin: **P573684**
 TSR: 134 - Mark W. Beasley
 PB: **10.25.166**
 Shipped Via: **FedEX Ground**
 Rem./Contaminant Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	PAHS ONLY	PAHS + Cresols	Discolored Fe Mn, Pb	NH3, NO2NO3	NWTPHDXLVI	NWTPHGX	RSK175	Sulfate	Sulfide	Pb ONLY	V8260BTEX	Rem./Contaminant	Sample # (lab only)
RMD-4-20161115	grab	GW	55'	11-15-16	13:42	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		-01
WMW-18-20161115	grab	GW	20'	11-15-16	15:40	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		02
RMD-3-20161115	grab	GW	50'	11-15-16	16:30	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		03
WMW-16-20161116	grab	GW	20'	11-16-16	8:50	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		04
RMD-2-20161116	grab	GW	40'	11-16-16	10:45	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		05
WMW-17-20161116	grab	GW	20'	11-16-16	12:00	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		06
WMW-14-20161116	grab	GW	20'	11-16-16	12:20	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		07
WMW-11-20161116	grab	GW	15'	11-16-16	14:10	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		08
WMW-10-20161116	grab	GW	15'	11-16-16	15:05	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		09
WMW-1-20161116	grab	GW	15'	11-16-16	15:25	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: pH _____ Temp _____ 7066 8122 3508
 Flow _____ Other _____ Hold #

Relinquished by: (Signature)
Alice Robinson

Date: **11-18-16**
 Time: **1:10**

Received by: (Signature)

Samples returned via: UPS
 FedEx Courier _____

Condition: (lab use only)
MB

Relinquished by: (Signature)

Date: _____
 Time: _____

Received by: (Signature)

Temp: **24** °C Bottles Received: **271 + 15x4**

COC Seal Intact: Y N NA

Relinquished by: (Signature)

Date: _____
 Time: _____

Received for lab by: (Signature)
RA

Date: **1-19-16** Time: **0900**


pH Checked: **22** NCF: _____

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information & Quote Number:
 Shane DeGross
 605 Puyallup Ave S
 Tacoma, WA 98421

Analysis / Container / Preservative


Chain of Custody Page ___ of ___



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project:
 Description: **BNSF - Wishram Railyard, WA**

City/State
 Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Client Project #
1696120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson / Joe Smuder

Site/Facility ID #

P.O. #

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
 Email? ___No **X** Yes
 FAX? ___No ___Yes

Immediately
 Packed on Ice N ___ Y ___

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8276 PAHs	8276 PAHs + Cresols	100ml Amb NoPres	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPDXLVI 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Sulfide 125mlAmb-S-NaOH+ZnAc	Total Pb 250mlHDPE-HNO3	Pb + Arsenic	V8260BTEX 40mlAmb-HCl
WMW-9-20161116	grab	GW	15'	11-16-16	16:05	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WMW-13-20161116	grab	GW	15'	11-16-16	16:55	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
RMD-1-20161117	grab	GW	37.5'	11-17-16	9:20	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WMW-15-20161117	grab	GW	20'	11-17-16	11:30	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WMW-5-20161117	grab	GW	15'	11-17-16	11:55	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WMW-7-20161117	grab	GW	15'	11-17-16	13:45	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WMW-12-20161117	grab	GW	15'	11-17-16	15:35	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
AR WMW-3-20161117	grab	GW	15'	11-17-16	16:45	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DUP-14-20161117	grab	GW	15'	11-17-16		15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
AR		GW																

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: pH _____ Temp _____ 7066 8122 3508
 Flow _____ Other _____ Hold #

Relinquished by: (Signature)
Alice Robinson

Date: **11-18-16**
 Time: **1:10**

Received by: (Signature)

Samples returned via: UPS
 FedEx Courier

Condition: (lab use only)
113

Relinquished by: (Signature)

Date: _____
 Time: _____

Received by: (Signature)

Temp: **21** °C Bottles Received: **271 + 10A**

COC Seal Intact: **C** Y ___ N ___ NA

Relinquished by: (Signature)

Date: _____
 Time: _____

Received for lab by: (Signature)
Halo **RA**

Date: **11-19-16**
 Time: **0900**

pH Checked: **c2**
 NCF: _____



Cooler Receipt Form			
Client:	BNSFIKEN	SDG#	L873914
Cooler Received/Opened On:	11-19-16	Temperature Upon Receipt:	2.4 °c
Received By: Richard Hughes			
Signature: <i>[Handwritten Signature]</i>			
Receipt Check List			
	Yes	No	N/A
Were custody seals on outside of cooler and intact?	/		
Were custody papers properly filled out?	/		
Did all bottles arrive in good condition?	/		
Were correct bottles used for the analyses requested?	/		
Was sufficient amount of sample sent in each bottle?	/		
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?		/	
Non Conformance Generated. (If yes see attached NCF)			

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L875439
Samples Received: 11/19/2016
Project Number: 1696120
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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.



¹Cp: Cover Page	1	
²Tc: Table of Contents	2	
³Ss: Sample Summary	3	
⁴Cn: Case Narrative	4	
⁵Sr: Sample Results	5	
TRIP BLANK-1 L875439-01	5	
TRIP BLANK-2 L875439-02	6	
TRIP BLANK-3 L875439-03	7	
TRIP BLANK-4 L875439-04	8	
⁶Qc: Quality Control Summary	9	
Volatile Organic Compounds (GC/MS) by Method 8260B	9	
⁷Gl: Glossary of Terms	10	
⁸Al: Accreditations & Locations	11	
⁹Sc: Chain of Custody	12	

SAMPLE SUMMARY



TRIP BLANK-1 L875439-01 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG930921	1	12/01/16 11:40	12/01/16 11:40	JHH

Collected by AR / JS Collected date/time 11/17/16 00:00 Received date/time 11/19/16 09:00

¹ Cp

² Tc

³ Ss

TRIP BLANK-2 L875439-02 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG930921	1	12/01/16 12:04	12/01/16 12:04	JHH

Collected by AR / JS Collected date/time 11/17/16 00:00 Received date/time 11/19/16 09:00

⁴ Cn

⁵ Sr

TRIP BLANK-3 L875439-03 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG930921	1	12/01/16 12:27	12/01/16 12:27	JHH

Collected by AR / JS Collected date/time 11/17/16 00:00 Received date/time 11/19/16 09:00

⁶ Qc

⁷ Gl

TRIP BLANK-4 L875439-04 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG930921	1	12/01/16 12:51	12/01/16 12:51	JHH

Collected by AR / JS Collected date/time 11/17/16 00:00 Received date/time 11/19/16 09:00

⁸ Al

⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Mark W. Beasley
Technical Service Representative

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/01/2016 11:40	WG930921
Toluene	ND		5.00	1	12/01/2016 11:40	WG930921
Ethylbenzene	ND		1.00	1	12/01/2016 11:40	WG930921
Total Xylenes	ND		3.00	1	12/01/2016 11:40	WG930921
<i>(S) Toluene-d8</i>	102		90.0-115		12/01/2016 11:40	WG930921
<i>(S) Dibromofluoromethane</i>	104		79.0-121		12/01/2016 11:40	WG930921
<i>(S) a,a,a-Trifluorotoluene</i>	103		90.4-116		12/01/2016 11:40	WG930921
<i>(S) 4-Bromofluorobenzene</i>	96.3		80.1-120		12/01/2016 11:40	WG930921

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	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/01/2016 12:04	WG930921
Toluene	ND		5.00	1	12/01/2016 12:04	WG930921
Ethylbenzene	ND		1.00	1	12/01/2016 12:04	WG930921
Total Xylenes	ND		3.00	1	12/01/2016 12:04	WG930921
<i>(S) Toluene-d8</i>	100		90.0-115		12/01/2016 12:04	WG930921
<i>(S) Dibromofluoromethane</i>	106		79.0-121		12/01/2016 12:04	WG930921
<i>(S) a,a,a-Trifluorotoluene</i>	99.8		90.4-116		12/01/2016 12:04	WG930921
<i>(S) 4-Bromofluorobenzene</i>	96.2		80.1-120		12/01/2016 12:04	WG930921

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	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/01/2016 12:27	WG930921
Toluene	ND		5.00	1	12/01/2016 12:27	WG930921
Ethylbenzene	ND		1.00	1	12/01/2016 12:27	WG930921
Total Xylenes	ND		3.00	1	12/01/2016 12:27	WG930921
<i>(S) Toluene-d8</i>	100		90.0-115		12/01/2016 12:27	WG930921
<i>(S) Dibromofluoromethane</i>	103		79.0-121		12/01/2016 12:27	WG930921
<i>(S) a,a,a-Trifluorotoluene</i>	99.6		90.4-116		12/01/2016 12:27	WG930921
<i>(S) 4-Bromofluorobenzene</i>	95.2		80.1-120		12/01/2016 12:27	WG930921

- 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	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/01/2016 12:51	WG930921
Toluene	ND		5.00	1	12/01/2016 12:51	WG930921
Ethylbenzene	ND		1.00	1	12/01/2016 12:51	WG930921
Total Xylenes	ND		3.00	1	12/01/2016 12:51	WG930921
<i>(S) Toluene-d8</i>	101		90.0-115		12/01/2016 12:51	WG930921
<i>(S) Dibromofluoromethane</i>	105		79.0-121		12/01/2016 12:51	WG930921
<i>(S) a,a,a-Trifluorotoluene</i>	101		90.4-116		12/01/2016 12:51	WG930921
<i>(S) 4-Bromofluorobenzene</i>	96.8		80.1-120		12/01/2016 12:51	WG930921

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3181838-3 12/01/16 10:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Toluene	U		0.780	5.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	101			90.0-115
(S) Dibromofluoromethane	104			79.0-121
(S) a,a,a-Trifluorotoluene	100			90.4-116
(S) 4-Bromofluorobenzene	93.4			80.1-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3181838-1 12/01/16 09:13 • (LCSD) R3181838-2 12/01/16 09:37

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	%	%	%			%	%
Benzene	25.0	23.6	23.2	94.2	92.8	73.0-122			1.51	20
Ethylbenzene	25.0	21.3	21.5	85.2	86.1	80.9-121			0.990	20
Toluene	25.0	22.0	22.1	87.8	88.3	77.9-116			0.540	20
Xylenes, Total	75.0	63.7	64.2	85.0	85.6	79.2-122			0.720	20
(S) Toluene-d8				103	102	90.0-115				
(S) Dibromofluoromethane				106	105	79.0-121				
(S) a,a,a-Trifluorotoluene				101	101	90.4-116				
(S) 4-Bromofluorobenzene				95.2	95.4	80.1-120				

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.
(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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



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		

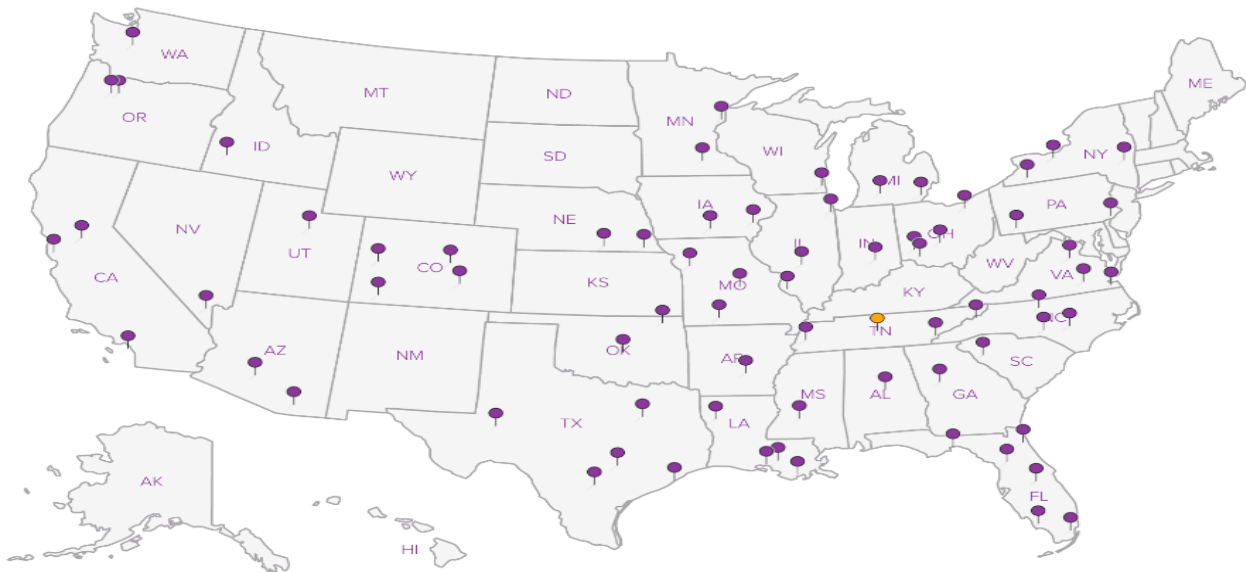
Third Party & Federal Accreditations

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.**



Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information & Quote Number:

Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
Joseph.Sawdey@kennedyjenks.com,

Project Description: BNSF - Wishram Rallyard, WA

City/State Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1696120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson / Joe Smucker

Site/Facility ID #

P.O. #

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)

Date Results Needed

Immediately
Packed on Ice N Y

Same Day _____ 200%
Next Day _____ 100%
Two Day _____ 50%
Three Day _____ 25%

Email? No X Yes

FAX? No Yes

No. of
Cnts

Analysis / Container / Preservative

Chain of Custody Page of



YOUR LAB OF CHOICE

13065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



LV 1873114

Table # 875739

Acctnum: BNSF1KEN

Template: T117134

Prelogin: P573684

TSR: 134 - Mark W. Beasley

PB: 10-25-16

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Analysis / Container / Preservative
WMW-9-20161116	grab	GW	15'	11-16-16	16:05	13	0270 PHS + Cresols 100ml Amb NoPres
WMW-13-20161116	grab	GW	15'	11-16-16	16:55	15	0270 PHS + Cresols 100ml Amb NoPres
RMD-1-20161117	grab	GW	37.5'	11-17-16	9:20	15	0270 PHS + Cresols 100ml Amb NoPres
WMW-15-20161117	grab	GW	20'	11-17-16	11:30	15	0270 PHS + Cresols 100ml Amb NoPres
WMW-5-20161117	grab	GW	15'	11-17-16	11:55	13	0270 PHS + Cresols 100ml Amb NoPres
WMW-7-20161117	grab	GW	15'	11-17-16	13:45	13	0270 PHS + Cresols 100ml Amb NoPres
WMW-12-20161117	grab	GW	15'	11-17-16	15:35	15	0270 PHS + Cresols 100ml Amb NoPres
WMW-3-20161117	grab	GW	15'	11-17-16	16:45	13	0270 PHS + Cresols 100ml Amb NoPres
DUP-1-20161117	grab	GW	15'	11-17-16		15	0270 PHS + Cresols 100ml Amb NoPres
AR		GW					

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: TB
TB
TB

pH _____ Temp _____
Flow _____ Other _____

7066 8122 3508
Hold # 03

Relinquished by: (Signature)
Alice Robinson

Date: 11-18-16
Time: 1:10

Received by: (Signature)
[Signature]

Samples returned via: UPS
 FedEx Courier _____

Condition: (lab use only) 173

Relinquished by: (Signature)

Date: _____
Time: _____

Received by: (Signature)

Temp: 2.9 °C Bottles Received: 271 + 104

COC Seal Intact: Y N NA

Relinquished by: (Signature)

Date: _____
Time: _____

Received for lab by: (Signature)
[Signature]

Date: 11-19-16 Time: 0900

pH Checked: NCF:

Matt Shacklock

From: Mark Beasley
Sent: Wednesday, November 30, 2016 12:06 PM
To: Login; Sample Storage
Subject: L873914 *BNSF1KEN* relog

Relog all 4 trip blanks (4 dash #'s) for V8260BTEX & EDD. Log as RX due 12/2.

Thanks

Mark Beasley

ESC Lab Sciences

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Email: mbeasley@esclabsciences.com

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Groundwater Analytical Reports
27 January 2017

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L886938
Samples Received: 01/31/2017
Project Number: 1696120.00
Description: BNSF - Wishram Railyard, WA
Site: WISHRAM
Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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

MW-18-20170127 L886938-01 GW

Collected by
Alice Robinson
Collected date/time
01/27/17 10:50
Received date/time
01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG948737	1	02/02/17 09:38	02/02/17 11:50	CCE
Metals (ICP) by Method 6010C	WG948740	1	02/02/17 09:39	02/02/17 13:22	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG948253	1	02/01/17 09:41	02/01/17 17:53	JF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG947950	1	01/31/17 19:06	02/01/17 16:44	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG948712	1	02/02/17 16:56	02/02/17 16:56	JHH
Volatile Organic Compounds (GC) by Method RSK175	WG948484	1	02/02/17 09:00	02/02/17 09:00	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG948284	1	02/01/17 15:02	02/01/17 15:02	BMB
Wet Chemistry by Method 350.1	WG949320	1	02/06/17 11:41	02/06/17 11:41	DR
Wet Chemistry by Method 353.2	WG949322	1	02/06/17 11:14	02/06/17 11:14	DR
Wet Chemistry by Method 4500S2 D-2011	WG948161	1	01/31/17 20:50	01/31/17 20:50	MZ
Wet Chemistry by Method 9056A	WG948565	1	02/02/17 17:21	02/02/17 17:21	SAM

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

MW-17-20170127 L886938-02 GW

Collected by
Alice Robinson
Collected date/time
01/27/17 11:30
Received date/time
01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG948737	1	02/02/17 09:38	02/02/17 12:00	CCE
Metals (ICP) by Method 6010C	WG948740	1	02/02/17 09:39	02/02/17 13:39	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG948613	1	02/03/17 18:08	02/07/17 05:31	KMP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG947950	1	01/31/17 19:06	02/01/17 17:01	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG948712	1	02/02/17 17:18	02/02/17 17:18	JHH
Volatile Organic Compounds (GC) by Method RSK175	WG948484	1	02/02/17 09:02	02/02/17 09:02	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG948800	5	02/02/17 10:17	02/02/17 10:17	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG948284	1	02/01/17 15:16	02/01/17 15:16	BMB
Wet Chemistry by Method 350.1	WG949320	1	02/06/17 11:43	02/06/17 11:43	DR
Wet Chemistry by Method 353.2	WG949322	1	02/06/17 11:15	02/06/17 11:15	DR
Wet Chemistry by Method 4500S2 D-2011	WG948161	1	01/31/17 20:50	01/31/17 20:50	MZ
Wet Chemistry by Method 9056A	WG948565	1	02/02/17 17:37	02/02/17 17:37	SAM

MW-16-20170127 L886938-03 GW

Collected by
Alice Robinson
Collected date/time
01/27/17 13:20
Received date/time
01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG948737	1	02/02/17 09:38	02/02/17 12:03	CCE
Metals (ICP) by Method 6010C	WG948740	1	02/02/17 09:39	02/02/17 13:41	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG948253	1	02/01/17 09:41	02/01/17 18:16	JF
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG947950	5	01/31/17 19:06	02/01/17 18:07	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG948712	1	02/02/17 17:40	02/02/17 17:40	JHH
Volatile Organic Compounds (GC) by Method RSK175	WG948484	1	02/02/17 09:04	02/02/17 09:04	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG948800	10	02/02/17 10:23	02/02/17 10:23	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG948284	1	02/01/17 15:29	02/01/17 15:29	BMB
Wet Chemistry by Method 350.1	WG949320	1	02/06/17 11:44	02/06/17 11:44	DR
Wet Chemistry by Method 353.2	WG949322	1	02/06/17 11:17	02/06/17 11:17	DR
Wet Chemistry by Method 4500S2 D-2011	WG948161	1	01/31/17 20:50	01/31/17 20:50	MZ
Wet Chemistry by Method 9056A	WG948565	1	02/02/17 17:53	02/02/17 17:53	SAM

MW-15-20170127 L886938-04 GW

Collected by
Alice Robinson
Collected date/time
01/27/17 16:00
Received date/time
01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG948737	1	02/02/17 09:38	02/02/17 12:06	CCE
Metals (ICP) by Method 6010C	WG948740	1	02/02/17 09:39	02/02/17 13:44	ST

SAMPLE SUMMARY



MW-15-20170127 L886938-04 GW

Collected by
Alice Robinson
Collected date/time
01/27/17 16:00
Received date/time
01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG947950	1	01/31/17 19:06	02/01/17 17:34	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG948712	1	02/02/17 18:02	02/02/17 18:02	JHH
Volatile Organic Compounds (GC) by Method RSK175	WG948484	1	02/02/17 09:07	02/02/17 09:07	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG948284	1	02/01/17 15:42	02/01/17 15:42	BMB
Wet Chemistry by Method 350.1	WG949320	1	02/06/17 11:46	02/06/17 11:46	DR
Wet Chemistry by Method 353.2	WG949322	1	02/06/17 11:18	02/06/17 11:18	DR
Wet Chemistry by Method 4500S2 D-2011	WG948161	1	01/31/17 20:50	01/31/17 20:50	MZ
Wet Chemistry by Method 9056A	WG948565	1	02/02/17 18:09	02/02/17 18:09	SAM

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

MW-14-20170127 L886938-05 GW

Collected by
Alice Robinson
Collected date/time
01/27/17 17:10
Received date/time
01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG948737	1	02/02/17 09:38	02/02/17 12:14	CCE
Metals (ICP) by Method 6010C	WG948740	1	02/02/17 09:39	02/02/17 13:47	ST
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG947950	1	01/31/17 19:06	02/01/17 17:17	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG948712	1	02/02/17 18:25	02/02/17 18:25	JHH
Volatile Organic Compounds (GC) by Method RSK175	WG948484	1	02/02/17 09:12	02/02/17 09:12	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG948284	1	02/01/17 15:56	02/01/17 15:56	BMB
Wet Chemistry by Method 350.1	WG949320	1	02/06/17 11:49	02/06/17 11:49	DR
Wet Chemistry by Method 353.2	WG949322	1	02/06/17 11:20	02/06/17 11:20	DR
Wet Chemistry by Method 4500S2 D-2011	WG948161	1	01/31/17 20:51	01/31/17 20:51	MZ
Wet Chemistry by Method 9056A	WG948565	1	02/02/17 18:25	02/02/17 18:25	SAM

DUP-20170127 L886938-06 GW

Collected by
Alice Robinson
Collected date/time
01/27/17 12:00
Received date/time
01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010C	WG948737	1	02/02/17 09:38	02/02/17 13:09	RDS
Metals (ICP) by Method 6010C	WG948740	1	02/02/17 09:39	02/02/17 13:50	ST
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG947950	5	01/31/17 19:06	02/01/17 17:50	TRF
Volatile Organic Compounds (GC) by Method NWTPHGX	WG948712	1	02/02/17 18:47	02/02/17 18:47	JHH
Volatile Organic Compounds (GC) by Method RSK175	WG948484	1	02/02/17 09:15	02/02/17 09:15	MJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG948284	1	02/01/17 16:10	02/01/17 16:10	BMB
Wet Chemistry by Method 350.1	WG949772	1	02/06/17 14:34	02/06/17 14:34	DR
Wet Chemistry by Method 353.2	WG949322	1	02/06/17 11:27	02/06/17 11:27	DR
Wet Chemistry by Method 4500S2 D-2011	WG948161	1	01/31/17 20:51	01/31/17 20:51	MZ
Wet Chemistry by Method 9056A	WG948565	1	02/02/17 19:12	02/02/17 19:12	SAM

TRIP BLANK-01 L886938-07 GW

Collected by
Alice Robinson
Collected date/time
01/27/17 00:00
Received date/time
01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG948284	1	02/01/17 14:08	02/01/17 14:08	BMB

TRIP BLANK-02 L886938-08 GW

Collected by
Alice Robinson
Collected date/time
01/27/17 00:00
Received date/time
01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG948284	1	02/01/17 14:21	02/01/17 14:21	BMB



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Mark W. Beasley
Technical Service Representative

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	173		100	1	02/06/2017 11:41	WG949320

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	1240		100	1	02/06/2017 11:14	WG949322

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	01/31/2017 20:50	WG948161

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	18500		5000	1	02/02/2017 17:21	WG948565

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	14.9		10.0	1	02/02/2017 11:50	WG948737
Arsenic,Dissolved	15.9		10.0	1	02/02/2017 13:22	WG948740
Iron,Dissolved	ND		100	1	02/02/2017 13:22	WG948740
Lead	ND		5.00	1	02/02/2017 11:50	WG948737
Lead,Dissolved	ND		5.00	1	02/02/2017 13:22	WG948740
Manganese,Dissolved	640		10.0	1	02/02/2017 13:22	WG948740

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	02/02/2017 16:56	WG948712
(S) a,a,a-Trifluorotoluene(FID)	98.2		77.0-122		02/02/2017 16:56	WG948712

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	70.3		10.0	1	02/02/2017 09:00	WG948484
Ethane	ND		13.0	1	02/02/2017 09:00	WG948484
Ethene	ND		13.0	1	02/02/2017 09:00	WG948484

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	02/01/2017 15:02	WG948284
Toluene	ND		1.00	1	02/01/2017 15:02	WG948284
Ethylbenzene	ND		1.00	1	02/01/2017 15:02	WG948284
Total Xylenes	ND		3.00	1	02/01/2017 15:02	WG948284
(S) Toluene-d8	104		80.0-120		02/01/2017 15:02	WG948284
(S) Dibromofluoromethane	93.5		76.0-123		02/01/2017 15:02	WG948284
(S) a,a,a-Trifluorotoluene	107		80.0-120		02/01/2017 15:02	WG948284
(S) 4-Bromofluorobenzene	110		80.0-120		02/01/2017 15:02	WG948284



Collected date/time: 01/27/17 10:50

L886938

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		250	1	02/01/2017 16:44	WG947950
Residual Range Organics (RRO)	ND		500	1	02/01/2017 16:44	WG947950
(S) o-Terphenyl	114		52.0-156		02/01/2017 16:44	WG947950

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acenaphthene	ND		1.00	1	02/01/2017 17:53	WG948253
Acenaphthylene	ND		1.00	1	02/01/2017 17:53	WG948253
Anthracene	ND		1.00	1	02/01/2017 17:53	WG948253
Benzo(a)anthracene	ND		1.00	1	02/01/2017 17:53	WG948253
Benzo(b)fluoranthene	ND		1.00	1	02/01/2017 17:53	WG948253
Benzo(k)fluoranthene	ND		1.00	1	02/01/2017 17:53	WG948253
Benzo(g,h,i)perylene	ND		1.00	1	02/01/2017 17:53	WG948253
Benzo(a)pyrene	ND		1.00	1	02/01/2017 17:53	WG948253
Chrysene	ND		1.00	1	02/01/2017 17:53	WG948253
Dibenz(a,h)anthracene	ND		1.00	1	02/01/2017 17:53	WG948253
Fluoranthene	ND		1.00	1	02/01/2017 17:53	WG948253
Fluorene	ND		1.00	1	02/01/2017 17:53	WG948253
Indeno(1,2,3-cd)pyrene	ND		1.00	1	02/01/2017 17:53	WG948253
Naphthalene	ND		1.00	1	02/01/2017 17:53	WG948253
Phenanthrene	ND		1.00	1	02/01/2017 17:53	WG948253
Pyrene	ND		1.00	1	02/01/2017 17:53	WG948253
2-Methylphenol	ND		10.0	1	02/01/2017 17:53	WG948253
3&4-Methyl Phenol	ND		10.0	1	02/01/2017 17:53	WG948253
(S) 2-Fluorophenol	33.7		10.0-120		02/01/2017 17:53	WG948253
(S) Phenol-d5	23.5		10.0-120		02/01/2017 17:53	WG948253
(S) Nitrobenzene-d5	57.4		10.0-126		02/01/2017 17:53	WG948253
(S) 2-Fluorobiphenyl	76.8		22.0-127		02/01/2017 17:53	WG948253
(S) 2,4,6-Tribromophenol	63.3		10.0-153		02/01/2017 17:53	WG948253
(S) p-Terphenyl-d14	89.5		29.0-141		02/01/2017 17:53	WG948253

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	234		100	1	02/06/2017 11:43	WG949320

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	02/06/2017 11:15	WG949322

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	01/31/2017 20:50	WG948161

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ND		5000	1	02/02/2017 17:37	WG948565

7 Gl

8 Al

9 Sc

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Arsenic	ND		10.0	1	02/02/2017 12:00	WG948737
Arsenic,Dissolved	13.3		10.0	1	02/02/2017 13:39	WG948740
Iron,Dissolved	5090		100	1	02/02/2017 13:39	WG948740
Lead	ND		5.00	1	02/02/2017 12:00	WG948737
Lead,Dissolved	ND		5.00	1	02/02/2017 13:39	WG948740
Manganese,Dissolved	1690		10.0	1	02/02/2017 13:39	WG948740

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	02/02/2017 17:18	WG948712
(S) a,a,a-Trifluorotoluene(FID)	98.5		77.0-122		02/02/2017 17:18	WG948712

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	2980		50.0	5	02/02/2017 10:17	WG948800
Ethane	ND		13.0	1	02/02/2017 09:02	WG948484
Ethene	ND		13.0	1	02/02/2017 09:02	WG948484

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	02/01/2017 15:16	WG948284
Toluene	ND		1.00	1	02/01/2017 15:16	WG948284
Ethylbenzene	ND		1.00	1	02/01/2017 15:16	WG948284
Total Xylenes	ND		3.00	1	02/01/2017 15:16	WG948284
(S) Toluene-d8	105		80.0-120		02/01/2017 15:16	WG948284
(S) Dibromofluoromethane	94.8		76.0-123		02/01/2017 15:16	WG948284
(S) a,a,a-Trifluorotoluene	110		80.0-120		02/01/2017 15:16	WG948284
(S) 4-Bromofluorobenzene	112		80.0-120		02/01/2017 15:16	WG948284



Collected date/time: 01/27/17 11:30

L886938

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2590		250	1	02/01/2017 17:01	WG947950
Residual Range Organics (RRO)	2310		500	1	02/01/2017 17:01	WG947950
(S) o-Terphenyl	120		52.0-156		02/01/2017 17:01	WG947950

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		1.00	1	02/07/2017 05:31	WG948613
Acenaphthene	ND		1.00	1	02/07/2017 05:31	WG948613
Acenaphthylene	ND		1.00	1	02/07/2017 05:31	WG948613
Benzo(a)anthracene	ND		1.00	1	02/07/2017 05:31	WG948613
Benzo(a)pyrene	ND		1.00	1	02/07/2017 05:31	WG948613
Benzo(b)fluoranthene	ND		1.00	1	02/07/2017 05:31	WG948613
Benzo(g,h,i)perylene	ND		1.00	1	02/07/2017 05:31	WG948613
Benzo(k)fluoranthene	ND		1.00	1	02/07/2017 05:31	WG948613
Chrysene	ND		1.00	1	02/07/2017 05:31	WG948613
Dibenz(a,h)anthracene	ND		1.00	1	02/07/2017 05:31	WG948613
Fluoranthene	ND		1.00	1	02/07/2017 05:31	WG948613
Fluorene	ND		1.00	1	02/07/2017 05:31	WG948613
Indeno(1,2,3-cd)pyrene	ND		1.00	1	02/07/2017 05:31	WG948613
Naphthalene	ND		1.00	1	02/07/2017 05:31	WG948613
Phenanthrene	ND		1.00	1	02/07/2017 05:31	WG948613
Pyrene	ND		1.00	1	02/07/2017 05:31	WG948613
(S) Nitrobenzene-d5	52.0		10.0-147		02/07/2017 05:31	WG948613
(S) 2-Fluorobiphenyl	64.4		15.0-137		02/07/2017 05:31	WG948613
(S) p-Terphenyl-d14	87.1		12.0-126		02/07/2017 05:31	WG948613

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	862		100	1	02/06/2017 11:44	WG949320

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	ND		100	1	02/06/2017 11:17	WG949322

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	01/31/2017 20:50	WG948161

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	ND		5000	1	02/02/2017 17:53	WG948565

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	9340		100	1	02/02/2017 13:41	WG948740
Lead	ND		5.00	1	02/02/2017 12:03	WG948737
Lead,Dissolved	ND		5.00	1	02/02/2017 13:41	WG948740
Manganese,Dissolved	2600		10.0	1	02/02/2017 13:41	WG948740

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	02/02/2017 17:40	WG948712
(S) a,a,a-Trifluorotoluene(FID)	98.8		77.0-122		02/02/2017 17:40	WG948712

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	5350		100	10	02/02/2017 10:23	WG948800
Ethane	ND		13.0	1	02/02/2017 09:04	WG948484
Ethene	ND		13.0	1	02/02/2017 09:04	WG948484

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	02/01/2017 15:29	WG948284
Toluene	ND		1.00	1	02/01/2017 15:29	WG948284
Ethylbenzene	ND		1.00	1	02/01/2017 15:29	WG948284
Total Xylenes	ND		3.00	1	02/01/2017 15:29	WG948284
(S) Toluene-d8	105		80.0-120		02/01/2017 15:29	WG948284
(S) Dibromofluoromethane	94.0		76.0-123		02/01/2017 15:29	WG948284
(S) a,a,a-Trifluorotoluene	108		80.0-120		02/01/2017 15:29	WG948284
(S) 4-Bromofluorobenzene	110		80.0-120		02/01/2017 15:29	WG948284



Collected date/time: 01/27/17 13:20

L886938

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	13500		1250	5	02/01/2017 18:07	WG947950
Residual Range Organics (RRO)	6650		2500	5	02/01/2017 18:07	WG947950
(S) o-Terphenyl	132		52.0-156		02/01/2017 18:07	WG947950

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		1.00	1	02/01/2017 18:16	WG948253
Acenaphthylene	ND		1.00	1	02/01/2017 18:16	WG948253
Anthracene	ND		1.00	1	02/01/2017 18:16	WG948253
Benzo(a)anthracene	ND		1.00	1	02/01/2017 18:16	WG948253
Benzo(b)fluoranthene	ND		1.00	1	02/01/2017 18:16	WG948253
Benzo(k)fluoranthene	ND		1.00	1	02/01/2017 18:16	WG948253
Benzo(g,h,i)perylene	ND		1.00	1	02/01/2017 18:16	WG948253
Benzo(a)pyrene	ND		1.00	1	02/01/2017 18:16	WG948253
Chrysene	ND		1.00	1	02/01/2017 18:16	WG948253
Dibenz(a,h)anthracene	ND		1.00	1	02/01/2017 18:16	WG948253
Fluoranthene	ND		1.00	1	02/01/2017 18:16	WG948253
Fluorene	ND		1.00	1	02/01/2017 18:16	WG948253
Indeno(1,2,3-cd)pyrene	ND		1.00	1	02/01/2017 18:16	WG948253
Naphthalene	ND		1.00	1	02/01/2017 18:16	WG948253
Phenanthrene	ND		1.00	1	02/01/2017 18:16	WG948253
Pyrene	ND		1.00	1	02/01/2017 18:16	WG948253
2-Methylphenol	ND		10.0	1	02/01/2017 18:16	WG948253
3&4-Methyl Phenol	ND		10.0	1	02/01/2017 18:16	WG948253
(S) 2-Fluorophenol	40.1		10.0-120		02/01/2017 18:16	WG948253
(S) Phenol-d5	28.9		10.0-120		02/01/2017 18:16	WG948253
(S) Nitrobenzene-d5	66.6		10.0-126		02/01/2017 18:16	WG948253
(S) 2-Fluorobiphenyl	89.6		22.0-127		02/01/2017 18:16	WG948253
(S) 2,4,6-Tribromophenol	98.8		10.0-153		02/01/2017 18:16	WG948253
(S) p-Terphenyl-d14	106		29.0-141		02/01/2017 18:16	WG948253

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	435		100	1	02/06/2017 11:46	WG949320

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	115		100	1	02/06/2017 11:18	WG949322

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	01/31/2017 20:50	WG948161

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	17200		5000	1	02/02/2017 18:09	WG948565

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	3080		100	1	02/02/2017 13:44	WG948740
Lead	ND		5.00	1	02/02/2017 12:06	WG948737
Lead,Dissolved	ND		5.00	1	02/02/2017 13:44	WG948740
Manganese,Dissolved	1610		10.0	1	02/02/2017 13:44	WG948740

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	02/02/2017 18:02	WG948712
(S) a,a,a-Trifluorotoluene(FID)	98.4		77.0-122		02/02/2017 18:02	WG948712

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	724		10.0	1	02/02/2017 09:07	WG948484
Ethane	ND		13.0	1	02/02/2017 09:07	WG948484
Ethene	ND		13.0	1	02/02/2017 09:07	WG948484

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	02/01/2017 15:42	WG948284
Toluene	ND		1.00	1	02/01/2017 15:42	WG948284
Ethylbenzene	ND		1.00	1	02/01/2017 15:42	WG948284
Total Xylenes	ND		3.00	1	02/01/2017 15:42	WG948284
(S) Toluene-d8	104		80.0-120		02/01/2017 15:42	WG948284
(S) Dibromofluoromethane	93.1		76.0-123		02/01/2017 15:42	WG948284
(S) a,a,a-Trifluorotoluene	108		80.0-120		02/01/2017 15:42	WG948284
(S) 4-Bromofluorobenzene	110		80.0-120		02/01/2017 15:42	WG948284



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3360		250	1	02/01/2017 17:34	WG947950
Residual Range Organics (RRO)	4180		500	1	02/01/2017 17:34	WG947950
<i>(S) o-Terphenyl</i>	120		52.0-156		02/01/2017 17:34	WG947950

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	02/06/2017 11:49	WG949320

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	1150		100	1	02/06/2017 11:20	WG949322

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	01/31/2017 20:51	WG948161

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	7350		5000	1	02/02/2017 18:25	WG948565

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	02/02/2017 13:47	WG948740
Lead	ND		5.00	1	02/02/2017 12:14	WG948737
Lead,Dissolved	ND		5.00	1	02/02/2017 13:47	WG948740
Manganese,Dissolved	ND		10.0	1	02/02/2017 13:47	WG948740

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	02/02/2017 18:25	WG948712
(S) a,a,a-Trifluorotoluene(FID)	98.2		77.0-122		02/02/2017 18:25	WG948712

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	02/02/2017 09:12	WG948484
Ethane	ND		13.0	1	02/02/2017 09:12	WG948484
Ethene	ND		13.0	1	02/02/2017 09:12	WG948484

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	02/01/2017 15:56	WG948284
Toluene	ND		1.00	1	02/01/2017 15:56	WG948284
Ethylbenzene	ND		1.00	1	02/01/2017 15:56	WG948284
Total Xylenes	ND		3.00	1	02/01/2017 15:56	WG948284
(S) Toluene-d8	103		80.0-120		02/01/2017 15:56	WG948284
(S) Dibromofluoromethane	93.5		76.0-123		02/01/2017 15:56	WG948284
(S) a,a,a-Trifluorotoluene	107		80.0-120		02/01/2017 15:56	WG948284
(S) 4-Bromofluorobenzene	111		80.0-120		02/01/2017 15:56	WG948284



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		250	1	02/01/2017 17:17	WG947950
Residual Range Organics (RRO)	ND		500	1	02/01/2017 17:17	WG947950
<i>(S) o-Terphenyl</i>	107		52.0-156		02/01/2017 17:17	WG947950

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	451		100	1	02/06/2017 14:34	WG949772

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	122		100	1	02/06/2017 11:27	WG949322

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	01/31/2017 20:51	WG948161

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	18100		5000	1	02/02/2017 19:12	WG948565

7 Gl

8 Al

Metals (ICP) by Method 6010C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	3400		100	1	02/02/2017 13:50	WG948740
Lead	ND		5.00	1	02/02/2017 13:09	WG948737
Lead,Dissolved	ND		5.00	1	02/02/2017 13:50	WG948740
Manganese,Dissolved	1640		10.0	1	02/02/2017 13:50	WG948740

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	02/02/2017 18:47	WG948712
(S) a,a,a-Trifluorotoluene(FID)	99.0		77.0-122		02/02/2017 18:47	WG948712

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	790		10.0	1	02/02/2017 09:15	WG948484
Ethane	ND		13.0	1	02/02/2017 09:15	WG948484
Ethene	ND		13.0	1	02/02/2017 09:15	WG948484

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	02/01/2017 16:10	WG948284
Toluene	ND		1.00	1	02/01/2017 16:10	WG948284
Ethylbenzene	ND		1.00	1	02/01/2017 16:10	WG948284
Total Xylenes	ND		3.00	1	02/01/2017 16:10	WG948284
(S) Toluene-d8	104		80.0-120		02/01/2017 16:10	WG948284
(S) Dibromofluoromethane	90.0		76.0-123		02/01/2017 16:10	WG948284
(S) a,a,a-Trifluorotoluene	108		80.0-120		02/01/2017 16:10	WG948284
(S) 4-Bromofluorobenzene	110		80.0-120		02/01/2017 16:10	WG948284



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3630		1250	5	02/01/2017 17:50	WG947950
Residual Range Organics (RRO)	4840		2500	5	02/01/2017 17:50	WG947950
<i>(S) o-Terphenyl</i>	118		52.0-156		02/01/2017 17:50	WG947950

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	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	02/01/2017 14:08	WG948284
Toluene	ND		1.00	1	02/01/2017 14:08	WG948284
Ethylbenzene	ND		1.00	1	02/01/2017 14:08	WG948284
Total Xylenes	ND		3.00	1	02/01/2017 14:08	WG948284
<i>(S) Toluene-d8</i>	104		80.0-120		02/01/2017 14:08	WG948284
<i>(S) Dibromofluoromethane</i>	93.1		76.0-123		02/01/2017 14:08	WG948284
<i>(S) a,a,a-Trifluorotoluene</i>	106		80.0-120		02/01/2017 14:08	WG948284
<i>(S) 4-Bromofluorobenzene</i>	110		80.0-120		02/01/2017 14:08	WG948284

- 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	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	02/01/2017 14:21	WG948284
Toluene	ND		1.00	1	02/01/2017 14:21	WG948284
Ethylbenzene	ND		1.00	1	02/01/2017 14:21	WG948284
Total Xylenes	ND		3.00	1	02/01/2017 14:21	WG948284
<i>(S) Toluene-d8</i>	103		80.0-120		02/01/2017 14:21	WG948284
<i>(S) Dibromofluoromethane</i>	94.0		76.0-123		02/01/2017 14:21	WG948284
<i>(S) a,a,a-Trifluorotoluene</i>	106		80.0-120		02/01/2017 14:21	WG948284
<i>(S) 4-Bromofluorobenzene</i>	109		80.0-120		02/01/2017 14:21	WG948284

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3195014-1 02/06/17 11:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L886869-07 Original Sample (OS) • Duplicate (DUP)

(OS) L886869-07 02/06/17 11:24 • (DUP) R3195014-4 02/06/17 11:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	84.0	1	0		20

L886938-04 Original Sample (OS) • Duplicate (DUP)

(OS) L886938-04 02/06/17 11:46 • (DUP) R3195014-6 02/06/17 11:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	435	435	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3195014-2 02/06/17 11:03 • (LCSD) R3195014-3 02/06/17 11:04

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7210	7140	96	95	90-110			1	20

L886869-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L886869-09 02/06/17 11:27 • (MS) R3195014-5 02/06/17 11:28

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	10000	140	9860	97	1	90-110	

L886938-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L886938-05 02/06/17 11:49 • (MS) R3195014-7 02/06/17 11:55 • (MSD) R3195014-8 02/06/17 11:57

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	10000	ND	9390	9420	94	94	1	90-110			0	20



Method Blank (MB)

(MB) R3195081-1 02/06/17 14:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L886616-01 Original Sample (OS) • Duplicate (DUP)

(OS) L886616-01 02/06/17 14:23 • (DUP) R3195081-4 02/06/17 14:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	14900	14800	1	0		20

L887063-01 Original Sample (OS) • Duplicate (DUP)

(OS) L887063-01 02/06/17 14:42 • (DUP) R3195081-6 02/06/17 14:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	117	116	1	1		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3195081-2 02/06/17 14:17 • (LCSD) R3195081-3 02/06/17 14:18

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7180	7200	96	96	90-110			0	20

L886622-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L886622-01 02/06/17 14:26 • (MS) R3195081-5 02/06/17 14:28

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	10000	139	10500	103	1	90-110	

L887069-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L887069-01 02/06/17 14:50 • (MS) R3195081-7 02/06/17 14:52 • (MSD) R3195081-8 02/06/17 14:53

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	10000	ND	9950	9630	99	96	1	90-110			3	20



Method Blank (MB)

(MB) R3195021-1 02/06/17 10:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L886938-02 Original Sample (OS) • Duplicate (DUP)

(OS) L886938-02 02/06/17 11:15 • (DUP) R3195021-4 02/06/17 11:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	0		20

L886938-05 Original Sample (OS) • Duplicate (DUP)

(OS) L886938-05 02/06/17 11:20 • (DUP) R3195021-6 02/06/17 11:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1150	1110	1	3		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3195021-2 02/06/17 11:00 • (LCSD) R3195021-3 02/06/17 11:01

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	5220	5390	104	108	90-110			3	20

L886938-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L886938-04 02/06/17 11:18 • (MS) R3195021-5 02/06/17 11:19

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	5000	115	5150	101	1	90-110	

L886938-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L886938-06 02/06/17 11:27 • (MS) R3195021-7 02/06/17 11:28 • (MSD) R3195021-8 02/06/17 11:29

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	122	4970	5010	97	98	1	90-110			1	20



Method Blank (MB)

(MB) R3194165-1 01/31/17 20:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L886114-02 Original Sample (OS) • Duplicate (DUP)

(OS) L886114-02 01/31/17 20:46 • (DUP) R3194165-4 01/31/17 20:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	144	138	1	4		20

L886938-06 Original Sample (OS) • Duplicate (DUP)

(OS) L886938-06 01/31/17 20:51 • (DUP) R3194165-7 01/31/17 20:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3194165-2 01/31/17 20:45 • (LCSD) R3194165-3 01/31/17 20:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	552	550	110	110	85-115			0	20

L886888-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L886888-10 01/31/17 20:49 • (MS) R3194165-5 01/31/17 20:49 • (MSD) R3194165-6 01/31/17 20:50

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfide	1000	ND	1190	1220	119	122	1	80-120		J5	2	20



Method Blank (MB)

(MB) R3194614-1 02/02/17 07:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L886701-07 Original Sample (OS) • Duplicate (DUP)

(OS) L886701-07 02/02/17 13:06 • (DUP) R3194614-4 02/02/17 13:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	U	0.000	1	0		15

L886896-06 Original Sample (OS) • Duplicate (DUP)

(OS) L886896-06 02/02/17 16:17 • (DUP) R3194614-6 02/02/17 17:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	4200	4180	1	1	J	15

L886938-06 Original Sample (OS) • Duplicate (DUP)

(OS) L886938-06 02/02/17 19:12 • (DUP) R3194614-9 02/02/17 20:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	18100	19600	1	8		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3194614-2 02/02/17 07:48 • (LCSD) R3194614-3 02/02/17 08:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	37000	37300	92	93	80-120			1	15

L886896-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L886896-05 02/02/17 15:46 • (MS) R3194614-5 02/02/17 16:01

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	4200	54000	100	1	80-120	



L886938-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L886938-05 02/02/17 18:25 • (MS) R3194614-7 02/02/17 18:41 • (MSD) R3194614-8 02/02/17 18:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Sulfate	50000	7350	57900	58200	101	102	1	80-120			0	15

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3194401-1 02/02/17 11:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		6.50	10.0
Lead	U		1.90	5.00

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3194401-2 02/02/17 11:45 • (LCSD) R3194401-3 02/02/17 11:47

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	1010	1010	101	101	80-120			0	20
Lead	1000	1010	1010	101	101	80-120			1	20

5 Sr

6 Qc

L886938-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L886938-01 02/02/17 11:50 • (MS) R3194401-5 02/02/17 11:55 • (MSD) R3194401-6 02/02/17 11:57

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	14.9	1040	1040	103	103	1	75-125			0	20
Lead	1000	ND	1020	1020	102	102	1	75-125			0	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3194533-1 02/02/17 13:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		6.50	10.0
Iron,Dissolved	U		14.1	100
Lead,Dissolved	U		1.90	5.00
Manganese,Dissolved	U		1.20	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3194533-2 02/02/17 13:17 • (LCSD) R3194533-3 02/02/17 13:19

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,Dissolved	1000	1010	1000	101	100	80-120			0	20
Iron,Dissolved	10000	10100	9980	101	100	80-120			1	20
Lead,Dissolved	1000	1010	1000	101	100	80-120			0	20
Manganese,Dissolved	1000	976	970	98	97	80-120			1	20

⁶ Qc

⁷ Gl

⁸ Al

L886938-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L886938-01 02/02/17 13:22 • (MS) R3194533-5 02/02/17 13:27 • (MSD) R3194533-6 02/02/17 13:31

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,Dissolved	1000	15.9	1030	1040	101	102	1	75-125			1	20
Iron,Dissolved	10000	ND	9920	9980	99	100	1	75-125			1	20
Lead,Dissolved	1000	ND	1010	1010	101	101	1	75-125			0	20
Manganese,Dissolved	1000	640	1580	1580	94	94	1	75-125			1	20

⁹ Sc



Method Blank (MB)

(MB) R3194511-5 02/02/17 12:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHG C6 - C12	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	98.7			77.0-122

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3194511-3 02/02/17 11:26 • (LCSD) R3194511-4 02/02/17 11:48

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5500	6120	6030	111	110	72.0-134			1.43	20
(S) a,a,a-Trifluorotoluene(FID)				105	103	77.0-122				

5 Sr

6 Qc

L886979-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L886979-01 02/02/17 13:58 • (MS) R3194511-8 02/02/17 15:04 • (MSD) R3194511-9 02/02/17 15:26

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPHG C6 - C12	5500	2170	7370	7650	94.7	99.7	1	23.0-159			3.69	20
(S) a,a,a-Trifluorotoluene(FID)					110	112		77.0-122				

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3194300-1 02/02/17 08:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

1 Cp

2 Tc

3 Ss

4 Cn

L886433-04 Original Sample (OS) • Duplicate (DUP)

(OS) L886433-04 02/02/17 08:25 • (DUP) R3194300-2 02/02/17 08:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

5 Sr

6 Qc

7 Gl

L886938-05 Original Sample (OS) • Duplicate (DUP)

(OS) L886938-05 02/02/17 09:12 • (DUP) R3194300-3 02/02/17 09:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3194300-4 02/02/17 09:20 • (LCSD) R3194300-5 02/02/17 09:22

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	64.6	65.9	95.3	97.2	85.0-115			1.99	20
Ethane	129	122	123	94.4	95.0	85.0-115			0.620	20
Ethene	127	120	119	94.1	93.4	85.0-115			0.760	20



Method Blank (MB)

(MB) R3194359-1 02/02/17 09:49

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L886386-03 Original Sample (OS) • Duplicate (DUP)

(OS) L886386-03 02/02/17 10:07 • (DUP) R3194359-2 02/02/17 10:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	2880	2800	5	2.69		20

7 Gl

8 Al

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3194359-3 02/02/17 10:31 • (LCSD) R3194359-4 02/02/17 10:55

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	67.6	64.5	99.7	95.1	85.0-115			4.72	20

9 Sc



Method Blank (MB)

(MB) R3194427-3 02/01/17 11:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	104			80.0-120
(S) Dibromofluoromethane	92.9			76.0-123
(S) a,a,a-Trifluorotoluene	105			80.0-120
(S) 4-Bromofluorobenzene	112			80.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3194427-1 02/01/17 10:45 • (LCSD) R3194427-2 02/01/17 10:59

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	%	%	%			%	%
Benzene	25.0	23.3	23.5	93.3	94.1	69.0-123			0.880	20
Ethylbenzene	25.0	27.5	26.9	110	108	77.0-120			2.24	20
Toluene	25.0	25.5	24.8	102	99.3	77.0-120			2.66	20
Xylenes, Total	75.0	82.7	81.4	110	108	77.0-120			1.66	20
(S) Toluene-d8				103	103	80.0-120				
(S) Dibromofluoromethane				95.6	97.6	76.0-123				
(S) a,a,a-Trifluorotoluene				105	103	80.0-120				
(S) 4-Bromofluorobenzene				104	105	80.0-120				

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3194297-1 02/01/17 11:30

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		83.3	250
Residual Range Organics (RRO)	U		167	500
(S) o-Terphenyl	109			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3194297-2 02/01/17 11:46 • (LCSD) R3194297-3 02/01/17 12:02

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	838	825	112	110	50.0-150			1.65	20
Residual Range Organics (RRO)	750	724	715	96.5	95.4	50.0-150			1.17	20
(S) o-Terphenyl				111	112	52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3194367-3 02/01/17 17:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acenaphthene	U		0.316	1.00
Acenaphthylene	U		0.309	1.00
Anthracene	U		0.291	1.00
Benzo(a)anthracene	U		0.0975	1.00
Benzo(b)fluoranthene	U		0.0896	1.00
Benzo(k)fluoranthene	U		0.355	1.00
Benzo(g,h,i)perylene	U		0.161	1.00
Benzo(a)pyrene	U		0.340	1.00
Chrysene	U		0.332	1.00
Dibenz(a,h)anthracene	U		0.279	1.00
Fluoranthene	U		0.310	1.00
Fluorene	U		0.323	1.00
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Naphthalene	U		0.372	1.00
Phenanthrene	U		0.366	1.00
Pyrene	U		0.330	1.00
2-Methylphenol	U		0.312	10.0
3&4-Methyl Phenol	U		0.266	10.0
<i>(S) Nitrobenzene-d5</i>	56.3			10.0-126
<i>(S) 2-Fluorobiphenyl</i>	73.3			22.0-127
<i>(S) p-Terphenyl-d14</i>	102			29.0-141
<i>(S) Phenol-d5</i>	27.8			10.0-120
<i>(S) 2-Fluorophenol</i>	37.9			10.0-120
<i>(S) 2,4,6-Tribromophenol</i>	71.8			10.0-153

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) R3194367-1 02/01/17 15:56 • (LCSD) R3194367-2 02/01/17 16:19

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	%	%	%			%	%
Acenaphthene	50.0	41.0	39.2	82.0	78.4	42.0-120			4.42	22
Acenaphthylene	50.0	43.2	41.3	86.3	82.7	43.0-120			4.35	22
Anthracene	50.0	46.3	41.9	92.6	83.7	44.0-120			10.1	20
Benzo(a)anthracene	50.0	44.3	39.4	88.5	78.8	44.0-120			11.6	20
Benzo(b)fluoranthene	50.0	45.8	39.3	91.6	78.6	40.0-120			15.3	21
Benzo(k)fluoranthene	50.0	47.1	43.4	94.2	86.8	41.0-120			8.14	22
Benzo(g,h,i)perylene	50.0	49.2	44.2	98.4	88.4	45.0-121			10.6	20
Benzo(a)pyrene	50.0	48.4	43.6	96.8	87.1	41.0-120			10.5	20
Chrysene	50.0	46.7	40.8	93.3	81.6	45.0-120			13.4	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3194367-1 02/01/17 15:56 • (LCSD) R3194367-2 02/01/17 16:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Dibenz(a,h)anthracene	50.0	49.6	44.3	99.2	88.5	44.0-121			11.4	21
Fluoranthene	50.0	49.4	44.5	98.9	89.0	46.0-121			10.5	20
Fluorene	50.0	46.5	43.1	92.9	86.2	45.0-120			7.55	21
Indeno(1,2,3-cd)pyrene	50.0	50.3	45.0	101	90.0	45.0-123			11.2	21
Naphthalene	50.0	25.1	28.9	50.2	57.9	33.0-120			14.2	28
Phenanthrene	50.0	43.7	38.7	87.4	77.4	42.0-120			12.2	20
Pyrene	50.0	45.9	40.5	91.7	81.0	43.0-120			12.4	21
2-Methylphenol	50.0	25.0	28.1	49.9	56.2	26.0-120			11.9	27
3&4-Methyl Phenol	50.0	28.3	30.2	56.6	60.4	27.0-120			6.48	28
<i>(S) Nitrobenzene-d5</i>				48.7	52.5	10.0-126				
<i>(S) 2-Fluorobiphenyl</i>				85.5	79.8	22.0-127				
<i>(S) p-Terphenyl-d14</i>				106	88.6	29.0-141				
<i>(S) Phenol-d5</i>				25.5	28.1	10.0-120				
<i>(S) 2-Fluorophenol</i>				32.3	39.7	10.0-120				
<i>(S) 2,4,6-Tribromophenol</i>				103	96.7	10.0-153				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3195171-3 02/07/17 05:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Anthracene	U		0.291	1.00
Acenaphthene	U		0.316	1.00
Acenaphthylene	U		0.309	1.00
Benzo(a)anthracene	U		0.0373	1.00
Benzo(a)pyrene	U		0.340	1.00
Benzo(b)fluoranthene	U	J	0.0896	1.00
Benzo(g,h,i)perylene	U		0.161	1.00
Benzo(k)fluoranthene	U		0.355	1.00
Chrysene	U		0.332	1.00
Dibenz(a,h)anthracene	U		0.279	1.00
Fluoranthene	U		0.310	1.00
Fluorene	U		0.323	1.00
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Naphthalene	0.0594	J	0.0297	1.00
Phenanthrene	U		0.366	1.00
Pyrene	U		0.330	1.00
(S) Nitrobenzene-d5	80.2			10.0-147
(S) 2-Fluorobiphenyl	97.8			15.0-137
(S) p-Terphenyl-d14	118			12.0-126

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) R3195171-1 02/07/17 04:24 • (LCSD) R3195171-2 02/07/17 04:46

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	%	%	%			%	%
Acenaphthene	10.0	10.1	10.5	101	105	39.0-121			3.26	23
Acenaphthylene	10.0	9.97	10.1	99.7	101	37.0-125			1.74	23
Anthracene	10.0	10.1	10.6	101	106	37.0-125			4.65	23
Benzo(a)anthracene	10.0	9.95	10.5	99.5	105	39.0-126			5.34	22
Benzo(b)fluoranthene	10.0	10.3	11.4	103	114	35.0-130			10.0	22
Benzo(k)fluoranthene	10.0	9.58	9.78	95.8	97.8	35.0-129			1.98	29
Benzo(g,h,i)perylene	10.0	11.2	11.7	112	117	36.0-138			4.64	25
Benzo(a)pyrene	10.0	9.86	10.8	98.6	108	37.0-135			8.75	21
Chrysene	10.0	10.4	10.6	104	106	40.0-128			1.88	23
Dibenz(a,h)anthracene	10.0	10.4	11.0	104	110	34.0-135			5.48	24
Fluoranthene	10.0	9.15	9.45	91.5	94.5	42.0-136			3.18	23
Fluorene	10.0	9.52	9.82	95.2	98.2	40.0-125			3.03	22
Naphthalene	10.0	9.63	9.17	96.3	91.7	37.0-120			4.93	23
Phenanthrene	10.0	10.5	11.1	105	111	37.0-126			4.78	22



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3195171-1 02/07/17 04:24 • (LCSD) R3195171-2 02/07/17 04:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Pyrene	10.0	12.0	12.7	120	127	33.0-141			5.76	23
Indeno(1,2,3-cd)pyrene	10.0	10.7	11.1	107	111	34.0-138			4.31	24
<i>(S) Nitrobenzene-d5</i>				102	91.3	10.0-147				
<i>(S) 2-Fluorobiphenyl</i>				98.4	93.6	15.0-137				
<i>(S) p-Terphenyl-d14</i>				110	114	12.0-126				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 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
J	The identification of the analyte is acceptable; the reported value is an estimate.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.

- 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		

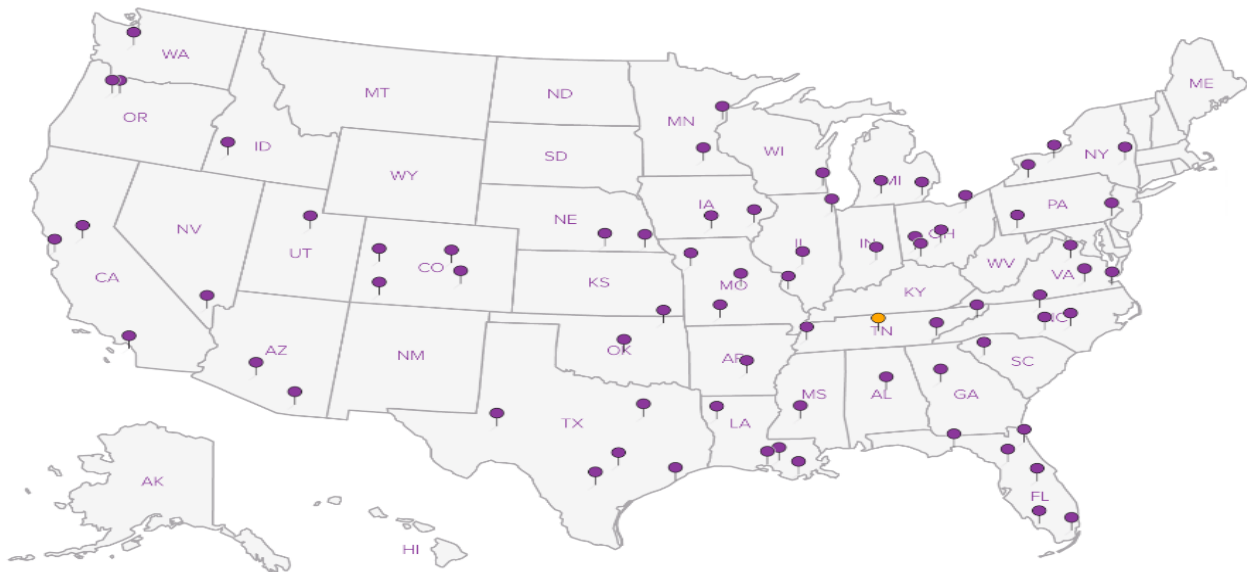
Third Party & Federal Accreditations

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.**



Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:

Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project
Description: **BNSF - Wishram Railyard, WA**

City/State
Collected: **Wishram, WA**

Phone: **253-835-6400**

Client Project #

Lab Project #
BNSF1KEN-WISHRAM

Fax:

1696120.00

Collected by (print):

Site/Facility ID #
Wishram

Collected by (signature):

Alice Robinson

Rush? (Lab MUST Be Notified)

Immediately
Packed on Ice N Y

Same Day200%
Next Day100%
Two Day50%
Three Day25%

Quote #

Date Results Needed

No. of
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	8270D omp cresol PAH 100ml Amb NoPres	8270PAH5HAD 100ml Amb-NoPres	ASPH 25ml HDPE-NoPres	NH3 125ml HDPE-H2SO4	NO2NO3 250ml HDPE-H2SO4	NWTPHDXLVI 40ml Amb-HCl-BT	NWTPHGX 40ml Amb HCl	RSK175 Diss CH4 40ml Amb-HCl	SULFATE 125ml HDPE-NoPres	Rem./Contaminant	Sample # (lab only)
MW-18-20170127	grab	GW	20'	1-27-17	10:50	18	X	X	X	X	X	X	X	X	X		-01
MW-17-20170127	grab	GW	20'	1-27-17	11:30	18	X	X	X	X	X	X	X	X	X		-02
MW-16-20170127	grab	GW	20'	1-27-17	13:20	18	X	X	X	X	X	X	X	X	X		-03
MW-15-20170127	grab	GW	20'	1-27-17	16:00	18	X	X	X	X	X	X	X	X	X		-04
MW-14-20170127	grab	GW	20'	1-27-17	17:10	18	X	X	X	X	X	X	X	X	X		-05
Dup-20170127	grab	GW	20'	1-27-17	12:00	18	X	X	X	X	X	X	X	X	X		-06
Trip Blank - 01		GW		1-27-17		18	X	X	X	X	X	X	X	X	X	AR	-07
Trip Blank - 02		GW		1-27-17		18	X	X	X	X	X	X	X	X	X	AR	-08

* Matrix:
SS - Soil AIR - Air
GW - Groundwater
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: NWTPH-Dx w/o SGCU, NWTPH-Gx, BTEX (8260), PAHs (or PAHs w/Cresols), total metals (As and/or Pb), dissolved metals (field filtered) (As and/or Pb, Fe, Mn), Nitrate/Nitrite, Ammonia, Sulfate, Sulfide, and Methane.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: UPS FedEx Courier

Tracking # **7176 8999 6781**

Sample Receipt Checklist

COC Seal Present/Intact: Y N

COC Signed/Accurate: Y N

Bottles arrive intact: Y N

Correct bottles used: Y N

Sufficient volume sent: Y N

If Applicable

VDA Zero HeadSpace: Y N

Preservation Correct/Checked: Y N

Relinquished by: (Signature)
Alice Robinson

Date: **1-30-2017**
Time: **1:15pm**

Received by: (Signature)
[Signature]

Trip Blank Received: **2** Yes/No
MCL/MeOH
TBR

Relinquished by: (Signature)

Date: _____
Time: _____

Received by: (Signature)

Temp: **3.1** °C
Bottle Received: **98**

Relinquished by: (Signature)

Date: _____
Time: _____

Received for lab by: (Signature)
[Signature]

Date: **1-31-17**
Time: **9:00**

If preservation required by Login: Date/Time
Hold: _____
Condition: NCF / **OK**

Chain of Custody Page of

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# **L886938**

A133

Acctnum: **BNSF1KEN**
Template: **T119667**
Prelogin: **P585558**
TSR: **134 - Mark W. Beasley**
PB: **123/19 mba**
Shipped Via: **FedEX Ground**

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:

Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project:
Description: BNSF - Wishram Railyard, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400

Client Project #

Lab Project #
BNSF1KEN-WISHRAM

Fax:

1696120.00

Collected by (print):
Alice Robinson

Site/Facility ID #

P.O. #

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)

Quote #

Immediately
Packed on Ice N Y

Same Day200%
Next Day100%
Two Day50%
Three Day25%

Date Results Needed

No. of
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts
MW-18-20170127	grab	GW	20'	1-27-17	10:50	18
MW-17-20170127	grab	GW	20'	1-27-17	11:30	18
MW-16-20170127	grab	GW	20'	1-27-17	13:20	18
MW-15-20170127	grab	GW	20'	1-27-17	16:00 14	18
MW-14-20170127	grab	GW	20'	1-27-17	17:10 14	18
Dup-20170127	grab	GW	20'	1-27-17	12:00 14	18
Trip Blank-01		GW		1-27-17		18
Trip Blank-02		GW		1-27-17		18

SULFIDE 125mlAmb-S-NaOH+ZnAc

V8260BTEX 40mlAmb-HCl

As, Pb 250 mL HDPE HN03

Pb 250 mL HDPE HN03

Diss As, Fe, Mn, Pb 250 mL HDPE HN03

Diss Fe, Mn, Pb 250 mL HDPE HN03

Analysis / Container / Preservative

Chain of Custody Page of



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L#
L886938

Table #

Acctnum: BNSF1KEN

Template: T119667

Prelogin: P585558

TSR: 134 - Mark W. Beasley

PB: 1/23/17

Shipped Via: FedEX Ground

Rem./Contaminant Sample # (Lab only)

-01
-02
-03
-04
-05
-06
-07
-08

* Matrix:
SS - Soil AIR - Air
GW - Groundwater
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: NWTPh-Dx w/o SGCU, NWTPh-Gx, BTEX (8260), PAHs (or PAHs w/Cresols), total metals (As and/or Pb), dissolved metals (field filtered) (As and/or Pb, Fe, Mn), Nitrate/Nitrite, Ammonia, Sulfate, Sulfide, and Methane.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: UPS FedEx Courier

Tracking # 7176 8999 6739

Sample Receipt Checklist	
COC Seal Present/Intact:	NP <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
COC Signed/Accurate:	<input type="checkbox"/> Y <input type="checkbox"/> N
Bottles arrive intact:	<input type="checkbox"/> Y <input type="checkbox"/> N
Correct bottles used:	<input type="checkbox"/> Y <input type="checkbox"/> N
Sufficient volume sent:	<input type="checkbox"/> Y <input type="checkbox"/> N
If Applicable	
VOA Zero Headspace:	<input type="checkbox"/> Y <input type="checkbox"/> N
Preservation Correct/Checked:	<input type="checkbox"/> Y <input type="checkbox"/> N

Relinquished by: (Signature)

Date: 1-30-2017

Time: 1:15 pm

Received by: (Signature)

Trip Blank Received: Yes No

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: °C Bottles Received: 98

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

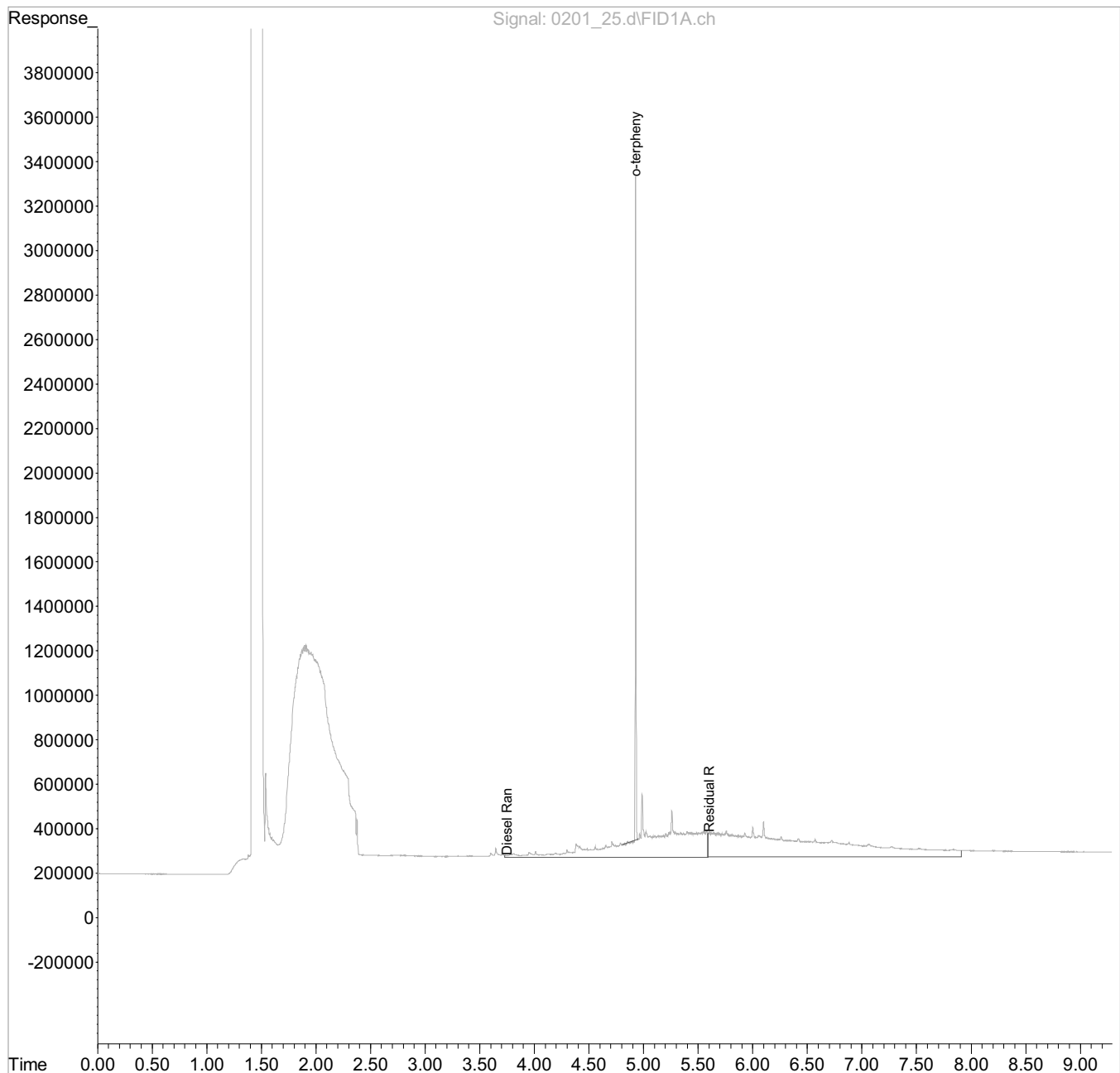
Date: 1/31/17 Time: 9:60

Hold: Condition: NCF / OK

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Signal(s) : FID1A.ch
Acq On : 1 Feb 2017 4:44 pm
Operator : 765
Sample : L886938-01 1x WG947950 40-2
Misc : water
ALS Vial : 18 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Feb 01 17:01:18 2017
Quant Method : C:\msdchem\1\methods\EP27A25Q.M
Quant Title :
QLast Update : Wed Jan 25 13:17:51 2017
Response via : Initial Calibration
Integrator: ChemStation

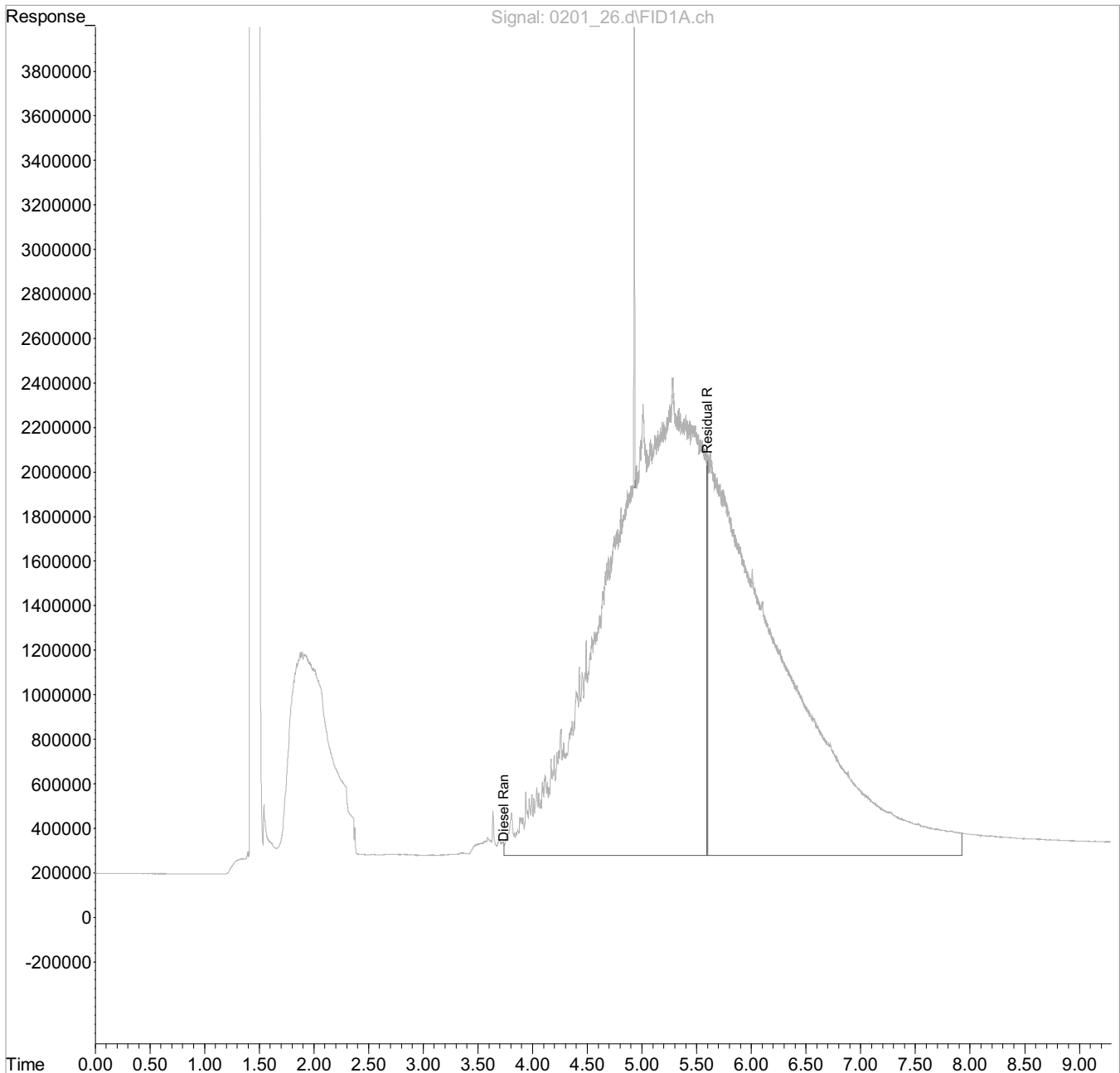
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



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 Data File : 0201_26.d
 Signal(s) : FID1A.ch
 Acq On : 1 Feb 2017 5:01 pm
 Operator : 765
 Sample : L886938-02 1x WG947950 40-2
 Misc : water
 ALS Vial : 19 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Feb 02 09:00:28 2017
 Quant Method : C:\msdchem\1\methods\EP27A25Q.M
 Quant Title :
 QLast Update : Wed Jan 25 13:17:51 2017
 Response via : Initial Calibration
 Integrator: ChemStation

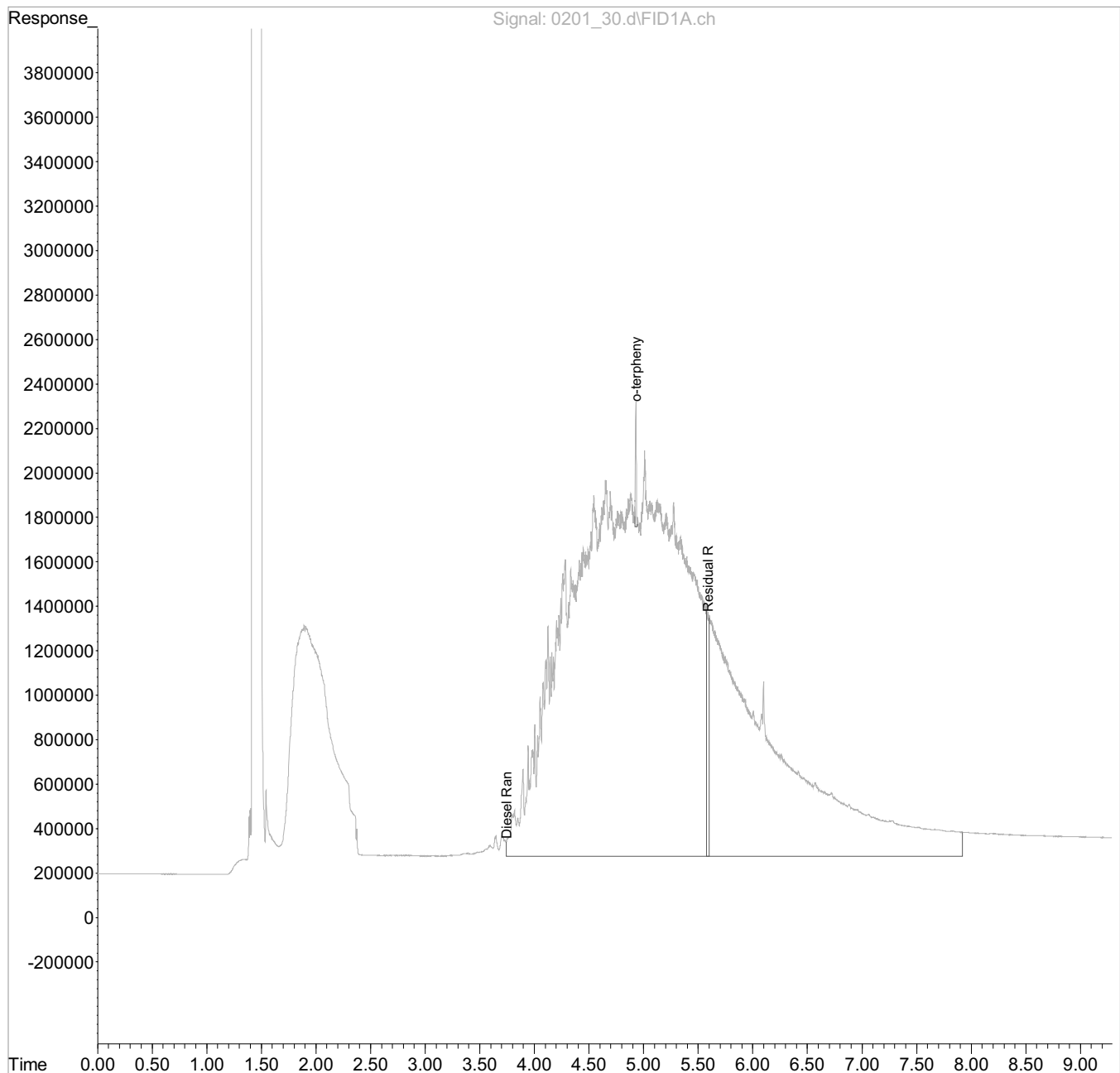
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\020117\
Data File : 0201_30.d
Signal(s) : FID1A.ch
Acq On : 1 Feb 2017 6:07 pm
Operator : 765
Sample : L886938-03 5x WG947950 40-2
Misc : water
ALS Vial : 23 Sample Multiplier: 0.25
InstName : SVGC27

Integration File: events.e
Quant Time: Feb 02 09:06:31 2017
Quant Method : C:\msdchem\1\methods\EP27A25Q.M
Quant Title :
QLast Update : Wed Jan 25 13:17:51 2017
Response via : Initial Calibration
Integrator: ChemStation

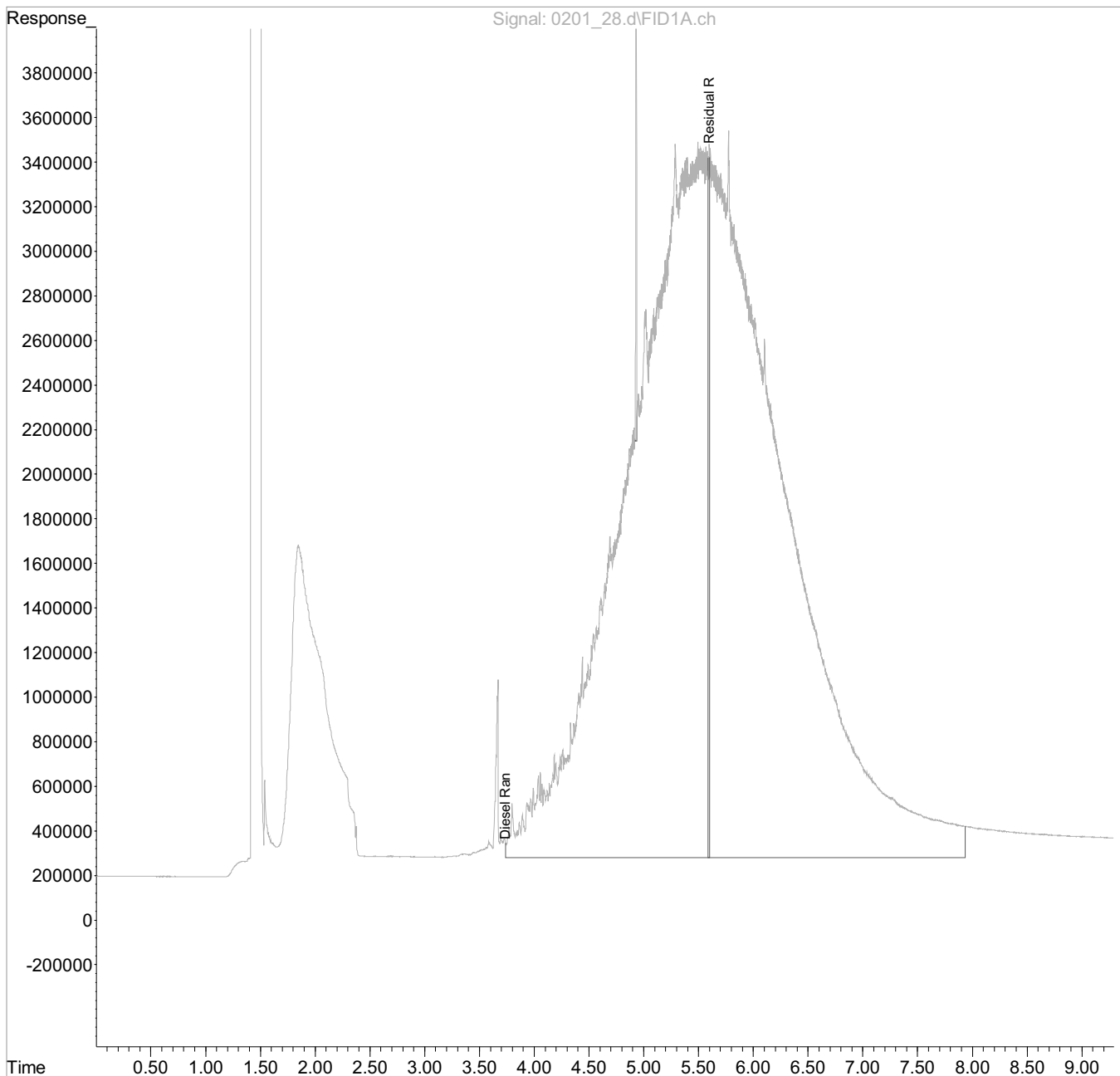
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\020117\
 Data File : 0201_28.d
 Signal(s) : FID1A.ch
 Acq On : 1 Feb 2017 5:34 pm
 Operator : 765
 Sample : L886938-04 1x WG947950 40-2
 Misc : water
 ALS Vial : 21 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Feb 02 09:03:43 2017
 Quant Method : C:\msdchem\1\methods\EP27A25Q.M
 Quant Title :
 QLast Update : Wed Jan 25 13:17:51 2017
 Response via : Initial Calibration
 Integrator: ChemStation

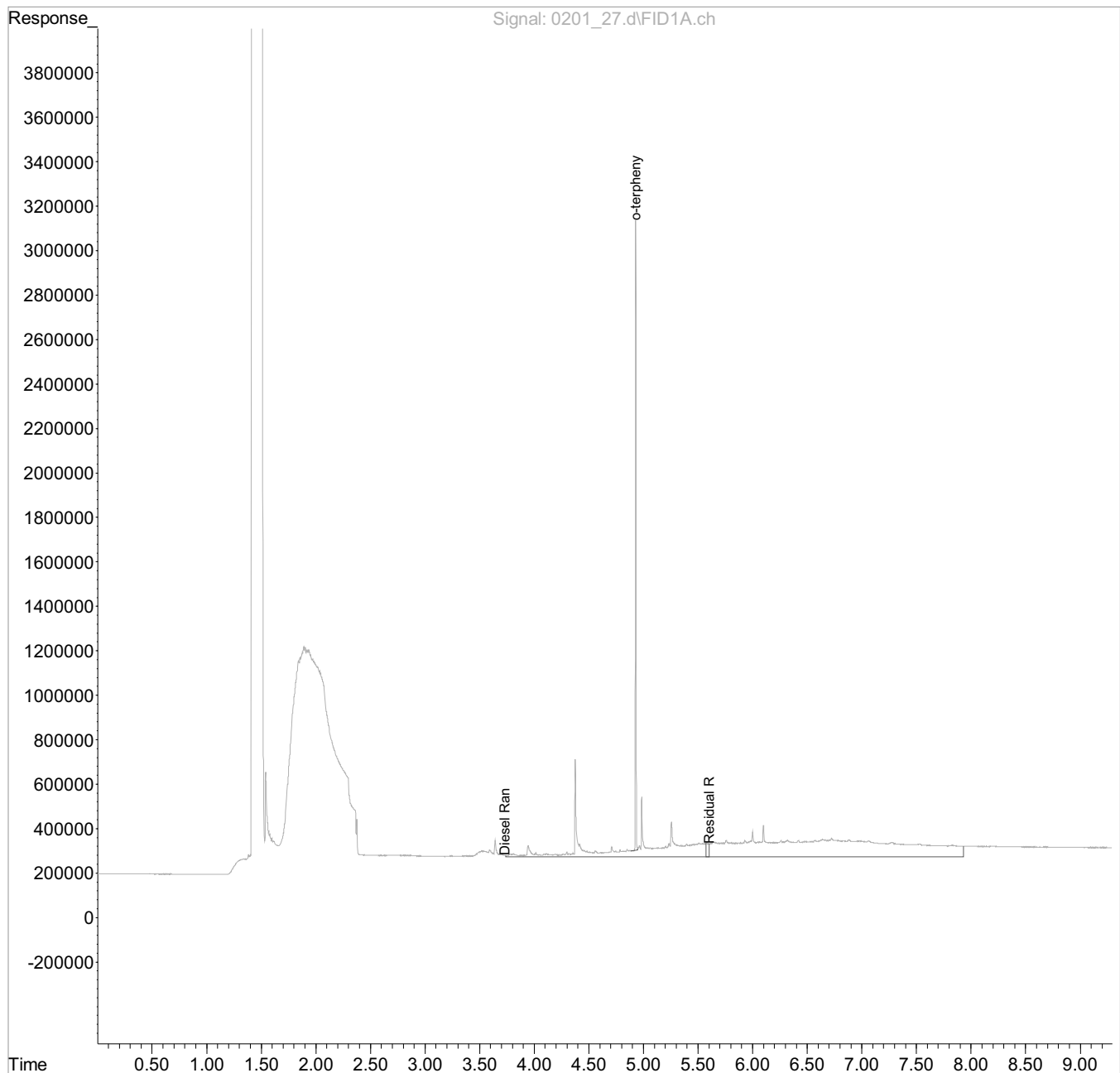
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\020117\
Data File : 0201_27.d
Signal(s) : FID1A.ch
Acq On : 1 Feb 2017 5:17 pm
Operator : 765
Sample : L886938-05 1x WG947950 40-2
Misc : water
ALS Vial : 20 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Feb 02 09:02:08 2017
Quant Method : C:\msdchem\1\methods\EP27A25Q.M
Quant Title :
QLast Update : Wed Jan 25 13:17:51 2017
Response via : Initial Calibration
Integrator: ChemStation

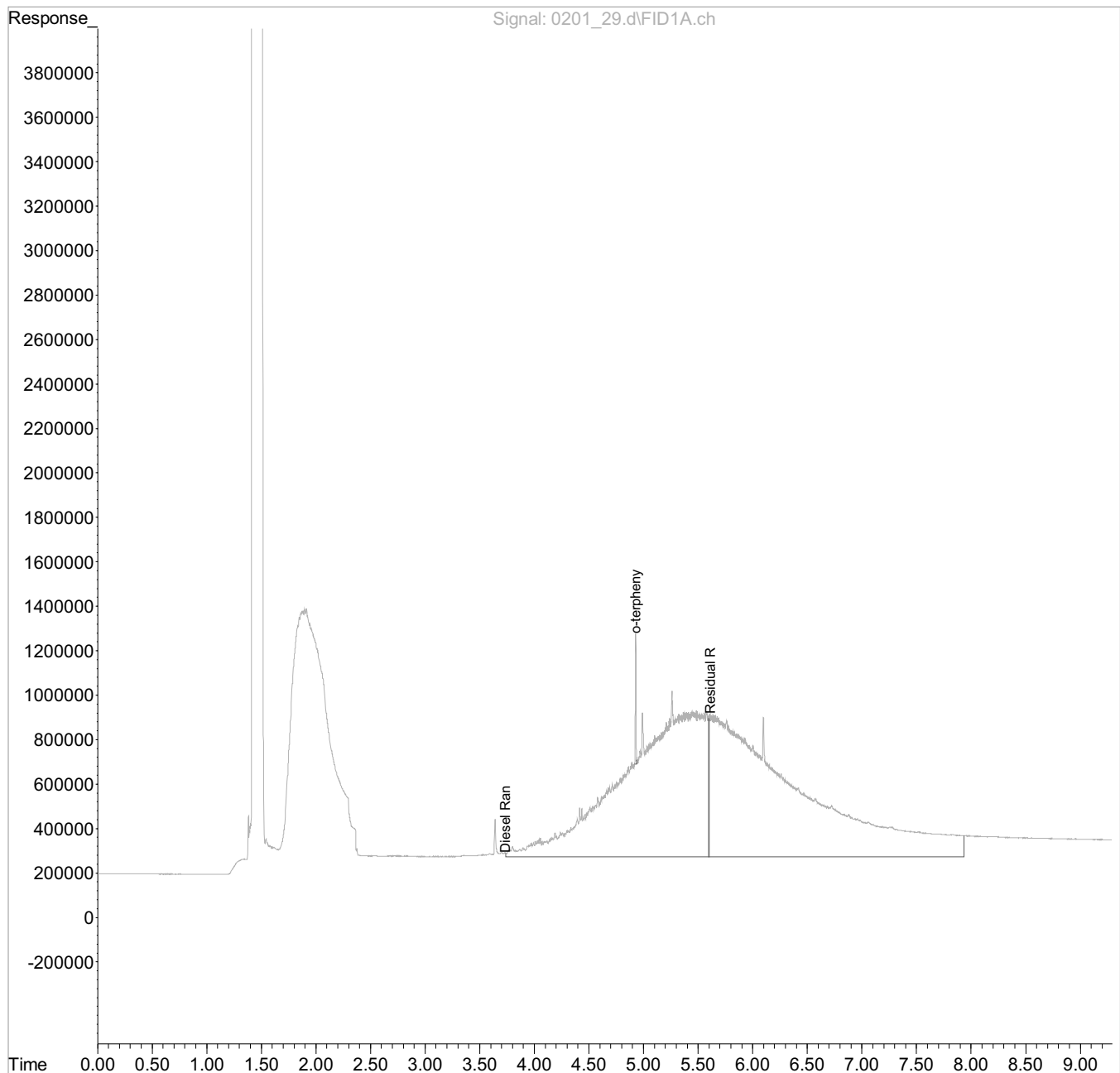
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\020117\
Data File : 0201 29.d
Signal(s) : FID1A.ch
Acq On : 1 Feb 2017 5:50 pm
Operator : 765
Sample : L886938-06 5x WG947950 40-2
Misc : water
ALS Vial : 22 Sample Multiplier: 0.25
InstName : SVGC27

Integration File: events.e
Quant Time: Feb 02 09:05:22 2017
Quant Method : C:\msdchem\1\methods\EP27A25Q.M
Quant Title :
QLast Update : Wed Jan 25 13:17:51 2017
Response via : Initial Calibration
Integrator: ChemStation

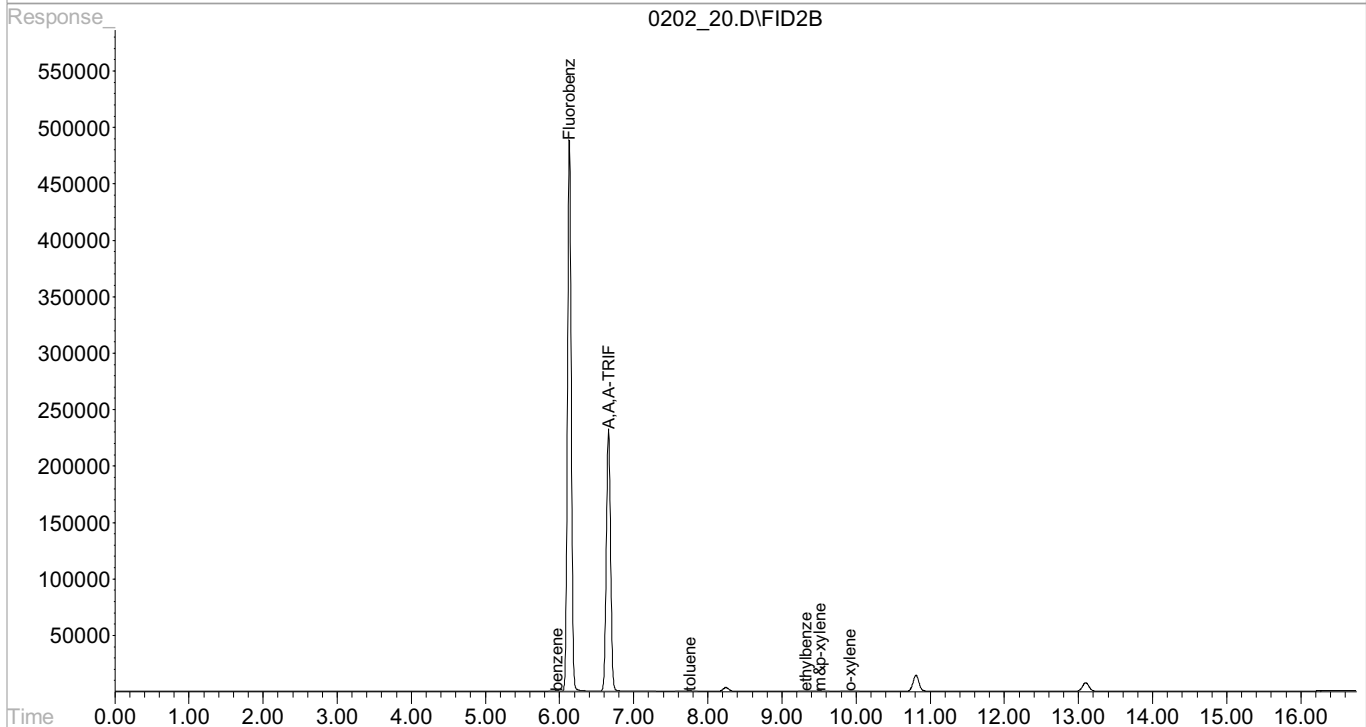
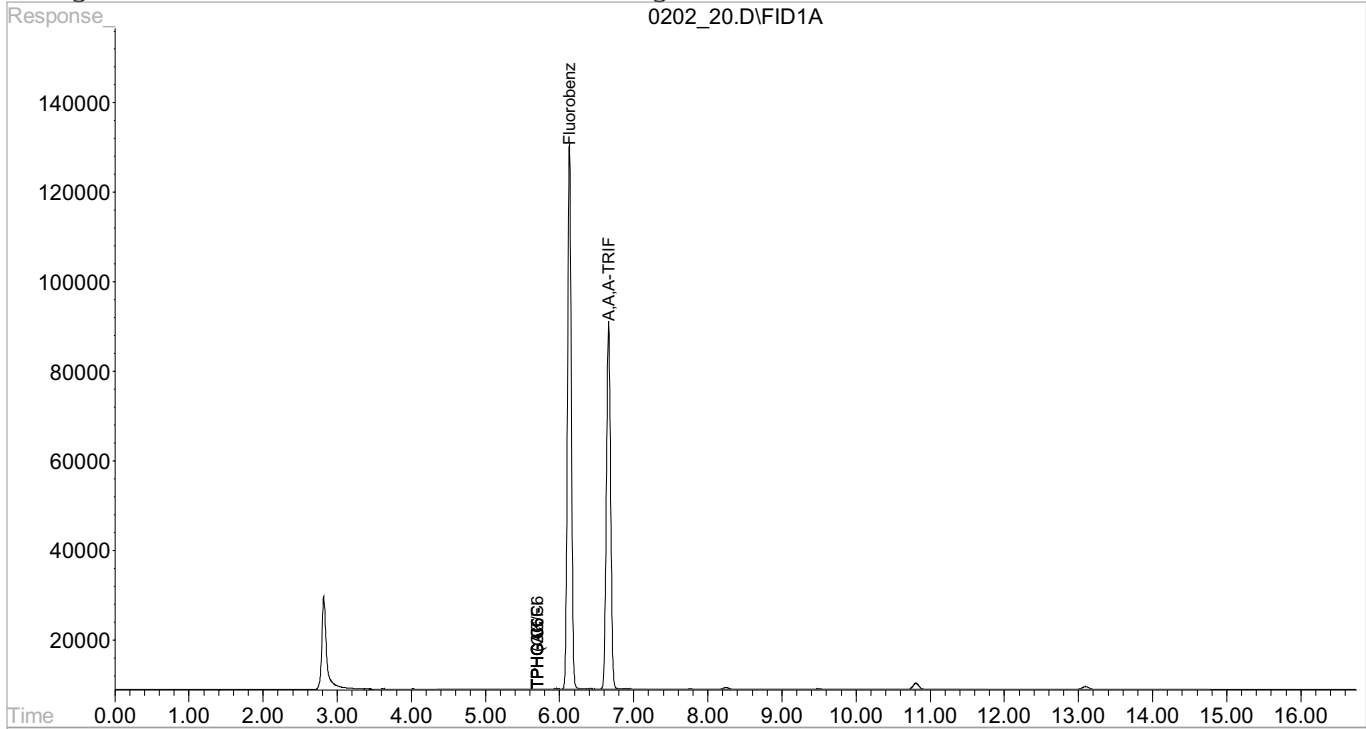
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\020217\0202 20.D\FID1A.CH Vial: 20
 Signal #2 : C:\HPCHEM\1\DATA\020217\0202 20.D\FID2B.CH
 Acq On : 2 Feb 2017 4:56 pm Operator: 605
 Sample : L886938-01 1x WG948712 NWTPHGX Inst : VOCGC1
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Feb 3 9:23 2017 Quant Results File: BG01L16P.RES

Quant Method : C:\HPCHEM\1\METHODS\BG01L16P.M (Chemstation Integrator)
 Title : WIS GRO VOCGC01
 Last Update : Sat Dec 17 14:49:51 2016
 Response via : Single Level Calibration
 DataAcq Meth : GC1BG.M

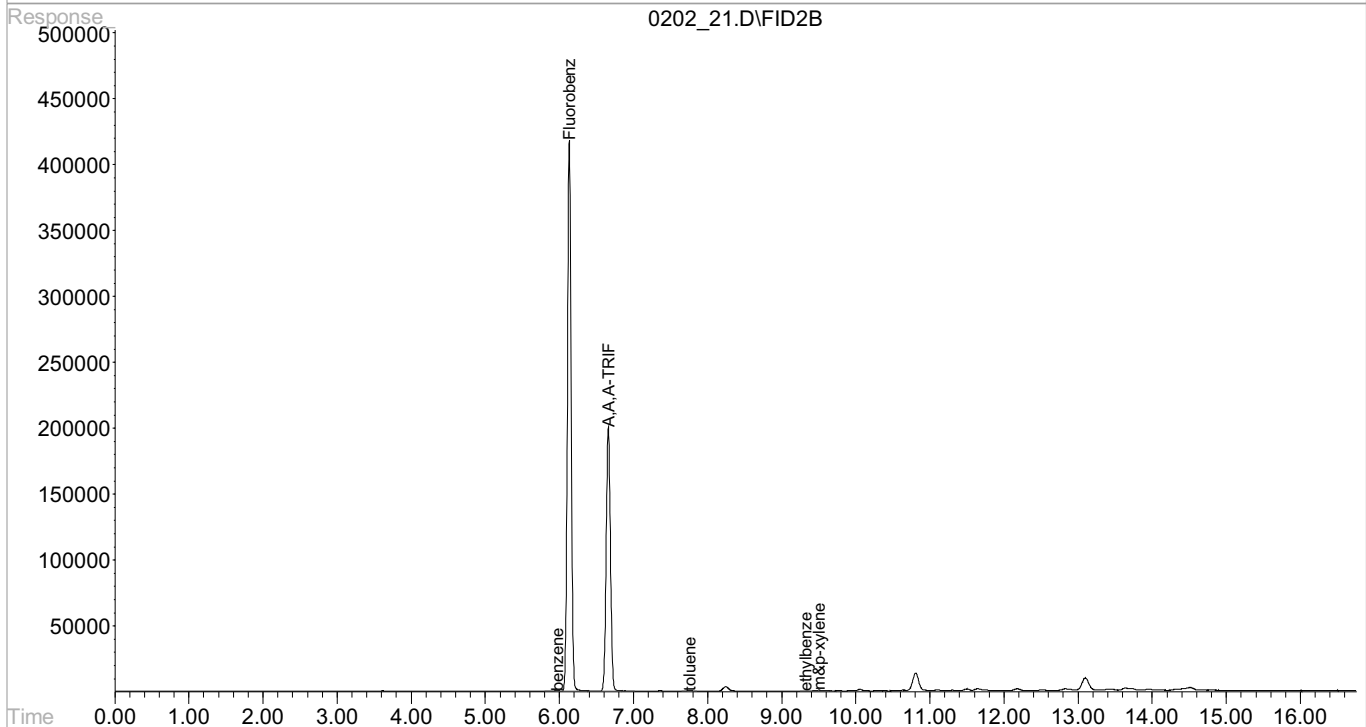
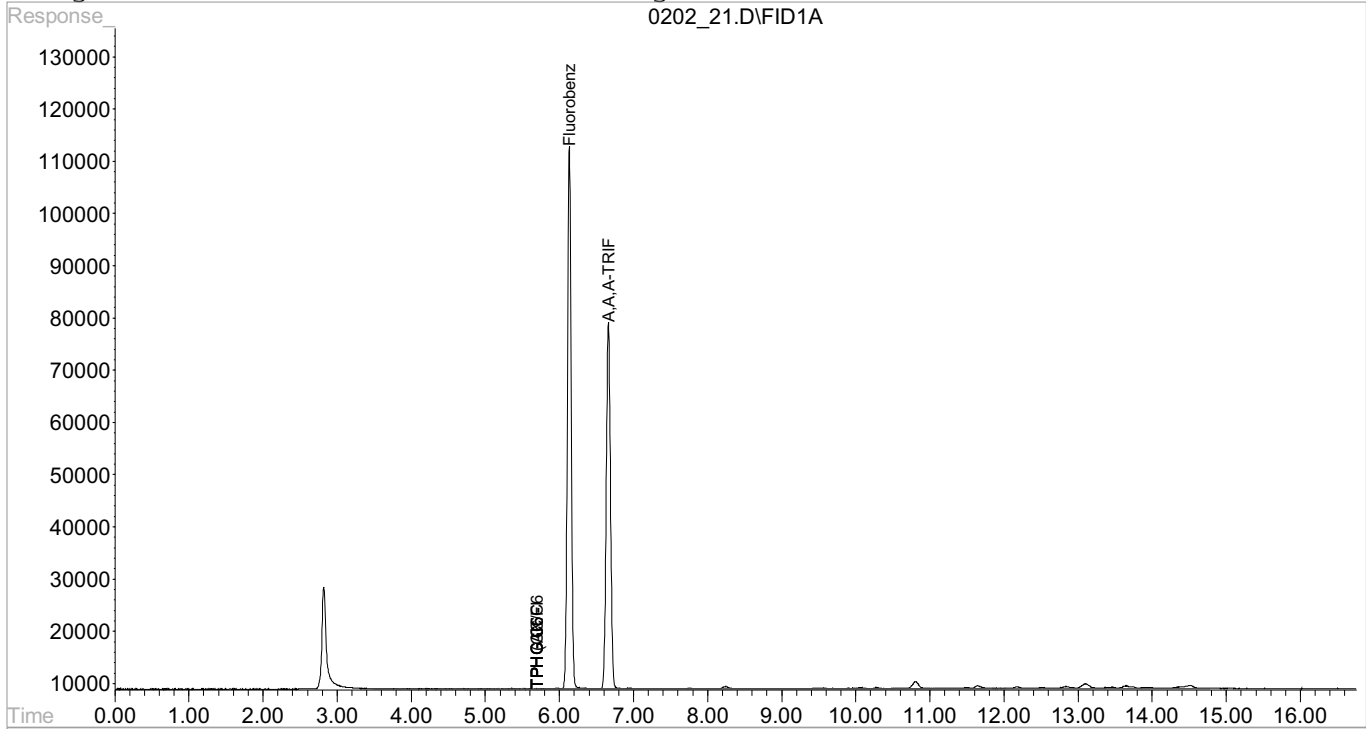
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Signal #1 : C:\HPCHEM\1\DATA\020217\0202 21.D\FID1A.CH Vial: 21
 Signal #2 : C:\HPCHEM\1\DATA\020217\0202 21.D\FID2B.CH
 Acq On : 2 Feb 2017 5:18 pm Operator: 605
 Sample : L886938-02 1x WG948712 NWTPHGX Inst : VOCGC1
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Feb 3 9:23 2017 Quant Results File: BG01L16P.RES

Quant Method : C:\HPCHEM\1\METHODS\BG01L16P.M (Chemstation Integrator)
 Title : WIS GRO VOCGC01
 Last Update : Sat Dec 17 14:49:51 2016
 Response via : Single Level Calibration
 DataAcq Meth : GC1BG.M

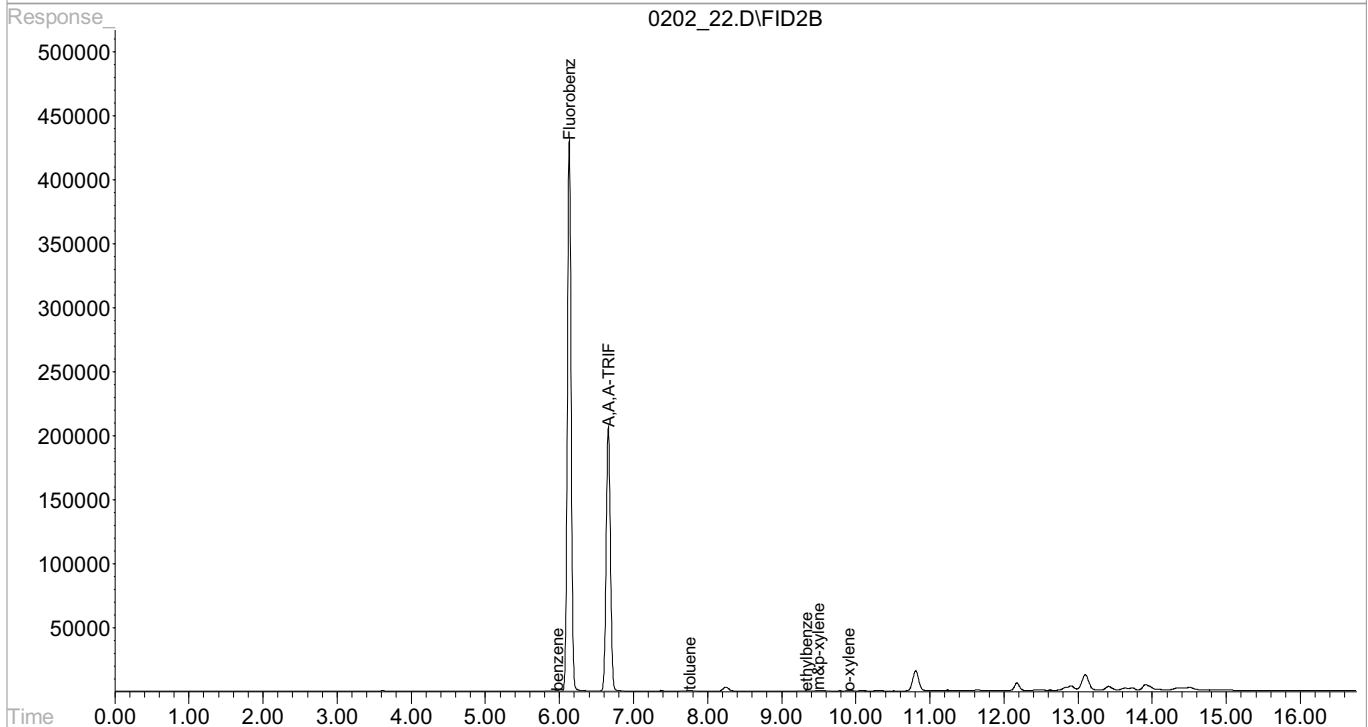
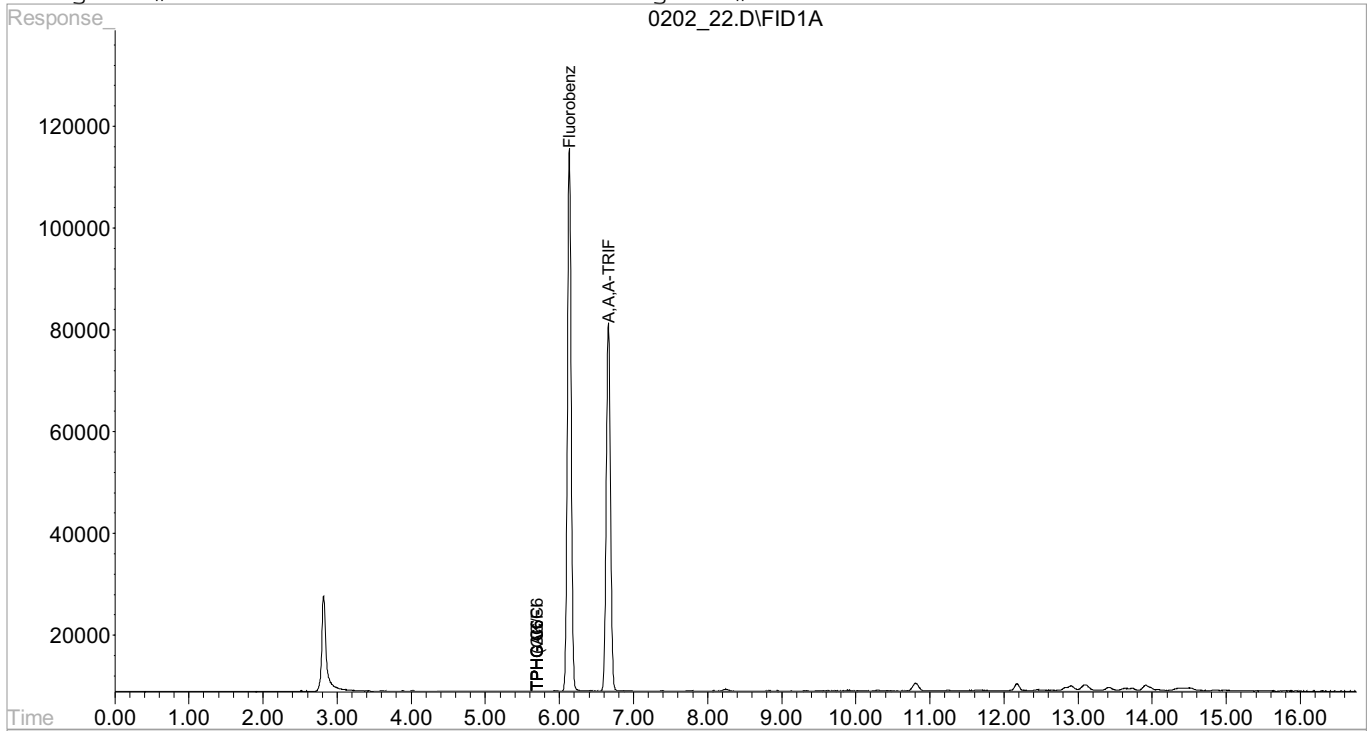
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Signal #1 : C:\HPCHEM\1\DATA\020217\0202 22.D\FID1A.CH Vial: 22
 Signal #2 : C:\HPCHEM\1\DATA\020217\0202 22.D\FID2B.CH
 Acq On : 2 Feb 2017 5:40 pm Operator: 605
 Sample : L886938-03 1x WG948712 NWTPHGX Inst : VOCGC1
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Feb 3 9:23 2017 Quant Results File: BG01L16P.RES

Quant Method : C:\HPCHEM\1\METHODS\BG01L16P.M (Chemstation Integrator)
 Title : WIS GRO VOCGC01
 Last Update : Sat Dec 17 14:49:51 2016
 Response via : Single Level Calibration
 DataAcq Meth : GC1BG.M

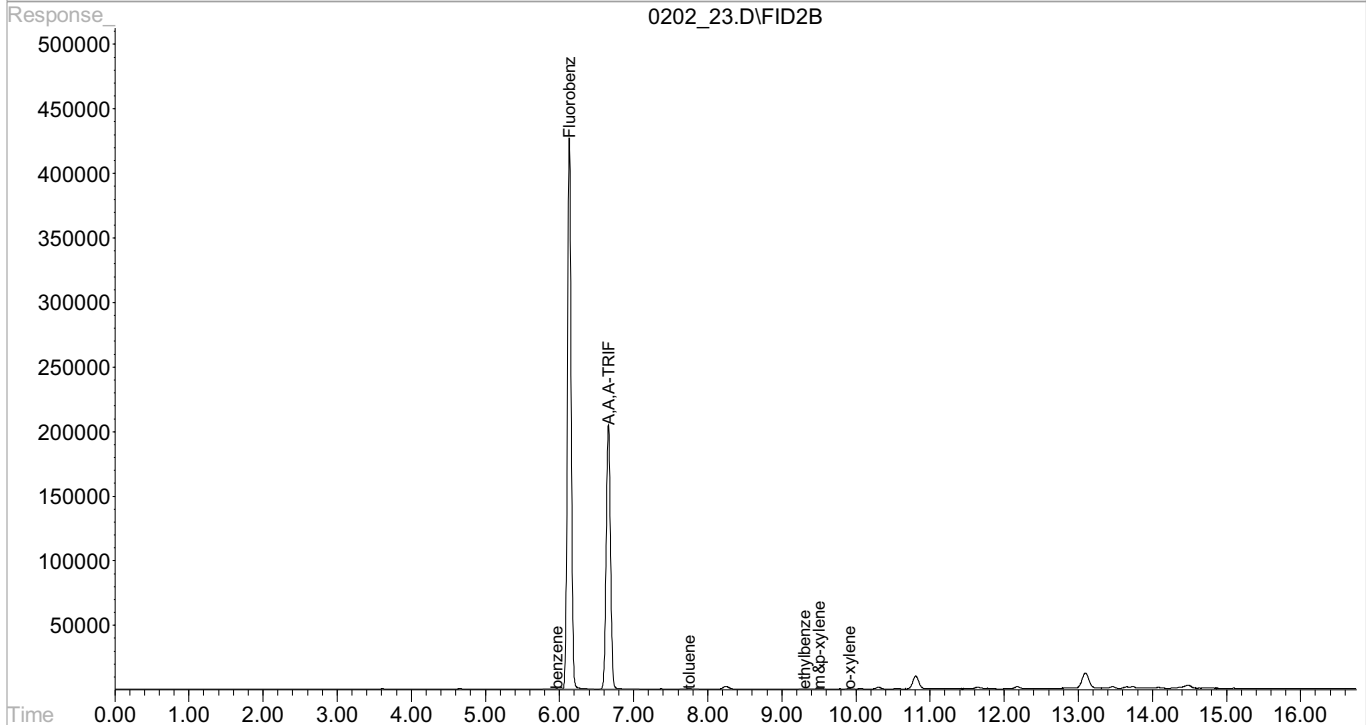
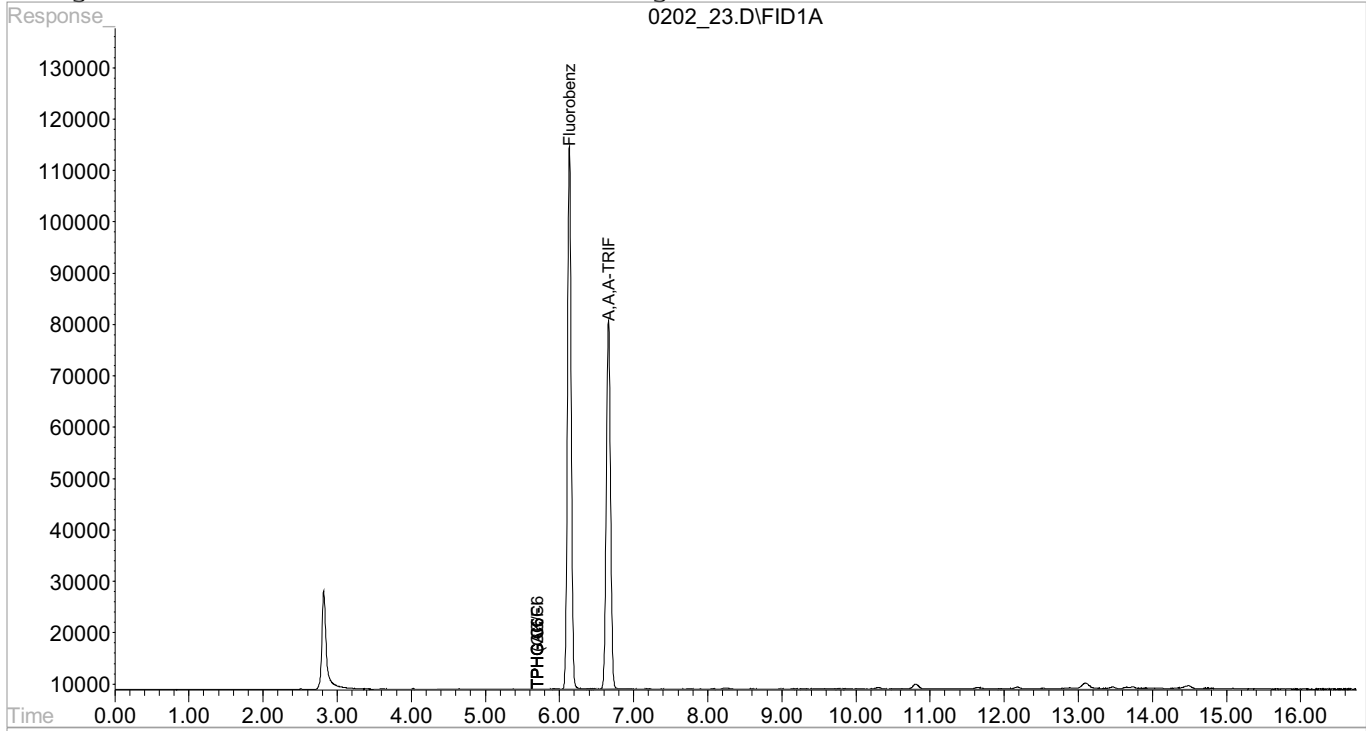
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Signal #1 : C:\HPCHEM\1\DATA\020217\0202 23.D\FID1A.CH Vial: 23
 Signal #2 : C:\HPCHEM\1\DATA\020217\0202 23.D\FID2B.CH
 Acq On : 2 Feb 2017 6:02 pm Operator: 605
 Sample : L886938-04 1x WG948712 NWTPHGX Inst : VOCGC1
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Feb 3 9:23 2017 Quant Results File: BG01L16P.RES

Quant Method : C:\HPCHEM\1\METHODS\BG01L16P.M (Chemstation Integrator)
 Title : WIS GRO VOCGC01
 Last Update : Sat Dec 17 14:49:51 2016
 Response via : Single Level Calibration
 DataAcq Meth : GC1BG.M

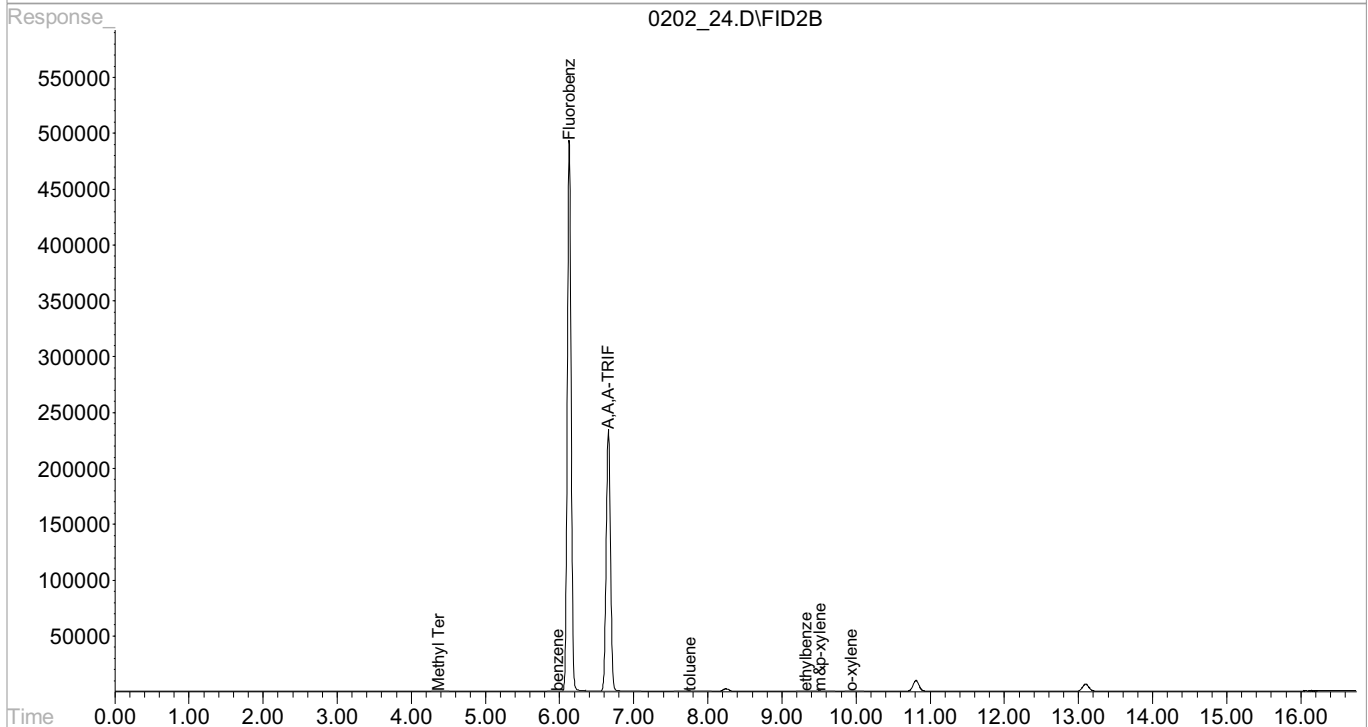
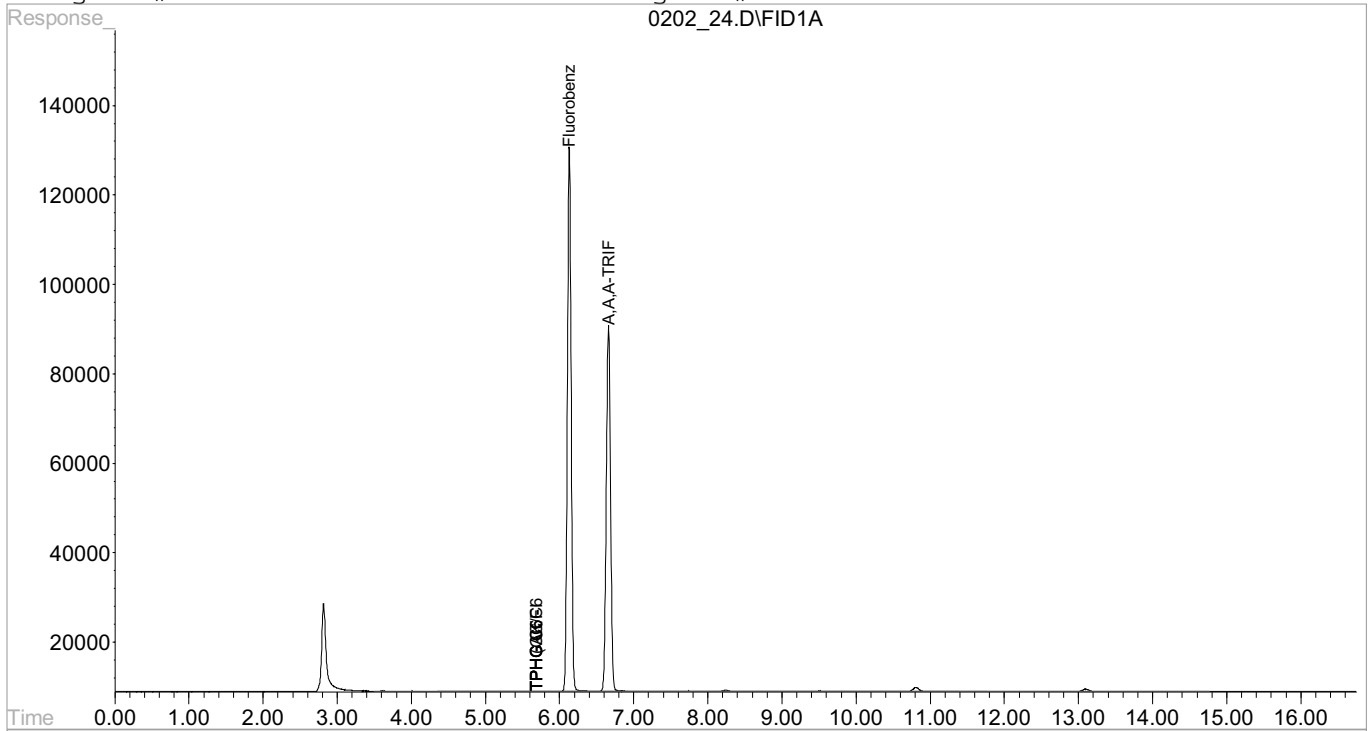
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Signal #1 : C:\HPCHEM\1\DATA\020217\0202 24.D\FID1A.CH Vial: 24
 Signal #2 : C:\HPCHEM\1\DATA\020217\0202 24.D\FID2B.CH
 Acq On : 2 Feb 2017 6:25 pm Operator: 605
 Sample : L886938-05 1x WG948712 NWTPHGX Inst : VO CGC1
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Feb 3 9:24 2017 Quant Results File: BG01L16P.RES

Quant Method : C:\HPCHEM\1\METHODS\BG01L16P.M (Chemstation Integrator)
 Title : WIS GRO VO CGC01
 Last Update : Sat Dec 17 14:49:51 2016
 Response via : Single Level Calibration
 DataAcq Meth : GC1BG.M

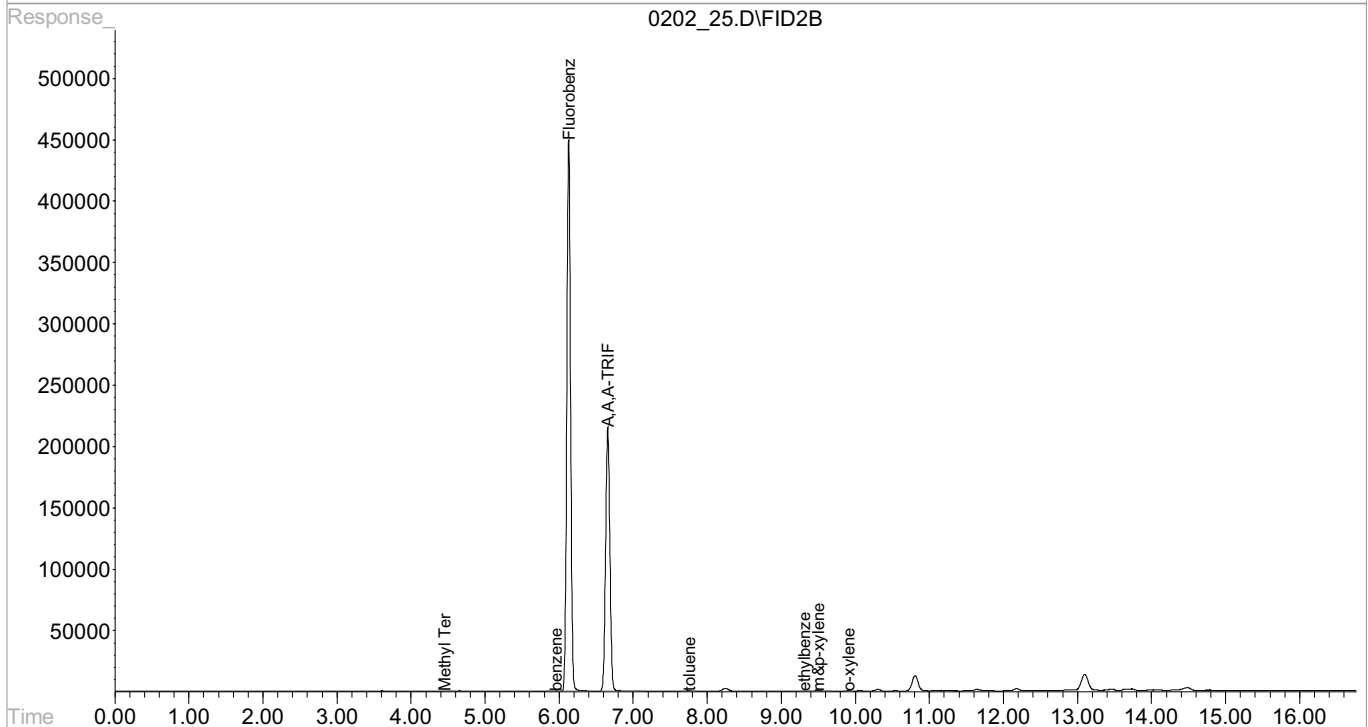
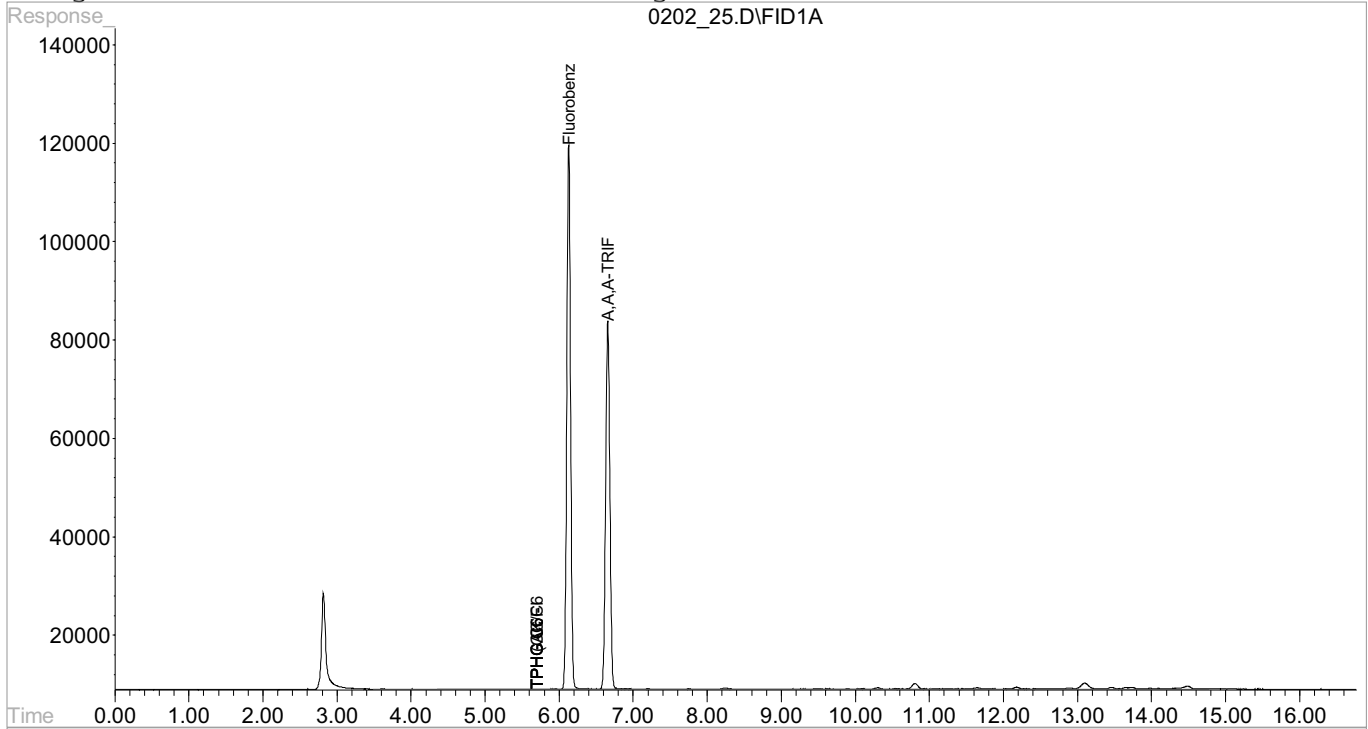
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Signal #1 : C:\HPCHEM\1\DATA\020217\0202 25.D\FID1A.CH Vial: 25
 Signal #2 : C:\HPCHEM\1\DATA\020217\0202 25.D\FID2B.CH
 Acq On : 2 Feb 2017 6:47 pm Operator: 605
 Sample : L886938-06 1x WG948712 NWTPHGX Inst : VO CGC1
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Feb 3 9:24 2017 Quant Results File: BG01L16P.RES

Quant Method : C:\HPCHEM\1\METHODS\BG01L16P.M (Chemstation Integrator)
 Title : WIS GRO VO CGC01
 Last Update : Sat Dec 17 14:49:51 2016
 Response via : Single Level Calibration
 DataAcq Meth : GC1BG.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L888357
Samples Received: 01/31/2017
Project Number: 1696120.00
Description: BNSF - Wishram Railyard, WA
Site: WISHRAM
Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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.



¹Cp: Cover Page	1	
²Tc: Table of Contents	2	
³Ss: Sample Summary	3	
⁴Cn: Case Narrative	4	
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MW-17-20170127 L888357-02	6	
MW-16-20170127 L888357-03	7	
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SAMPLE SUMMARY



MW-18-20170127 L888357-01 GW

Collected by Alice Robinson Collected date/time 01/27/17 10:50 Received date/time 01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG951041	1	02/10/17 13:06	02/13/17 03:26	FMB

¹ Cp

² Tc

³ Ss

MW-17-20170127 L888357-02 GW

Collected by Alice Robinson Collected date/time 01/27/17 11:30 Received date/time 01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG951041	1	02/10/17 13:06	02/13/17 03:48	FMB

⁴ Cn

⁵ Sr

MW-16-20170127 L888357-03 GW

Collected by Alice Robinson Collected date/time 01/27/17 13:20 Received date/time 01/31/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM	WG951041	1	02/10/17 13:06	02/13/17 04:10	FMB

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.

Mark W. Beasley
Technical Service Representative

Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

<u>ESC Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L888357-01	MW-18-20170127	8270 D-SIM
L888357-02	MW-17-20170127	8270 D-SIM
L888357-03	MW-16-20170127	8270 D-SIM

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	02/13/2017 03:26	WG951041
Acenaphthene	ND		0.0500	1	02/13/2017 03:26	WG951041
Acenaphthylene	ND		0.0500	1	02/13/2017 03:26	WG951041
Benzo(a)anthracene	ND		0.0500	1	02/13/2017 03:26	WG951041
Benzo(a)pyrene	ND		0.0500	1	02/13/2017 03:26	WG951041
Benzo(b)fluoranthene	ND		0.0500	1	02/13/2017 03:26	WG951041
Benzo(g,h,i)perylene	ND		0.0500	1	02/13/2017 03:26	WG951041
Benzo(k)fluoranthene	ND		0.0500	1	02/13/2017 03:26	WG951041
Chrysene	ND		0.0500	1	02/13/2017 03:26	WG951041
Dibenz(a,h)anthracene	ND		0.0500	1	02/13/2017 03:26	WG951041
Fluoranthene	ND		0.0500	1	02/13/2017 03:26	WG951041
Fluorene	ND		0.0500	1	02/13/2017 03:26	WG951041
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	02/13/2017 03:26	WG951041
Naphthalene	ND		0.250	1	02/13/2017 03:26	WG951041
Phenanthrene	ND		0.0500	1	02/13/2017 03:26	WG951041
Pyrene	ND		0.0500	1	02/13/2017 03:26	WG951041
1-Methylnaphthalene	ND		0.250	1	02/13/2017 03:26	WG951041
2-Methylnaphthalene	ND		0.250	1	02/13/2017 03:26	WG951041
2-Chloronaphthalene	ND		0.250	1	02/13/2017 03:26	WG951041
(S) Nitrobenzene-d5	76.0		11.0-135		02/13/2017 03:26	WG951041
(S) 2-Fluorobiphenyl	82.7		32.0-120		02/13/2017 03:26	WG951041
(S) p-Terphenyl-d14	99.4		23.0-122		02/13/2017 03:26	WG951041

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	02/13/2017 03:48	WG951041
Acenaphthene	0.0554		0.0500	1	02/13/2017 03:48	WG951041
Acenaphthylene	ND		0.0500	1	02/13/2017 03:48	WG951041
Benzo(a)anthracene	ND		0.0500	1	02/13/2017 03:48	WG951041
Benzo(a)pyrene	ND		0.0500	1	02/13/2017 03:48	WG951041
Benzo(b)fluoranthene	ND		0.0500	1	02/13/2017 03:48	WG951041
Benzo(g,h,i)perylene	ND		0.0500	1	02/13/2017 03:48	WG951041
Benzo(k)fluoranthene	ND		0.0500	1	02/13/2017 03:48	WG951041
Chrysene	ND		0.0500	1	02/13/2017 03:48	WG951041
Dibenz(a,h)anthracene	ND		0.0500	1	02/13/2017 03:48	WG951041
Fluoranthene	ND		0.0500	1	02/13/2017 03:48	WG951041
Fluorene	ND		0.0500	1	02/13/2017 03:48	WG951041
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	02/13/2017 03:48	WG951041
Naphthalene	ND		0.250	1	02/13/2017 03:48	WG951041
Phenanthrene	ND		0.0500	1	02/13/2017 03:48	WG951041
Pyrene	ND		0.0500	1	02/13/2017 03:48	WG951041
1-Methylnaphthalene	ND		0.250	1	02/13/2017 03:48	WG951041
2-Methylnaphthalene	ND		0.250	1	02/13/2017 03:48	WG951041
2-Chloronaphthalene	ND		0.250	1	02/13/2017 03:48	WG951041
(S) Nitrobenzene-d5	69.4		11.0-135		02/13/2017 03:48	WG951041
(S) 2-Fluorobiphenyl	70.9		32.0-120		02/13/2017 03:48	WG951041
(S) p-Terphenyl-d14	79.7		23.0-122		02/13/2017 03:48	WG951041

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270 D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	02/13/2017 04:10	WG951041
Acenaphthene	0.718		0.0500	1	02/13/2017 04:10	WG951041
Acenaphthylene	ND		0.0500	1	02/13/2017 04:10	WG951041
Benzo(a)anthracene	ND		0.0500	1	02/13/2017 04:10	WG951041
Benzo(a)pyrene	ND		0.0500	1	02/13/2017 04:10	WG951041
Benzo(b)fluoranthene	ND		0.0500	1	02/13/2017 04:10	WG951041
Benzo(g,h,i)perylene	ND		0.0500	1	02/13/2017 04:10	WG951041
Benzo(k)fluoranthene	ND		0.0500	1	02/13/2017 04:10	WG951041
Chrysene	ND		0.0500	1	02/13/2017 04:10	WG951041
Dibenz(a,h)anthracene	ND		0.0500	1	02/13/2017 04:10	WG951041
Fluoranthene	ND		0.0500	1	02/13/2017 04:10	WG951041
Fluorene	0.598		0.0500	1	02/13/2017 04:10	WG951041
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	02/13/2017 04:10	WG951041
Naphthalene	ND		0.250	1	02/13/2017 04:10	WG951041
Phenanthrene	ND		0.0500	1	02/13/2017 04:10	WG951041
Pyrene	ND		0.0500	1	02/13/2017 04:10	WG951041
1-Methylnaphthalene	1.59		0.250	1	02/13/2017 04:10	WG951041
2-Methylnaphthalene	ND		0.250	1	02/13/2017 04:10	WG951041
2-Chloronaphthalene	ND		0.250	1	02/13/2017 04:10	WG951041
(S) Nitrobenzene-d5	74.1		11.0-135		02/13/2017 04:10	WG951041
(S) 2-Fluorobiphenyl	69.0		32.0-120		02/13/2017 04:10	WG951041
(S) p-Terphenyl-d14	73.5		23.0-122		02/13/2017 04:10	WG951041

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3196907-3 02/13/17 03:04

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Anthracene	U		0.00800	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.00700	0.0500
Benzo(a)anthracene	U		0.00830	0.0500
Benzo(a)pyrene	U		0.0158	0.0500
Benzo(b)fluoranthene	U		0.00212	0.0500
Benzo(g,h,i)perylene	0.00350	J	0.00227	0.0500
Benzo(k)fluoranthene	U		0.0255	0.0500
Chrysene	U		0.0144	0.0500
Dibenz(a,h)anthracene	U		0.00454	0.0500
Fluoranthene	U		0.0165	0.0500
Fluorene	U		0.00898	0.0500
Indeno(1,2,3-cd)pyrene	U		0.00739	0.0500
Naphthalene	0.0292	J	0.0123	0.250
Phenanthrene	U		0.0184	0.0500
Pyrene	U		0.0155	0.0500
1-Methylnaphthalene	U		0.0189	0.250
2-Methylnaphthalene	U		0.0155	0.250
2-Chloronaphthalene	U		0.0165	0.250
(S) Nitrobenzene-d5	72.1			11.0-135
(S) 2-Fluorobiphenyl	78.4			32.0-120
(S) p-Terphenyl-d14	97.2			23.0-122

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) R3196907-1 02/13/17 02:21 • (LCSD) R3196907-2 02/13/17 02:43

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	%	%	%			%	%
Anthracene	2.00	1.68	1.79	84.1	89.6	51.0-120			6.37	20
Acenaphthene	2.00	1.63	1.73	81.6	86.3	50.0-120			5.60	20
Acenaphthylene	2.00	1.57	1.67	78.6	83.4	49.0-120			5.93	20
Benzo(a)anthracene	2.00	1.64	1.81	82.0	90.6	49.0-120			9.99	20
Benzo(a)pyrene	2.00	1.67	1.82	83.5	90.9	50.0-122			8.45	20
Benzo(b)fluoranthene	2.00	1.79	1.92	89.5	96.2	48.0-120			7.23	22
Benzo(g,h,i)perylene	2.00	1.54	1.74	77.2	86.9	38.0-126			11.9	22
Benzo(k)fluoranthene	2.00	1.67	1.81	83.5	90.5	48.0-120			8.00	22
Chrysene	2.00	1.73	1.87	86.5	93.3	51.0-120			7.54	20
Dibenz(a,h)anthracene	2.00	1.52	1.74	75.8	86.9	30.0-130			13.7	26
Fluoranthene	2.00	1.76	1.91	88.2	95.7	50.0-121			8.16	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3196907-1 02/13/17 02:21 • (LCSD) R3196907-2 02/13/17 02:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	1.59	1.69	79.6	84.3	48.0-120			5.75	20
Indeno(1,2,3-cd)pyrene	2.00	1.62	1.80	81.1	90.0	39.0-125			10.4	21
Naphthalene	2.00	1.57	1.65	78.6	82.4	46.0-120			4.68	20
Phenanthrene	2.00	1.61	1.72	80.7	86.0	50.0-120			6.35	20
Pyrene	2.00	1.65	1.74	82.7	87.2	49.0-127			5.20	20
1-Methylnaphthalene	2.00	1.68	1.77	83.8	88.4	50.0-120			5.34	20
2-Methylnaphthalene	2.00	1.56	1.63	77.8	81.3	49.0-120			4.42	20
2-Chloronaphthalene	2.00	1.50	1.57	74.9	78.3	46.0-120			4.50	20
<i>(S) Nitrobenzene-d5</i>				77.6	84.0	11.0-135				
<i>(S) 2-Fluorobiphenyl</i>				85.0	90.7	32.0-120				
<i>(S) p-Terphenyl-d14</i>				93.6	97.5	23.0-122				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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.
(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
J	The identification of the analyte is acceptable; the reported value is an estimate.

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		

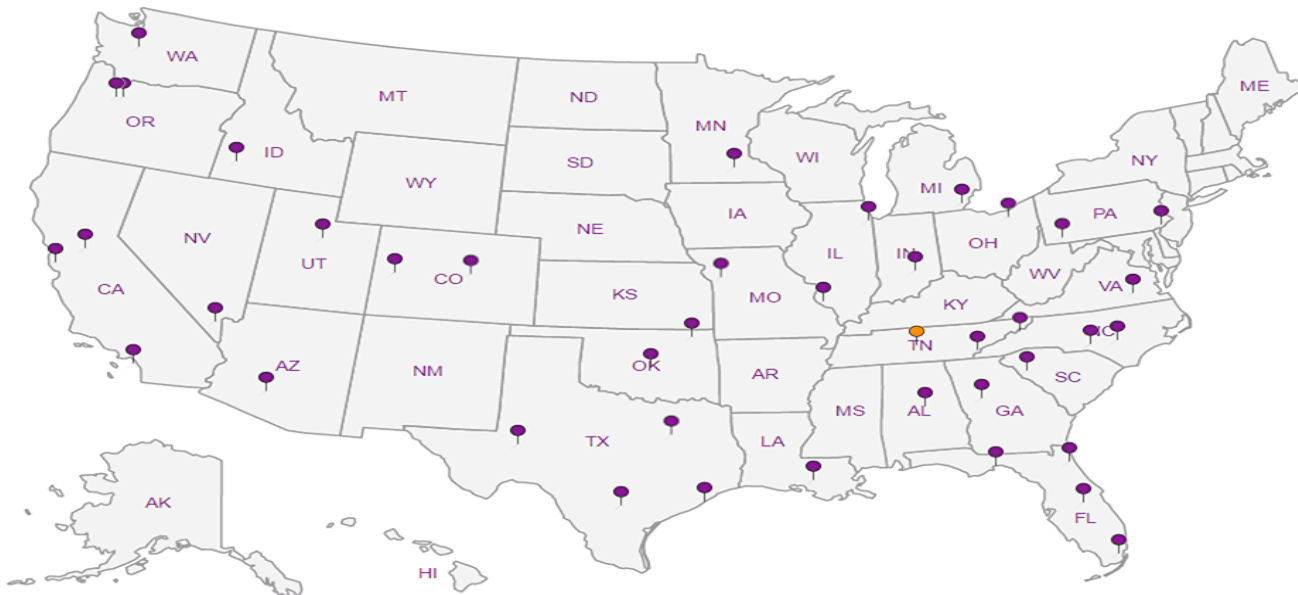
Third Party & Federal Accreditations

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.**



Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:

Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
Joseph.Sawdey@kennedyjenks.com,

Project Description: BNSF - Wishram Rail yard, WA

City/State Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1696120.00

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson
Collected by (signature):
Alice Kela

Site/Facility ID #
Wishram

P.O. #

Quote #

Rush? (Lab MUST Be Notified)
 Some Day 300%
 Next Day 100%
 Two Day 50%
 Three Day 25%

Date Results Needed

No. of
Ctrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Ctrs
MW-18-20170127	grab	GW	20'	1-27-17	10:50	18
MW-17-20170127	grab	GW	20'	1-27-17	11:30	18
MW-16-20170127	grab	GW	20'	1-27-17	13:20	18
MW-15-20170127	grab	GW	20'	1-27-17	16:00	18
MW-14-20170127	grab	GW	20'	1-27-17	17:10	18
Dup-20170127	grab	GW	20'	1-27-17	12:00	18
Trip Blank - 01		GW		1-27-17		18
Trip Blank - 02		GW		1-27-17		18

Analysis / Container / Preservative

Pres Chk	8270D omp cresol PAH 100ml Amb NoPres	8270PAHSHM9 100ml Amb-NoPres	ASPH 250ml HDPE NoPres	NH3 125ml HDPE-H2SO4	NO2NO3 250ml HDPE-H2SO4	NWTPHDXLVI 40ml Amb-HCl-BT	NWTPHGX 40ml Amb HCl	RSK175 Diss CH4 40ml Amb-HCl	SULFATE 125ml HDPE-NoPres
		No SIM AR	see 2nd page			No-SGT AR			

Chain of Custody Page ___ of ___

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-8858
Phone: 800-767-8839
Fax: 615-758-8859

L# L886938
A133
L888357
 Acctnum: BNSF1KEN
 Template: T119667
 Prelogin: P585558
 TSR: 134 - Mark W. Beasley
 P# 123121
 Shipped Via: FedEX Ground

N
2/7/17

* Matrix:
 SS - Soil AIR - Air
 GW - Groundwater
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: NWTPH-Dx w/o SGCU, NWTPH-Gx, BTEX (8260), PAHs (or PAHs w/Cresols), total metals (As and/or Pb), dissolved metals (field filtered) (As and/or Pb, Fe, Mn), Nitrate/Nitrite, Ammonia, Sulfate, Sulfide, and Methane.

pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist:
 CUC Seal Present/Intact: Y N
 CUC signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 In Aspirable
 VQA Zero Headspace: Y N
 Preservation Correct/Checked: Y N

Relinquished by: (Signature) <u>Alice Robinson</u>	Date: 1-30-2017	Time: 1:15pm	Received by: (Signature)	Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Mech: <u>2</u>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <u>3.1</u> °C Bottle Received: <u>98</u>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <u>Shane DeGross</u>	Date: <u>1-31-17</u> Time: <u>9:00</u> Hold: Condition: <u>NCF / 100</u>

Andy Vann

To: Mark Beasley; Login; Sample Storage
Subject: RE: L886938 *BNSF1KEN* relog

Relogged -01 thru -03 to L888357.
Mark – We did not receive any 100ml containers for -04 thru -06.

From: Mark Beasley
Sent: Tuesday, February 07, 2017 4:41 PM
To: Login; Sample Storage
Subject: L886938 *BNSF1KEN* relog

Relog L886938-01 thru -06 for 8270PAHSIMD. Log as R5 due 2/14. Run OOH per client.

Thanks
Mark Beasley
ESC Lab Sciences
Direct: (615) 773-9672
Mobile: (615) 330-1602
Email: mbeasley@esclabsciences.com

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Groundwater Analytical Reports
17 to 18 April 2017

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L903886
Samples Received: 04/20/2017
Project Number: 1796120.00
Description: BNSF - Wishram Railyard, WA
Site: WISHRAM
Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001










Entire Report Reviewed By:



Mark W. Beasley
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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¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷GI⁸AI⁹Sc

SAMPLE SUMMARY



RMD-1-20170418 L903886-01 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 11:50
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973409	1	04/25/17 09:52	04/25/17 09:52	DR
Wet Chemistry by Method 353.2	WG972525	1	04/24/17 10:59	04/24/17 10:59	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:17	04/20/17 20:17	MZ
Wet Chemistry by Method 9056A	WG972468	1	04/22/17 00:17	04/22/17 00:17	SAM
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:11	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 13:26	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 16:14	04/24/17 16:14	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/23/17 23:56	04/23/17 23:56	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG973314	20	04/24/17 17:58	04/24/17 17:58	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 14:14	04/22/17 14:14	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 10:51	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 05:53	FMB

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

RMD-2-20170418 L903886-02 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 09:30
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973409	1	04/25/17 09:58	04/25/17 09:58	DR
Wet Chemistry by Method 353.2	WG972525	1	04/24/17 11:01	04/24/17 11:01	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:17	04/20/17 20:17	MZ
Wet Chemistry by Method 9056A	WG972468	1	04/22/17 00:35	04/22/17 00:35	SAM
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:14	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 13:40	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 17:50	04/24/17 17:50	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 00:13	04/24/17 00:13	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG973314	10	04/24/17 18:31	04/24/17 18:31	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 14:31	04/22/17 14:31	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 11:07	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 06:17	FMB

RMD-3-20170417 L903886-03 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 14:00
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973409	1	04/25/17 09:59	04/25/17 09:59	DR
Wet Chemistry by Method 353.2	WG972525	1	04/24/17 11:03	04/24/17 11:03	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:17	04/20/17 20:17	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 10:35	04/21/17 10:35	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:18	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 13:44	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 18:14	04/24/17 18:14	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 00:46	04/24/17 00:46	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 14:48	04/22/17 14:48	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 11:24	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 06:40	FMB

RMD-4-20170417 L903886-04 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 17:40
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:25	04/25/17 10:25	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:08	04/26/17 14:08	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:18	04/20/17 20:18	MZ

SAMPLE SUMMARY



RMD-4-20170417 L903886-04 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 17:40
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 10:45	04/21/17 10:45	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:28	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 13:55	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 18:38	04/24/17 18:38	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 01:19	04/24/17 01:19	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 15:06	04/22/17 15:06	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 11:40	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 07:03	FMB

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

WMW-15-20170418 L903886-05 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 12:55
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:32	04/25/17 10:32	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:09	04/26/17 14:09	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:18	04/20/17 20:18	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 10:55	04/21/17 10:55	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:32	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 13:58	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 19:02	04/24/17 19:02	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 01:36	04/24/17 01:36	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 15:23	04/22/17 15:23	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	5	04/21/17 08:12	04/26/17 16:14	TH

6
Qc

7
Gl

8
Al

9
Sc

WMW-16-20170418 L903886-06 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 10:35
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:33	04/25/17 10:33	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:15	04/26/17 14:15	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:18	04/20/17 20:18	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 11:05	04/21/17 11:05	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:36	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:02	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 19:26	04/24/17 19:26	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973688	1	04/25/17 13:56	04/25/17 13:56	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 15:40	04/22/17 15:40	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 15:41	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG972881	1.11	04/21/17 21:20	04/24/17 16:00	JF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 07:27	FMB

WMW-17-20170417 L903886-07 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 12:35
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:35	04/25/17 10:35	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:16	04/26/17 14:16	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:18	04/20/17 20:18	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 11:26	04/21/17 11:26	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:39	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:06	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 19:50	04/24/17 19:50	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 08:45	04/24/17 08:45	MJ

SAMPLE SUMMARY



WMW-17-20170417 L903886-07 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 12:35
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method RSK175	WG973314	10	04/24/17 19:05	04/24/17 19:05	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 15:57	04/22/17 15:57	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 11:56	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 07:50	FMB

1
Cp

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Tc

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Ss

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Cn

WMW-18-20170417 L903886-08 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 16:10
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:37	04/25/17 10:37	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:18	04/26/17 14:18	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:19	04/20/17 20:19	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 11:56	04/21/17 11:56	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:43	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:09	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 20:15	04/24/17 20:15	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 09:02	04/24/17 09:02	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 16:14	04/22/17 16:14	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 12:13	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG972881	1.11	04/21/17 21:20	04/24/17 16:23	JF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 08:14	FMB

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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

D-1-20170417 L903886-09 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 00:00
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:46	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:12	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 20:39	04/24/17 20:39	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 16:31	04/22/17 16:31	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 12:29	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 08:37	FMB

D-2-20170418 L903886-10 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 00:00
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:50	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:16	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 22:49	04/24/17 22:49	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 16:48	04/22/17 16:48	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 12:57	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 09:01	FMB

WMW-14-20170418 L903886-11 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 13:40
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:40	04/25/17 10:40	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:19	04/26/17 14:19	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:19	04/20/17 20:19	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 12:06	04/21/17 12:06	KCF

SAMPLE SUMMARY



WMW-14-20170418 L903886-11 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 13:40
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:53	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:19	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 23:14	04/24/17 23:14	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 09:19	04/24/17 09:19	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 17:05	04/22/17 17:05	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 13:15	TH

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Cp

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Tc

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Ss

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Cn

WMW-5-20170418 L903886-12 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 14:35
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:43	04/25/17 10:43	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:20	04/26/17 14:20	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:19	04/20/17 20:19	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 12:16	04/21/17 12:16	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 18:57	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:23	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/24/17 23:38	04/24/17 23:38	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 09:35	04/24/17 09:35	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 17:23	04/22/17 17:23	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 13:31	TH

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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

TB-1 L903886-13 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 00:00
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 13:23	04/22/17 13:23	ACG

TB-2 L903886-14 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 00:00
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 13:40	04/22/17 13:40	ACG

TB-3 L903886-15 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 00:00
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 13:57	04/22/17 13:57	ACG

WMW-13-20170417 L903886-16 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 12:25
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:49	04/25/17 10:49	DR
Wet Chemistry by Method 353.2	WG973650	5	04/26/17 14:21	04/26/17 14:21	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:20	04/20/17 20:20	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 12:26	04/21/17 12:26	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 19:00	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:33	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/25/17 00:02	04/25/17 00:02	ACG

SAMPLE SUMMARY



WMW-13-20170417 L903886-16 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 12:25
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 09:52	04/24/17 09:52	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 17:40	04/22/17 17:40	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 14:36	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG972881	1	04/21/17 21:20	04/24/17 16:46	JF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 09:24	FMB

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Cp

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Tc

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Ss

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Cn

WMW-10-20170417 L903886-17 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 13:30
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:51	04/25/17 10:51	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:27	04/26/17 14:27	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:20	04/20/17 20:20	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 12:37	04/21/17 12:37	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 19:11	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:37	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/25/17 00:26	04/25/17 00:26	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 10:09	04/24/17 10:09	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 17:57	04/22/17 17:57	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 14:53	TH

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Sr

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Qc

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Gl

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Al

9
Sc

WMW-9-20170417 L903886-18 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 14:35
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:52	04/25/17 10:52	DR
Wet Chemistry by Method 353.2	WG973650	5	04/26/17 14:28	04/26/17 14:28	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:20	04/20/17 20:20	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 12:57	04/21/17 12:57	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 19:14	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:40	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/25/17 00:50	04/25/17 00:50	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973136	1	04/24/17 10:25	04/24/17 10:25	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 18:14	04/22/17 18:14	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 15:09	TH

WMW-11-20170417 L903886-19 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 15:55
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:54	04/25/17 10:54	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:29	04/26/17 14:29	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:21	04/20/17 20:21	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 13:07	04/21/17 13:07	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 19:18	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:44	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/25/17 01:14	04/25/17 01:14	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973135	1	04/23/17 18:05	04/23/17 18:05	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 18:31	04/22/17 18:31	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	5	04/21/17 08:12	04/26/17 16:47	TH

SAMPLE SUMMARY



WMW-12-20170417 L903886-20 GW

Collected by
Alexander Leshner
Collected date/time
04/17/17 17:15
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:56	04/25/17 10:56	DR
Wet Chemistry by Method 353.2	WG973650	10	04/26/17 14:30	04/26/17 14:30	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:21	04/20/17 20:21	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 13:17	04/21/17 13:17	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 19:21	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:48	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/25/17 01:38	04/25/17 01:38	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973135	1	04/23/17 18:22	04/23/17 18:22	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG972544	1	04/22/17 18:48	04/22/17 18:48	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/26/17 15:25	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG972881	1	04/21/17 21:20	04/24/17 17:10	JF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG972578	1	04/21/17 08:18	04/22/17 09:48	FMB

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

WMW-3-20170418 L903886-21 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 10:15
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 10:59	04/25/17 10:59	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:31	04/26/17 14:31	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:21	04/20/17 20:21	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 13:48	04/21/17 13:48	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 19:25	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:51	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/25/17 02:03	04/25/17 02:03	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973135	1	04/23/17 18:38	04/23/17 18:38	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG973071	1	04/23/17 03:38	04/23/17 03:38	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	5	04/21/17 08:12	04/26/17 15:58	TH

WMW-1-20170418 L903886-22 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 12:20
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 11:00	04/25/17 11:00	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:34	04/26/17 14:34	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:21	04/20/17 20:21	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 13:58	04/21/17 13:58	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 19:28	JPD
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:54	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/25/17 02:27	04/25/17 02:27	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973135	1	04/23/17 18:55	04/23/17 18:55	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG973314	20	04/24/17 19:21	04/24/17 19:21	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG973071	1	04/23/17 03:51	04/23/17 03:51	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	5	04/21/17 08:12	04/26/17 16:30	TH

FB-01-20170418 L903886-23 GW

Collected by
Alexander Leshner
Collected date/time
04/18/17 08:30
Received date/time
04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG973411	1	04/25/17 11:07	04/25/17 11:07	DR
Wet Chemistry by Method 353.2	WG973650	1	04/26/17 14:39	04/26/17 14:39	DR
Wet Chemistry by Method 4500S2 D-2011	WG972424	1	04/20/17 20:22	04/20/17 20:22	MZ
Wet Chemistry by Method 9056A	WG972469	1	04/21/17 14:08	04/21/17 14:08	KCF
Metals (ICPMS) by Method 6020	WG972568	1	04/21/17 08:44	04/21/17 17:57	JPD

SAMPLE SUMMARY



FB-01-20170418 L903886-23 GW

Collected by Alexander Lesher
 Collected date/time 04/18/17 08:30
 Received date/time 04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020	WG972678	1	04/21/17 15:40	04/22/17 14:58	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG972545	1	04/25/17 02:51	04/25/17 02:51	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG973135	1	04/23/17 14:13	04/23/17 14:13	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG973071	1	04/23/17 04:04	04/23/17 04:04	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG972494	1	04/21/17 08:12	04/25/17 01:01	DMG

1
Cp

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Tc

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Ss

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Cn

TB-4 L903886-24 GW

Collected by Alexander Lesher
 Collected date/time 04/18/17 00:00
 Received date/time 04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG973071	1	04/23/17 00:01	04/23/17 00:01	LRL

5
Sr

6
Qc

7
Gl

TB-5 L903886-25 GW

Collected by Alexander Lesher
 Collected date/time 04/18/17 00:00
 Received date/time 04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG973071	1	04/23/17 00:14	04/23/17 00:14	LRL

8
Al

9
Sc

TB-6 L903886-26 GW

Collected by Alexander Lesher
 Collected date/time 04/18/17 00:00
 Received date/time 04/20/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG973071	1	04/23/17 00:27	04/23/17 00:27	LRL



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Mark W. Beasley
Technical Service Representative

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	194		100	1	04/25/2017 09:52	WG973409

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	ND	P1	100	1	04/24/2017 10:59	WG972525

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	04/20/2017 20:17	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	8560		5000	1	04/22/2017 00:17	WG972468

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	2660		100	1	04/22/2017 13:26	WG972678
Lead	ND		2.00	1	04/21/2017 18:11	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 13:26	WG972678
Manganese,Dissolved	2550		5.00	1	04/22/2017 13:26	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	106		100	1	04/24/2017 16:14	WG972545
(S) a,a,a-Trifluorotoluene(FID)	110		77.0-122		04/24/2017 16:14	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		200	20	04/24/2017 17:58	WG973314
Ethane	ND		13.0	1	04/23/2017 23:56	WG973136
Ethene	ND		13.0	1	04/23/2017 23:56	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 14:14	WG972544
Toluene	ND		1.00	1	04/22/2017 14:14	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 14:14	WG972544
o-Xylene	ND		1.00	1	04/22/2017 14:14	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 14:14	WG972544
(S) Toluene-d8	111		80.0-120		04/22/2017 14:14	WG972544
(S) Dibromofluoromethane	118		76.0-123		04/22/2017 14:14	WG972544
(S) a,a,a-Trifluorotoluene	91.0		80.0-120		04/22/2017 14:14	WG972544
(S) 4-Bromofluorobenzene	83.8		80.0-120		04/22/2017 14:14	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4970		200	1	04/26/2017 10:51	WG972494
Residual Range Organics (RRO)	3530		250	1	04/26/2017 10:51	WG972494
(S) o-Terphenyl	141		52.0-156		04/26/2017 10:51	WG972494

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	04/22/2017 05:53	WG972578
Acenaphthene	0.358		0.0500	1	04/22/2017 05:53	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 05:53	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 05:53	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 05:53	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 05:53	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 05:53	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 05:53	WG972578
Chrysene	ND		0.0500	1	04/22/2017 05:53	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 05:53	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 05:53	WG972578
Fluorene	0.302		0.0500	1	04/22/2017 05:53	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 05:53	WG972578
Naphthalene	0.433		0.250	1	04/22/2017 05:53	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 05:53	WG972578
Pyrene	ND		0.0500	1	04/22/2017 05:53	WG972578
1-Methylnaphthalene	3.64		0.250	1	04/22/2017 05:53	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 05:53	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 05:53	WG972578
(S) Nitrobenzene-d5	117		31.0-160		04/22/2017 05:53	WG972578
(S) 2-Fluorobiphenyl	96.6		48.0-148		04/22/2017 05:53	WG972578
(S) p-Terphenyl-d14	111		37.0-146		04/22/2017 05:53	WG972578

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	177		100	1	04/25/2017 09:58	WG973409

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND	J6	100	1	04/24/2017 11:01	WG972525

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	04/20/2017 20:17	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ND		5000	1	04/22/2017 00:35	WG972468

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	5150		100	1	04/22/2017 13:40	WG972678
Lead	ND		2.00	1	04/21/2017 18:14	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 13:40	WG972678
Manganese,Dissolved	2830		5.00	1	04/22/2017 13:40	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	04/24/2017 17:50	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 17:50	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	1840		100	10	04/24/2017 18:31	WG973314
Ethane	ND		13.0	1	04/24/2017 00:13	WG973136
Ethene	ND		13.0	1	04/24/2017 00:13	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	04/22/2017 14:31	WG972544
Toluene	ND		1.00	1	04/22/2017 14:31	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 14:31	WG972544
o-Xylene	ND		1.00	1	04/22/2017 14:31	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 14:31	WG972544
(S) Toluene-d8	110		80.0-120		04/22/2017 14:31	WG972544
(S) Dibromofluoromethane	121		76.0-123		04/22/2017 14:31	WG972544
(S) a,a,a-Trifluorotoluene	90.7		80.0-120		04/22/2017 14:31	WG972544
(S) 4-Bromofluorobenzene	81.8		80.0-120		04/22/2017 14:31	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4880		200	1	04/26/2017 11:07	WG972494
Residual Range Organics (RRO)	4520		250	1	04/26/2017 11:07	WG972494
(S) o-Terphenyl	141		52.0-156		04/26/2017 11:07	WG972494

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.0894		0.0500	1	04/22/2017 06:17	WG972578
Acenaphthene	0.0739		0.0500	1	04/22/2017 06:17	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 06:17	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 06:17	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 06:17	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 06:17	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 06:17	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 06:17	WG972578
Chrysene	ND		0.0500	1	04/22/2017 06:17	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 06:17	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 06:17	WG972578
Fluorene	0.266		0.0500	1	04/22/2017 06:17	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 06:17	WG972578
Naphthalene	ND		0.250	1	04/22/2017 06:17	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 06:17	WG972578
Pyrene	0.0661		0.0500	1	04/22/2017 06:17	WG972578
1-Methylnaphthalene	ND		0.250	1	04/22/2017 06:17	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 06:17	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 06:17	WG972578
(S) Nitrobenzene-d5	120		31.0-160		04/22/2017 06:17	WG972578
(S) 2-Fluorobiphenyl	94.0		48.0-148		04/22/2017 06:17	WG972578
(S) p-Terphenyl-d14	117		37.0-146		04/22/2017 06:17	WG972578

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	100		100	1	04/25/2017 09:59	WG973409

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	04/24/2017 11:03	WG972525

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	04/20/2017 20:17	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	21900		5000	1	04/21/2017 10:35	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	1640		100	1	04/22/2017 13:44	WG972678
Lead	ND		2.00	1	04/21/2017 18:18	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 13:44	WG972678
Manganese,Dissolved	708		5.00	1	04/22/2017 13:44	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	04/24/2017 18:14	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 18:14	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	65.8		10.0	1	04/24/2017 00:46	WG973136
Ethane	ND		13.0	1	04/24/2017 00:46	WG973136
Ethene	ND		13.0	1	04/24/2017 00:46	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	04/22/2017 14:48	WG972544
Toluene	ND		1.00	1	04/22/2017 14:48	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 14:48	WG972544
o-Xylene	ND		1.00	1	04/22/2017 14:48	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 14:48	WG972544
(S) Toluene-d8	110		80.0-120		04/22/2017 14:48	WG972544
(S) Dibromofluoromethane	121		76.0-123		04/22/2017 14:48	WG972544
(S) a,a,a-Trifluorotoluene	90.4		80.0-120		04/22/2017 14:48	WG972544
(S) 4-Bromofluorobenzene	82.5		80.0-120		04/22/2017 14:48	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	229		200	1	04/26/2017 11:24	WG972494
Residual Range Organics (RRO)	302		250	1	04/26/2017 11:24	WG972494
(S) o-Terphenyl	155		52.0-156		04/26/2017 11:24	WG972494

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	04/22/2017 06:40	WG972578
Acenaphthene	ND		0.0500	1	04/22/2017 06:40	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 06:40	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 06:40	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 06:40	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 06:40	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 06:40	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 06:40	WG972578
Chrysene	ND		0.0500	1	04/22/2017 06:40	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 06:40	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 06:40	WG972578
Fluorene	ND		0.0500	1	04/22/2017 06:40	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 06:40	WG972578
Naphthalene	ND		0.250	1	04/22/2017 06:40	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 06:40	WG972578
Pyrene	ND		0.0500	1	04/22/2017 06:40	WG972578
1-Methylnaphthalene	ND		0.250	1	04/22/2017 06:40	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 06:40	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 06:40	WG972578
(S) Nitrobenzene-d5	111		31.0-160		04/22/2017 06:40	WG972578
(S) 2-Fluorobiphenyl	99.3		48.0-148		04/22/2017 06:40	WG972578
(S) p-Terphenyl-d14	107		37.0-146		04/22/2017 06:40	WG972578

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	04/25/2017 10:25	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	1160		100	1	04/26/2017 14:08	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	04/20/2017 20:18	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	40200		5000	1	04/21/2017 10:45	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	04/22/2017 13:55	WG972678
Lead	ND		2.00	1	04/21/2017 18:28	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 13:55	WG972678
Manganese,Dissolved	114		5.00	1	04/22/2017 13:55	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	04/24/2017 18:38	WG972545
(S) a, a, a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 18:38	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	04/24/2017 01:19	WG973136
Ethane	ND		13.0	1	04/24/2017 01:19	WG973136
Ethene	ND		13.0	1	04/24/2017 01:19	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 15:06	WG972544
Toluene	ND		1.00	1	04/22/2017 15:06	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 15:06	WG972544
o-Xylene	ND		1.00	1	04/22/2017 15:06	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 15:06	WG972544
(S) Toluene-d8	111		80.0-120		04/22/2017 15:06	WG972544
(S) Dibromofluoromethane	120		76.0-123		04/22/2017 15:06	WG972544
(S) a, a, a-Trifluorotoluene	91.1		80.0-120		04/22/2017 15:06	WG972544
(S) 4-Bromofluorobenzene	83.7		80.0-120		04/22/2017 15:06	WG972544



Collected date/time: 04/17/17 17:40

L903886

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	04/26/2017 11:40	WG972494
Residual Range Organics (RRO)	591		250	1	04/26/2017 11:40	WG972494
<i>(S) o-Terphenyl</i>	144		52.0-156		04/26/2017 11:40	WG972494

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	04/22/2017 07:03	WG972578
Acenaphthene	ND		0.0500	1	04/22/2017 07:03	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 07:03	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 07:03	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 07:03	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 07:03	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 07:03	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 07:03	WG972578
Chrysene	ND		0.0500	1	04/22/2017 07:03	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 07:03	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 07:03	WG972578
Fluorene	ND		0.0500	1	04/22/2017 07:03	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 07:03	WG972578
Naphthalene	ND		0.250	1	04/22/2017 07:03	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 07:03	WG972578
Pyrene	ND		0.0500	1	04/22/2017 07:03	WG972578
1-Methylnaphthalene	ND		0.250	1	04/22/2017 07:03	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 07:03	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 07:03	WG972578
<i>(S) Nitrobenzene-d5</i>	110		31.0-160		04/22/2017 07:03	WG972578
<i>(S) 2-Fluorobiphenyl</i>	97.4		48.0-148		04/22/2017 07:03	WG972578
<i>(S) p-Terphenyl-d14</i>	103		37.0-146		04/22/2017 07:03	WG972578

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	274		100	1	04/25/2017 10:32	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	538		100	1	04/26/2017 14:09	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	04/20/2017 20:18	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	21400		5000	1	04/21/2017 10:55	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	04/22/2017 13:58	WG972678
Lead	ND		2.00	1	04/21/2017 18:32	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 13:58	WG972678
Manganese,Dissolved	850		5.00	1	04/22/2017 13:58	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	04/24/2017 19:02	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 19:02	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	88.9		10.0	1	04/24/2017 01:36	WG973136
Ethane	ND		13.0	1	04/24/2017 01:36	WG973136
Ethene	ND		13.0	1	04/24/2017 01:36	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 15:23	WG972544
Toluene	ND		1.00	1	04/22/2017 15:23	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 15:23	WG972544
o-Xylene	ND		1.00	1	04/22/2017 15:23	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 15:23	WG972544
(S) Toluene-d8	110		80.0-120		04/22/2017 15:23	WG972544
(S) Dibromofluoromethane	119		76.0-123		04/22/2017 15:23	WG972544
(S) a,a,a-Trifluorotoluene	90.2		80.0-120		04/22/2017 15:23	WG972544
(S) 4-Bromofluorobenzene	81.1		80.0-120		04/22/2017 15:23	WG972544



Collected date/time: 04/18/17 12:55

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Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3980		1000	5	04/26/2017 16:14	WG972494
Residual Range Organics (RRO)	4600		1250	5	04/26/2017 16:14	WG972494
<i>(S) o-Terphenyl</i>	121		52.0-156		04/26/2017 16:14	WG972494

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ND		100	1	04/25/2017 10:33	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	3250		100	1	04/26/2017 14:15	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	04/20/2017 20:18	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	35500		5000	1	04/21/2017 11:05	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	ND		100	1	04/22/2017 14:02	WG972678
Lead	ND		2.00	1	04/21/2017 18:36	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:02	WG972678
Manganese,Dissolved	184		5.00	1	04/22/2017 14:02	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	04/24/2017 19:26	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 19:26	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ND		10.0	1	04/25/2017 13:56	WG973688
Ethane	ND		13.0	1	04/25/2017 13:56	WG973688
Ethene	ND		13.0	1	04/25/2017 13:56	WG973688

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	04/22/2017 15:40	WG972544
Toluene	ND		1.00	1	04/22/2017 15:40	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 15:40	WG972544
o-Xylene	ND		1.00	1	04/22/2017 15:40	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 15:40	WG972544
(S) Toluene-d8	111		80.0-120		04/22/2017 15:40	WG972544
(S) Dibromofluoromethane	121		76.0-123		04/22/2017 15:40	WG972544
(S) a,a,a-Trifluorotoluene	90.0		80.0-120		04/22/2017 15:40	WG972544
(S) 4-Bromofluorobenzene	81.2		80.0-120		04/22/2017 15:40	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	2820		200	1	04/26/2017 15:41	WG972494
Residual Range Organics (RRO)	2380		250	1	04/26/2017 15:41	WG972494
(S) o-Terphenyl	129		52.0-156		04/26/2017 15:41	WG972494

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
2-Methylphenol	ND		11.1	1.11	04/24/2017 16:00	WG972881
3&4-Methyl Phenol	ND		11.1	1.11	04/24/2017 16:00	WG972881
(S) 2-Fluorophenol	36.0		10.0-120		04/24/2017 16:00	WG972881
(S) Phenol-d5	28.1		10.0-120		04/24/2017 16:00	WG972881
(S) Nitrobenzene-d5	69.3		10.0-126		04/24/2017 16:00	WG972881
(S) 2-Fluorobiphenyl	76.8		22.0-127		04/24/2017 16:00	WG972881
(S) 2,4,6-Tribromophenol	85.5		10.0-153		04/24/2017 16:00	WG972881
(S) p-Terphenyl-d14	88.7		29.0-141		04/24/2017 16:00	WG972881

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	0.0536		0.0500	1	04/22/2017 07:27	WG972578
Acenaphthene	ND		0.0500	1	04/22/2017 07:27	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 07:27	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 07:27	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 07:27	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 07:27	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 07:27	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 07:27	WG972578
Chrysene	ND		0.0500	1	04/22/2017 07:27	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 07:27	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 07:27	WG972578
Fluorene	ND		0.0500	1	04/22/2017 07:27	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 07:27	WG972578
Naphthalene	ND		0.250	1	04/22/2017 07:27	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 07:27	WG972578
Pyrene	ND		0.0500	1	04/22/2017 07:27	WG972578
1-Methylnaphthalene	ND		0.250	1	04/22/2017 07:27	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 07:27	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 07:27	WG972578
(S) Nitrobenzene-d5	111		31.0-160		04/22/2017 07:27	WG972578
(S) 2-Fluorobiphenyl	94.4		48.0-148		04/22/2017 07:27	WG972578
(S) p-Terphenyl-d14	105		37.0-146		04/22/2017 07:27	WG972578

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ug/l		ug/l		date / time	
	361		100	1	04/25/2017 10:35	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ug/l		ug/l		date / time	
	ND	P1	100	1	04/26/2017 14:16	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ug/l		ug/l		date / time	
	ND		50.0	1	04/20/2017 20:18	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ug/l		ug/l		date / time	
	ND		5000	1	04/21/2017 11:26	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Arsenic	ug/l		ug/l		date / time	
Arsenic	25.5		2.00	1	04/21/2017 18:39	WG972568
Arsenic,Dissolved	24.6		2.00	1	04/22/2017 14:06	WG972678
Iron,Dissolved	3490		100	1	04/22/2017 14:06	WG972678
Lead	ND		2.00	1	04/21/2017 18:39	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:06	WG972678
Manganese,Dissolved	2330		5.00	1	04/22/2017 14:06	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ug/l		ug/l		date / time	
	ND		100	1	04/24/2017 19:50	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 19:50	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ug/l		ug/l		date / time	
	789		100	10	04/24/2017 19:05	WG973314
Ethane	ND		13.0	1	04/24/2017 08:45	WG973136
Ethene	ND		13.0	1	04/24/2017 08:45	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ug/l		ug/l		date / time	
	ND		1.00	1	04/22/2017 15:57	WG972544
Toluene	ND		1.00	1	04/22/2017 15:57	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 15:57	WG972544
o-Xylene	ND		1.00	1	04/22/2017 15:57	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 15:57	WG972544
(S) Toluene-d8	109		80.0-120		04/22/2017 15:57	WG972544
(S) Dibromofluoromethane	119		76.0-123		04/22/2017 15:57	WG972544
(S) a,a,a-Trifluorotoluene	89.9		80.0-120		04/22/2017 15:57	WG972544
(S) 4-Bromofluorobenzene	83.5		80.0-120		04/22/2017 15:57	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4140		200	1	04/26/2017 11:56	WG972494
Residual Range Organics (RRO)	4440		250	1	04/26/2017 11:56	WG972494
<i>(S) o-Terphenyl</i>	131		52.0-156		04/26/2017 11:56	WG972494

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	04/22/2017 07:50	WG972578
Acenaphthene	ND		0.0500	1	04/22/2017 07:50	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 07:50	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 07:50	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 07:50	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 07:50	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 07:50	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 07:50	WG972578
Chrysene	ND		0.0500	1	04/22/2017 07:50	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 07:50	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 07:50	WG972578
Fluorene	0.0608		0.0500	1	04/22/2017 07:50	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 07:50	WG972578
Naphthalene	ND		0.250	1	04/22/2017 07:50	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 07:50	WG972578
Pyrene	ND		0.0500	1	04/22/2017 07:50	WG972578
1-Methylnaphthalene	ND		0.250	1	04/22/2017 07:50	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 07:50	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 07:50	WG972578
<i>(S) Nitrobenzene-d5</i>	112		31.0-160		04/22/2017 07:50	WG972578
<i>(S) 2-Fluorobiphenyl</i>	73.1		48.0-148		04/22/2017 07:50	WG972578
<i>(S) p-Terphenyl-d14</i>	103		37.0-146		04/22/2017 07:50	WG972578

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	138		100	1	04/25/2017 10:37	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	1830		100	1	04/26/2017 14:18	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	04/20/2017 20:19	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	23600		5000	1	04/21/2017 11:56	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Arsenic	13.1		2.00	1	04/21/2017 18:43	WG972568
Arsenic,Dissolved	12.8		2.00	1	04/22/2017 14:09	WG972678
Iron,Dissolved	ND		100	1	04/22/2017 14:09	WG972678
Lead	ND		2.00	1	04/21/2017 18:43	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:09	WG972678
Manganese,Dissolved	212		5.00	1	04/22/2017 14:09	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	04/24/2017 20:15	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 20:15	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	91.7		10.0	1	04/24/2017 09:02	WG973136
Ethane	ND		13.0	1	04/24/2017 09:02	WG973136
Ethene	ND		13.0	1	04/24/2017 09:02	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	04/22/2017 16:14	WG972544
Toluene	ND		1.00	1	04/22/2017 16:14	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 16:14	WG972544
o-Xylene	ND		1.00	1	04/22/2017 16:14	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 16:14	WG972544
(S) Toluene-d8	112		80.0-120		04/22/2017 16:14	WG972544
(S) Dibromofluoromethane	120		76.0-123		04/22/2017 16:14	WG972544
(S) a,a,a-Trifluorotoluene	90.1		80.0-120		04/22/2017 16:14	WG972544
(S) 4-Bromofluorobenzene	82.4		80.0-120		04/22/2017 16:14	WG972544



Collected date/time: 04/17/17 16:10

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Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	04/26/2017 12:13	WG972494
Residual Range Organics (RRO)	472		250	1	04/26/2017 12:13	WG972494
(S) o-Terphenyl	129		52.0-156		04/26/2017 12:13	WG972494

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
2-Methylphenol	ND		11.1	1.11	04/24/2017 16:23	WG972881
3&4-Methyl Phenol	ND		11.1	1.11	04/24/2017 16:23	WG972881
(S) 2-Fluorophenol	32.6		10.0-120		04/24/2017 16:23	WG972881
(S) Phenol-d5	25.9		10.0-120		04/24/2017 16:23	WG972881
(S) Nitrobenzene-d5	69.6		10.0-126		04/24/2017 16:23	WG972881
(S) 2-Fluorobiphenyl	69.5		22.0-127		04/24/2017 16:23	WG972881
(S) 2,4,6-Tribromophenol	71.3		10.0-153		04/24/2017 16:23	WG972881
(S) p-Terphenyl-d14	93.1		29.0-141		04/24/2017 16:23	WG972881

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	04/22/2017 08:14	WG972578
Acenaphthene	ND		0.0500	1	04/22/2017 08:14	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 08:14	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 08:14	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 08:14	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 08:14	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 08:14	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 08:14	WG972578
Chrysene	ND		0.0500	1	04/22/2017 08:14	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 08:14	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 08:14	WG972578
Fluorene	ND		0.0500	1	04/22/2017 08:14	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 08:14	WG972578
Naphthalene	ND		0.250	1	04/22/2017 08:14	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 08:14	WG972578
Pyrene	ND		0.0500	1	04/22/2017 08:14	WG972578
1-Methylnaphthalene	ND		0.250	1	04/22/2017 08:14	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 08:14	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 08:14	WG972578
(S) Nitrobenzene-d5	113		31.0-160		04/22/2017 08:14	WG972578
(S) 2-Fluorobiphenyl	100		48.0-148		04/22/2017 08:14	WG972578
(S) p-Terphenyl-d14	106		37.0-146		04/22/2017 08:14	WG972578



Collected date/time: 04/17/17 00:00

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Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	24.9		2.00	1	04/21/2017 18:46	WG972568
Arsenic,Dissolved	23.1		2.00	1	04/22/2017 14:12	WG972678
Lead	ND		2.00	1	04/21/2017 18:46	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:12	WG972678

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	04/24/2017 20:39	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 20:39	WG972545

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 16:31	WG972544
Toluene	ND		1.00	1	04/22/2017 16:31	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 16:31	WG972544
o-Xylene	ND		1.00	1	04/22/2017 16:31	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 16:31	WG972544
(S) Toluene-d8	111		80.0-120		04/22/2017 16:31	WG972544
(S) Dibromofluoromethane	118		76.0-123		04/22/2017 16:31	WG972544
(S) a,a,a-Trifluorotoluene	91.0		80.0-120		04/22/2017 16:31	WG972544
(S) 4-Bromofluorobenzene	82.4		80.0-120		04/22/2017 16:31	WG972544

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	4130		200	1	04/26/2017 12:29	WG972494
Residual Range Organics (RRO)	4380		250	1	04/26/2017 12:29	WG972494
(S) o-Terphenyl	132		52.0-156		04/26/2017 12:29	WG972494

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	04/22/2017 08:37	WG972578
Acenaphthene	ND		0.0500	1	04/22/2017 08:37	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 08:37	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 08:37	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 08:37	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 08:37	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 08:37	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 08:37	WG972578
Chrysene	ND		0.0500	1	04/22/2017 08:37	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 08:37	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 08:37	WG972578
Fluorene	0.0710		0.0500	1	04/22/2017 08:37	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 08:37	WG972578
Naphthalene	ND		0.250	1	04/22/2017 08:37	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 08:37	WG972578
Pyrene	ND		0.0500	1	04/22/2017 08:37	WG972578
1-Methylnaphthalene	ND		0.250	1	04/22/2017 08:37	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 08:37	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 08:37	WG972578
(S) Nitrobenzene-d5	118		31.0-160		04/22/2017 08:37	WG972578



Collected date/time: 04/17/17 00:00

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Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	79.8		48.0-148		04/22/2017 08:37	WG972578
(S) p-Terphenyl-d14	112		37.0-146		04/22/2017 08:37	WG972578

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	ND		2.00	1	04/21/2017 18:50	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:16	WG972678

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	04/24/2017 22:49	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 22:49	WG972545

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 16:48	WG972544
Toluene	ND		1.00	1	04/22/2017 16:48	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 16:48	WG972544
o-Xylene	ND		1.00	1	04/22/2017 16:48	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 16:48	WG972544
(S) Toluene-d8	108		80.0-120		04/22/2017 16:48	WG972544
(S) Dibromofluoromethane	122		76.0-123		04/22/2017 16:48	WG972544
(S) a,a,a-Trifluorotoluene	90.5		80.0-120		04/22/2017 16:48	WG972544
(S) 4-Bromofluorobenzene	84.5		80.0-120		04/22/2017 16:48	WG972544

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	4830		200	1	04/26/2017 12:57	WG972494
Residual Range Organics (RRO)	4720		250	1	04/26/2017 12:57	WG972494
(S) o-Terphenyl	136		52.0-156		04/26/2017 12:57	WG972494

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	0.0813		0.0500	1	04/22/2017 09:01	WG972578
Acenaphthene	0.0688		0.0500	1	04/22/2017 09:01	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 09:01	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 09:01	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 09:01	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 09:01	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 09:01	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 09:01	WG972578
Chrysene	ND		0.0500	1	04/22/2017 09:01	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 09:01	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 09:01	WG972578
Fluorene	0.239		0.0500	1	04/22/2017 09:01	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 09:01	WG972578
Naphthalene	ND		0.250	1	04/22/2017 09:01	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 09:01	WG972578
Pyrene	0.0550		0.0500	1	04/22/2017 09:01	WG972578
1-Methylnaphthalene	ND		0.250	1	04/22/2017 09:01	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 09:01	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 09:01	WG972578
(S) Nitrobenzene-d5	108		31.0-160		04/22/2017 09:01	WG972578
(S) 2-Fluorobiphenyl	89.7		48.0-148		04/22/2017 09:01	WG972578
(S) p-Terphenyl-d14	107		37.0-146		04/22/2017 09:01	WG972578



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ND		100	1	04/25/2017 10:40	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	1850		100	1	04/26/2017 14:19	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	04/20/2017 20:19	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	11700		5000	1	04/21/2017 12:06	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	ND		100	1	04/22/2017 14:19	WG972678
Lead	ND		2.00	1	04/21/2017 18:53	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:19	WG972678
Manganese,Dissolved	ND		5.00	1	04/22/2017 14:19	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	04/24/2017 23:14	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 23:14	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ND		10.0	1	04/24/2017 09:19	WG973136
Ethane	ND		13.0	1	04/24/2017 09:19	WG973136
Ethene	ND		13.0	1	04/24/2017 09:19	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	04/22/2017 17:05	WG972544
Toluene	ND		1.00	1	04/22/2017 17:05	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 17:05	WG972544
o-Xylene	ND		1.00	1	04/22/2017 17:05	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 17:05	WG972544
(S) Toluene-d8	111		80.0-120		04/22/2017 17:05	WG972544
(S) Dibromofluoromethane	118		76.0-123		04/22/2017 17:05	WG972544
(S) a,a,a-Trifluorotoluene	89.3		80.0-120		04/22/2017 17:05	WG972544
(S) 4-Bromofluorobenzene	80.5		80.0-120		04/22/2017 17:05	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	04/26/2017 13:15	WG972494
Residual Range Organics (RRO)	377		250	1	04/26/2017 13:15	WG972494
<i>(S) o-Terphenyl</i>	138		52.0-156		04/26/2017 13:15	WG972494

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ND		100	1	04/25/2017 10:43	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	2820		100	1	04/26/2017 14:20	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	04/20/2017 20:19	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	20000		5000	1	04/21/2017 12:16	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	ND		100	1	04/22/2017 14:23	WG972678
Lead	ND		2.00	1	04/21/2017 18:57	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:23	WG972678
Manganese,Dissolved	7.49		5.00	1	04/22/2017 14:23	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	04/24/2017 23:38	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/24/2017 23:38	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ND		10.0	1	04/24/2017 09:35	WG973136
Ethane	ND		13.0	1	04/24/2017 09:35	WG973136
Ethene	ND		13.0	1	04/24/2017 09:35	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	04/22/2017 17:23	WG972544
Toluene	ND		1.00	1	04/22/2017 17:23	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 17:23	WG972544
o-Xylene	ND		1.00	1	04/22/2017 17:23	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 17:23	WG972544
(S) Toluene-d8	112		80.0-120		04/22/2017 17:23	WG972544
(S) Dibromofluoromethane	122		76.0-123		04/22/2017 17:23	WG972544
(S) a,a,a-Trifluorotoluene	90.0		80.0-120		04/22/2017 17:23	WG972544
(S) 4-Bromofluorobenzene	81.8		80.0-120		04/22/2017 17:23	WG972544



Collected date/time: 04/18/17 14:35

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Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	04/26/2017 13:31	WG972494
Residual Range Organics (RRO)	524		250	1	04/26/2017 13:31	WG972494
<i>(S) o-Terphenyl</i>	136		52.0-156		04/26/2017 13:31	WG972494

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	04/22/2017 13:23	WG972544
Toluene	ND		1.00	1	04/22/2017 13:23	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 13:23	WG972544
o-Xylene	ND		1.00	1	04/22/2017 13:23	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 13:23	WG972544
(S) Toluene-d8	108		80.0-120		04/22/2017 13:23	WG972544
(S) Dibromofluoromethane	118		76.0-123		04/22/2017 13:23	WG972544
(S) a,a,a-Trifluorotoluene	89.2		80.0-120		04/22/2017 13:23	WG972544
(S) 4-Bromofluorobenzene	84.2		80.0-120		04/22/2017 13:23	WG972544

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 13:40	WG972544
Toluene	ND		1.00	1	04/22/2017 13:40	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 13:40	WG972544
o-Xylene	ND		1.00	1	04/22/2017 13:40	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 13:40	WG972544
(S) Toluene-d8	109		80.0-120		04/22/2017 13:40	WG972544
(S) Dibromofluoromethane	116		76.0-123		04/22/2017 13:40	WG972544
(S) a,a,a-Trifluorotoluene	91.3		80.0-120		04/22/2017 13:40	WG972544
(S) 4-Bromofluorobenzene	86.4		80.0-120		04/22/2017 13:40	WG972544

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 13:57	WG972544
Toluene	ND		1.00	1	04/22/2017 13:57	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 13:57	WG972544
o-Xylene	ND		1.00	1	04/22/2017 13:57	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 13:57	WG972544
(S) Toluene-d8	111		80.0-120		04/22/2017 13:57	WG972544
(S) Dibromofluoromethane	121		76.0-123		04/22/2017 13:57	WG972544
(S) a,a,a-Trifluorotoluene	90.8		80.0-120		04/22/2017 13:57	WG972544
(S) 4-Bromofluorobenzene	83.1		80.0-120		04/22/2017 13:57	WG972544

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	04/25/2017 10:49	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	7450		500	5	04/26/2017 14:21	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	04/20/2017 20:20	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	31700		5000	1	04/21/2017 12:26	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	04/22/2017 14:33	WG972678
Lead	ND		2.00	1	04/21/2017 19:00	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:33	WG972678
Manganese,Dissolved	36.7		5.00	1	04/22/2017 14:33	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	04/25/2017 00:02	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/25/2017 00:02	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	04/24/2017 09:52	WG973136
Ethane	ND		13.0	1	04/24/2017 09:52	WG973136
Ethene	ND		13.0	1	04/24/2017 09:52	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 17:40	WG972544
Toluene	ND		1.00	1	04/22/2017 17:40	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 17:40	WG972544
o-Xylene	ND		1.00	1	04/22/2017 17:40	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 17:40	WG972544
(S) Toluene-d8	111		80.0-120		04/22/2017 17:40	WG972544
(S) Dibromofluoromethane	120		76.0-123		04/22/2017 17:40	WG972544
(S) a,a,a-Trifluorotoluene	90.6		80.0-120		04/22/2017 17:40	WG972544
(S) 4-Bromofluorobenzene	78.0	<u>J2</u>	80.0-120		04/22/2017 17:40	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	04/26/2017 14:36	WG972494
Residual Range Organics (RRO)	ND		250	1	04/26/2017 14:36	WG972494
(S) o-Terphenyl	136		52.0-156		04/26/2017 14:36	WG972494

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
2-Methylphenol	ND		10.0	1	04/24/2017 16:46	WG972881
3&4-Methyl Phenol	ND		10.0	1	04/24/2017 16:46	WG972881
(S) 2-Fluorophenol	38.1		10.0-120		04/24/2017 16:46	WG972881
(S) Phenol-d5	27.2		10.0-120		04/24/2017 16:46	WG972881
(S) Nitrobenzene-d5	78.5		10.0-126		04/24/2017 16:46	WG972881
(S) 2-Fluorobiphenyl	78.8		22.0-127		04/24/2017 16:46	WG972881
(S) 2,4,6-Tribromophenol	65.4		10.0-153		04/24/2017 16:46	WG972881
(S) p-Terphenyl-d14	89.2		29.0-141		04/24/2017 16:46	WG972881

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	04/22/2017 09:24	WG972578
Acenaphthene	ND		0.0500	1	04/22/2017 09:24	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 09:24	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 09:24	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 09:24	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 09:24	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 09:24	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 09:24	WG972578
Chrysene	ND		0.0500	1	04/22/2017 09:24	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 09:24	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 09:24	WG972578
Fluorene	ND		0.0500	1	04/22/2017 09:24	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 09:24	WG972578
Naphthalene	ND		0.250	1	04/22/2017 09:24	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 09:24	WG972578
Pyrene	ND		0.0500	1	04/22/2017 09:24	WG972578
1-Methylnaphthalene	ND		0.250	1	04/22/2017 09:24	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 09:24	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 09:24	WG972578
(S) Nitrobenzene-d5	110		31.0-160		04/22/2017 09:24	WG972578
(S) 2-Fluorobiphenyl	98.8		48.0-148		04/22/2017 09:24	WG972578
(S) p-Terphenyl-d14	105		37.0-146		04/22/2017 09:24	WG972578

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	04/25/2017 10:51	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	7470		100	1	04/26/2017 14:27	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	04/20/2017 20:20	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	25300	J5	5000	1	04/21/2017 12:37	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	04/22/2017 14:37	WG972678
Lead	ND		2.00	1	04/21/2017 19:11	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:37	WG972678
Manganese,Dissolved	ND		5.00	1	04/22/2017 14:37	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	04/25/2017 00:26	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/25/2017 00:26	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	04/24/2017 10:09	WG973136
Ethane	ND		13.0	1	04/24/2017 10:09	WG973136
Ethene	ND		13.0	1	04/24/2017 10:09	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 17:57	WG972544
Toluene	ND		1.00	1	04/22/2017 17:57	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 17:57	WG972544
o-Xylene	ND		1.00	1	04/22/2017 17:57	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 17:57	WG972544
(S) Toluene-d8	110		80.0-120		04/22/2017 17:57	WG972544
(S) Dibromofluoromethane	121		76.0-123		04/22/2017 17:57	WG972544
(S) a,a,a-Trifluorotoluene	90.6		80.0-120		04/22/2017 17:57	WG972544
(S) 4-Bromofluorobenzene	80.4		80.0-120		04/22/2017 17:57	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	444		200	1	04/26/2017 14:53	WG972494
Residual Range Organics (RRO)	996		250	1	04/26/2017 14:53	WG972494
<i>(S) o-Terphenyl</i>	142		52.0-156		04/26/2017 14:53	WG972494

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	04/25/2017 10:52	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	8870		500	5	04/26/2017 14:28	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	04/20/2017 20:20	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	58900		5000	1	04/21/2017 12:57	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	04/22/2017 14:40	WG972678
Lead	ND		2.00	1	04/21/2017 19:14	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:40	WG972678
Manganese,Dissolved	459		5.00	1	04/22/2017 14:40	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	04/25/2017 00:50	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/25/2017 00:50	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	04/24/2017 10:25	WG973136
Ethane	ND		13.0	1	04/24/2017 10:25	WG973136
Ethene	ND		13.0	1	04/24/2017 10:25	WG973136

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 18:14	WG972544
Toluene	ND		1.00	1	04/22/2017 18:14	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 18:14	WG972544
o-Xylene	ND		1.00	1	04/22/2017 18:14	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 18:14	WG972544
(S) Toluene-d8	111		80.0-120		04/22/2017 18:14	WG972544
(S) Dibromofluoromethane	121		76.0-123		04/22/2017 18:14	WG972544
(S) a,a,a-Trifluorotoluene	90.9		80.0-120		04/22/2017 18:14	WG972544
(S) 4-Bromofluorobenzene	82.4		80.0-120		04/22/2017 18:14	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	862		200	1	04/26/2017 15:09	WG972494
Residual Range Organics (RRO)	1720		250	1	04/26/2017 15:09	WG972494
<i>(S) o-Terphenyl</i>	135		52.0-156		04/26/2017 15:09	WG972494

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	243		100	1	04/25/2017 10:54	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	614		100	1	04/26/2017 14:29	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	04/20/2017 20:21	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	88000		5000	1	04/21/2017 13:07	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	474		100	1	04/22/2017 14:44	WG972678
Lead	ND		2.00	1	04/21/2017 19:18	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:44	WG972678
Manganese,Dissolved	1510		5.00	1	04/22/2017 14:44	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	04/25/2017 01:14	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/25/2017 01:14	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	496		10.0	1	04/23/2017 18:05	WG973135
Ethane	ND		13.0	1	04/23/2017 18:05	WG973135
Ethene	ND		13.0	1	04/23/2017 18:05	WG973135

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/22/2017 18:31	WG972544
Toluene	ND		1.00	1	04/22/2017 18:31	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 18:31	WG972544
o-Xylene	ND		1.00	1	04/22/2017 18:31	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 18:31	WG972544
(S) Toluene-d8	110		80.0-120		04/22/2017 18:31	WG972544
(S) Dibromofluoromethane	120		76.0-123		04/22/2017 18:31	WG972544
(S) a,a,a-Trifluorotoluene	90.9		80.0-120		04/22/2017 18:31	WG972544
(S) 4-Bromofluorobenzene	79.2	<u>J2</u>	80.0-120		04/22/2017 18:31	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4370		1000	5	04/26/2017 16:47	WG972494
Residual Range Organics (RRO)	6350		1250	5	04/26/2017 16:47	WG972494
<i>(S) o-Terphenyl</i>	124		52.0-156		04/26/2017 16:47	WG972494

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ND		100	1	04/25/2017 10:56	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	31700		1000	10	04/26/2017 14:30	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	04/20/2017 20:21	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	34400		5000	1	04/21/2017 13:17	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	ND		100	1	04/22/2017 14:48	WG972678
Lead	ND		2.00	1	04/21/2017 19:21	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:48	WG972678
Manganese,Dissolved	ND		5.00	1	04/22/2017 14:48	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	04/25/2017 01:38	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/25/2017 01:38	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ND		10.0	1	04/23/2017 18:22	WG973135
Ethane	ND		13.0	1	04/23/2017 18:22	WG973135
Ethene	ND		13.0	1	04/23/2017 18:22	WG973135

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	04/22/2017 18:48	WG972544
Toluene	ND		1.00	1	04/22/2017 18:48	WG972544
Ethylbenzene	ND		1.00	1	04/22/2017 18:48	WG972544
o-Xylene	ND		1.00	1	04/22/2017 18:48	WG972544
m&p-Xylene	ND		2.00	1	04/22/2017 18:48	WG972544
(S) Toluene-d8	111		80.0-120		04/22/2017 18:48	WG972544
(S) Dibromofluoromethane	120		76.0-123		04/22/2017 18:48	WG972544
(S) a,a,a-Trifluorotoluene	91.4		80.0-120		04/22/2017 18:48	WG972544
(S) 4-Bromofluorobenzene	83.3		80.0-120		04/22/2017 18:48	WG972544



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	04/26/2017 15:25	WG972494
Residual Range Organics (RRO)	ND		250	1	04/26/2017 15:25	WG972494
(S) o-Terphenyl	131		52.0-156		04/26/2017 15:25	WG972494

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
2-Methylphenol	ND		10.0	1	04/24/2017 17:10	WG972881
3&4-Methyl Phenol	ND		10.0	1	04/24/2017 17:10	WG972881
(S) 2-Fluorophenol	33.3		10.0-120		04/24/2017 17:10	WG972881
(S) Phenol-d5	25.6		10.0-120		04/24/2017 17:10	WG972881
(S) Nitrobenzene-d5	68.6		10.0-126		04/24/2017 17:10	WG972881
(S) 2-Fluorobiphenyl	72.2		22.0-127		04/24/2017 17:10	WG972881
(S) 2,4,6-Tribromophenol	75.5		10.0-153		04/24/2017 17:10	WG972881
(S) p-Terphenyl-d14	93.1		29.0-141		04/24/2017 17:10	WG972881

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	04/22/2017 09:48	WG972578
Acenaphthene	ND		0.0500	1	04/22/2017 09:48	WG972578
Acenaphthylene	ND		0.0500	1	04/22/2017 09:48	WG972578
Benzo(a)anthracene	ND		0.0500	1	04/22/2017 09:48	WG972578
Benzo(a)pyrene	ND		0.0500	1	04/22/2017 09:48	WG972578
Benzo(b)fluoranthene	ND		0.0500	1	04/22/2017 09:48	WG972578
Benzo(g,h,i)perylene	ND		0.0500	1	04/22/2017 09:48	WG972578
Benzo(k)fluoranthene	ND		0.0500	1	04/22/2017 09:48	WG972578
Chrysene	ND		0.0500	1	04/22/2017 09:48	WG972578
Dibenz(a,h)anthracene	ND		0.0500	1	04/22/2017 09:48	WG972578
Fluoranthene	ND		0.0500	1	04/22/2017 09:48	WG972578
Fluorene	ND		0.0500	1	04/22/2017 09:48	WG972578
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	04/22/2017 09:48	WG972578
Naphthalene	ND		0.250	1	04/22/2017 09:48	WG972578
Phenanthrene	ND		0.0500	1	04/22/2017 09:48	WG972578
Pyrene	ND		0.0500	1	04/22/2017 09:48	WG972578
1-Methylnaphthalene	ND		0.250	1	04/22/2017 09:48	WG972578
2-Methylnaphthalene	ND		0.250	1	04/22/2017 09:48	WG972578
2-Chloronaphthalene	ND		0.250	1	04/22/2017 09:48	WG972578
(S) Nitrobenzene-d5	111		31.0-160		04/22/2017 09:48	WG972578
(S) 2-Fluorobiphenyl	99.6		48.0-148		04/22/2017 09:48	WG972578
(S) p-Terphenyl-d14	107		37.0-146		04/22/2017 09:48	WG972578

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	260		100	1	04/25/2017 10:59	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	04/26/2017 14:31	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	04/20/2017 20:21	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ND		5000	1	04/21/2017 13:48	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	4780		100	1	04/22/2017 14:51	WG972678
Lead	ND		2.00	1	04/21/2017 19:25	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:51	WG972678
Manganese,Dissolved	2190		5.00	1	04/22/2017 14:51	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	136		100	1	04/25/2017 02:03	WG972545
(S) a, a, a-Trifluorotoluene(FID)	109		77.0-122		04/25/2017 02:03	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	288		10.0	1	04/23/2017 18:38	WG973135
Ethane	ND		13.0	1	04/23/2017 18:38	WG973135
Ethene	ND		13.0	1	04/23/2017 18:38	WG973135

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	04/23/2017 03:38	WG973071
Toluene	ND		1.00	1	04/23/2017 03:38	WG973071
Ethylbenzene	ND		1.00	1	04/23/2017 03:38	WG973071
o-Xylene	ND		1.00	1	04/23/2017 03:38	WG973071
m&p-Xylene	ND		2.00	1	04/23/2017 03:38	WG973071
(S) Toluene-d8	102		80.0-120		04/23/2017 03:38	WG973071
(S) Dibromofluoromethane	105		76.0-123		04/23/2017 03:38	WG973071
(S) a, a, a-Trifluorotoluene	99.6		80.0-120		04/23/2017 03:38	WG973071
(S) 4-Bromofluorobenzene	99.1		80.0-120		04/23/2017 03:38	WG973071



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6650		1000	5	04/26/2017 15:58	WG972494
Residual Range Organics (RRO)	4050		1250	5	04/26/2017 15:58	WG972494
<i>(S) o-Terphenyl</i>	132		52.0-156		04/26/2017 15:58	WG972494

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	241		100	1	04/25/2017 11:00	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	04/26/2017 14:34	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	04/20/2017 20:21	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ND		5000	1	04/21/2017 13:58	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	10000		100	1	04/22/2017 14:54	WG972678
Lead	ND		2.00	1	04/21/2017 19:28	WG972568
Lead,Dissolved	ND		2.00	1	04/22/2017 14:54	WG972678
Manganese,Dissolved	1380		5.00	1	04/22/2017 14:54	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	111		100	1	04/25/2017 02:27	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/25/2017 02:27	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	200		200	20	04/24/2017 19:21	WG973314
Ethane	ND		13.0	1	04/23/2017 18:55	WG973135
Ethene	ND		13.0	1	04/23/2017 18:55	WG973135

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	04/23/2017 03:51	WG973071
Toluene	ND		1.00	1	04/23/2017 03:51	WG973071
Ethylbenzene	ND		1.00	1	04/23/2017 03:51	WG973071
o-Xylene	ND		1.00	1	04/23/2017 03:51	WG973071
m&p-Xylene	ND		2.00	1	04/23/2017 03:51	WG973071
(S) Toluene-d8	103		80.0-120		04/23/2017 03:51	WG973071
(S) Dibromofluoromethane	104		76.0-123		04/23/2017 03:51	WG973071
(S) a,a,a-Trifluorotoluene	101		80.0-120		04/23/2017 03:51	WG973071
(S) 4-Bromofluorobenzene	99.4		80.0-120		04/23/2017 03:51	WG973071



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3810		1000	5	04/26/2017 16:30	WG972494
Residual Range Organics (RRO)	3870		1250	5	04/26/2017 16:30	WG972494
<i>(S) o-Terphenyl</i>	110		52.0-156		04/26/2017 16:30	WG972494

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ug/l		ug/l		date / time	
	ND		100	1	04/25/2017 11:07	WG973411

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ug/l		ug/l		date / time	
	ND		100	1	04/26/2017 14:39	WG973650

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ug/l		ug/l		date / time	
	ND		50.0	1	04/20/2017 20:22	WG972424

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ug/l		ug/l		date / time	
	ND		5000	1	04/21/2017 14:08	WG972469

7 Gl

8 Al

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	ug/l		ug/l		date / time	
	ND		100	1	04/22/2017 14:58	WG972678
Lead	ug/l		ug/l		date / time	
	ND		2.00	1	04/21/2017 17:57	WG972568
Lead,Dissolved	ug/l		ug/l		date / time	
	ND		2.00	1	04/22/2017 14:58	WG972678
Manganese,Dissolved	ug/l		ug/l		date / time	
	ND		5.00	1	04/22/2017 14:58	WG972678

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ug/l		ug/l		date / time	
	ND		100	1	04/25/2017 02:51	WG972545
(S) a,a,a-Trifluorotoluene(FID)	109		77.0-122		04/25/2017 02:51	WG972545

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ug/l		ug/l		date / time	
	ND		10.0	1	04/23/2017 14:13	WG973135
Ethane	ug/l		ug/l		date / time	
	ND		13.0	1	04/23/2017 14:13	WG973135
Ethene	ug/l		ug/l		date / time	
	ND		13.0	1	04/23/2017 14:13	WG973135

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ug/l		ug/l		date / time	
	ND		1.00	1	04/23/2017 04:04	WG973071
Toluene	ug/l		ug/l		date / time	
	ND		1.00	1	04/23/2017 04:04	WG973071
Ethylbenzene	ug/l		ug/l		date / time	
	ND		1.00	1	04/23/2017 04:04	WG973071
o-Xylene	ug/l		ug/l		date / time	
	ND		1.00	1	04/23/2017 04:04	WG973071
m&p-Xylene	ug/l		ug/l		date / time	
	ND		2.00	1	04/23/2017 04:04	WG973071
(S) Toluene-d8	102		80.0-120		04/23/2017 04:04	WG973071
(S) Dibromofluoromethane	103		76.0-123		04/23/2017 04:04	WG973071
(S) a,a,a-Trifluorotoluene	102		80.0-120		04/23/2017 04:04	WG973071
(S) 4-Bromofluorobenzene	99.0		80.0-120		04/23/2017 04:04	WG973071



Collected date/time: 04/18/17 08:30

L903886

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	04/25/2017 01:01	WG972494
Residual Range Organics (RRO)	ND		250	1	04/25/2017 01:01	WG972494
<i>(S) o-Terphenyl</i>	126		52.0-156		04/25/2017 01:01	WG972494

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	04/23/2017 00:01	WG973071
Toluene	ND		1.00	1	04/23/2017 00:01	WG973071
Ethylbenzene	ND		1.00	1	04/23/2017 00:01	WG973071
o-Xylene	ND		1.00	1	04/23/2017 00:01	WG973071
m&p-Xylene	ND		2.00	1	04/23/2017 00:01	WG973071
(S) Toluene-d8	102		80.0-120		04/23/2017 00:01	WG973071
(S) Dibromofluoromethane	104		76.0-123		04/23/2017 00:01	WG973071
(S) a,a,a-Trifluorotoluene	100		80.0-120		04/23/2017 00:01	WG973071
(S) 4-Bromofluorobenzene	98.7		80.0-120		04/23/2017 00:01	WG973071

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	04/23/2017 00:14	WG973071
Toluene	ND		1.00	1	04/23/2017 00:14	WG973071
Ethylbenzene	ND		1.00	1	04/23/2017 00:14	WG973071
o-Xylene	ND		1.00	1	04/23/2017 00:14	WG973071
m&p-Xylene	ND		2.00	1	04/23/2017 00:14	WG973071
(S) Toluene-d8	102		80.0-120		04/23/2017 00:14	WG973071
(S) Dibromofluoromethane	104		76.0-123		04/23/2017 00:14	WG973071
(S) a,a,a-Trifluorotoluene	99.9		80.0-120		04/23/2017 00:14	WG973071
(S) 4-Bromofluorobenzene	100		80.0-120		04/23/2017 00:14	WG973071

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	04/23/2017 00:27	WG973071
Toluene	ND		1.00	1	04/23/2017 00:27	WG973071
Ethylbenzene	ND		1.00	1	04/23/2017 00:27	WG973071
o-Xylene	ND		1.00	1	04/23/2017 00:27	WG973071
m&p-Xylene	ND		2.00	1	04/23/2017 00:27	WG973071
(S) Toluene-d8	102		80.0-120		04/23/2017 00:27	WG973071
(S) Dibromofluoromethane	106		76.0-123		04/23/2017 00:27	WG973071
(S) a,a,a-Trifluorotoluene	100		80.0-120		04/23/2017 00:27	WG973071
(S) 4-Bromofluorobenzene	100		80.0-120		04/23/2017 00:27	WG973071

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3213242-1 04/25/17 09:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

L903833-09 Original Sample (OS) • Duplicate (DUP)

(OS) L903833-09 04/25/17 09:15 • (DUP) R3213242-6 04/25/17 09:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0		20

⁶ Qc

L903833-15 Original Sample (OS) • Duplicate (DUP)

(OS) L903833-15 04/25/17 09:31 • (DUP) R3213242-7 04/25/17 09:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0		20

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3213242-2 04/25/17 09:07 • (LCSD) R3213242-3 04/25/17 09:09

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7270	7050	97	94	90-110			3	20

⁹ Sc

L903833-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L903833-08 04/25/17 09:10 • (MS) R3213242-4 04/25/17 09:12 • (MSD) R3213242-5 04/25/17 09:13

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	5000	ND	5110	5110	102	102	1	90-110			0	20

L903833-16 Original Sample (OS) • Matrix Spike (MS)

(OS) L903833-16 04/25/17 09:34 • (MS) R3213242-8 04/25/17 09:40

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4800	96	1	90-110	



Method Blank (MB)

(MB) R3213240-1 04/25/17 10:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L903886-08 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-08 04/25/17 10:37 • (DUP) R3213240-4 04/25/17 10:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	138	137	1	1		20

L903886-20 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-20 04/25/17 10:56 • (DUP) R3213240-6 04/25/17 10:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3213240-2 04/25/17 10:16 • (LCSD) R3213240-3 04/25/17 10:18

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7110	7000	95	93	90-110			2	20

L903886-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L903886-11 04/25/17 10:40 • (MS) R3213240-5 04/25/17 10:41

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	5140	103	1	90-110	

L903886-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L903886-23 04/25/17 11:07 • (MS) R3213240-7 04/25/17 11:08 • (MSD) R3213240-8 04/25/17 11:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	5000	ND	5070	5210	101	104	1	90-110			3	20



Method Blank (MB)

(MB) R3212955-1 04/24/17 10:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	30.0	<u>J</u>	19.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

L903886-01 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-01 04/24/17 10:59 • (DUP) R3212955-4 04/24/17 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	200	<u>P1</u>	20

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212955-2 04/24/17 10:47 • (LCSD) R3212955-3 04/24/17 10:48

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	4660	4630	93	93	90-110			1	20

⁷ Gl

⁸ Al

L903886-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L903886-02 04/24/17 11:01 • (MS) R3212955-5 04/24/17 11:02

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	5000	ND	4260	85	1	90-110	<u>J6</u>

⁹ Sc



Method Blank (MB)

(MB) R3213759-1 04/26/17 14:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L903136-03 Original Sample (OS) • Duplicate (DUP)

(OS) L903136-03 04/26/17 14:04 • (DUP) R3213759-4 04/26/17 14:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	241	213	1	12		20

L903886-07 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-07 04/26/17 14:16 • (DUP) R3213759-6 04/26/17 14:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	200	P1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3213759-2 04/26/17 14:02 • (LCSD) R3213759-3 04/26/17 14:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	5020	4870	100	97	90-110			3	20

L903886-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L903886-05 04/26/17 14:09 • (MS) R3213759-5 04/26/17 14:14

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	5000	538	5220	94	1	90-110	

L903886-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L903886-21 04/26/17 14:31 • (MS) R3213759-7 04/26/17 14:32 • (MSD) R3213759-8 04/26/17 14:33

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	ND	4890	4890	98	98	1	90-110			0	20



Method Blank (MB)

(MB) R3212376-1 04/20/17 20:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L903868-01 Original Sample (OS) • Duplicate (DUP)

(OS) L903868-01 04/20/17 20:16 • (DUP) R3212376-4 04/20/17 20:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0		20

L903886-23 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-23 04/20/17 20:22 • (DUP) R3212376-7 04/20/17 20:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212376-2 04/20/17 20:14 • (LCSD) R3212376-3 04/20/17 20:15

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	524	520	105	104	85-115			1	20

L903886-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L903886-08 04/20/17 20:19 • (MS) R3212376-5 04/20/17 20:19 • (MSD) R3212376-6 04/20/17 20:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfide	1000	ND	1030	1030	103	103	1	80-120			0	20



Method Blank (MB)

(MB) R3212682-1 04/21/17 09:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L903833-20 Original Sample (OS) • Duplicate (DUP)

(OS) L903833-20 04/21/17 18:11 • (DUP) R3212682-5 04/21/17 18:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	28300	28500	1	1		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212682-2 04/21/17 10:13 • (LCSD) R3212682-3 04/21/17 10:31

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	40300	39900	101	100	80-120			1	15

L903886-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L903886-02 04/22/17 00:35 • (MS) R3212682-7 04/22/17 00:52 • (MSD) R3212682-8 04/22/17 01:09

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfate	50000	ND	47800	47700	96	95	1	80-120			0	15



Method Blank (MB)

(MB) R3212631-4 04/21/17 09:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L903886-06 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-06 04/21/17 11:05 • (DUP) R3212631-7 04/21/17 11:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	35500	34400	1	3		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212631-5 04/21/17 09:54 • (LCSD) R3212631-6 04/21/17 10:04

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	40700	40600	102	102	80-120			0	15

L903886-17 Original Sample (OS) • Matrix Spike (MS)

(OS) L903886-17 04/21/17 12:37 • (MS) R3212631-8 04/21/17 12:47

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	25300	92600	135	1	80-120	J5



Method Blank (MB)

(MB) R3212678-1 04/21/17 17:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		0.250	2.00
Lead	U		0.240	2.00

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212678-2 04/21/17 17:50 • (LCSD) R3212678-3 04/21/17 17:53

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	50.0	49.2	48.5	98	97	80-120			1	20
Lead	50.0	48.7	49.1	97	98	80-120			1	20

L903886-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L903886-23 04/21/17 17:57 • (MS) R3212678-5 04/21/17 18:04 • (MSD) R3212678-6 04/21/17 18:07

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	50.0	ND	50.3	49.2	101	98	1	75-125			2	20
Lead	50.0	ND	51.0	49.6	102	99	1	75-125			3	20



Method Blank (MB)

(MB) R3212771-1 04/22/17 13:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		0.250	2.00
Iron,Dissolved	U		15.0	100
Lead,Dissolved	U		0.240	2.00
Manganese,Dissolved	0.930	<u>J</u>	0.250	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212771-2 04/22/17 13:19 • (LCSD) R3212771-3 04/22/17 13:23

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,Dissolved	50.0	48.6	48.9	97	98	80-120			1	20
Iron,Dissolved	5000	5110	5140	102	103	80-120			1	20
Lead,Dissolved	50.0	49.4	50.8	99	102	80-120			3	20
Manganese,Dissolved	50.0	48.4	49.0	97	98	80-120			1	20

⁶Qc

⁷Gl

⁸Al

L903886-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L903886-01 04/22/17 13:26 • (MS) R3212771-5 04/22/17 13:33 • (MSD) R3212771-6 04/22/17 13:37

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,Dissolved	50.0	27.6	76.6	75.2	98	95	1	75-125			2	20
Iron,Dissolved	5000	2660	7550	7410	98	95	1	75-125			2	20
Lead,Dissolved	50.0	ND	50.8	51.3	102	103	1	75-125			1	20
Manganese,Dissolved	50.0	2550	2610	2560	116	27	1	75-125		<u>V</u>	2	20

⁹Sc



Method Blank (MB)

(MB) R3213956-3 04/24/17 11:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	109			77.0-122

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3213956-1 04/24/17 10:21 • (LCSD) R3213956-2 04/24/17 10:45

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 %
Gasoline Range Organics-NWTPH	5500	5990	5800	109	105	72.0-134			3.31	20
(S) a,a,a-Trifluorotoluene(FID)				109	110	77.0-122				

L903886-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L903886-01 04/24/17 16:14 • (MS) R3213956-4 04/24/17 16:38 • (MSD) R3213956-5 04/24/17 17:02

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 %
Gasoline Range Organics-NWTPH	5500	106	6440	6740	115	121	1	23.0-159			4.51	20
(S) a,a,a-Trifluorotoluene(FID)					111	111		77.0-122				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3212834-1 04/23/17 13:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L903022-39 Original Sample (OS) • Duplicate (DUP)

(OS) L903022-39 04/23/17 16:42 • (DUP) R3212834-2 04/23/17 16:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L903886-22 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-22 04/23/17 18:55 • (DUP) R3212834-3 04/23/17 20:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	2470	2420	1	1.99	E	20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212834-6 04/23/17 21:10 • (LCSD) R3212834-7 04/23/17 21:26

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	%	%	%			%	%
Methane	67.8	65.5	61.9	96.7	91.2	85.0-115			5.78	20
Ethane	129	117	111	90.3	86.4	85.0-115			4.48	20
Ethene	127	114	109	89.9	86.0	85.0-115			4.39	20



L903022-39 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L903022-39 04/23/17 16:42 • (MS) R3212834-4 04/23/17 20:36 • (MSD) R3212834-5 04/23/17 20:53

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 %
Methane	67.8	ND	65.1	64.1	96.0	94.5	1	85.0-115			1.62	20
Ethane	129	ND	118	118	91.6	91.6	1	85.0-115			0.0500	20
Ethene	127	ND	116	115	91.1	90.9	1	85.0-115			0.250	20

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3212840-1 04/23/17 21:43

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L903886-01 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-01 04/23/17 23:56 • (DUP) R3212840-2 04/24/17 01:03

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	2550	2400	1	5.81	E	20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L903886-08 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-08 04/24/17 09:02 • (DUP) R3212840-3 04/24/17 10:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	91.7	95.2	1	3.69		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212840-4 04/24/17 10:59 • (LCSD) R3212840-5 04/24/17 11:15

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	%	%	%			%	%
Methane	67.8	62.6	66.0	92.4	97.3	85.0-115			5.16	20
Ethane	129	110	115	85.1	89.1	85.0-115			4.54	20
Ethene	127	108	113	85.0	88.8	85.0-115			4.36	20



Method Blank (MB)

(MB) R3213197-1 04/24/17 15:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L903886-02 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-02 04/24/17 18:31 • (DUP) R3213197-2 04/24/17 18:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	1840	2050	10	10.5		20

L903886-07 Original Sample (OS) • Duplicate (DUP)

(OS) L903886-07 04/24/17 19:05 • (DUP) R3213197-3 04/24/17 22:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	789	949	10	18.4		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3213197-4 04/24/17 22:29 • (LCSD) R3213197-5 04/24/17 22:46

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	67.5	67.1	99.6	99.0	85.0-115			0.610	20



Method Blank (MB)

(MB) R3213529-1 04/25/17 13:40

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L903946-03 Original Sample (OS) • Duplicate (DUP)

(OS) L903946-03 04/25/17 14:13 • (DUP) R3213529-2 04/25/17 16:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	4430	4310	20	2.86		20
Ethane	345	337	20	2.61		20
Ethene	369	355	20	3.75		20

L903949-03 Original Sample (OS) • Duplicate (DUP)

(OS) L903949-03 04/25/17 17:49 • (DUP) R3213529-5 04/26/17 00:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	17200	20100	50	15.4		20
Ethane	U	0.000	50	0.000		20
Ethene	791	899	50	12.7		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3213529-3 04/25/17 20:38 • (LCSD) R3213529-4 04/25/17 20:54

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	%	%	%			%	%
Methane	67.8	64.8	66.1	95.6	97.5	85.0-115			1.91	20
Ethane	129	116	118	90.0	91.7	85.0-115			1.82	20
Ethene	127	114	116	89.5	91.2	85.0-115			1.80	20



Method Blank (MB)

(MB) R3213731-2 04/22/17 11:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Toluene	U		0.412	1.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.716	2.00
(S) Toluene-d8	111			80.0-120
(S) Dibromofluoromethane	118			76.0-123
(S) a,a,a-Trifluorotoluene	90.5			80.0-120
(S) 4-Bromofluorobenzene	84.1			80.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3213731-1 04/22/17 11:04 • (LCSD) R3213731-3 04/22/17 12:32

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	%	%	%			%	%
Benzene	25.0	28.9	29.9	116	120	69.0-123			3.42	20
Ethylbenzene	25.0	21.7	22.4	86.9	89.4	77.0-120			2.92	20
Toluene	25.0	25.4	25.7	102	103	77.0-120			1.31	20
o-Xylene	25.0	21.3	21.7	85.2	86.7	78.0-120			1.79	20
m&p-Xylenes	50.0	44.4	45.1	88.8	90.1	77.0-120			1.46	20
(S) Toluene-d8				105	107	80.0-120				
(S) Dibromofluoromethane				112	113	76.0-123				
(S) a,a,a-Trifluorotoluene				89.1	88.8	80.0-120				
(S) 4-Bromofluorobenzene				90.6	89.6	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3213982-3 04/22/17 23:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Toluene	U		0.412	1.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.716	2.00
(S) Toluene-d8	102			80.0-120
(S) Dibromofluoromethane	105			76.0-123
(S) a,a,a-Trifluorotoluene	101			80.0-120
(S) 4-Bromofluorobenzene	99.0			80.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3213982-1 04/22/17 22:58 • (LCSD) R3213982-2 04/22/17 23:10

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	%	%	%			%	%
Benzene	25.0	28.1	28.4	112	114	69.0-123			1.14	20
Ethylbenzene	25.0	27.0	27.2	108	109	77.0-120			0.920	20
Toluene	25.0	27.7	27.6	111	110	77.0-120			0.420	20
o-Xylene	25.0	27.2	26.8	109	107	78.0-120			1.25	20
m&p-Xylenes	50.0	54.1	54.1	108	108	77.0-120			0.140	20
(S) Toluene-d8				101	101	80.0-120				
(S) Dibromofluoromethane				103	105	76.0-123				
(S) a,a,a-Trifluorotoluene				99.5	99.6	80.0-120				
(S) 4-Bromofluorobenzene				97.6	96.5	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-[NO 536-01,02,03,04,05,06,07,08,09,10,11,12,16,17,18,19,20,21,22,23](#)

Method Blank (MB)

(MB) R3213026-1 04/21/17 16:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	121			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3213026-2 04/21/17 16:24 • (LCSD) R3213026-3 04/21/17 16:41

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	864	884	115	118	50.0-150			2.19	20
Residual Range Organics (RRO)	750	842	833	112	111	50.0-150			1.08	20
<i>(S) o-Terphenyl</i>				115	118	52.0-156				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3212908-3 04/24/17 09:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
2-Methylphenol	U		0.312	10.0
3&4-Methyl Phenol	U		0.266	10.0
(S) Nitrobenzene-d5	75.1			10.0-126
(S) 2-Fluorobiphenyl	76.7			22.0-127
(S) p-Terphenyl-d14	89.9			29.0-141
(S) Phenol-d5	30.1			10.0-120
(S) 2-Fluorophenol	40.3			10.0-120
(S) 2,4,6-Tribromophenol	71.7			10.0-153

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212908-1 04/24/17 08:59 • (LCSD) R3212908-2 04/24/17 09:22

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	%	%	%			%	%
3&4-Methyl Phenol	50.0	29.8	37.1	59.6	74.2	27.0-120			21.8	28
2-Methylphenol	50.0	28.0	34.7	56.0	69.4	26.0-120			21.3	27
(S) Nitrobenzene-d5				67.7	78.7	10.0-126				
(S) 2-Fluorobiphenyl				79.6	86.2	22.0-127				
(S) p-Terphenyl-d14				90.1	93.3	29.0-141				
(S) Phenol-d5				25.6	31.7	10.0-120				
(S) 2-Fluorophenol				34.9	43.7	10.0-120				
(S) 2,4,6-Tribromophenol				83.8	89.1	10.0-153				

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3212995-3 04/22/17 03:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	U		0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	0.0327	J	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	110			31.0-160
(S) 2-Fluorobiphenyl	97.4			48.0-148
(S) p-Terphenyl-d14	99.9			37.0-146

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) R3212995-1 04/22/17 03:10 • (LCSD) R3212995-2 04/22/17 03:33

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 %
Anthracene	2.00	2.05	2.10	102	105	64.0-142			2.57	20
Acenaphthene	2.00	1.86	1.89	93.0	94.4	66.0-132			1.50	20
Acenaphthylene	2.00	1.92	1.94	95.8	97.2	65.0-132			1.46	20
Benzo(a)anthracene	2.00	1.80	1.81	90.2	90.5	59.0-134			0.290	20
Benzo(a)pyrene	2.00	1.91	1.91	95.6	95.3	61.0-145			0.330	20
Benzo(b)fluoranthene	2.00	1.79	1.81	89.3	90.5	57.0-136			1.34	20
Benzo(g,h,i)perylene	2.00	2.22	2.25	111	112	54.0-140			1.29	20
Benzo(k)fluoranthene	2.00	2.03	2.02	102	101	57.0-141			0.510	20
Chrysene	2.00	1.98	2.07	99.1	104	63.0-140			4.53	20
Dibenz(a,h)anthracene	2.00	2.08	2.12	104	106	49.0-141			1.90	20
Fluoranthene	2.00	2.06	2.09	103	104	65.0-143			1.14	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212995-1 04/22/17 03:10 • (LCSD) R3212995-2 04/22/17 03:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	1.77	1.79	88.3	89.5	64.0-129			1.29	20
Indeno(1,2,3-cd)pyrene	2.00	2.21	2.24	111	112	53.0-141			1.19	20
Naphthalene	2.00	1.76	1.80	88.0	90.1	68.0-129			2.38	20
Phenanthrene	2.00	1.74	1.75	87.2	87.6	62.0-132			0.510	20
Pyrene	2.00	1.83	1.86	91.6	92.9	58.0-156			1.41	20
1-Methylnaphthalene	2.00	1.75	1.78	87.7	89.2	68.0-137			1.70	20
2-Methylnaphthalene	2.00	1.72	1.76	85.9	87.9	68.0-134			2.36	20
2-Chloronaphthalene	2.00	1.98	2.02	99.2	101	65.0-129			1.69	20
<i>(S) Nitrobenzene-d5</i>				108	109	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				96.5	98.4	48.0-148				
<i>(S) p-Terphenyl-d14</i>				99.2	101	37.0-146				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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.
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

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.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
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		

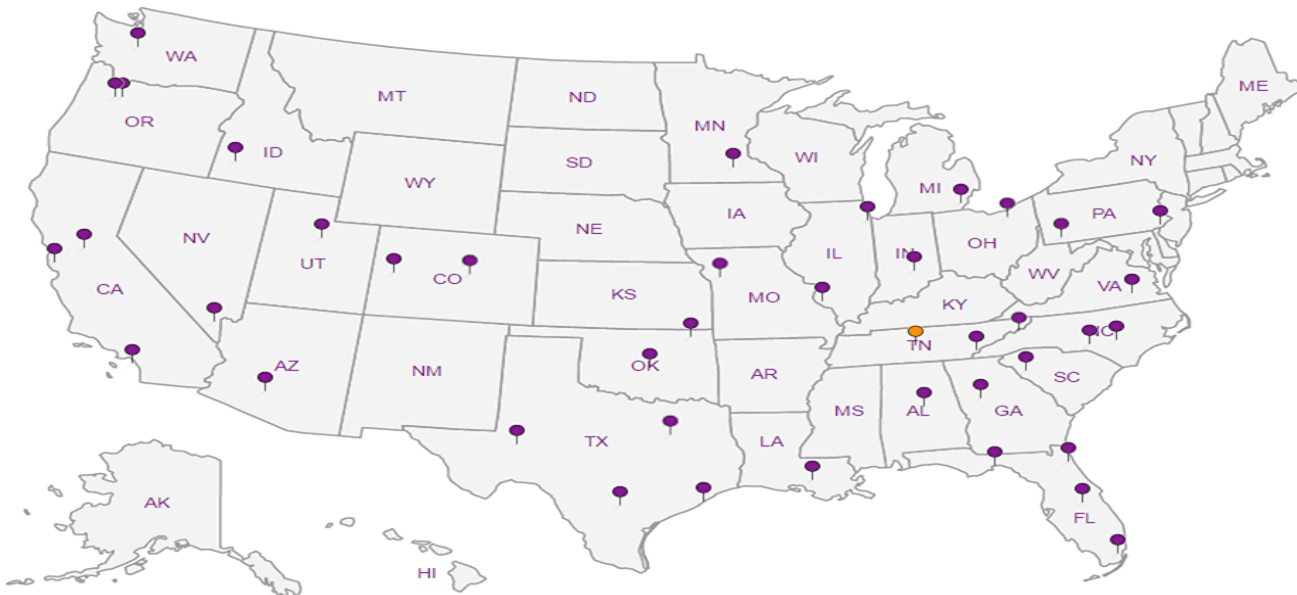
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	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.**



Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Pres
Chk

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
tyschreiner@kennedyjenks.com,

Project
Description: BNSF - Wishram Railyard, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400

Client Project #
1796120-00

Lab Project #
BNSF1KEN-WISHRAM

Fax:

Collected by (print):
Alexander Leher

Site/Facility ID #
Wishram

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
Same Day ___ Five Day ___
Next Day ___ 5 Day (Rad Only) ___
Two Day ___ 10 Day (Rad Only) ___
Three Day ___

Quote #
Date Results Needed

Immediately Packed on Ice N ___ Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270 - Cresols 100ml Amb NoPres	Diss. As, Fe, Mn, Pb 250mlHDPE-HNO3	Diss. Fe, Mn, Pb 250mlHDPE-HNO3	NH3 125mlHDPE-H2SO4	NO2NO3 250mlHDPE-H2SO4	NWTPDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres
RMD-1-20170418	G	GW		4-18-17	1150	16			X	X	X	X	X	X	X	X
RMD-2-20170418		GW		4-18-17	0930	16			X					X		
RMD-3-20170417		GW		4-17-17	1400	16			X					X		
RMD-4-20170417		GW		4-17-17	1740	16			X					X		
WMW-15-20170418		GW		4-18-17	1255	14			X					X		
WMW-16-20170418		GW		4-18-17	1035	18	X	X	X					X		
WMW-17-20170417		GW		4-17-17	1235	16			X					X		
WMW-18-20170417		GW		4-17-17	1610	58	X	X						X		
D-1-20170417		GW		4-17-17	-	16			X					X		
D-2-20170418		GW		4-18-18	-	16			X					X		

Chain of Custody Page 1 of 8



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# 2903886

J011

Acctnum: BNSF1KEN
Template: T122528
Prelogin: P596945
TSR: 134 - Mark W. Beasley
PB: 4-11-17

Shipped Via: FedEX Saver

- * Matrix:
- SS - Soil AIR - Air F - Filter
- GW - Groundwater B - Bioassay
- WW - Waste Water
- DW - Drinking Water
- OT - Other

Remarks: TT9156-R04, PO# 4358

MS-MSD sample
MW-17 and MW-18 are analyzed for Pb and As.
Other samples do not

No Silica Gel on DRO

Samples returned via:
___ UPS ___ FedEx ___ Courier ___

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact: 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) <i>[Signature]</i>	Date: 4-19-17	Time: 1430	Received by: (Signature) <i>[Signature]</i>	Trip Blank Received: <input checked="" type="checkbox"/> No <input type="checkbox"/> HCL MeOH TBR	Temp: °C 3.3	Bottles Received: 331	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)				
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 4-20-17	Time: 845	Hold:	Condition: NCF / OK

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Ave S
 Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
 tyschreiner@kennedyjenks.com,

Project
 Description: **BNSF - Wishram Rail yard, WA**

City/State
 Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Client Project #
179612000

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alexander Lesher

Site/Facility ID #
Wishram

P.O. #

Collected by (signature):
[Signature]
 Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
 Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
WMW-14-20170418	G	GW		4-18-17	1340	14
WMW-5-20170418	G	GW		4-18-17	1435	14
		GW				
		GW				
		GW				
		GW				
		GW				
		GW				
		GW				

Analysis / Container / Preservative										
8270 - Cresols 100ml Amb NoPres	Diss. As, Fe, Mn, Pb 250mlHDPE-HNO3	Diss. Fe, Mn, Pb 250mlHDPE-HNO3	NH3 125mlHDPE-H2SO4	NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb -NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-No Pres	

Chain of Custody Page 3 of 8



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L # **2903886**

Table #

Acctnum: **BNSF1KEN**
 Template: **T122528**
 Prelogin: **P596945**
 TSR: 134 - Mark W. Beasley
 PB: **4-11-17**

Shipped Via: **FedEx Saver**

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: **TT9156-R04, PO# 4358**
No Silica Gel Cleanup on Dx

Samples returned via:
 UPS FedEx Courier

Tracking #

pH _____ Temp _____
 Flow _____ Other _____

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)
[Signature]

Date: **4-18-17**
 Time: **1430**

Received by: (Signature)
[Signature]

Trip Blank Received: Yes No
 MeOH TBR

Relinquished by: (Signature)
[Signature]

Date: _____
 Time: _____

Received by: (Signature)
[Signature]

Temp: **33** °C
 Bottles Received: **331**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: _____
 Time: _____

Received for lab by: (Signature)
[Signature]

Date: **4-20-17**
 Time: **845**

Hold: _____
 Condition: NCF / OK

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Ave S
 Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
 tyschreiner@kennedyjenks.com

Project
 Description: **BNSF - Wishram Railyard, WA**

City/State
 Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Client Project #
1796120 ∞

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alexander Leher

Site/Facility ID #
Wishram

P.O. #

Collected by (signature):
[Signature]
 Immediately
 Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
 Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
WMW-14-20170418	G	GW		4-18-17	1340	14
WMW-5-20170418	G	GW		4-18-17	1435	14
TB-1		GW			-	1
TB-2		GW			-	1
TB-3		GW			-	1
		GW				
		GW				
		GW				
		GW				
		GW				

Analysis / Container / Preservative			
Sulfide 125mlAmb-S-NaOH+ZnAc	Total As, Pb 250mlHDPE-HNO3	Total Pb 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl

Chain of Custody Page **4** of **8**



L.A.B. S.C.I.E.N.C.E.S.

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L # **2403886**

Table #

Acctnum: **BNSF1KEN**

Template: **T122528**

Prelogin: **P596945**

TSR: 134 - Mark W. Beasley

PB:

Shipped Via: **FedEX Saver**

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: **TT9156-R04, PO# 4358**

Samples returned via:
 UPS FedEx Courier

Tracking # **fedex**

pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact: 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)
[Signature]

Date: **4-19-17**
 Time: **1430**

Received by: (Signature)
[Signature]

Trip Blank Received: Yes No
 MeOH MeOH
 TBR

Temp: **3.3** °C
 Bottles Received: **331**

If preservation required by Login: Date/Time

Hold:

Condition: **NCF / OK**

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Ave S
 Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
 tyschreiner@kennedyjenks.com

Project Description: **BNSF - Wishram Railyard, WA**

City/State Collected: **Wishram WA**

Phone: **253-835-6400**
 Fax:

Client Project #
1796120.00

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson

Site/Facility ID #
Wishram

P.O. #

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)
 ___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day

Quote #

Immediately Packed on Ice **N**

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
-----------	-----------	----------	-------	------	------	--------------

WMW-13-20170417	G	GW	15'	4-17-17	12:25	18
WMW-10-20170417	I	GW	15'	4-17-17	13:30	14
WMW-9-20170417	I	GW	15'	4-17-17	14:35	14
WMW-11-20170417	I	GW	15'	4-17-17	15:55	14
WMW-12-20170417	I	GW	15'	4-17-17	17:15	18
		GW				
		GW				
		GW				
		GW				
		GW				


Analysis / Container / Preservative									
8270 - Cresols 100ml Amb NoPres	Diss. As, Fe, Mn, Pb 250mlHDPE-HNO3	Diss. Fe, Mn, Pb 250mlHDPE-HNO3	NH3 125mlHDPE-H2SO4	NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVINO SGT 40mlAmb HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres
X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X

Chain of Custody Page **5** of **8**



YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **L903886**

Table #

Acctnum: **BNSF1KEN**

Template: **T122528**

Prelogin: **P596945**

TSR: **134 - Mark W. Beasley**

PB: **4-11-17**

Shipped Via: **FedEX Saver**

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - Waste Water
 DW - Drinking Water
 OT - Other

Remarks: **TT9156-R04, PO# 4358**
No SGC on Dx

Samples returned via:
 ___ UPS ___ FedEx ___ Courier

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact: Y ___ N

COC Signed/Accurate: Y ___ N

Bottles arrive intact: Y ___ N

Correct bottles used: Y ___ N

Sufficient volume sent: Y ___ N

If Applicable
 VCA Zero Headpace: Y ___ N

Preservation Correct/Checked: Y ___ N

Relinquished by: (Signature)
[Signature]

Date: **4-19-17**
 Time: **1430**

Received by: (Signature)
[Signature]

Trip Blank Received: Yes / No
 HCl/MeOH
 TBR

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp: **33** °C
 Bottles Received: **331**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature)
[Signature]

Date: **4-20-17**
 Time: **845**

Hold: Condition: NCF / OK

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 6 of 8



YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
tyschreiner@kennedyjenks.com,

Project Description: **BNSF - Wishram Railway, WA**

City/State Collected: **Wishram, WA**

Phone: **253-835-6400**
Fax:

Client Project #
1796120.00

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson

Site/Facility ID #
Wishram

P.O. #

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #

Immediately Packed on Ice: N Y

Date Results Needed

No.
of
Ctrs

Sulfide 125mlAmb-S-NaOH+ZnAC
Total As, Pb 250mlHDPE-HNO3
Total Pb 250mlHDPE-HNO3
V8260BTEXC 40mlAmb-HCl

L # **2963886**

Table #

Acctnum: **BNSF1KEN**

Template: **T122528**

Prelogin: **P596945**
TSR: **134 - Mark W. Beasley**

PB:
Shipped Via: **FedEX Saver**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Ctrs	Sulfide	Total As, Pb	Total Pb	V8260BTEXC	Remarks	Sample # (lab only)
WMW-13-20170417	G	GW	1S	4-17-17	12:25	18	X	X	X			16
WMW-10-20170417	I	GW	1S	4-17-17	13:30	14	X	X	X			17
WMW-9-20170417	I	GW	1S	4-17-17	14:35	14	X	X	X			18
WMW-11-20170417	I	GW	1S	4-17-17	15:55	14	X	X	X			19
WMW-12-20170417	I	GW	1S	4-17-17	17:15	18	X	X	X			20
TB-4		GW				1						-24-21
TB-5		GW				1						25-22
		GW										
		GW										

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: **TT9156-R04, PO# 4358**
No SGC on Dx

Samples returned via:
 UPS FedEx Courier

Tracking #

pH _____ Temp _____
Flow _____ Other _____

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)
Alice Robinson

Date: **4-19-17** Time: **1430**

Received by: (Signature)

Trip Blank Received: Yes No
6 **MeI / MeOH**
T59

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp: **3.3** °C Bottles Received: **331**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature)
Shane DeGross

Date: **4-20-17** Time: **845**

Hold: Condition: **NCF / OK**

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Ave S
 Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
 tyschreiner@kennedyjenks.com

Project
 Description: **BNSF - Wishram Railyard, WA**

City/State
 Collected: **Wishram, WA**

Phone: **253-835-6400**
 Fax:

Client Project #
1796120.00

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson

Site/Facility ID #
Wishram

P.O. #

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #

Immediately Packed on Ice N Y

Date Results Needed

No. of

Chain of Custody Page **1** of **8**



ESC
 L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Pres Chk	Analysis / Container / Preservative
							8270 - Cresols 100ml Amb NoPres
							Diss. As, Fe, Mn, Pb 250mlHDPE-HNO3
							Diss. Fe, Mn, Pb 250mlHDPE-HNO3
							NH3 125mlHDPE-H2SO4
							NO2NO3 250mlHDPE-H2SO4
							NWTPHDXLVINOSGT 40mlAmb-HCl-BT
							NWTPHGX 40mlAmb HCl
							PAHSIMLVID 40mlAmb-NoPres-WT
							RSK175 40mlAmb HCl
							Sulfate 125mlHDPE-NoPres

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Entrs	Remarks	Sample # (lab only)
WMW-3-20170418	G	GW	1S	4-18-17	10:15	14		21 23
WMW-1-20170418	I	GW	1S	4-18-17	12:20	14		22 24
FB-01-20170418	I	GW		4-18-17	8:30	14		23 25
FFAL		GW						
		GW						
		GW						
		GW						
		GW						
		GW						
		GW						

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: **TT9156-R04, PO# 4358**
No Silica Gel Cleanup on Dx

Samples returned via:
 UPS FedEx Courier

Tracking #

Relinquished by: (Signature) *[Signature]* Date: **4-19-17** Time: **14:50**

Received by: (Signature) *[Signature]* Trip Blank Received: Yes No
 HCL / MeOH TBR

Relinquished by: (Signature) Date: Time: Received by: (Signature) Temp: **3.3** °C Bottles Received: **331**

Relinquished by: (Signature) Date: Time: Received for lab by: (Signature) *[Signature]* Date: **4-20-17** Time: **8:45** Hold: Condition: NCF / OK

Sample Receipt Checklist

CDC Seal Present/Intact: Y N
 CDC 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

If preservation required by Login: Date/Time

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Ave S
 Tacoma, WA 98421

Report to:
 Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
 tyschreiner@kennedyjenks.com

Project:
 Description: BNSF - Wishram Railyard, WA

City/State Collected: *Wishram, WA*

Phone: 253-835-6400
 Fax:

Client Project #
1796120-00

Lab Project #
 BNSF1KEN-WISHRAM

Collected by (print):
Alize Robinson

Site/Facility ID #
Wishram

Collected by (signature):
Alize Robinson

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N Y

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 8 of 8

ESC
 L.A.B S.C.I.E.N.C.E.S
 YOUR LAB OF CHOICE
 12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859

QR Code

L# *L903886*

Table #

Acctnum: BNSF1KEN
 Template: T122528
 Prelogin: P596945
 TSK: 134 - Mark W. Beasley
 PB:

Shipped Via: FedEX Saver

Remarks Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Sulfide 125mlAmb-S-NaOH+ZnAc	Total As, Pb 250mlHDPE-HNO3	Total Pb 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl
WMW-3-20170418	G	GW	15'	4-18-17	10:15	14	X	X	X	
WMW-1-20170418	L	GW	15'	4-18-17	12:20	14	X	X	X	
FB-01-20170418	L	GW		4-18-17	0830	14	X	X	X	
TB-6		GW							X	
		GW								
		GW								
		GW								
		GW								
		GW								

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: TT9156-R04, PO# 4358

Samples returned via:
 UPS FedEx Courier

Tracking #

Relinquished by: (Signature) *[Signature]* Date: 4-19-17 Time: 1430
 Received by: (Signature) Trip Blank Received: 6 Yes/No
 HO / MeOH TBR

Relinquished by: (Signature) Date: Time: Received by: (Signature) Temp: 3.3 °C Bottles Received: 331
 If preservation required by Login: Date/Time

Relinquished by: (Signature) Date: Time: Received for lab by: (Signature) *[Signature]* Date: 4-20-17 Time: 845
 Hold: Condition: NCF / OK

Sample Receipt Checklist
 COC Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 VDA Zero HeadSpace: Y N
 Preservation Correct/Checked: Y N

ESC Lab Sciences Non-Conformance Form

Login #: L903886	Client: BNSF1KEN	Date: 4/20/17	Evaluated by: Jeremy
------------------	------------------	---------------	----------------------

Non-Conformance (check applicable items)

Sample Integrity		Chain of Custody Clarification	
Parameter(s) past holding time	x	Login Clarification Needed	If Broken Container:
Improper temperature		Chain of custody is incomplete	
Improper container type		Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation		Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courier)
Insufficient sample volume.		Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.		Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.		Trip Blank not received.	If no Chain of Custody:
Broken container		Client did not "X" analysis.	
Broken container:		Chain of Custody is missing	Date/Time:
Sufficient sample remains			Temp./Cont. Rec./pH:
			Carrier:
			Tracking#

Login Comments: Did not receive PAHSIMLVI vials for FB-01-20170418

Client informed by:	Call	Email	Voice Mail	Date: 4/20/17	Time: 1645
TSR Initials: MB	Client Contact: Ryan H.				

Login Instructions:

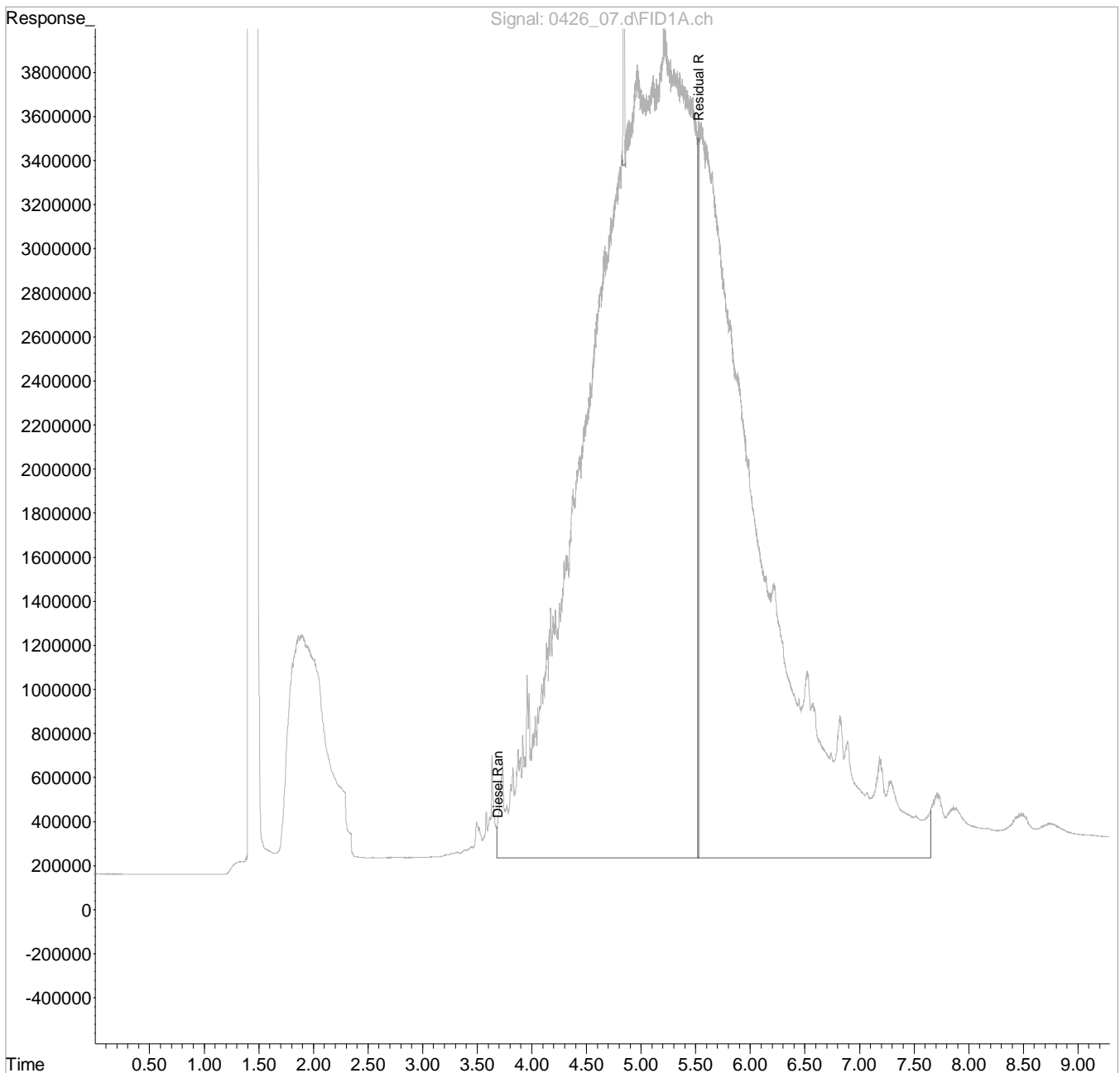
Do not run PAHs on FB-01

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 07.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 10:51 am
 Operator : 784
 Sample : L903886-01 1x WG972494 40-2
 Misc : water
 ALS Vial : 5 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 26 16:18:02 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

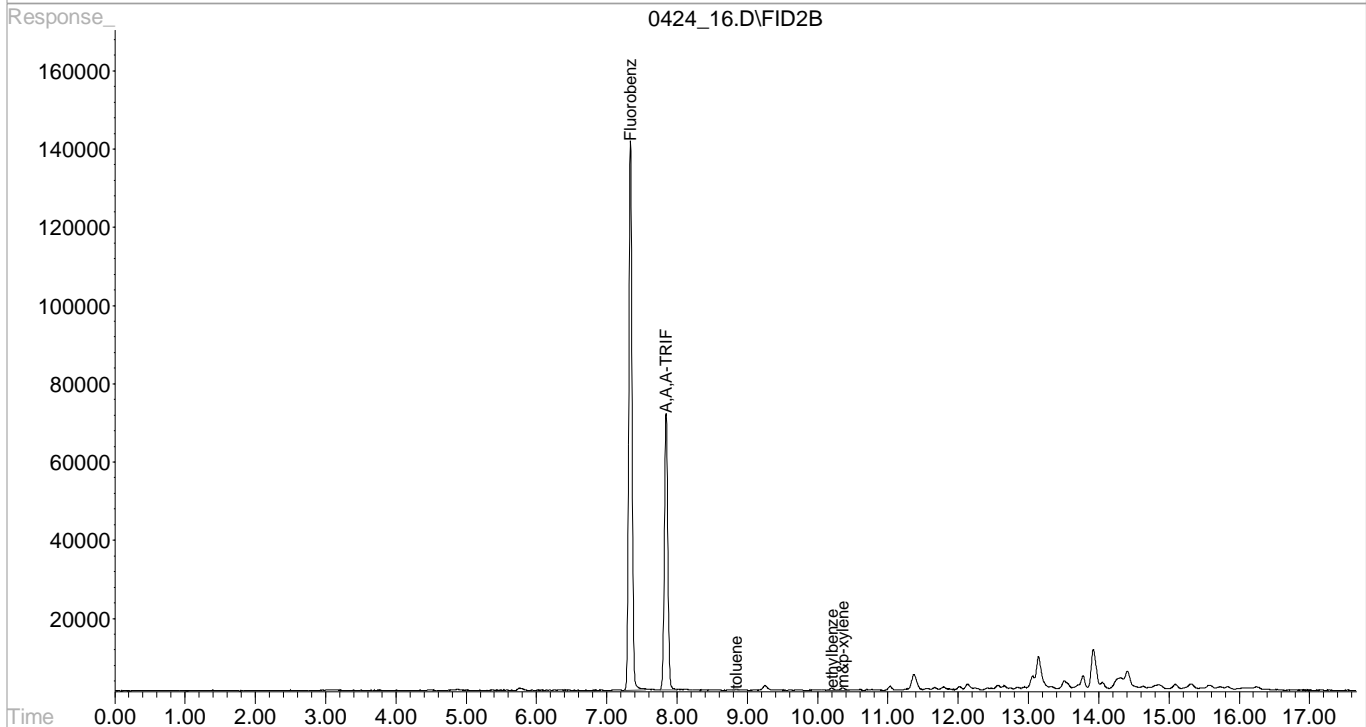
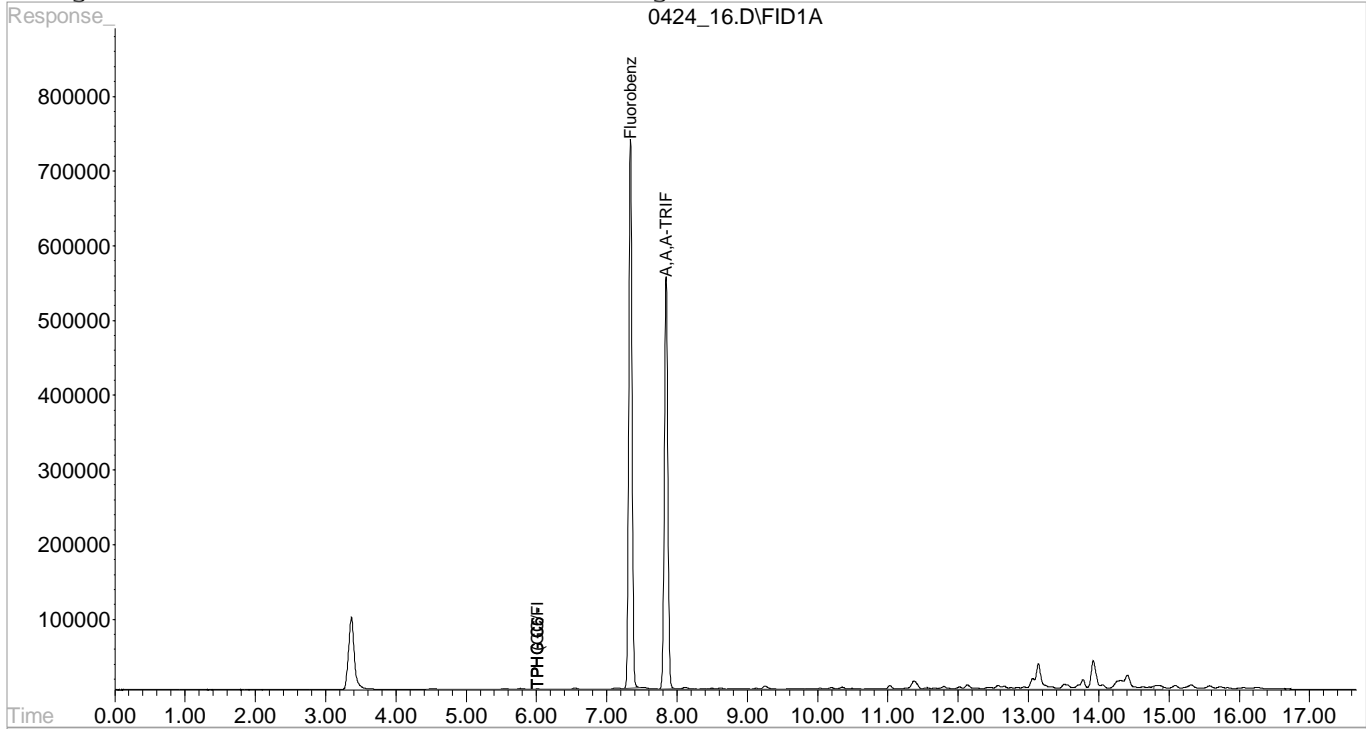
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 16.D\FID1A.CH Vial: 16
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 16.D\FID2B.CH
 Acq On : 24 Apr 2017 4:14 pm Operator: 605
 Sample : L903886-01 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:35 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

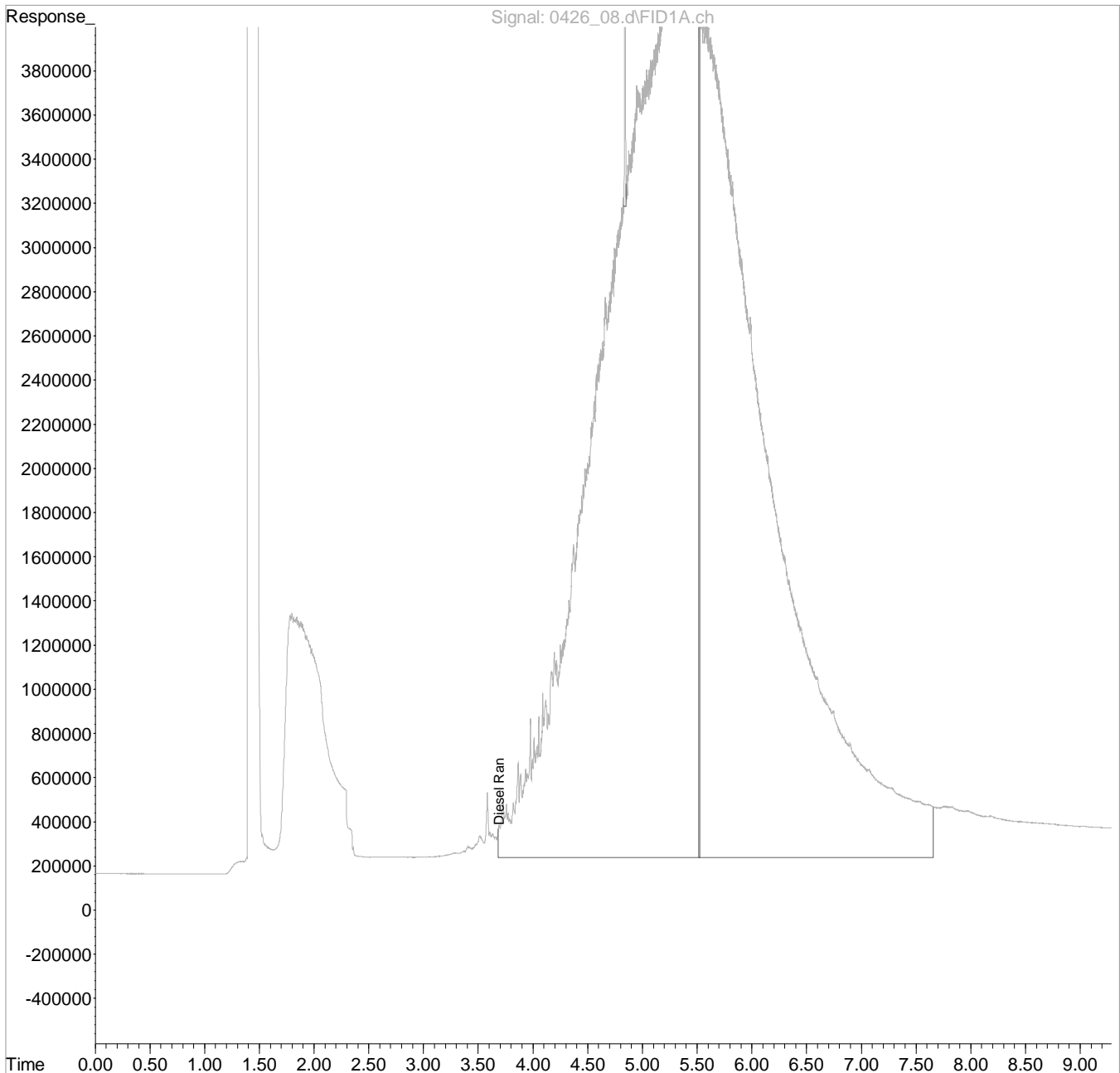
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 08.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 11:07 am
 Operator : 784
 Sample : L903886-02 1x WG972494 40-2
 Misc : water
 ALS Vial : 6 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:34:33 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

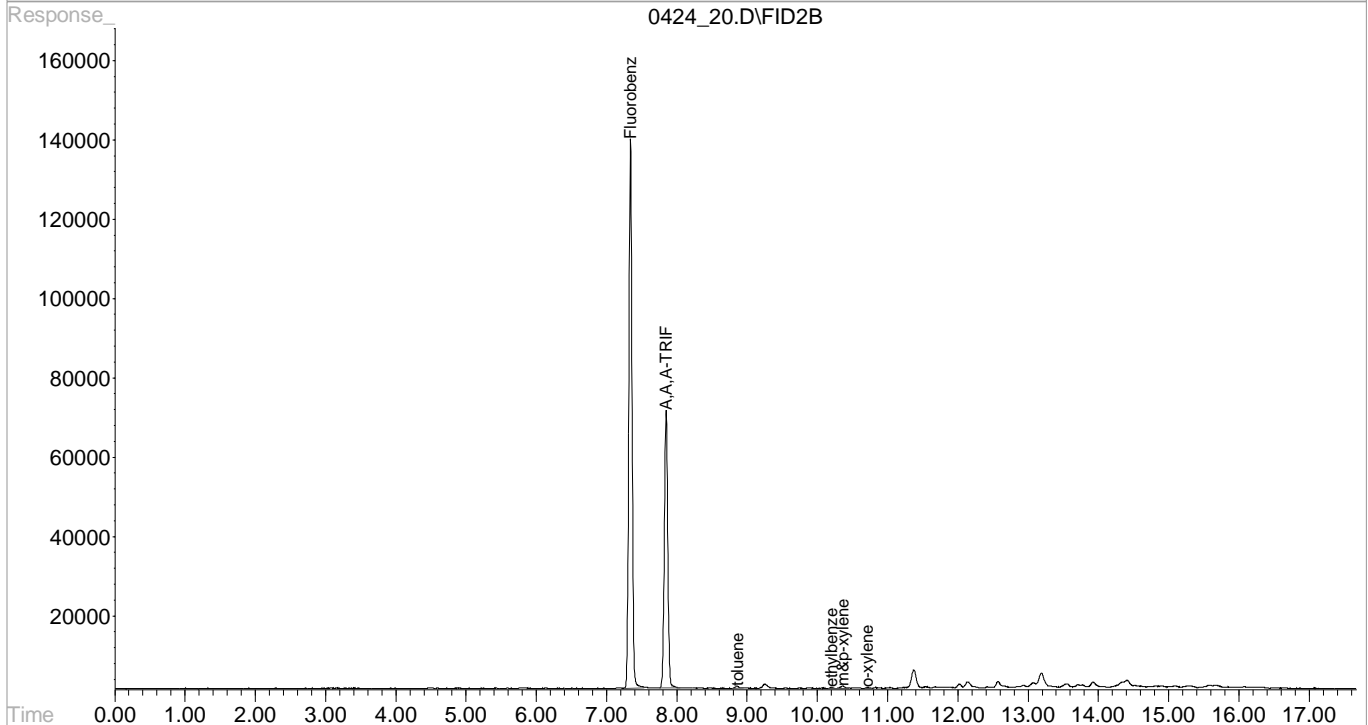
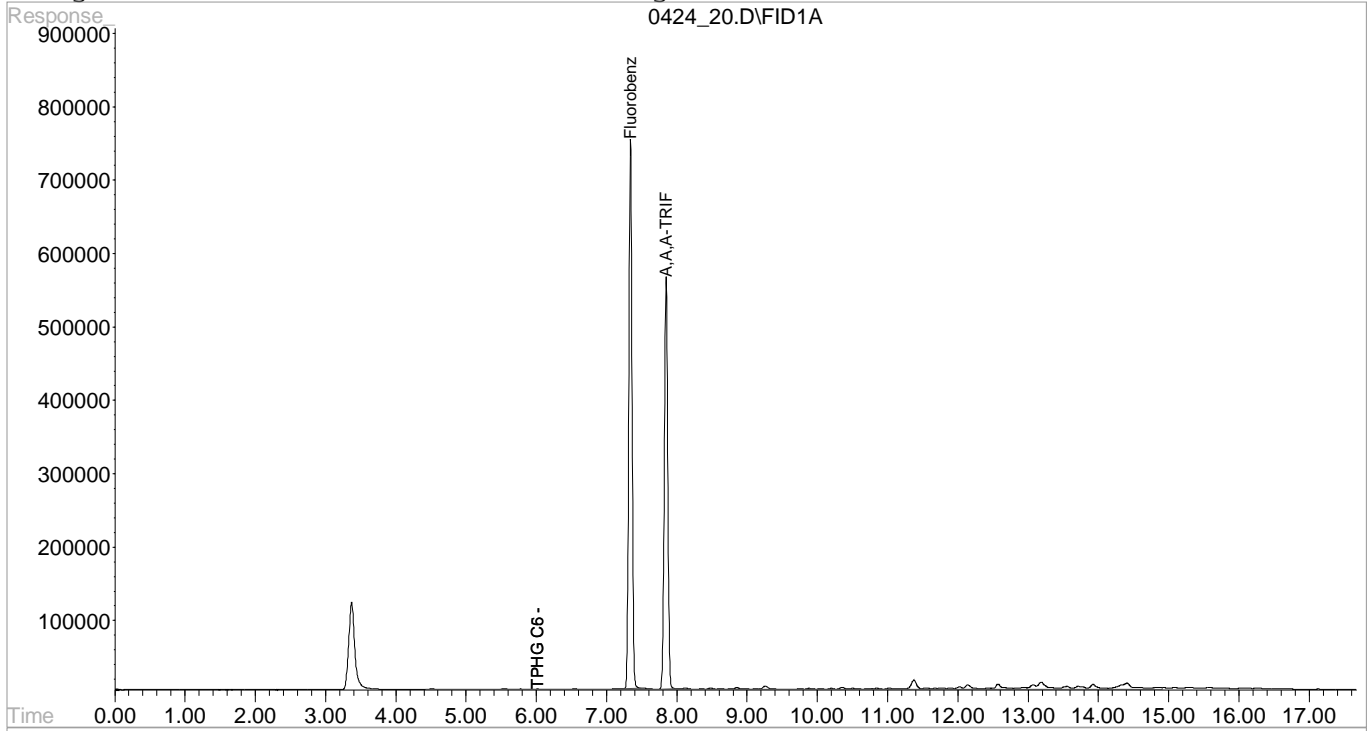
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 20.D\FID1A.CH Vial: 20
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 20.D\FID2B.CH
 Acq On : 24 Apr 2017 5:50 pm Operator: 605
 Sample : L903886-02 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:35 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

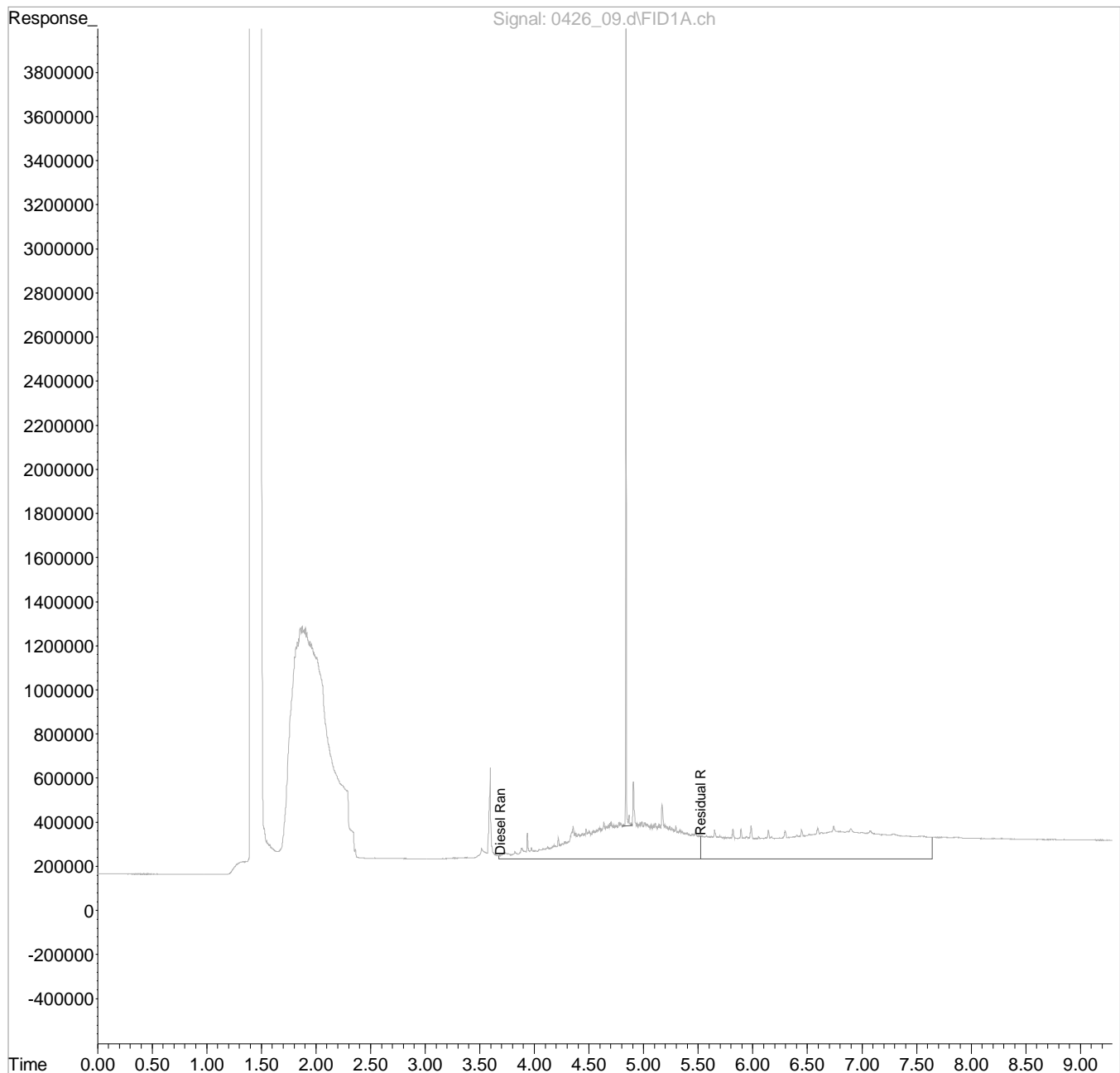
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
Data File : 0426 09.d
Signal(s) : FID1A.ch
Acq On : 26 Apr 2017 11:24 am
Operator : 784
Sample : L903886-03 1x WG972494 40-2
Misc : water
ALS Vial : 7 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Apr 27 13:34:57 2017
Quant Method : C:\msdchem\1\methods\EP27D19Q.M
Quant Title :
QLast Update : Thu Apr 20 09:21:55 2017
Response via : Initial Calibration
Integrator: ChemStation

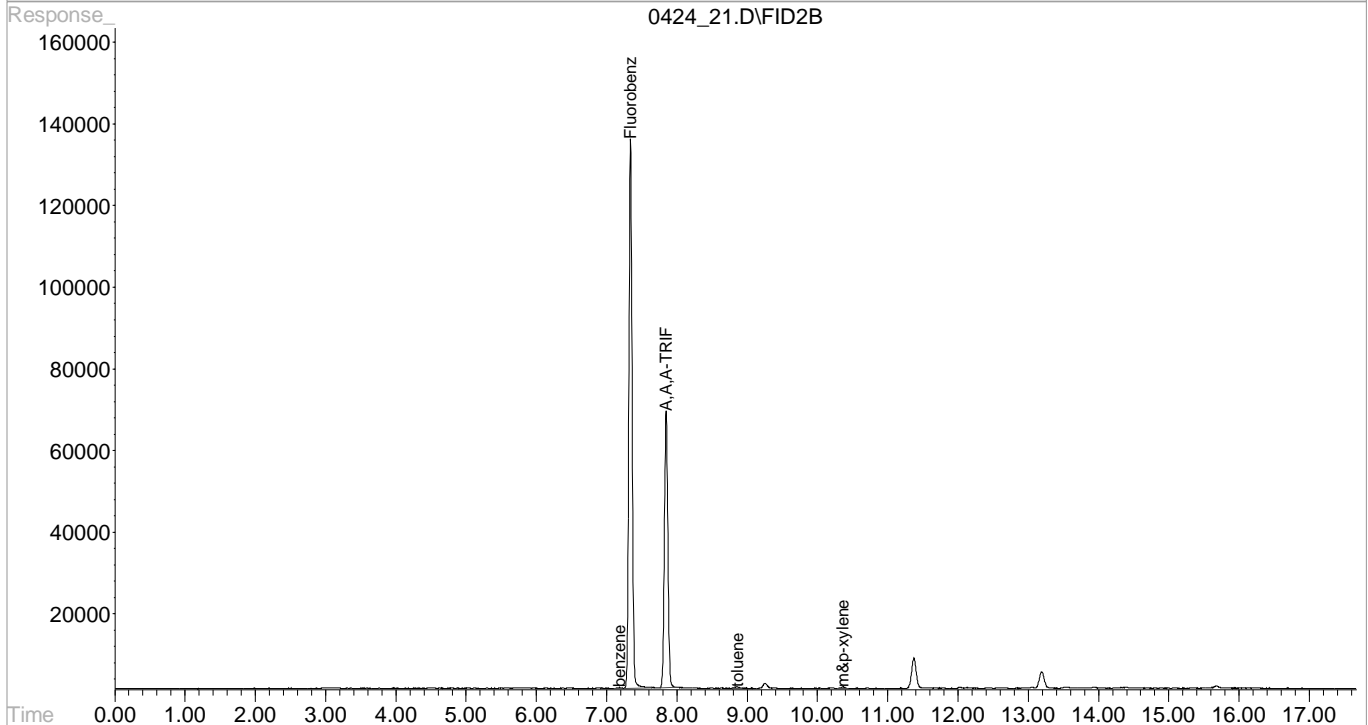
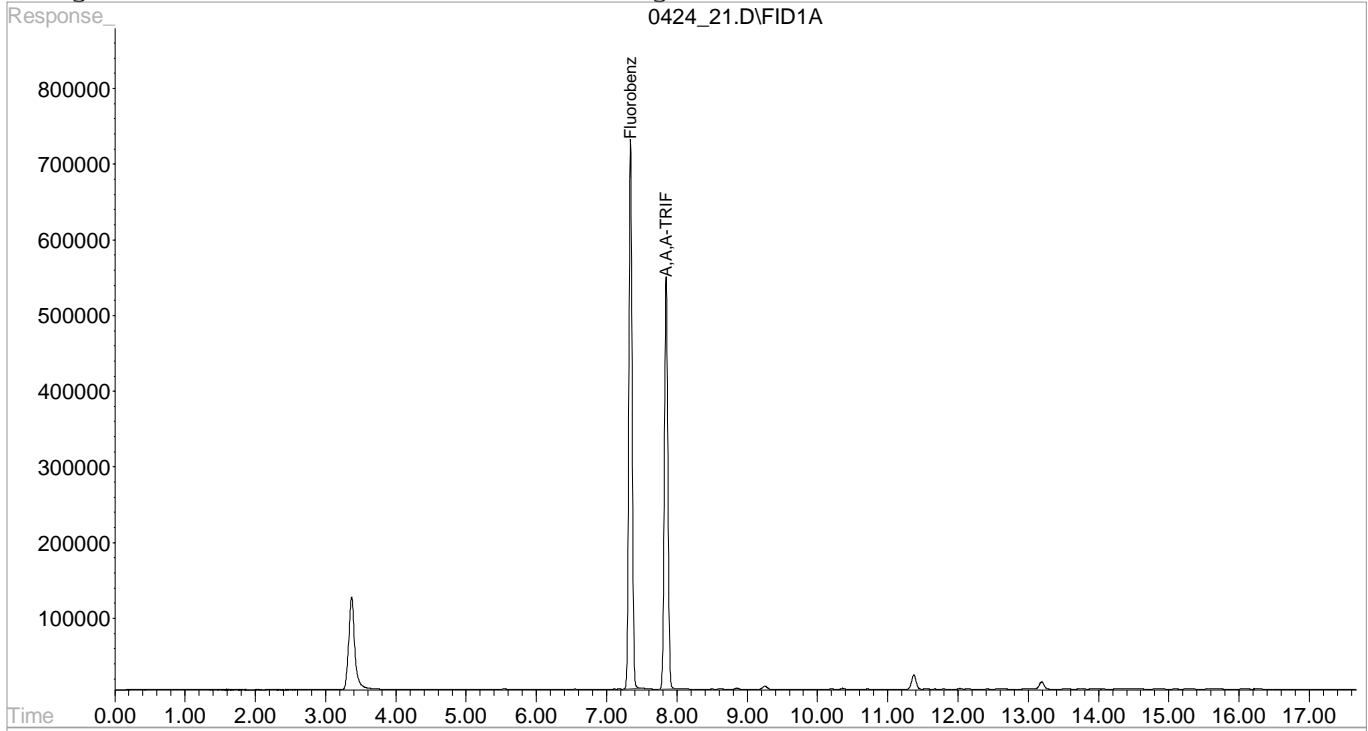
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 21.D\FID1A.CH Vial: 21
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 21.D\FID2B.CH
 Acq On : 24 Apr 2017 6:14 pm Operator: 605
 Sample : L903886-03 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:35 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

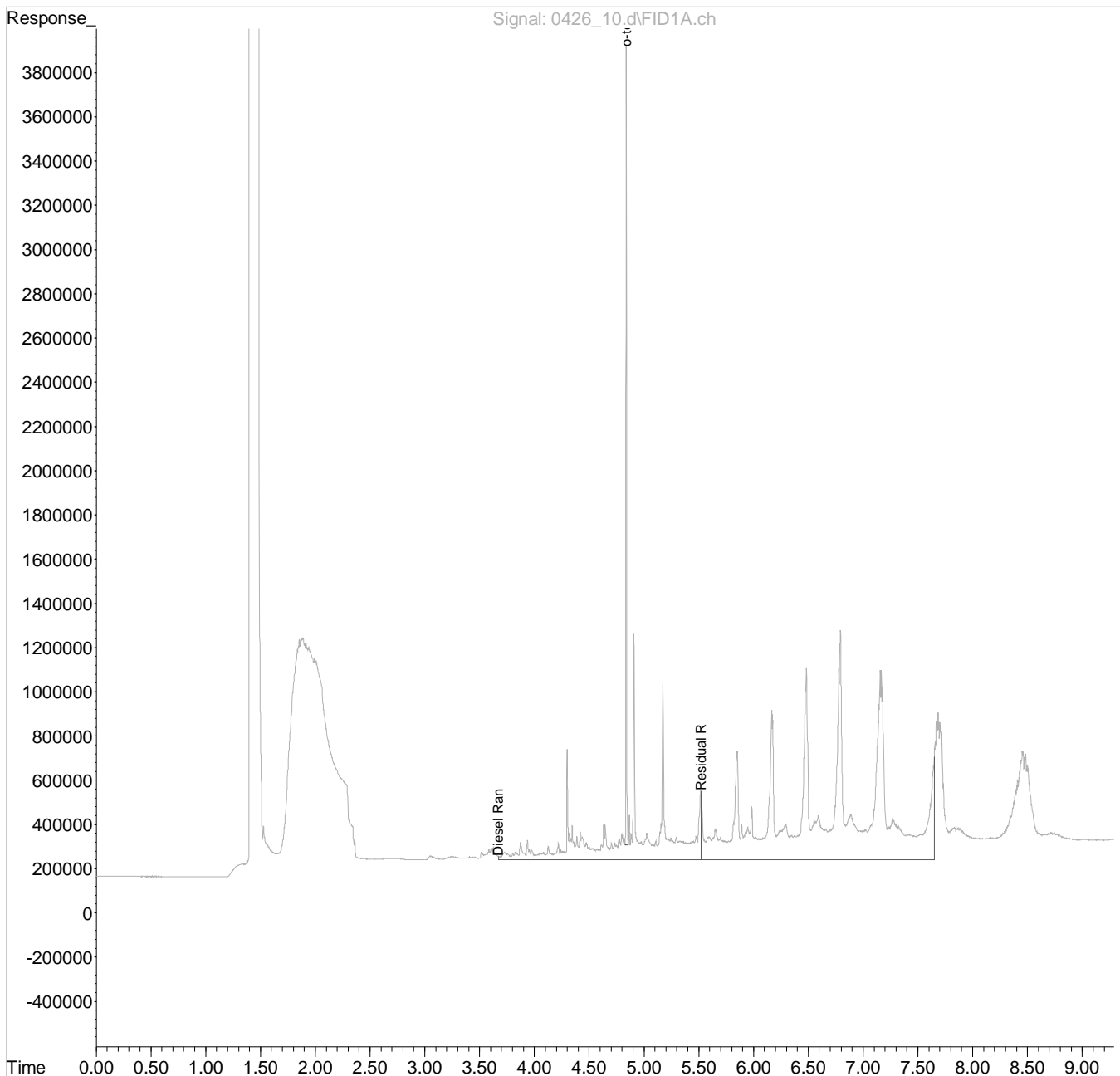
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 10.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 11:40 am
 Operator : 784
 Sample : L903886-04 1x WG972494 40-2
 Misc : water
 ALS Vial : 8 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:36:41 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

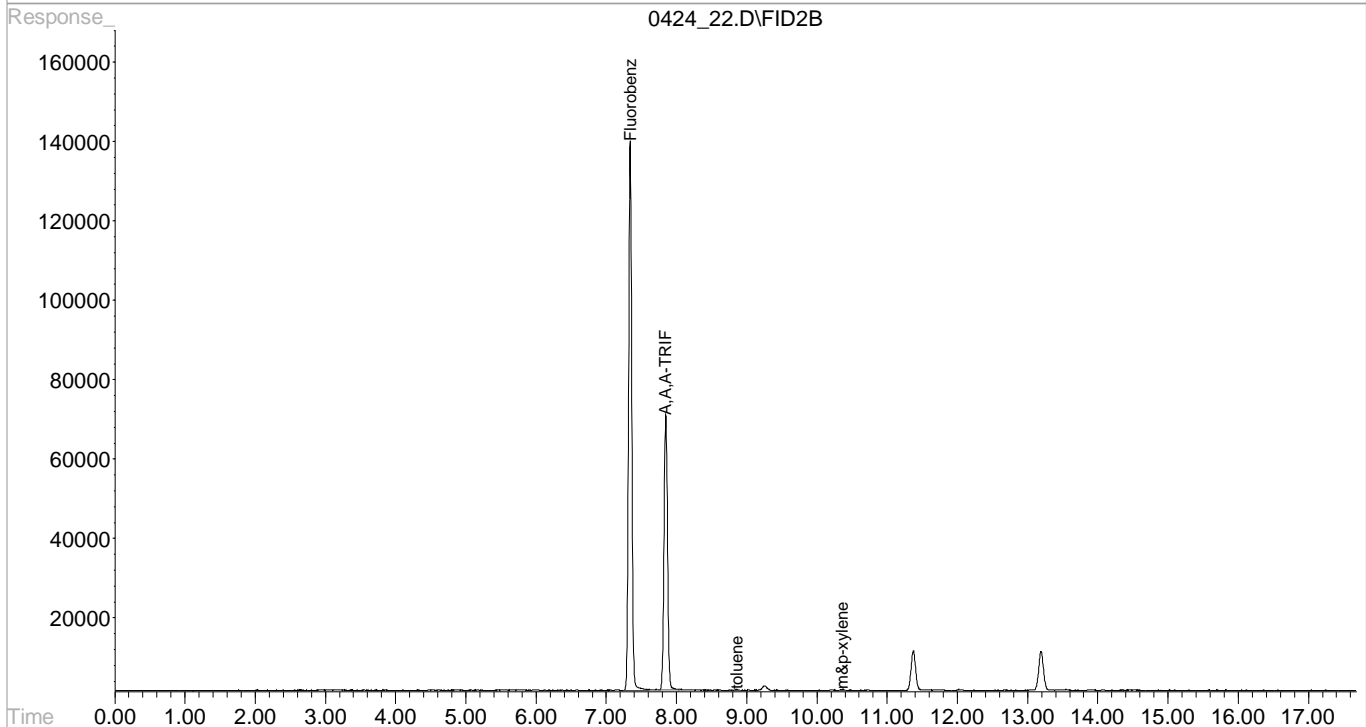
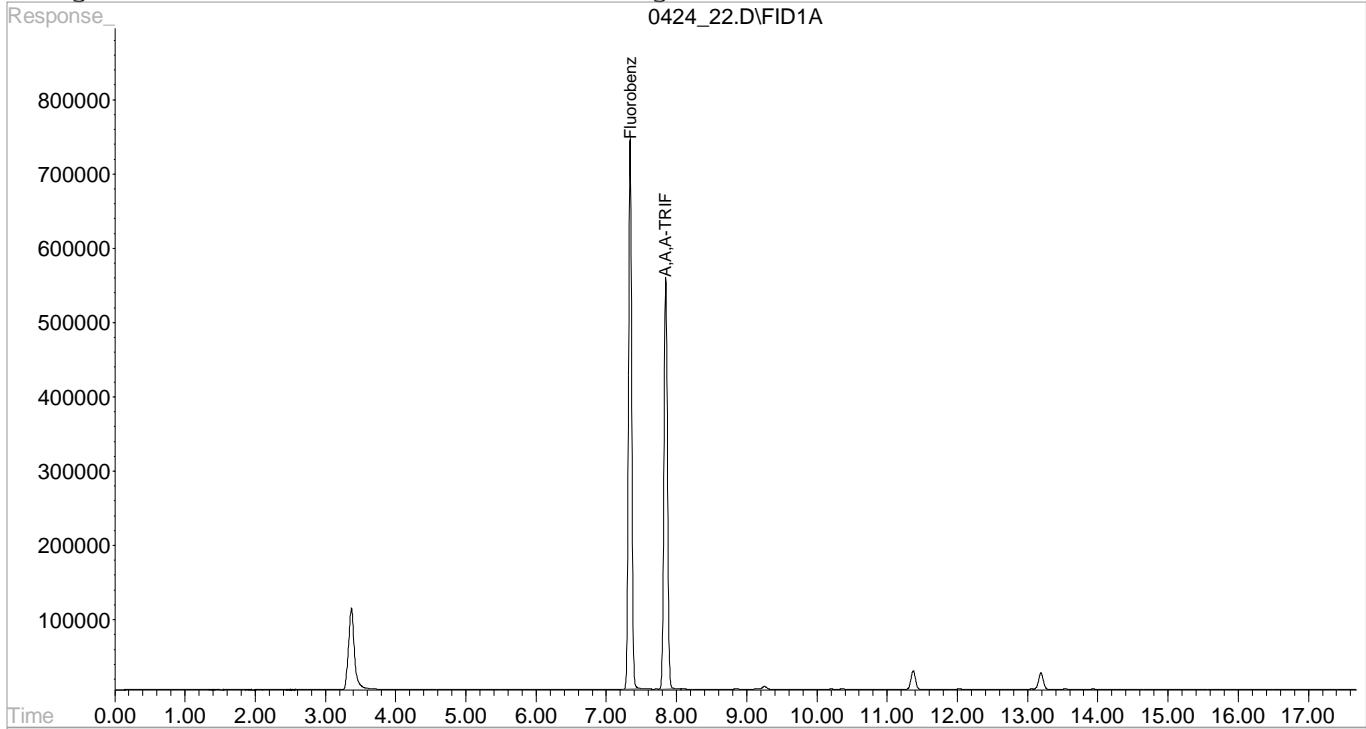
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 22.D\FID1A.CH Vial: 22
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 22.D\FID2B.CH
 Acq On : 24 Apr 2017 6:38 pm Operator: 605
 Sample : L903886-04 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:35 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

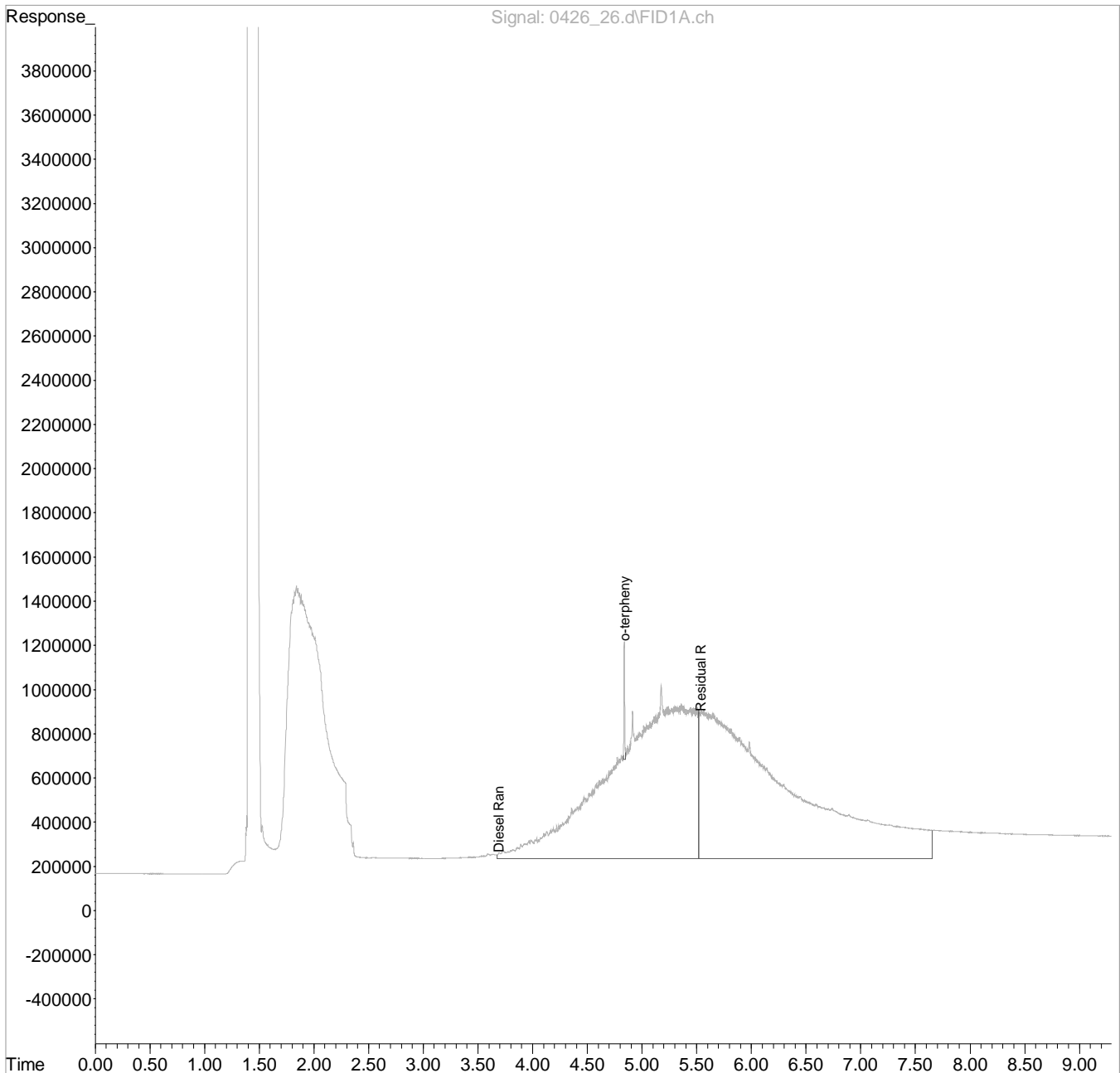
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426_26.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 4:14 pm
 Operator : 784
 Sample : L903886-05 5x WG972494 40-2
 Misc : water
 ALS Vial : 21 Sample Multiplier: 0.25
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:43:40 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

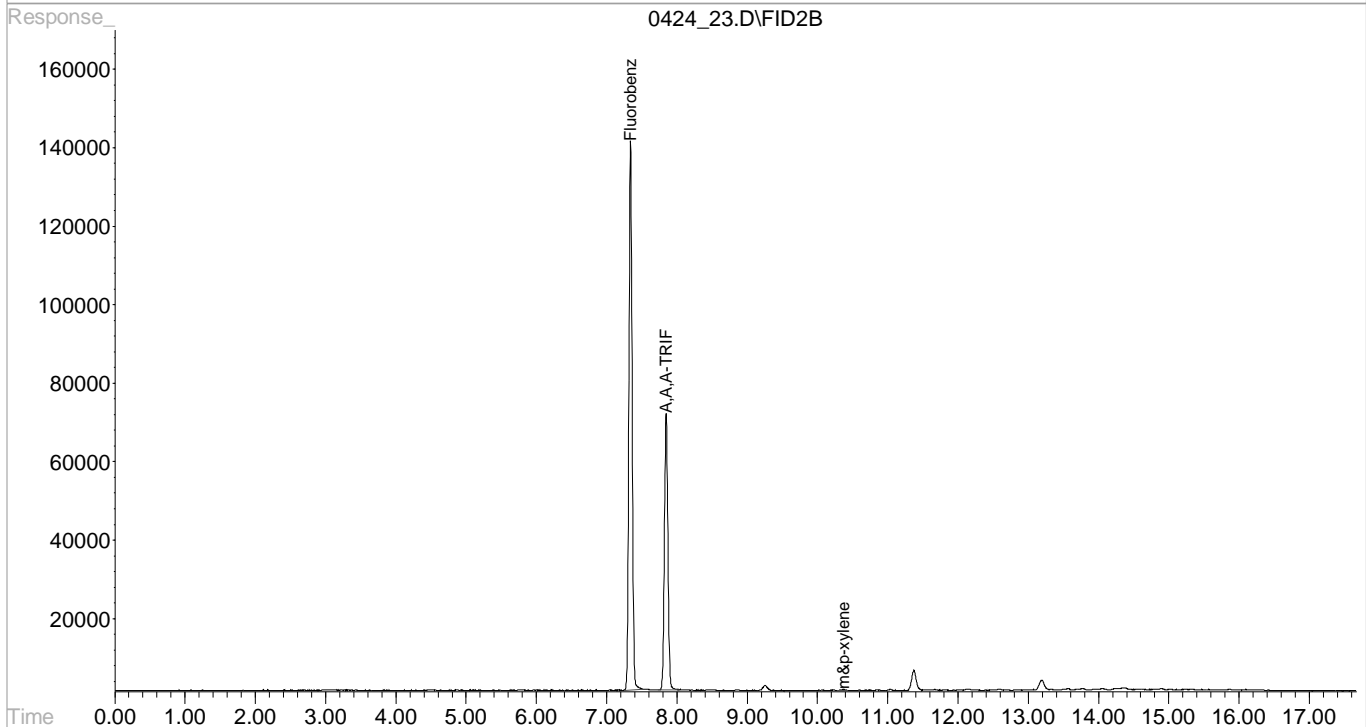
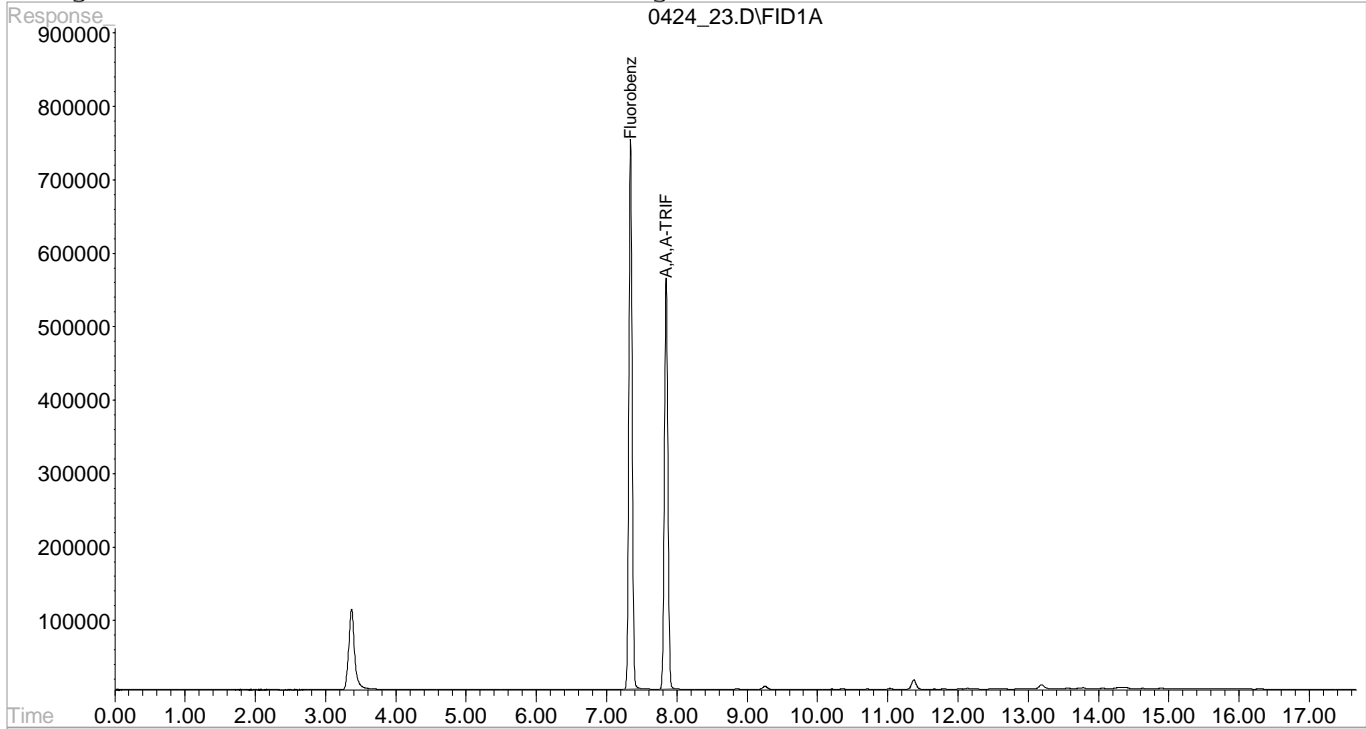
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 23.D\FID1A.CH Vial: 23
Signal #2 : C:\HPCHEM\1\DATA\042417\0424 23.D\FID2B.CH
Acq On : 24 Apr 2017 7:02 pm Operator: 605
Sample : L903886-05 1x WG972545 Inst : VO CGC4
Misc : water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
Quant Time: Apr 27 10:35 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
Title : WIS GRO VO CGC04
Last Update : Wed Feb 01 09:42:52 2017
Response via : Single Level Calibration
DataAcq Meth : VO CGC4.M

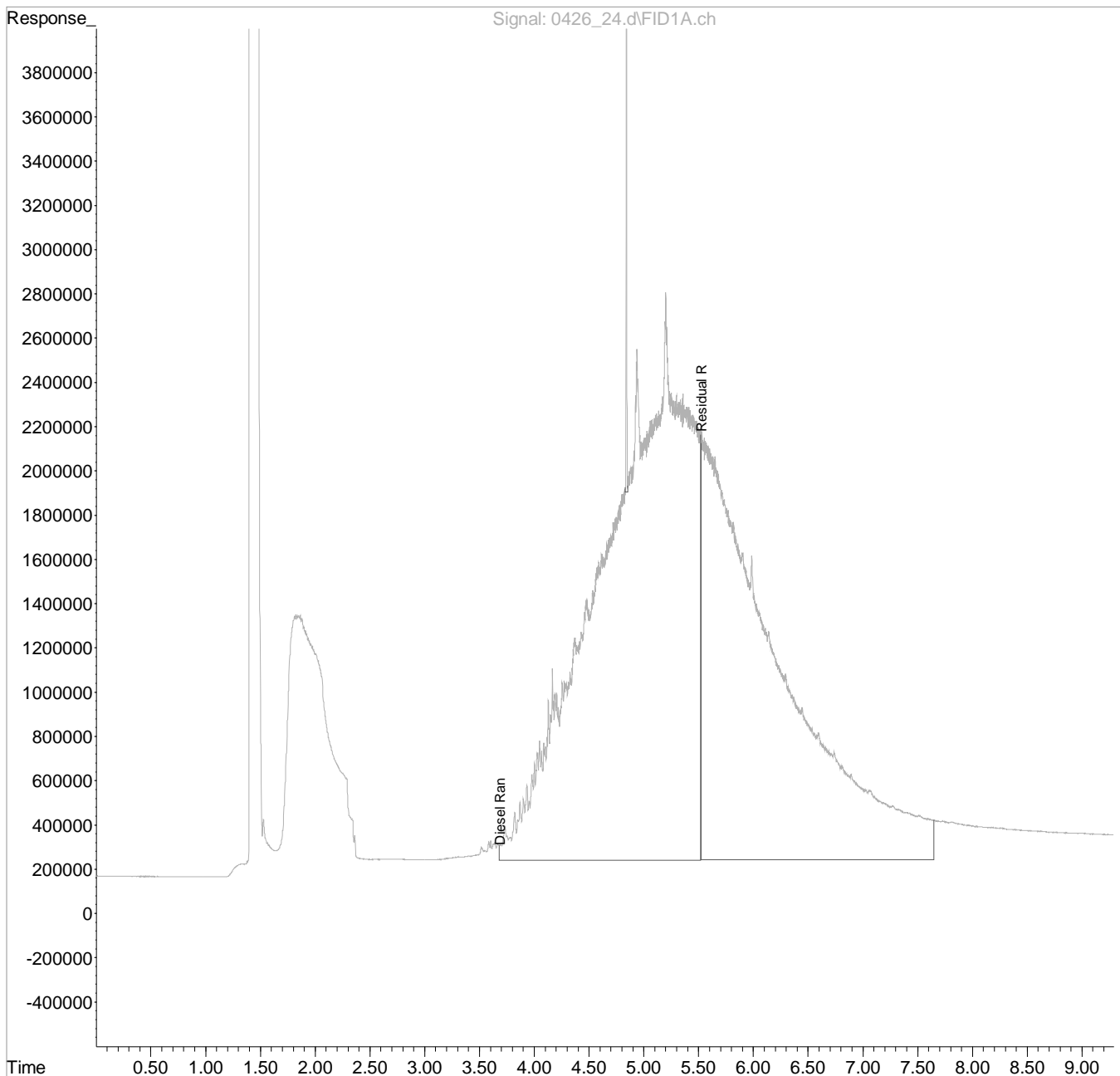
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 24.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 3:41 pm
 Operator : 784
 Sample : L903886-06 1x WG972494 40-2
 Misc : water
 ALS Vial : 19 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:42:16 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

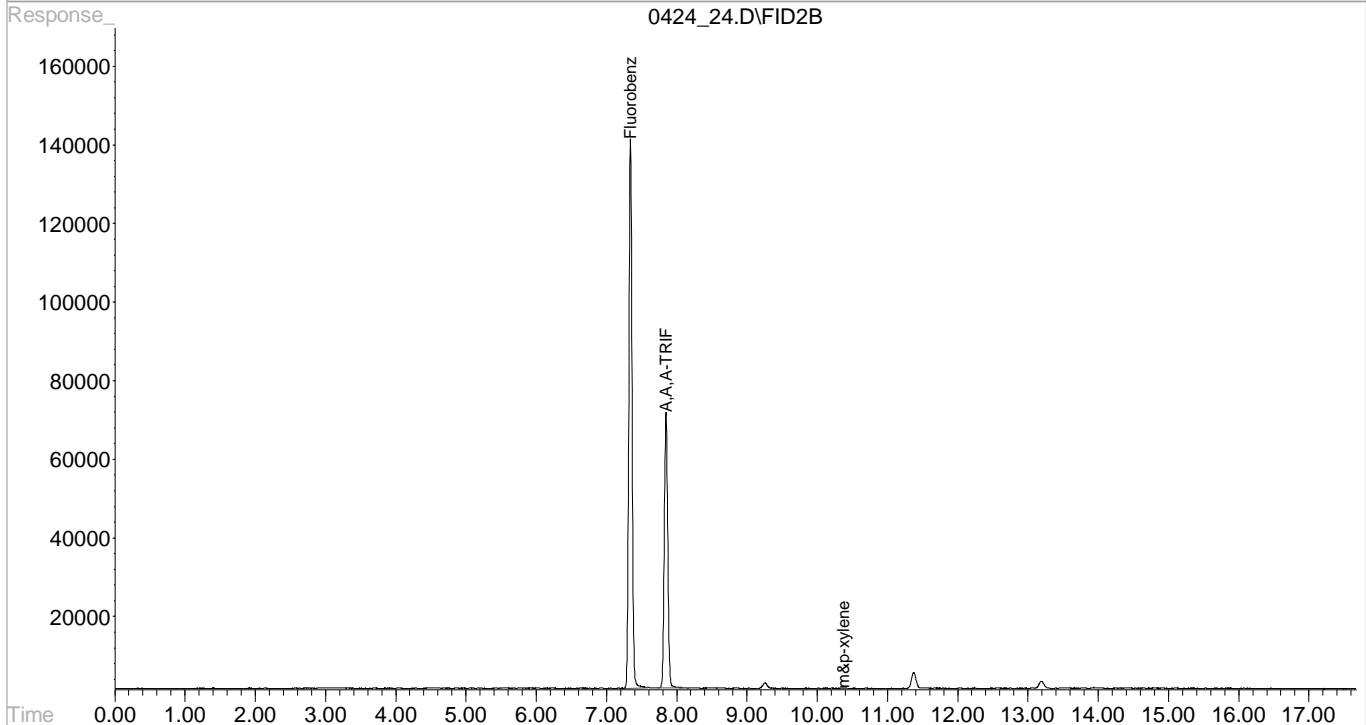
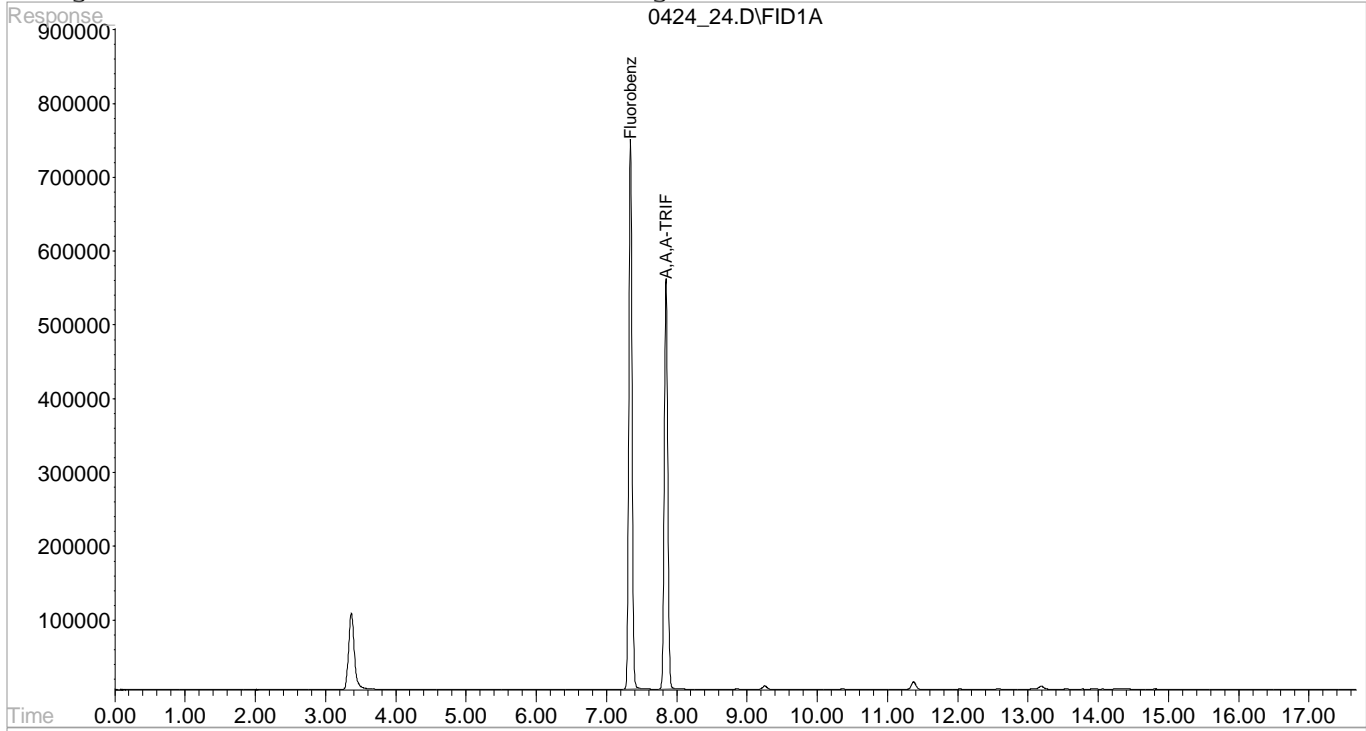
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 24.D\FID1A.CH Vial: 24
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 24.D\FID2B.CH
 Acq On : 24 Apr 2017 7:26 pm Operator: 605
 Sample : L903886-06 1x WG972545 Inst : VO CGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:35 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC4.M

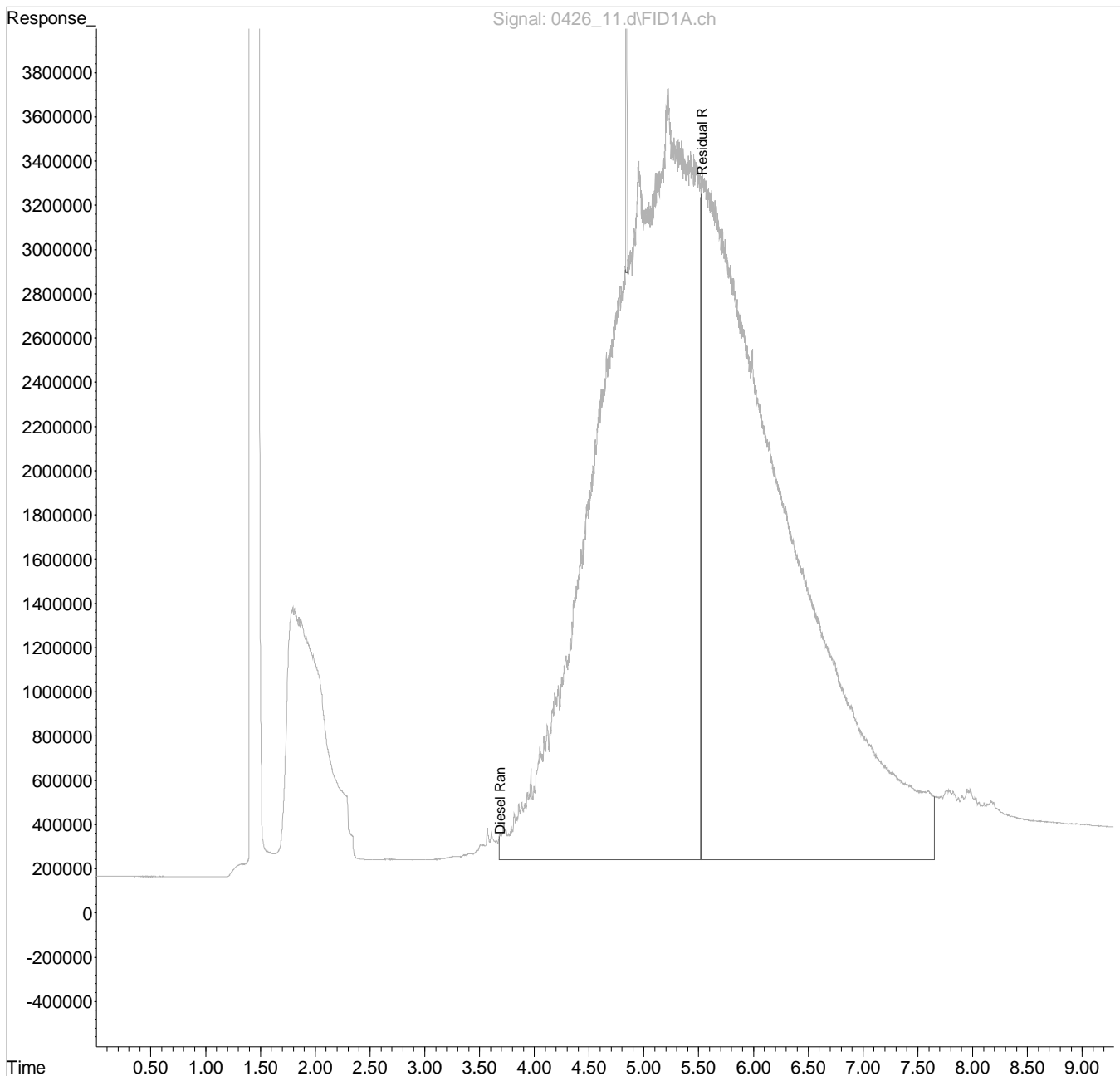
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 11.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 11:56 am
 Operator : 784
 Sample : L903886-07 1x WG972494 40-2
 Misc : water
 ALS Vial : 9 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:37:08 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

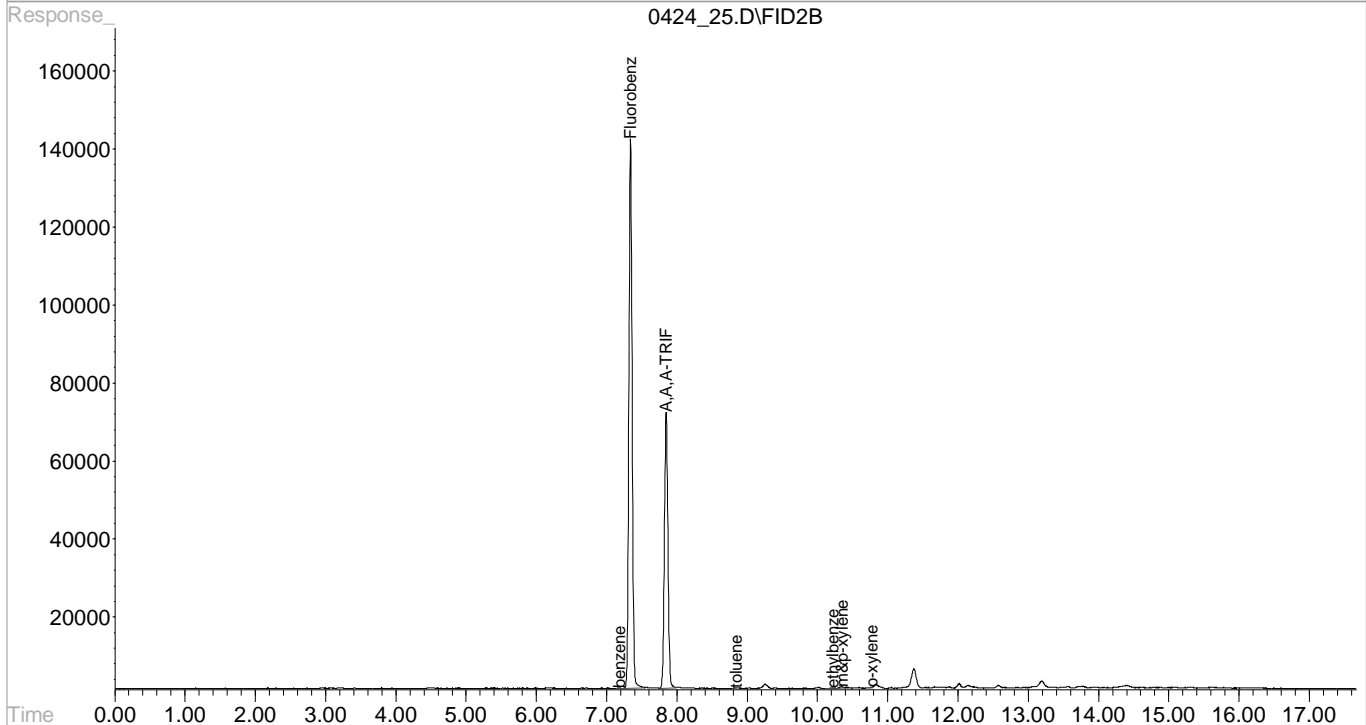
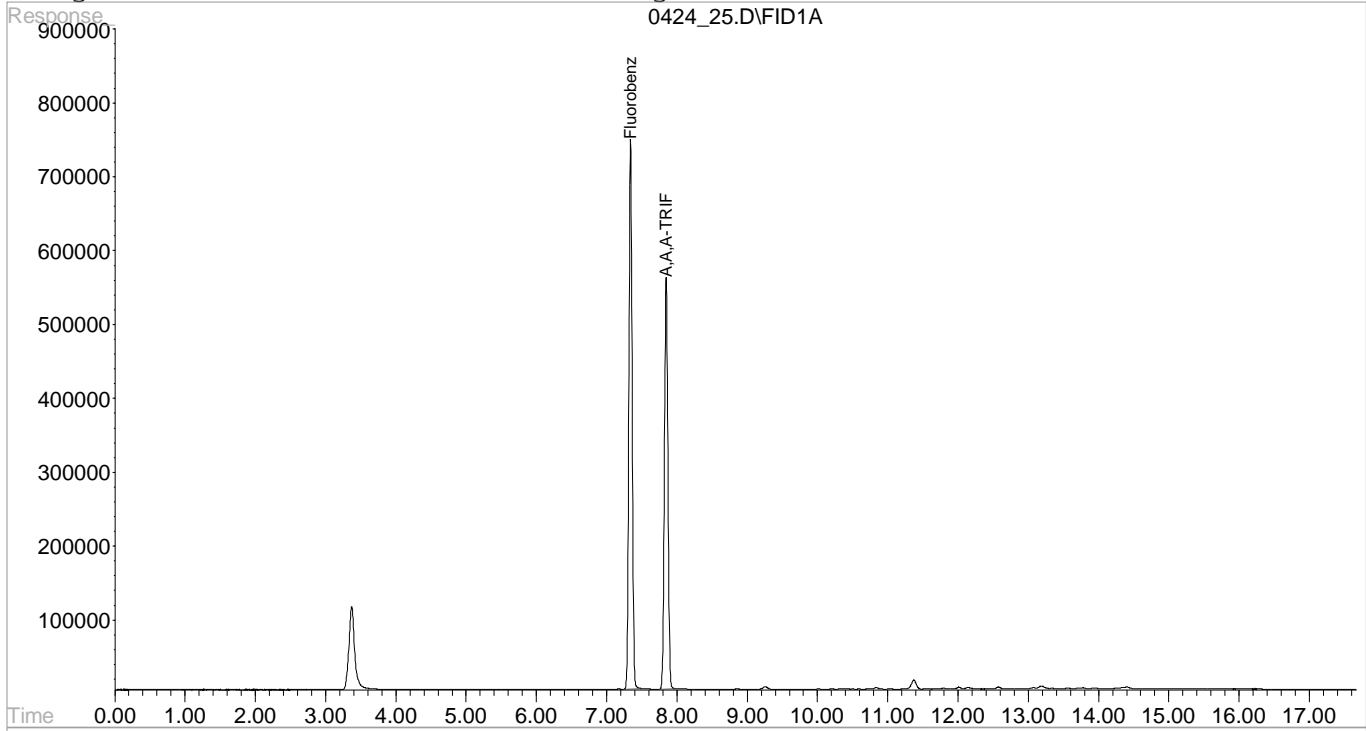
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 25.D\FID1A.CH Vial: 25
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 25.D\FID2B.CH
 Acq On : 24 Apr 2017 7:50 pm Operator: 605
 Sample : L903886-07 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:35 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

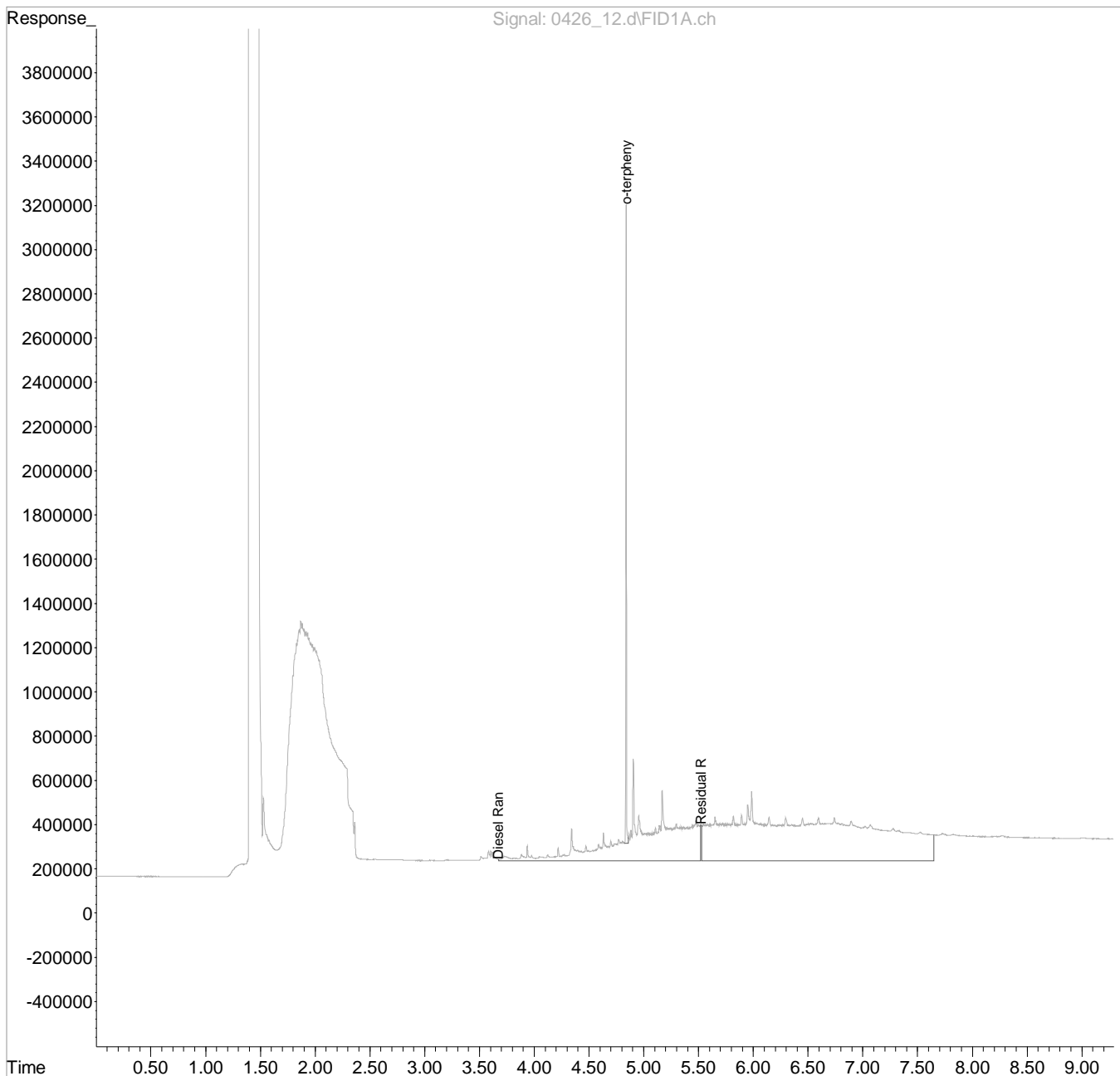
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 12.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 12:13 pm
 Operator : 784
 Sample : L903886-08 1x WG972494 40-2
 Misc : water
 ALS Vial : 10 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:37:35 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

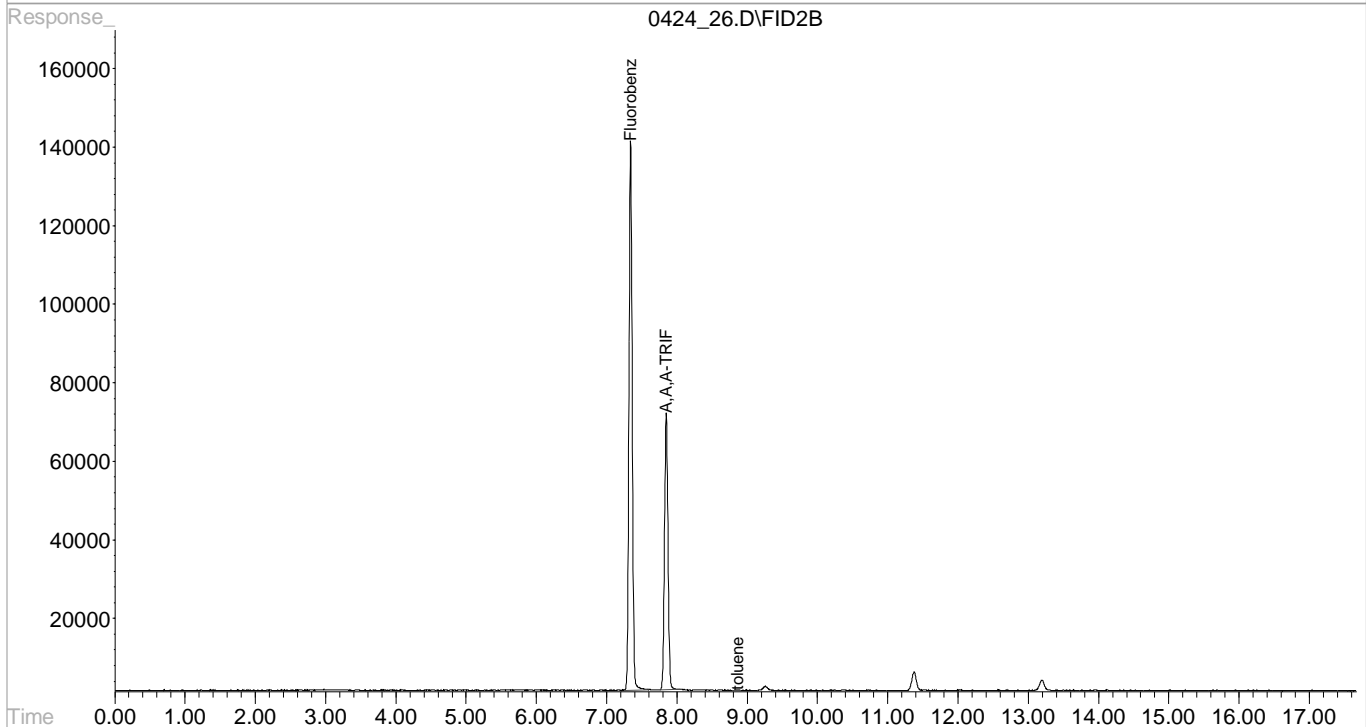
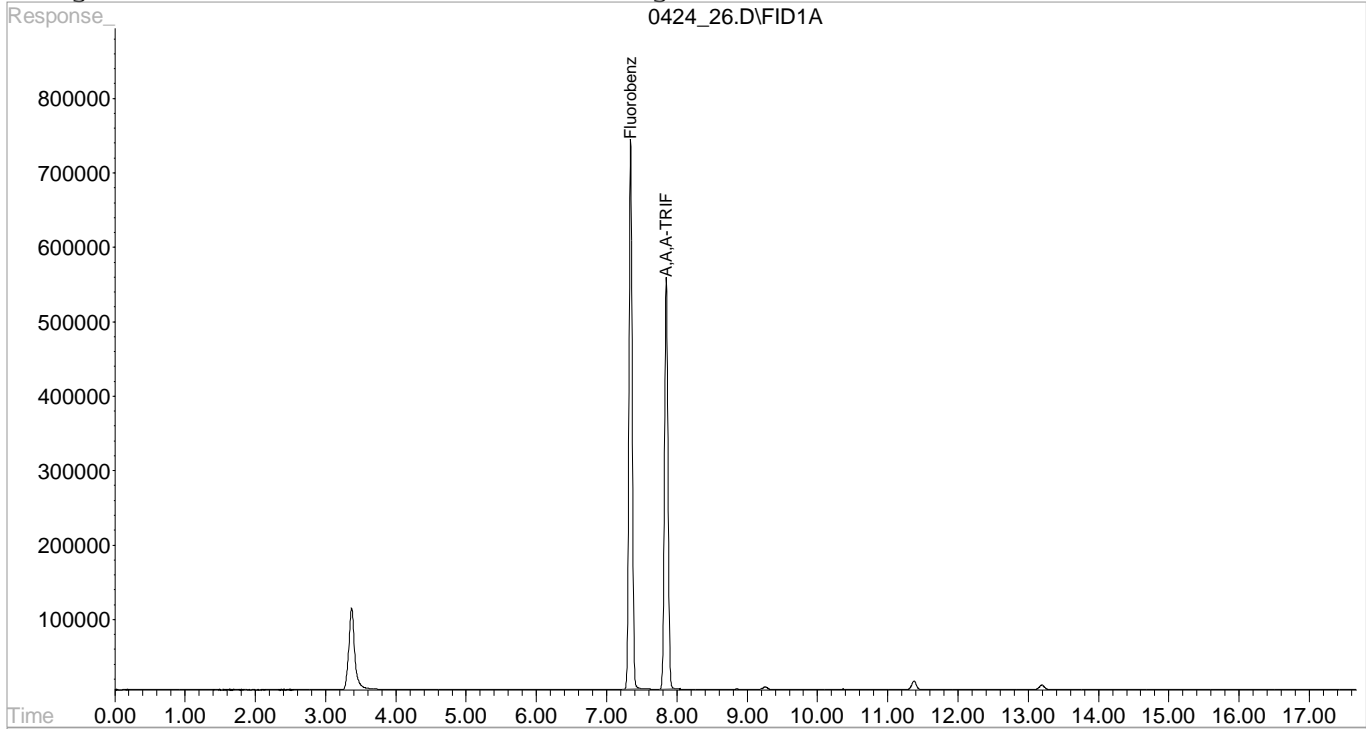
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 26.D\FID1A.CH Vial: 26
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 26.D\FID2B.CH
 Acq On : 24 Apr 2017 8:15 pm Operator: 605
 Sample : L903886-08 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:35 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

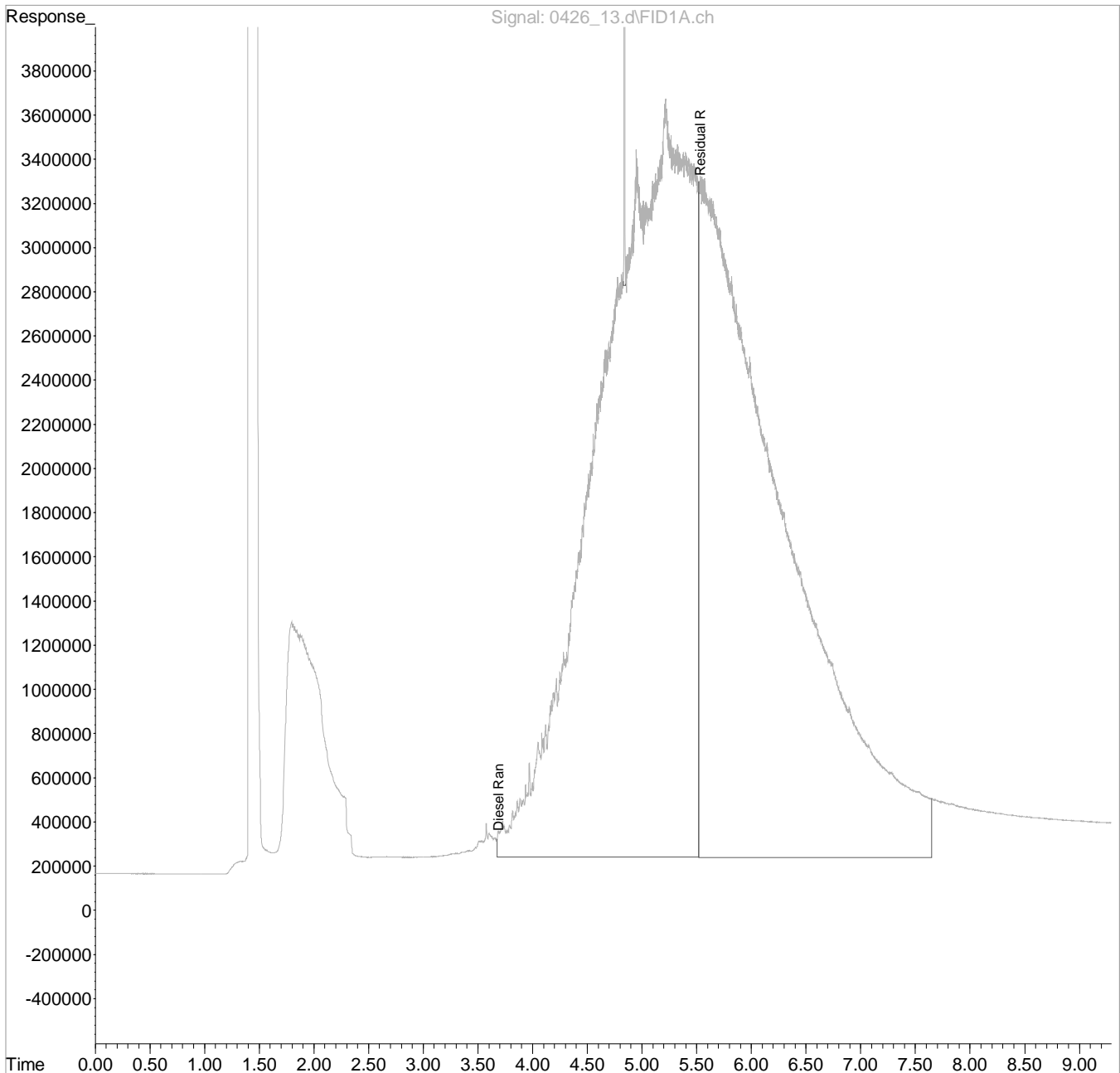
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 13.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 12:29 pm
 Operator : 784
 Sample : L903886-09 1x WG972494 40-2
 Misc : water
 ALS Vial : 11 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:38:03 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

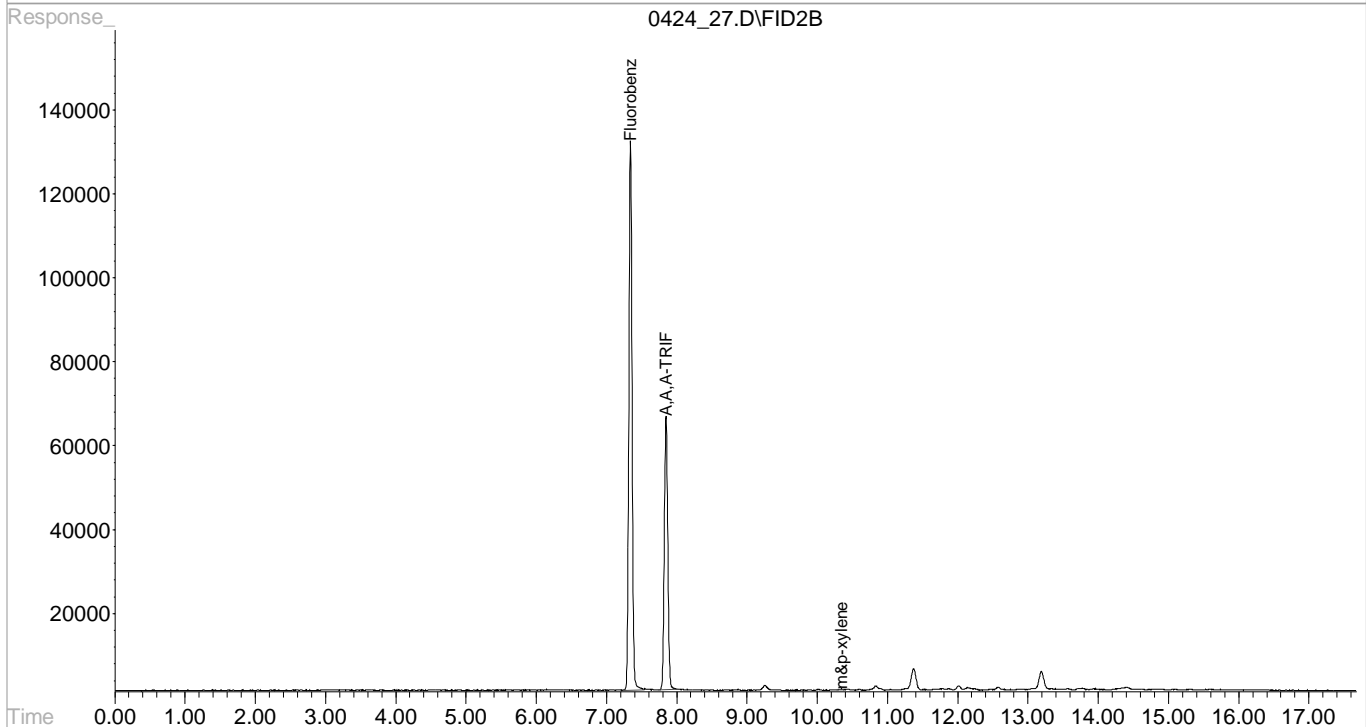
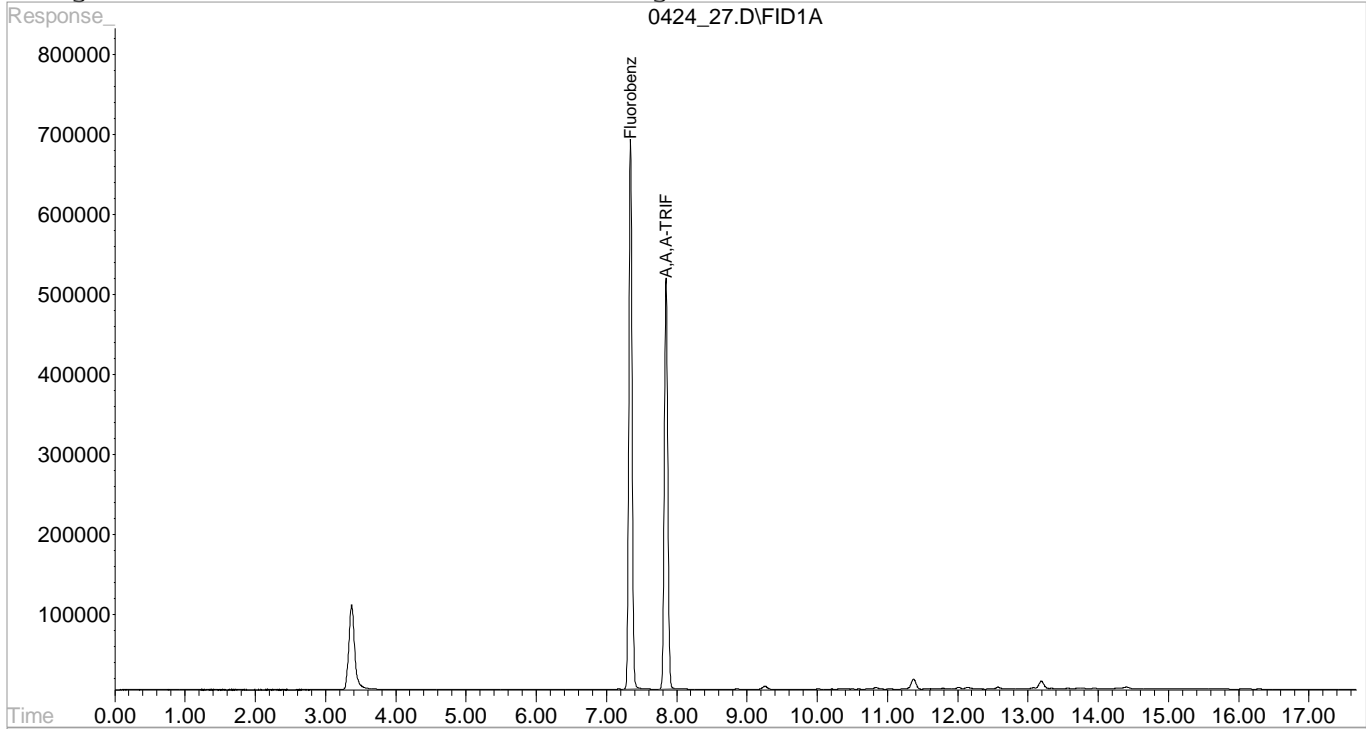
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 27.D\FID1A.CH Vial: 27
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 27.D\FID2B.CH
 Acq On : 24 Apr 2017 8:39 pm Operator: 605
 Sample : L903886-09 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:35 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

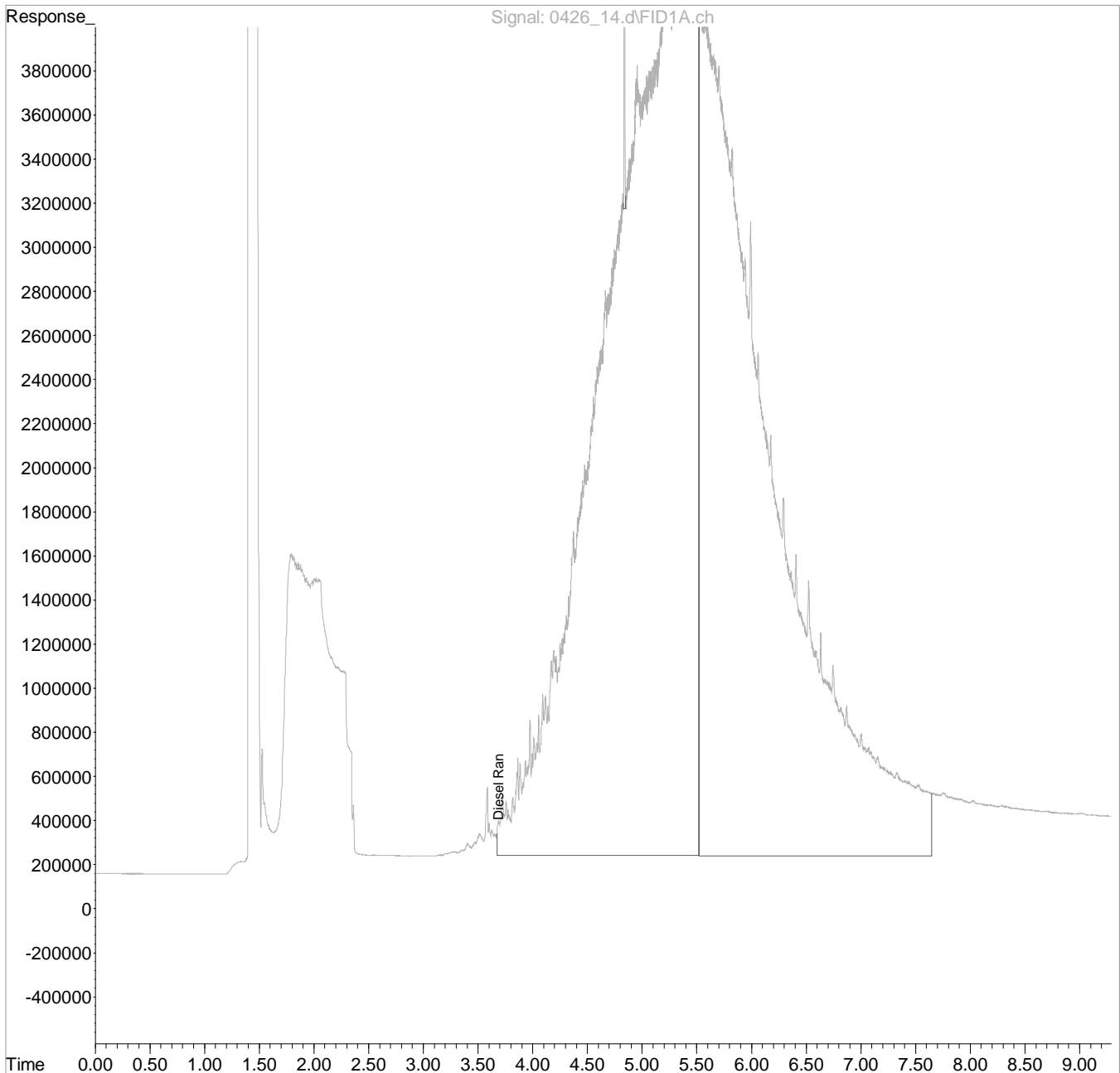
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426_14.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 12:57 pm
 Operator : 784
 Sample : L903886-10 1x WG972494 40-2
 Misc : water
 ALS Vial : 12 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:38:38 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

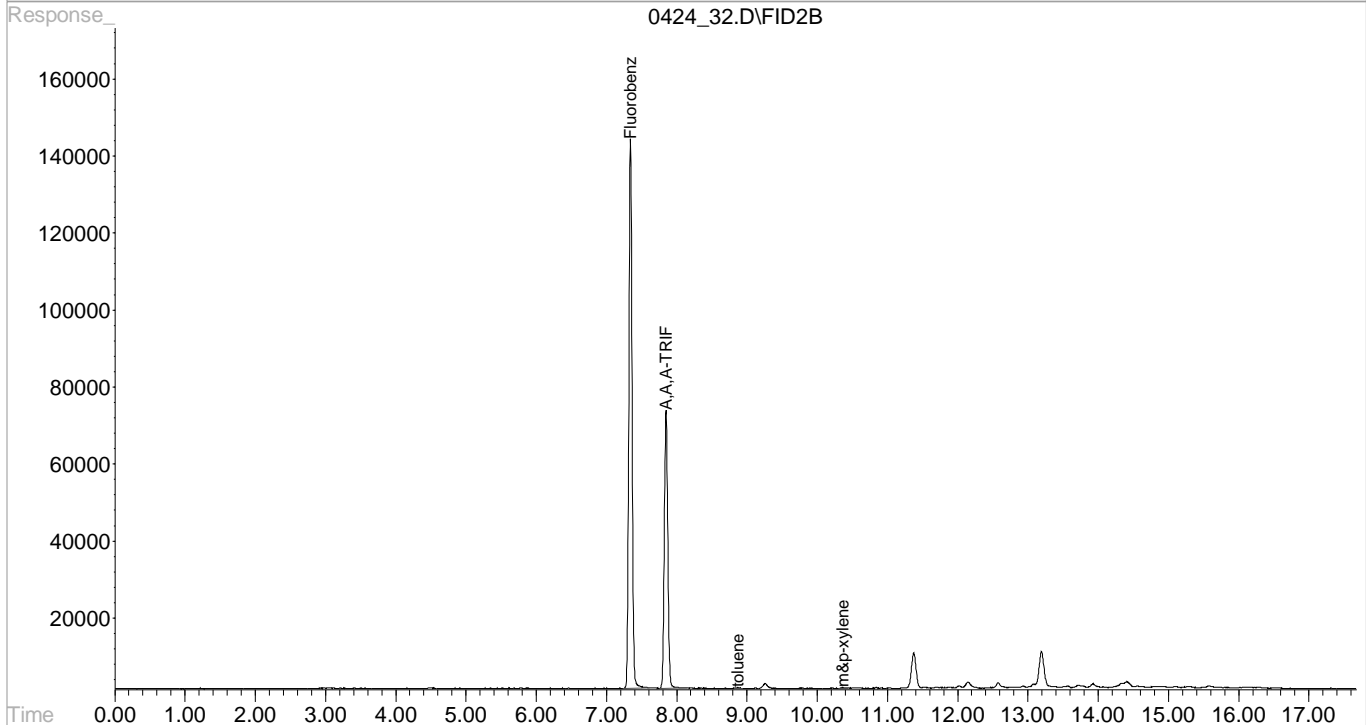
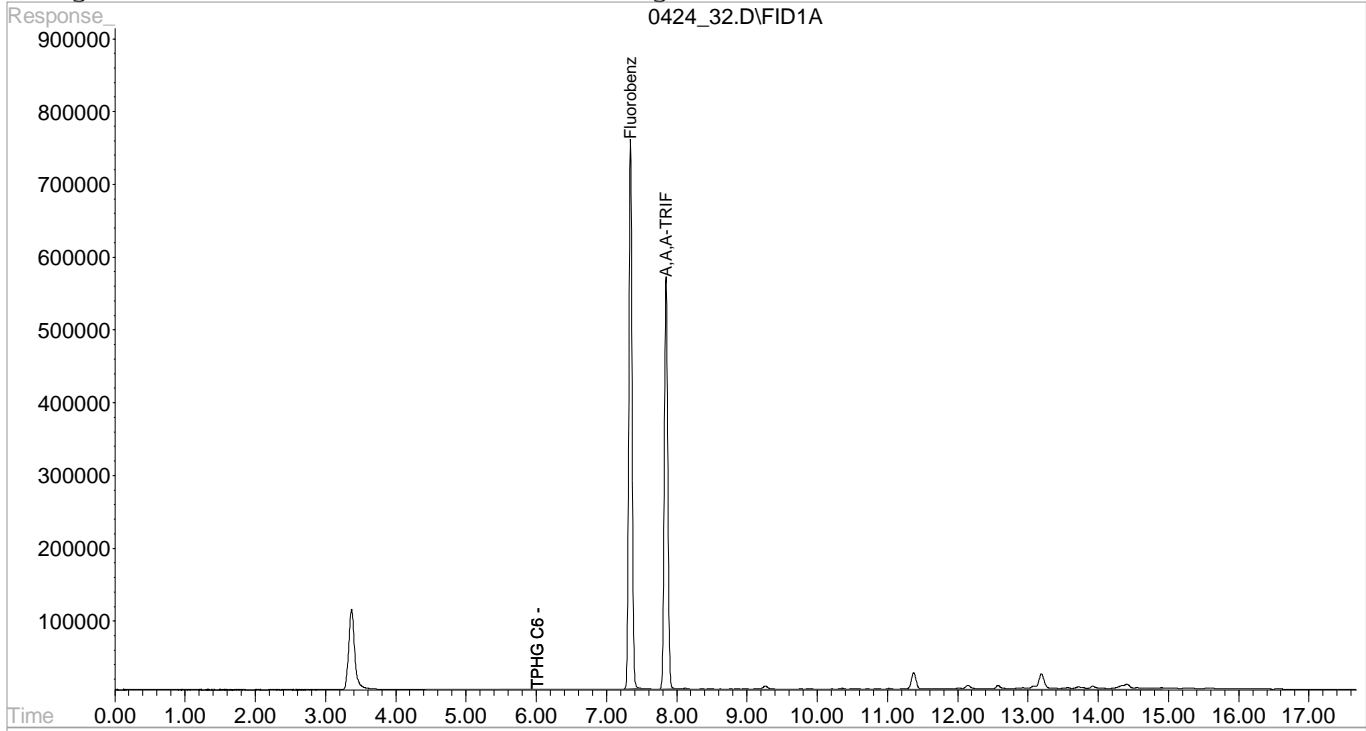
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 32.D\FID1A.CH Vial: 32
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 32.D\FID2B.CH
 Acq On : 24 Apr 2017 10:49 pm Operator: 605
 Sample : L903886-10 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

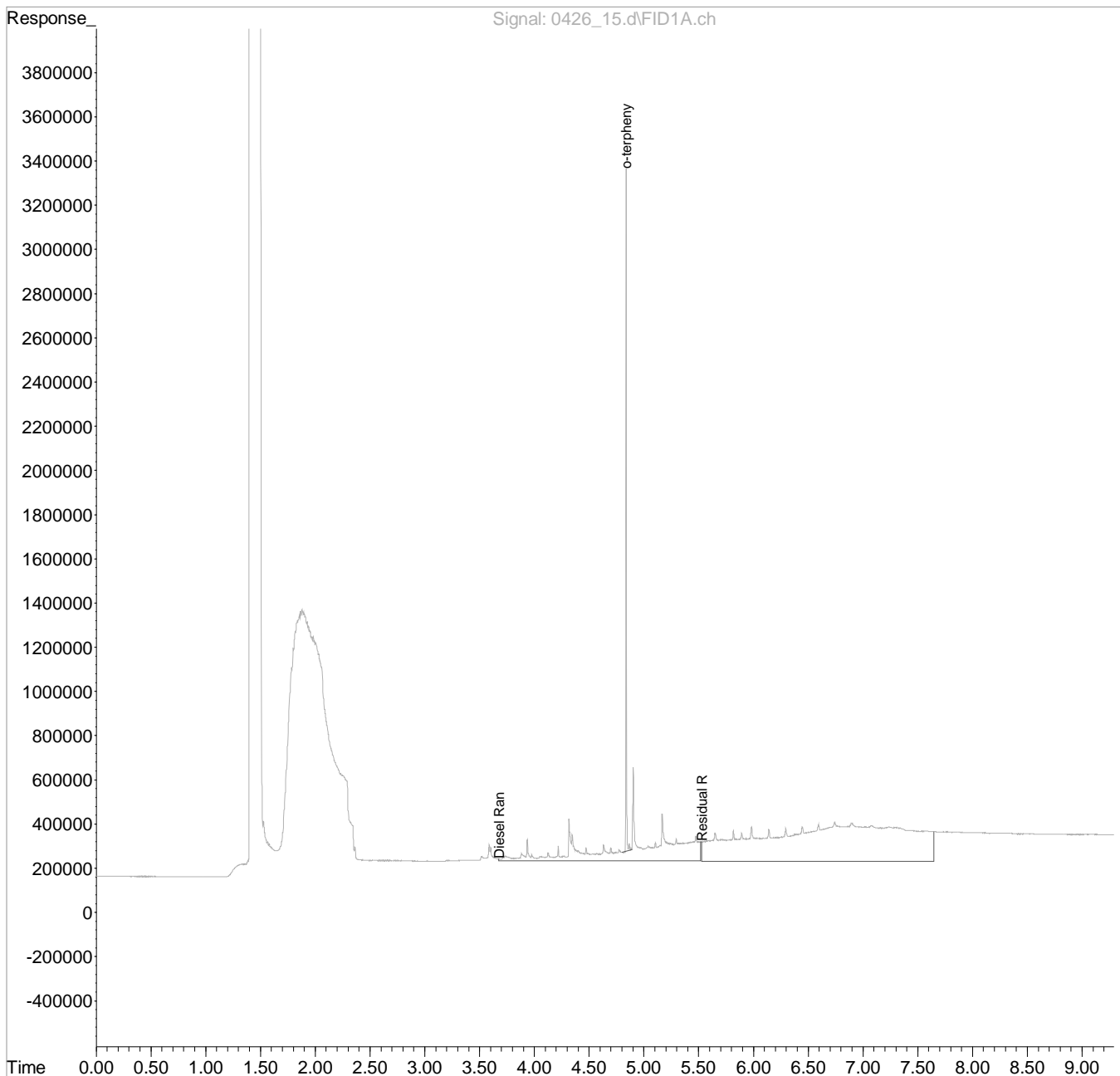
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 15.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 1:15 pm
 Operator : 784
 Sample : L903886-11 1x WG972494 40-2
 Misc : water
 ALS Vial : 13 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:39:07 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

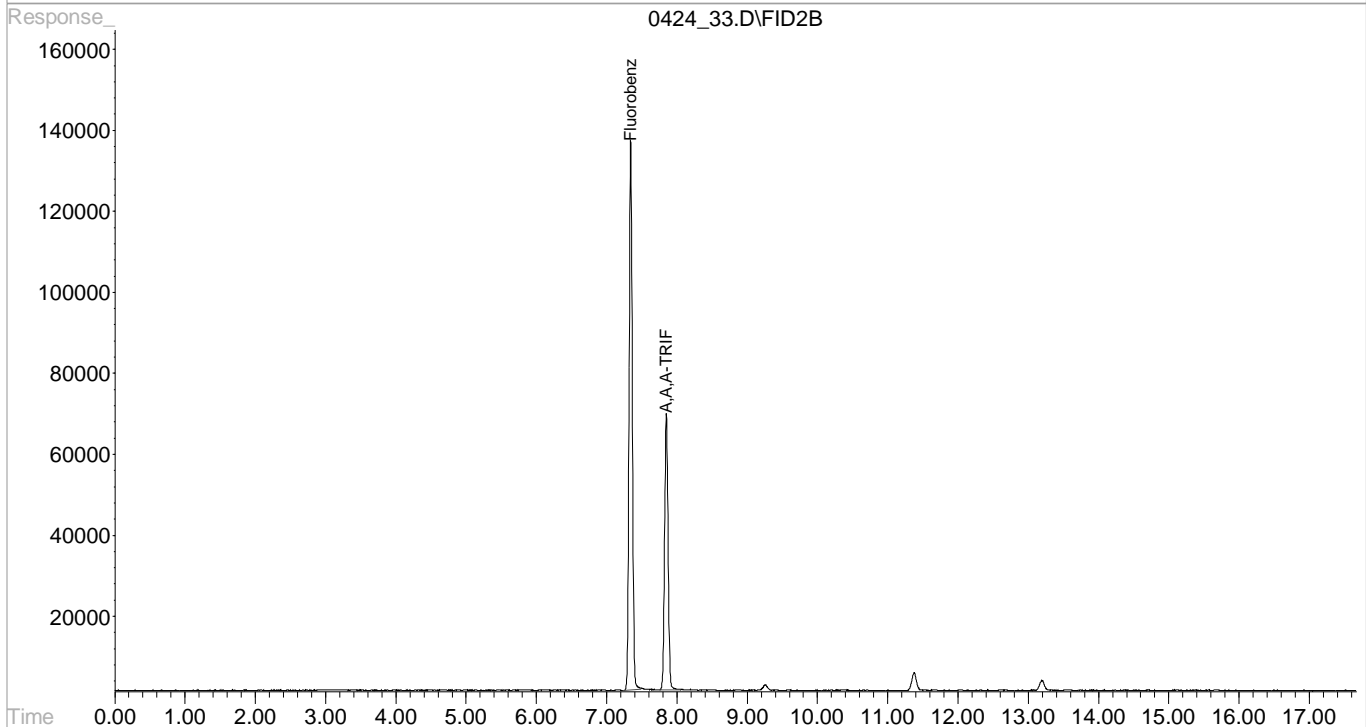
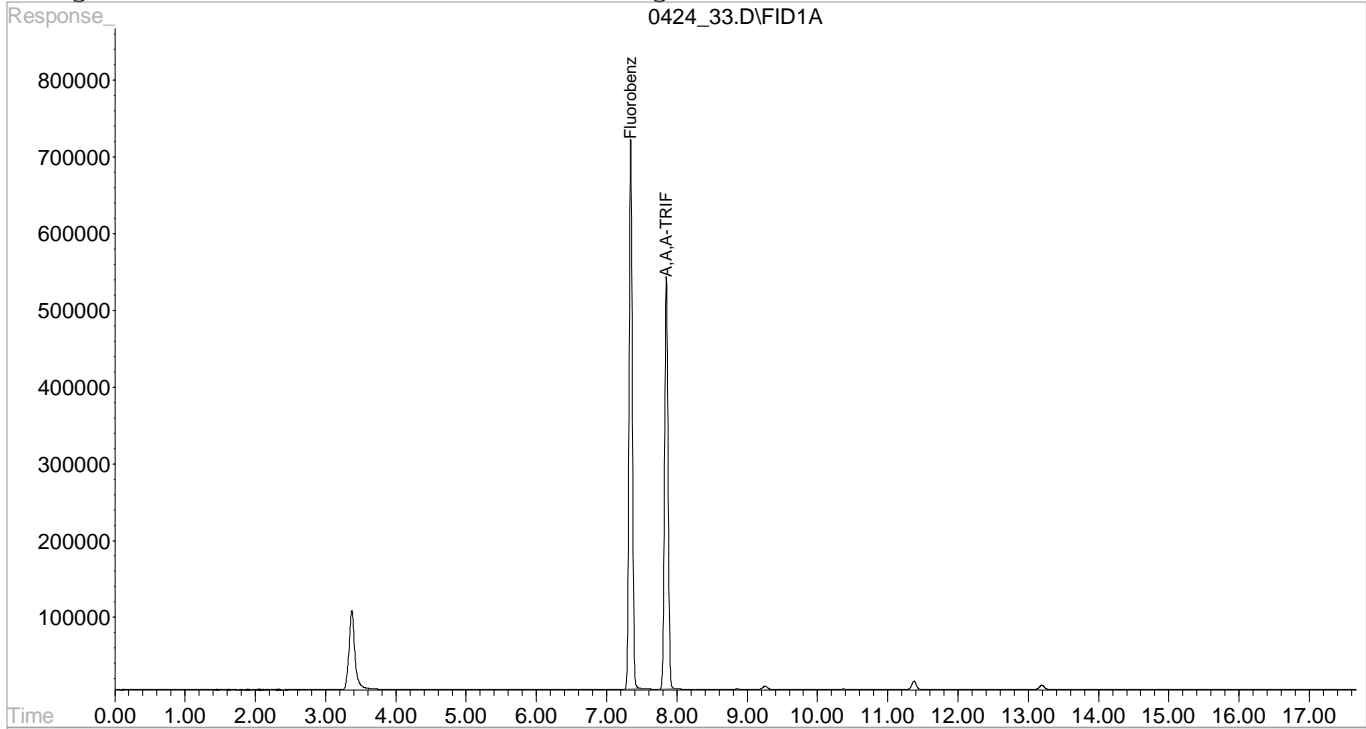
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 33.D\FID1A.CH Vial: 33
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 33.D\FID2B.CH
 Acq On : 24 Apr 2017 11:14 pm Operator: 605
 Sample : L903886-11 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

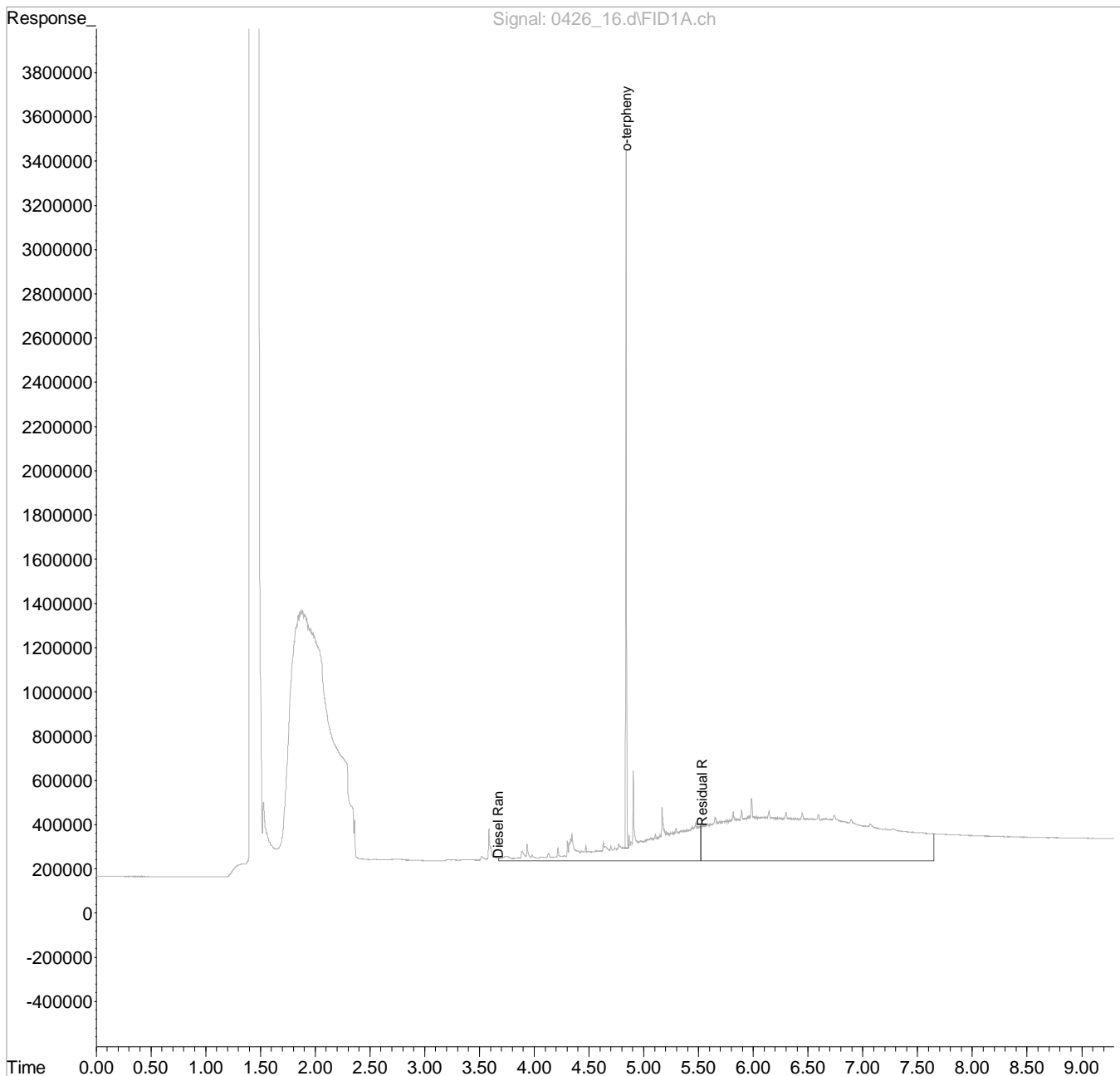
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426_16.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 1:31 pm
 Operator : 784
 Sample : L903886-12 1x WG972494 40-2
 Misc : water
 ALS Vial : 14 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:39:36 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

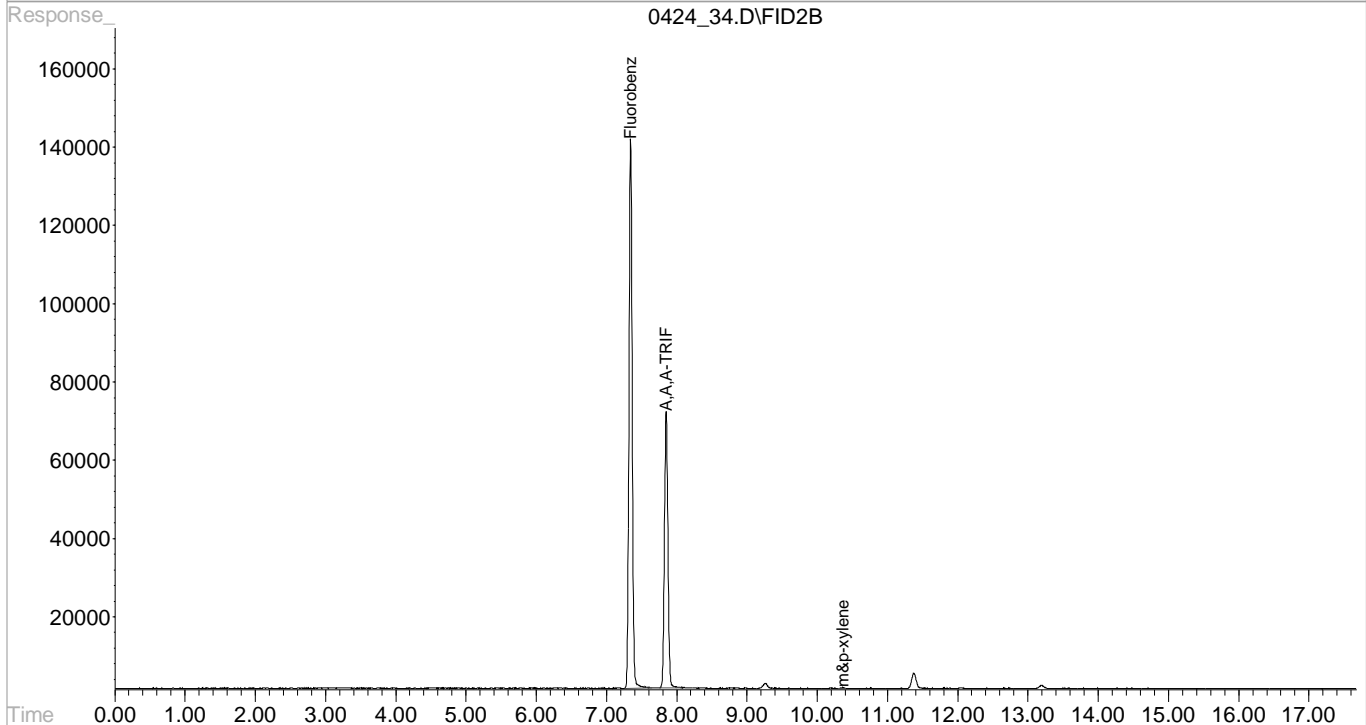
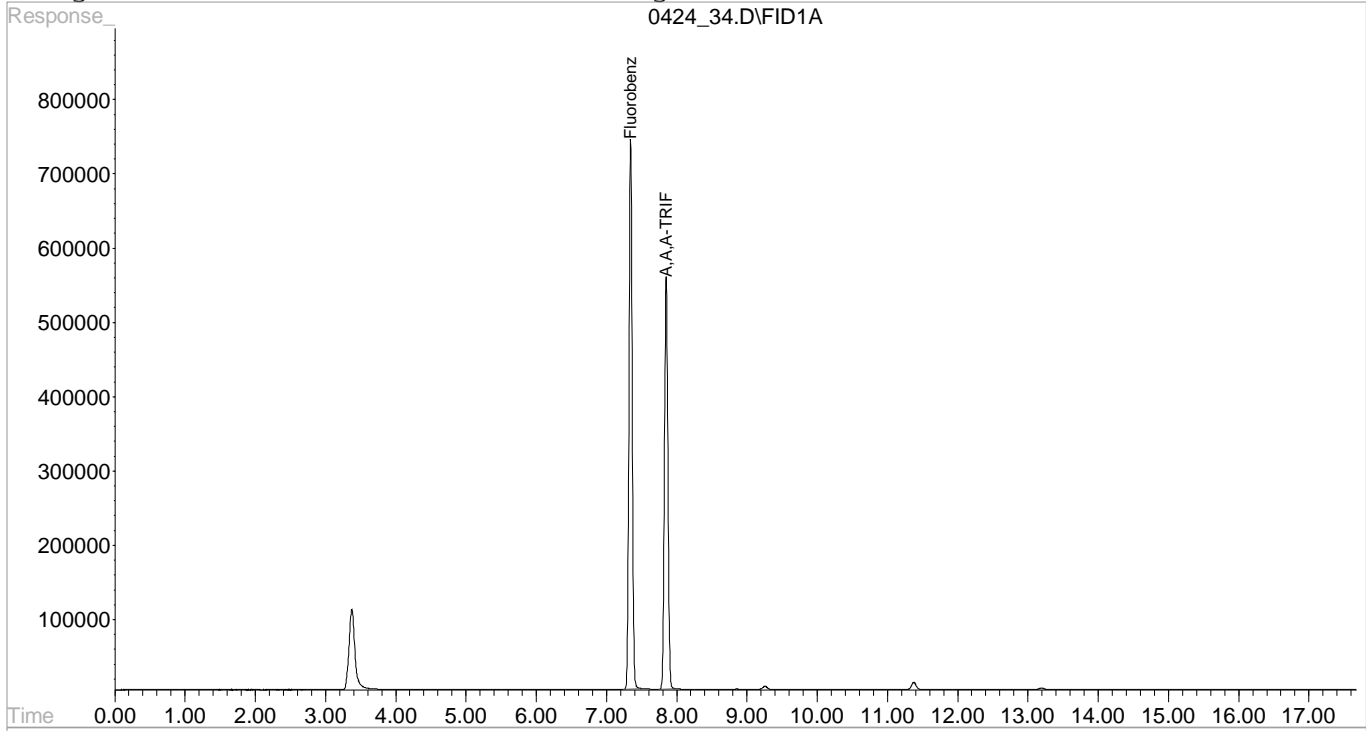
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 34.D\FID1A.CH Vial: 34
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 34.D\FID2B.CH
 Acq On : 24 Apr 2017 11:38 pm Operator: 605
 Sample : L903886-12 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

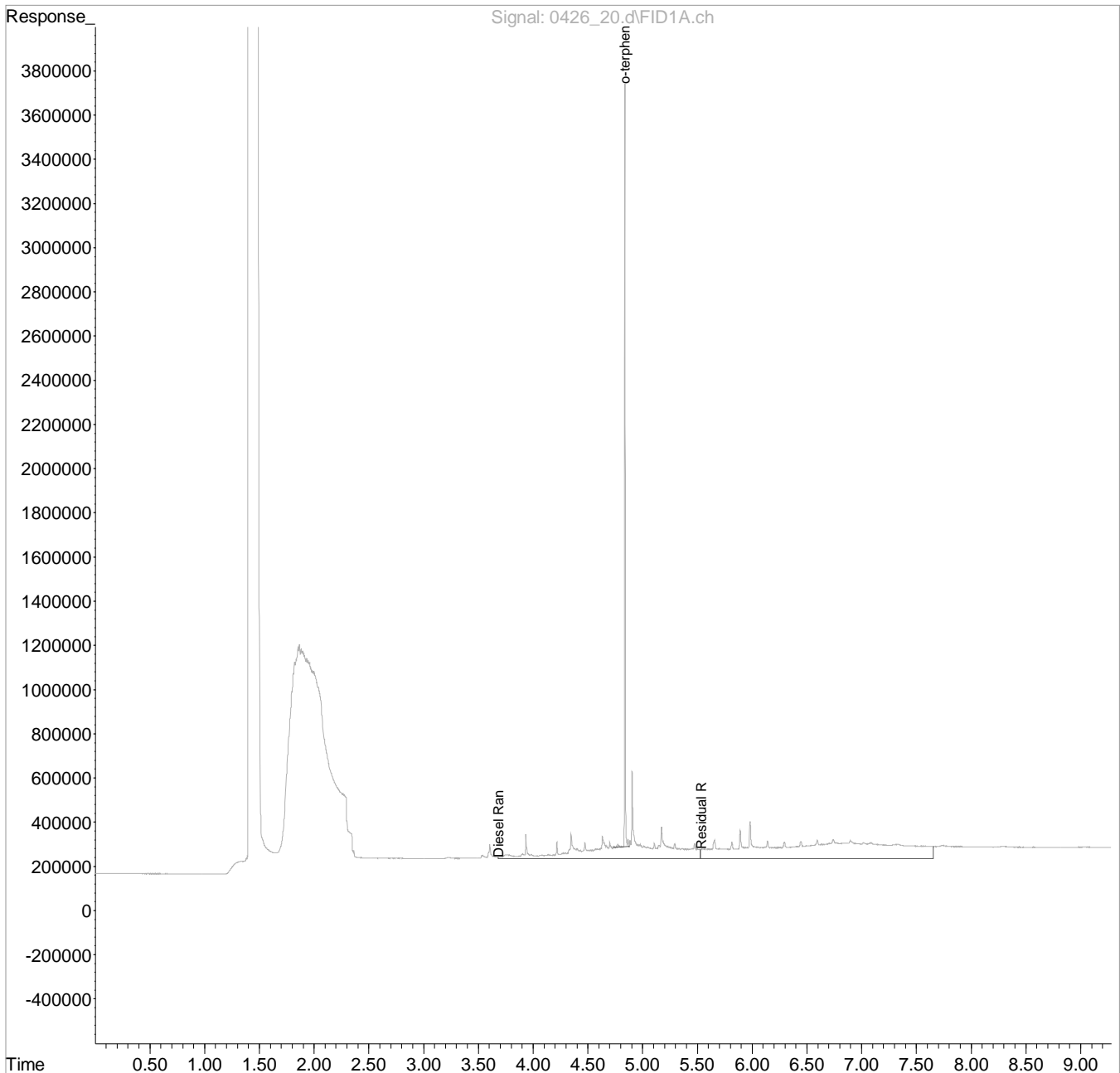
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 20.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 2:36 pm
 Operator : 784
 Sample : L903886-16 1x WG972494 40-2
 Misc : water
 ALS Vial : 15 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:40:16 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

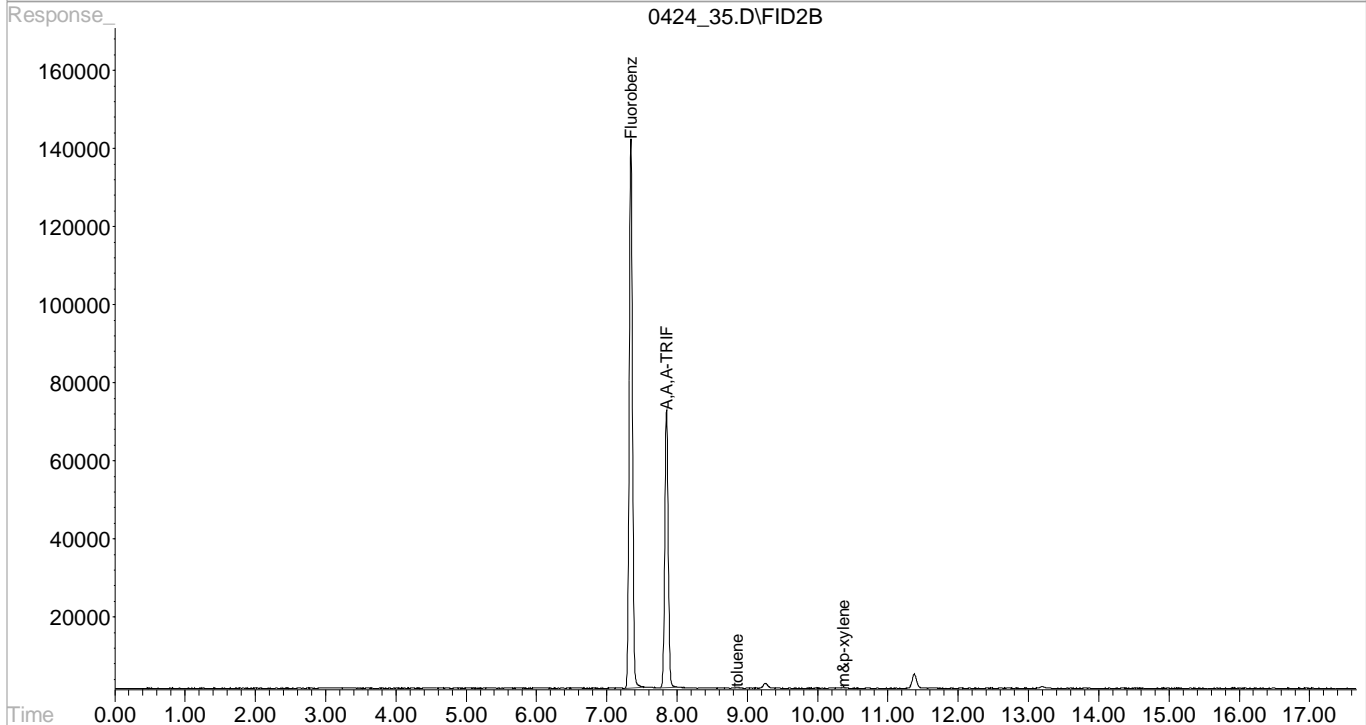
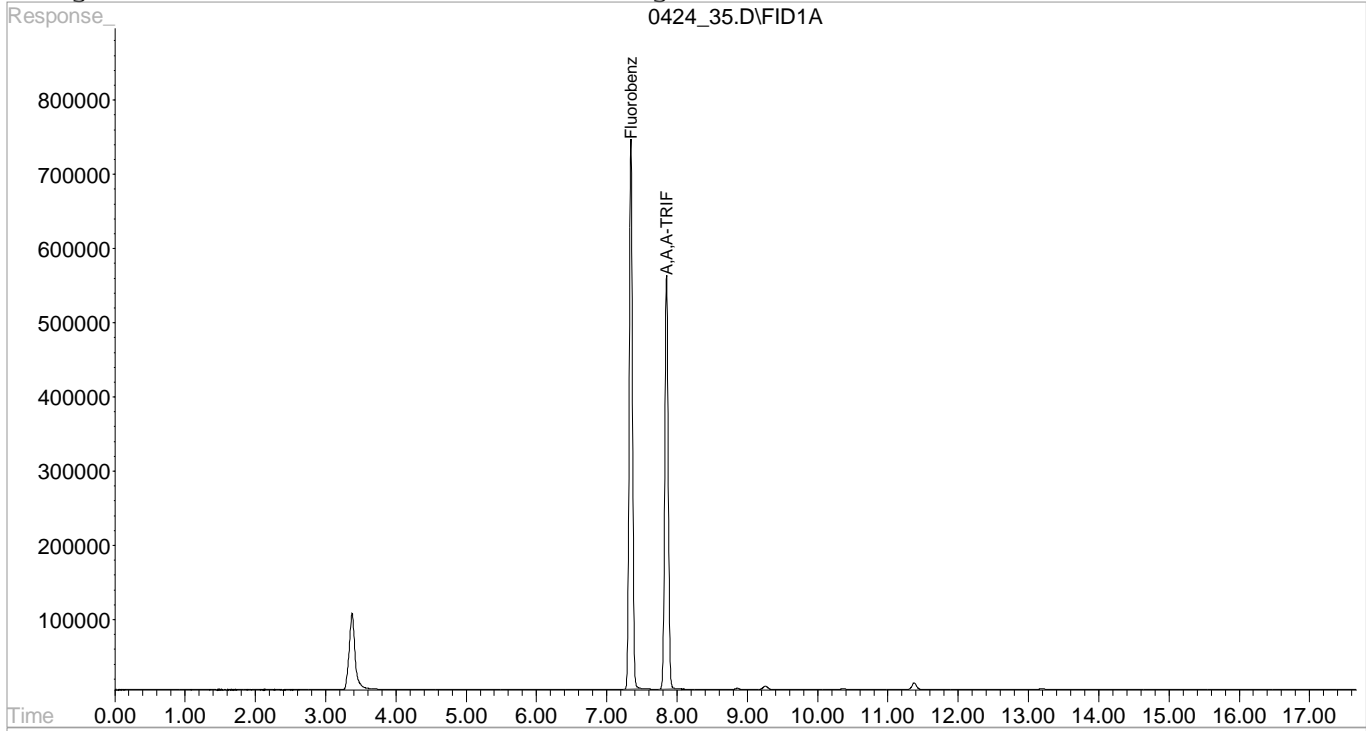
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 35.D\FID1A.CH Vial: 35
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 35.D\FID2B.CH
 Acq On : 25 Apr 2017 12:02 am Operator: 605
 Sample : L903886-16 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

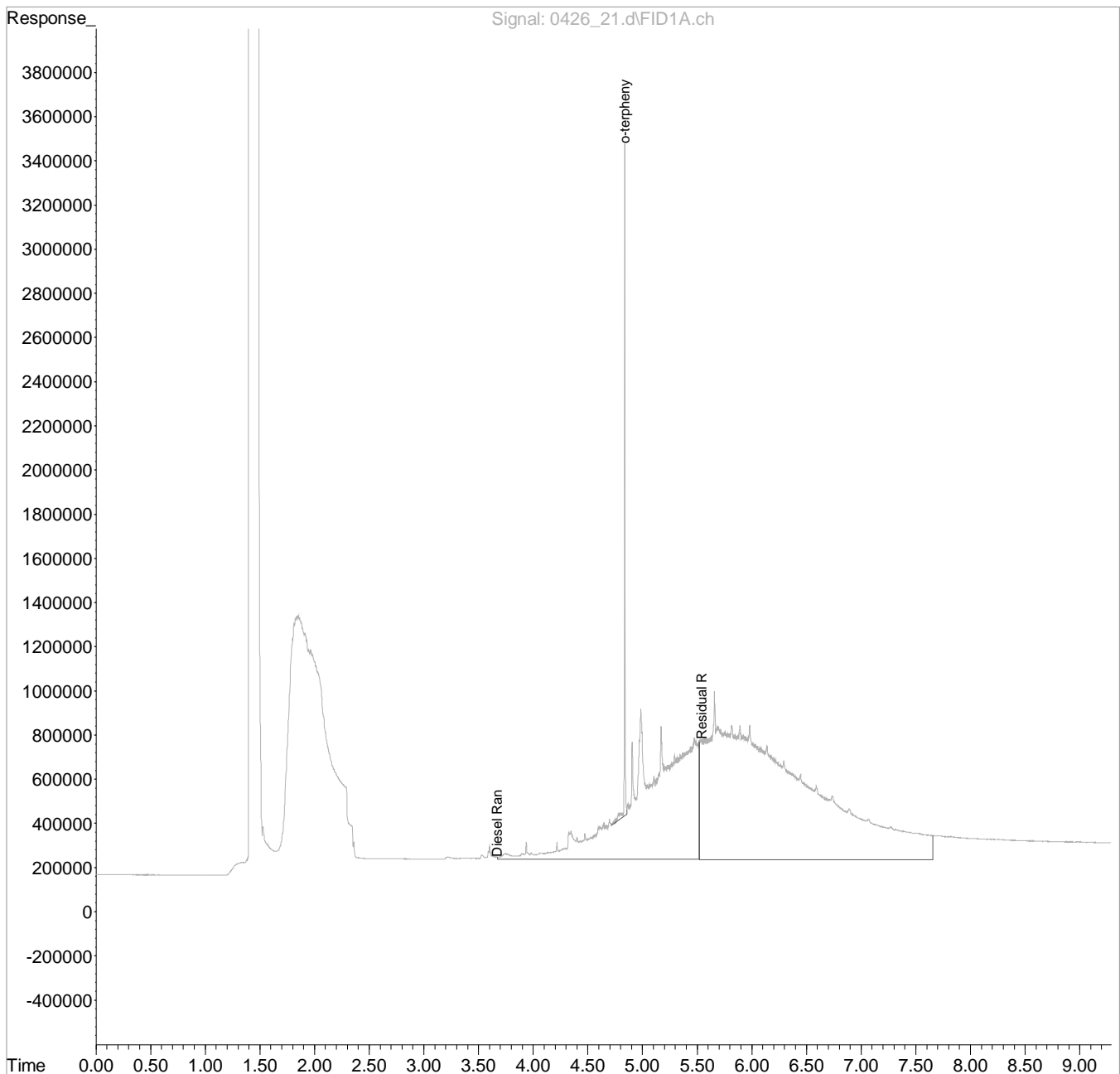
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 21.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 2:53 pm
 Operator : 784
 Sample : L903886-17 1x WG972494 40-2
 Misc : water
 ALS Vial : 16 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:40:46 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

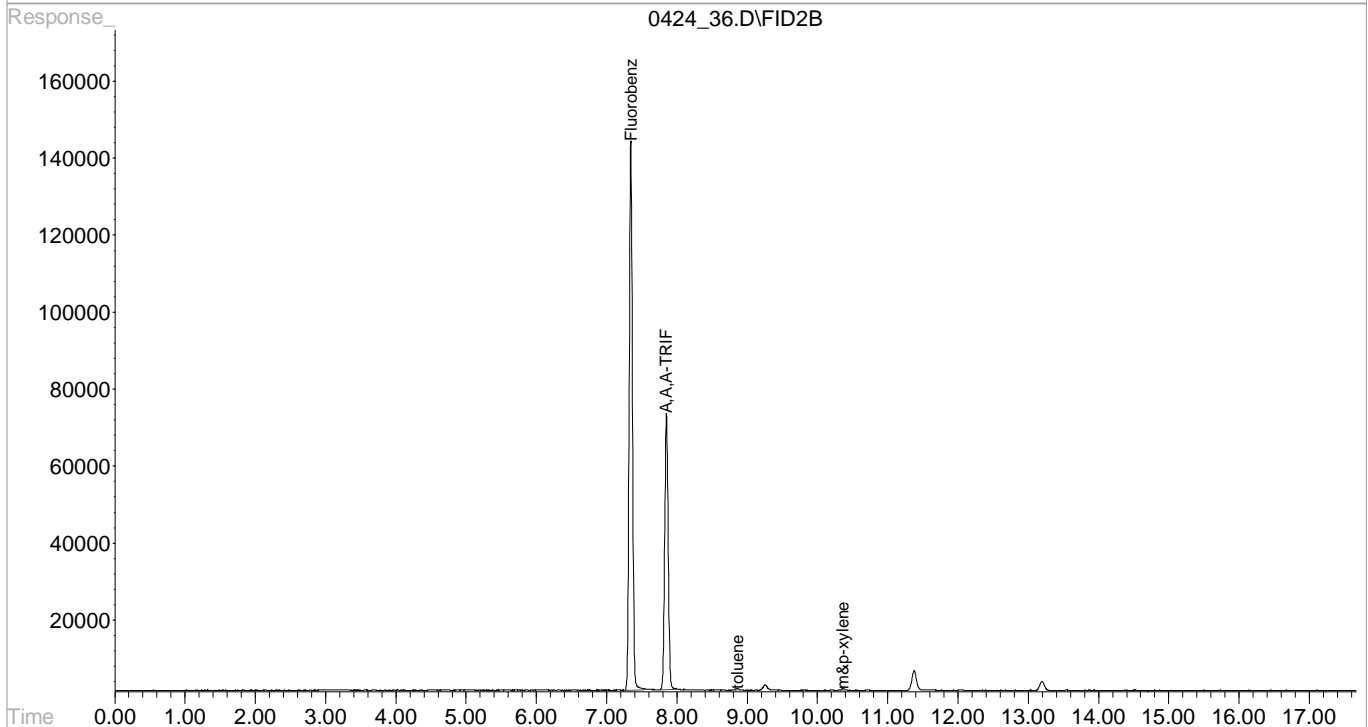
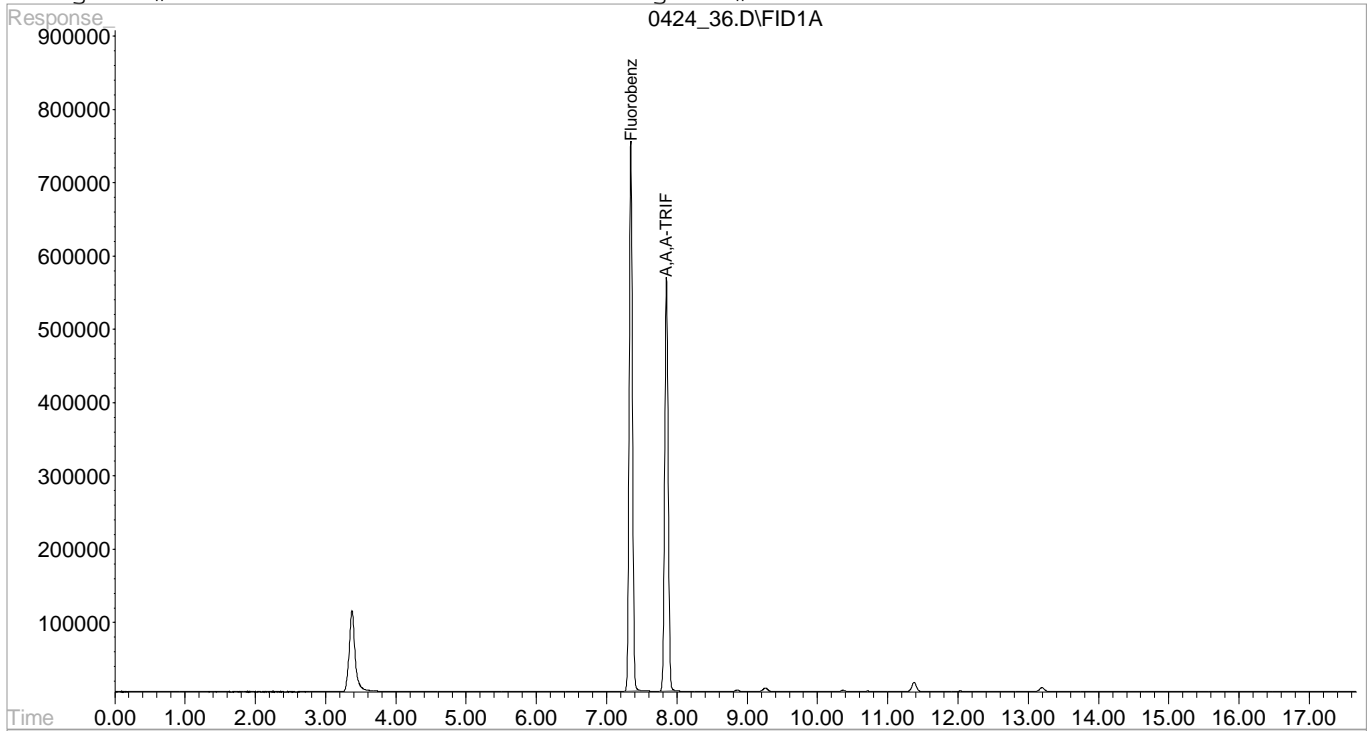
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 36.D\FID1A.CH Vial: 36
Signal #2 : C:\HPCHEM\1\DATA\042417\0424 36.D\FID2B.CH
Acq On : 25 Apr 2017 12:26 am Operator: 605
Sample : L903886-17 1x WG972545 Inst : VO CGC4
Misc : water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
Title : WIS GRO VO CGC04
Last Update : Wed Feb 01 09:42:52 2017
Response via : Single Level Calibration
DataAcq Meth : VO CGC4.M

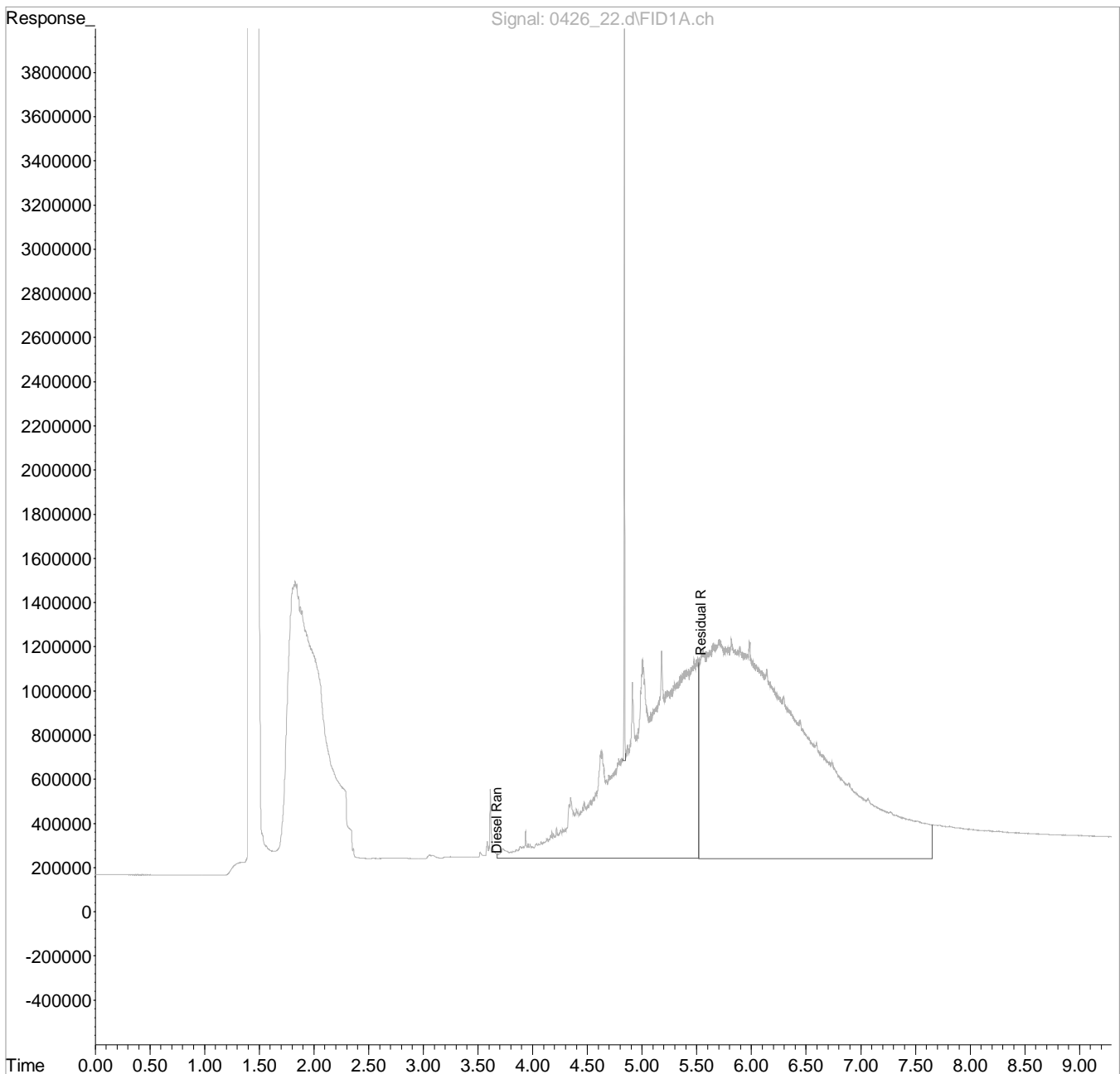
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 22.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 3:09 pm
 Operator : 784
 Sample : L903886-18 1x WG972494 40-2
 Misc : water
 ALS Vial : 17 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:41:17 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

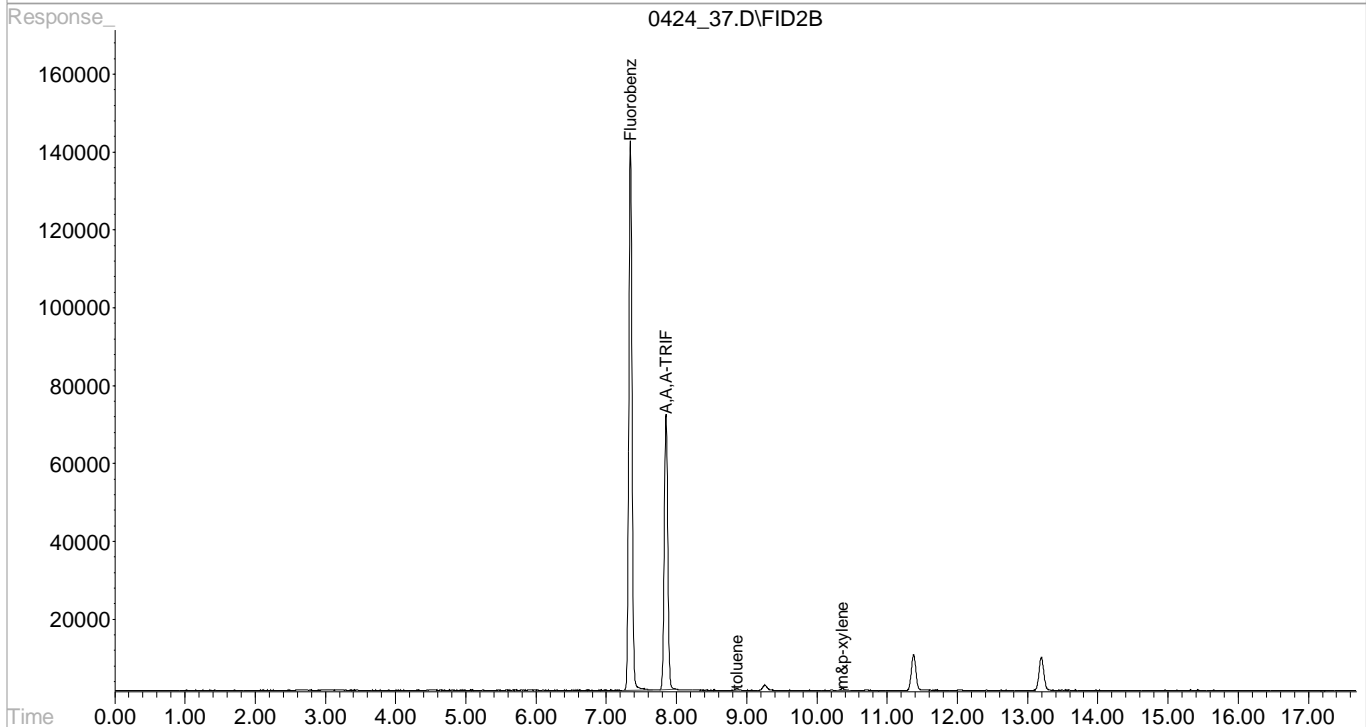
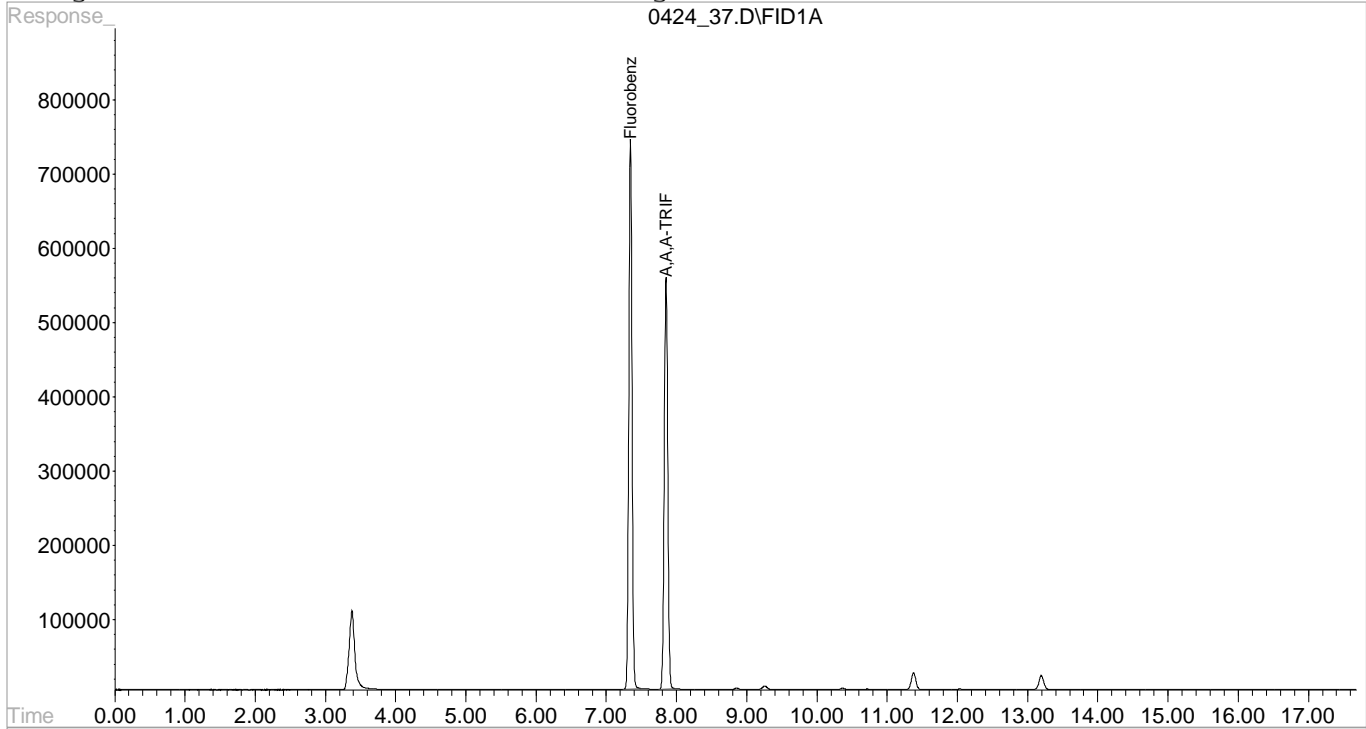
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 37.D\FID1A.CH Vial: 37
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 37.D\FID2B.CH
 Acq On : 25 Apr 2017 12:50 am Operator: 605
 Sample : L903886-18 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

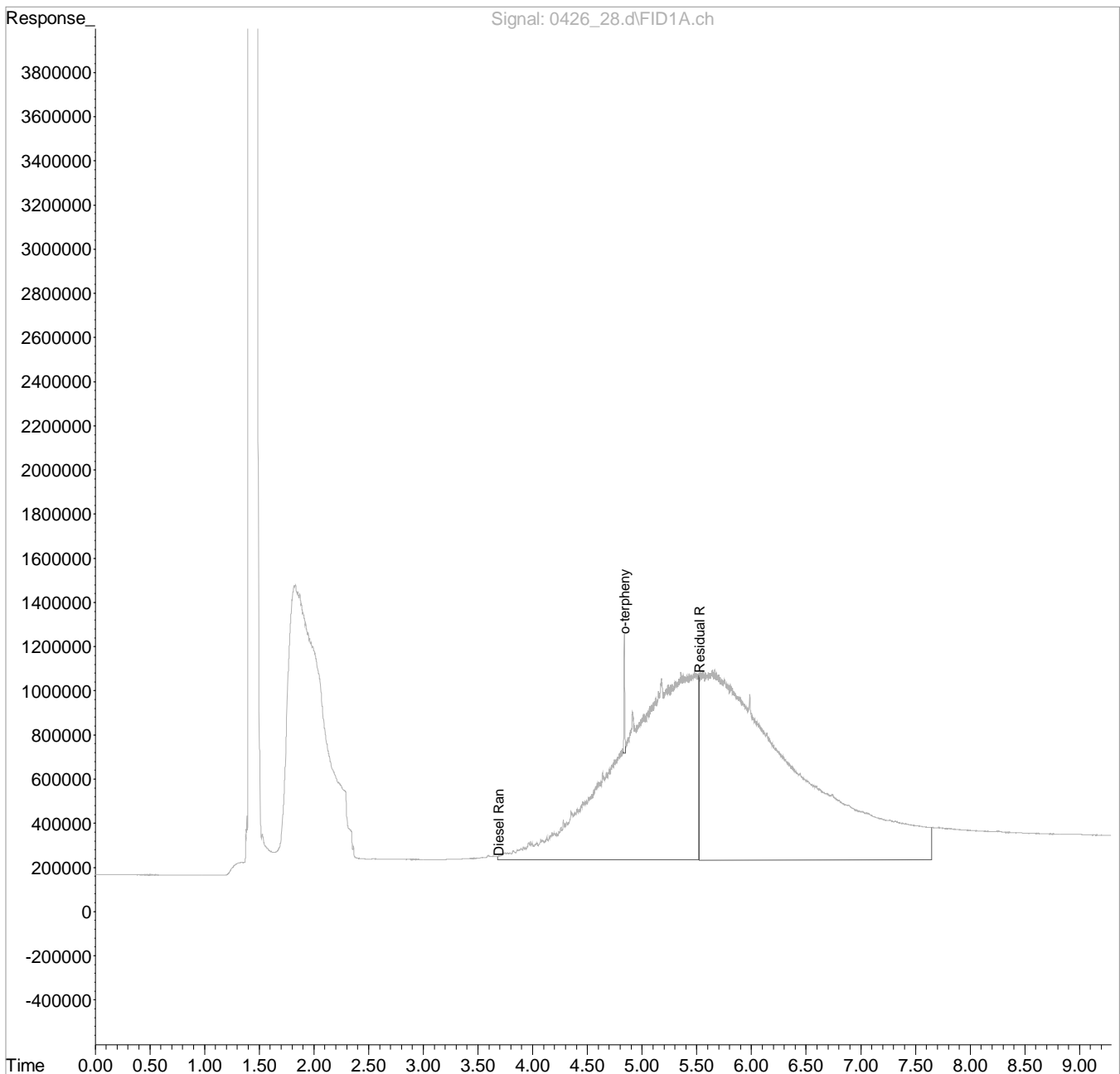
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 28.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 4:47 pm
 Operator : 784
 Sample : L903886-19 5x WG972494 40-2
 Misc : water
 ALS Vial : 23 Sample Multiplier: 0.25
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:45:12 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

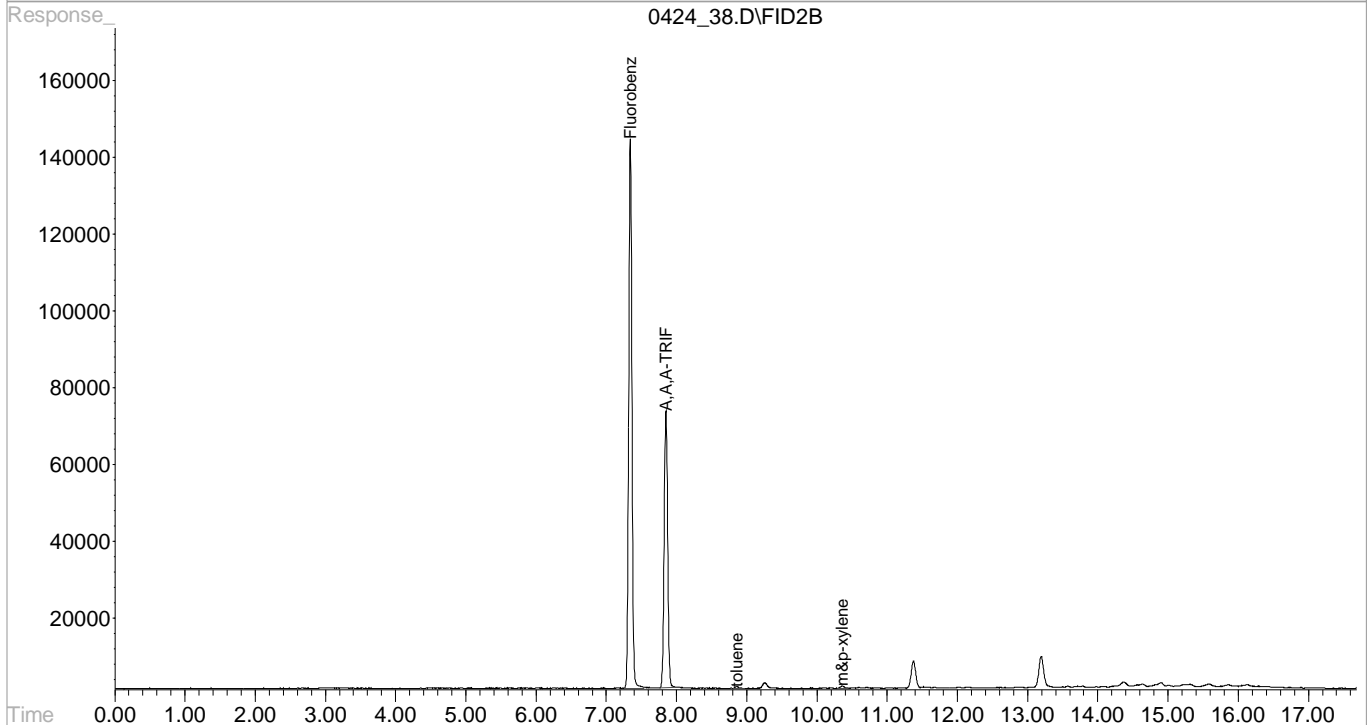
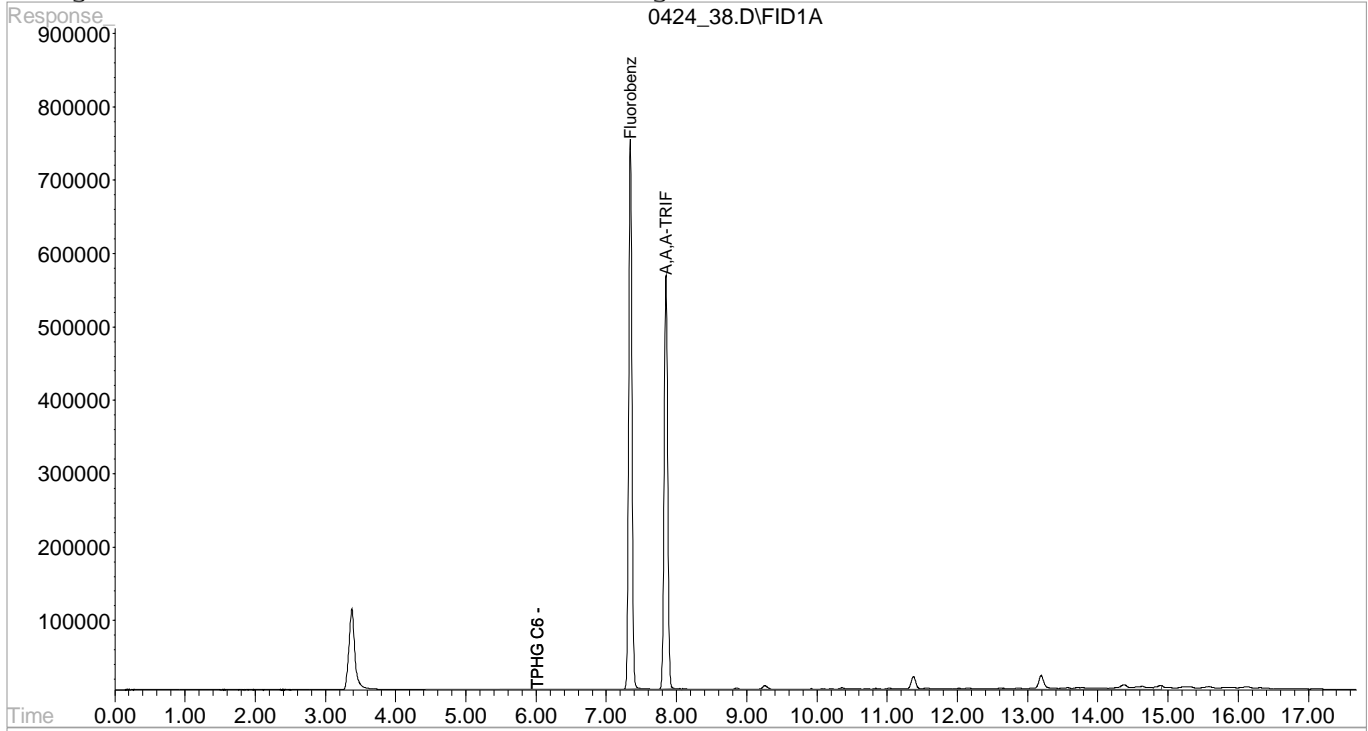
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 38.D\FID1A.CH Vial: 38
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 38.D\FID2B.CH
 Acq On : 25 Apr 2017 1:14 am Operator: 605
 Sample : L903886-19 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

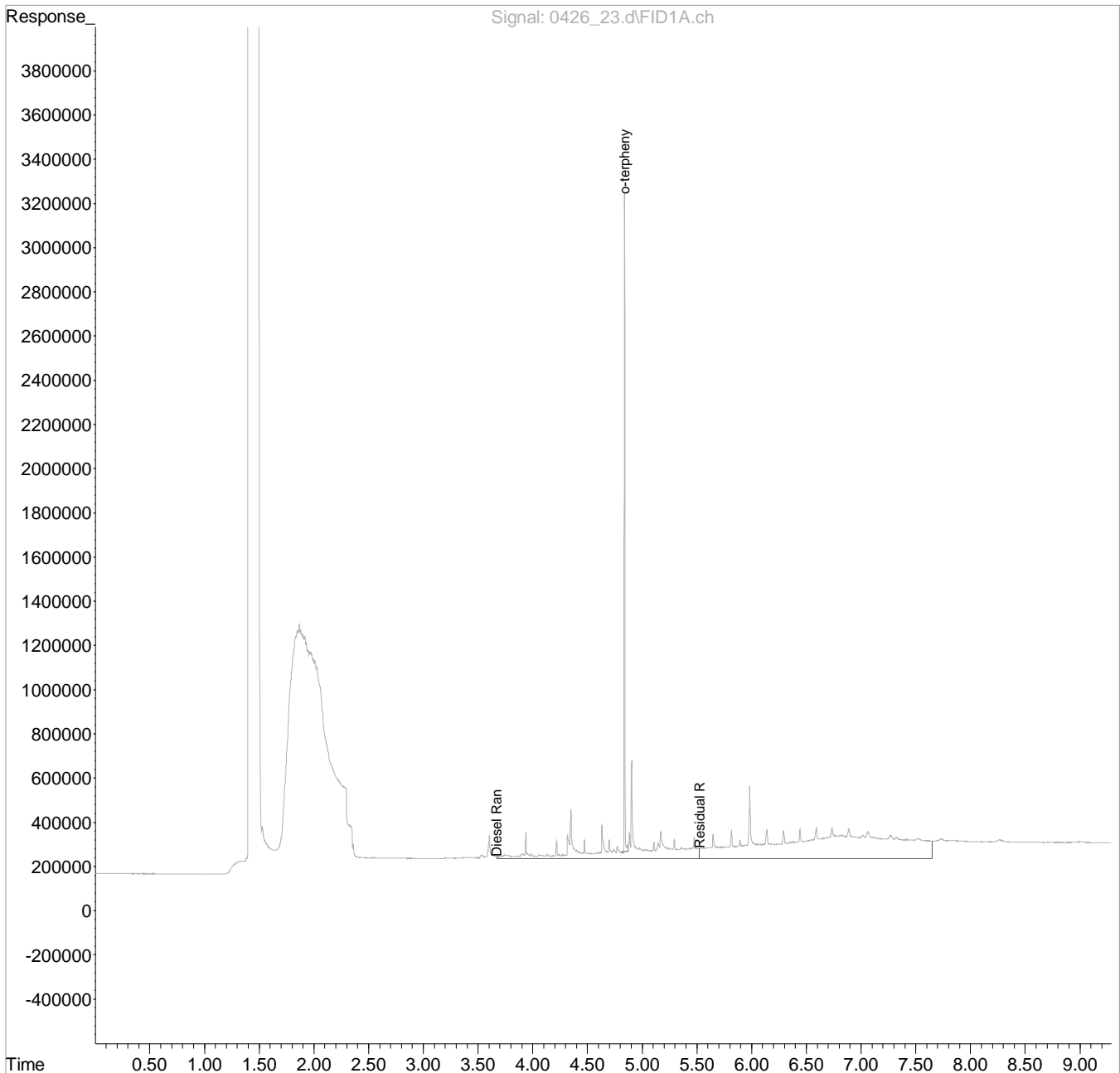
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
 Data File : 0426 23.d
 Signal(s) : FID1A.ch
 Acq On : 26 Apr 2017 3:25 pm
 Operator : 784
 Sample : L903886-20 1x WG972494 40-2
 Misc : water
 ALS Vial : 18 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 27 13:41:40 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

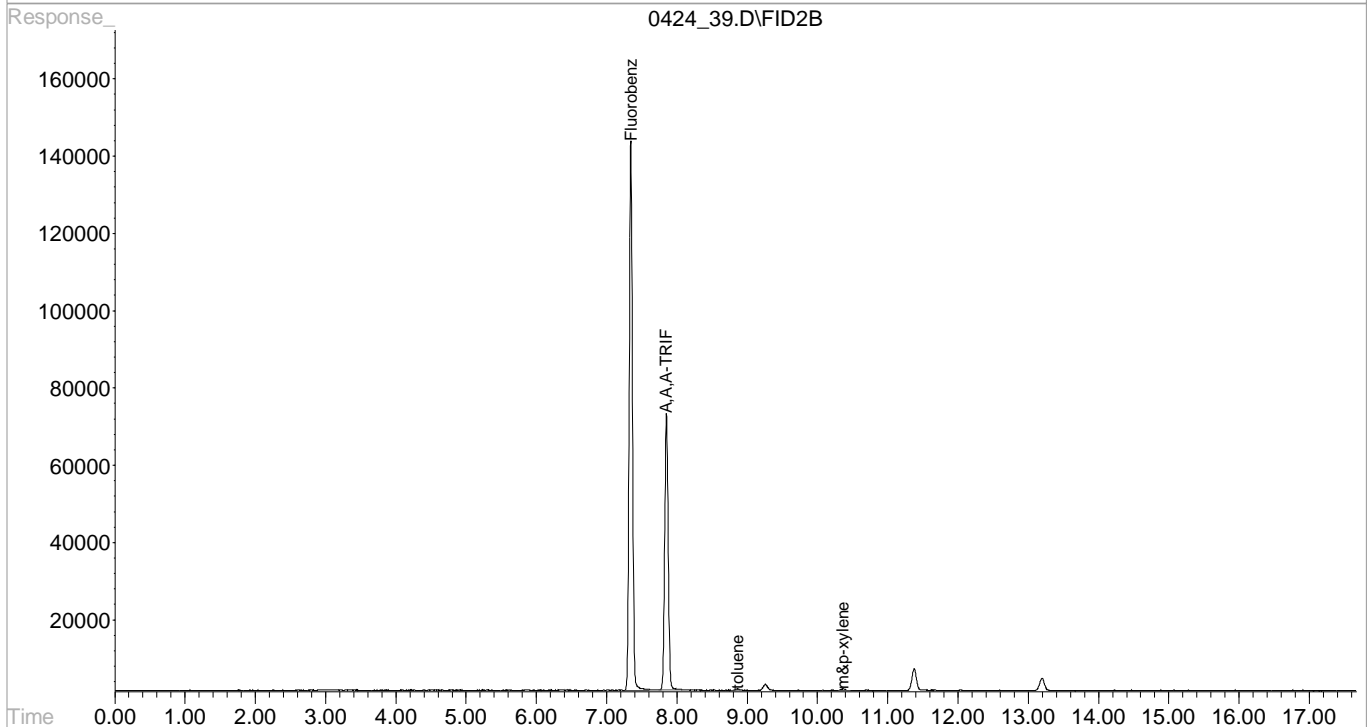
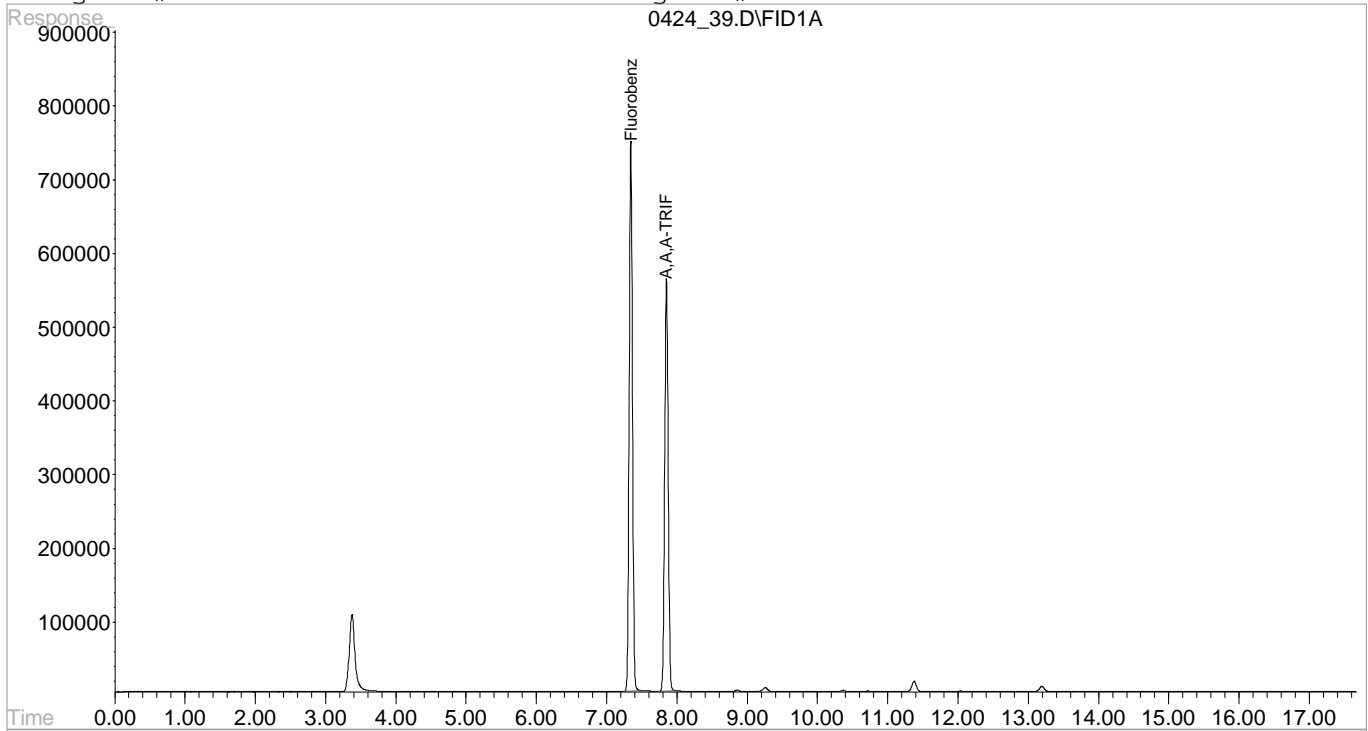
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 39.D\FID1A.CH Vial: 39
Signal #2 : C:\HPCHEM\1\DATA\042417\0424 39.D\FID2B.CH
Acq On : 25 Apr 2017 1:38 am Operator: 605
Sample : L903886-20 1x WG972545 Inst : VOCGC4
Misc : water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
Title : WIS GRO VOCGC04
Last Update : Wed Feb 01 09:42:52 2017
Response via : Single Level Calibration
DataAcq Meth : VOCGC4.M

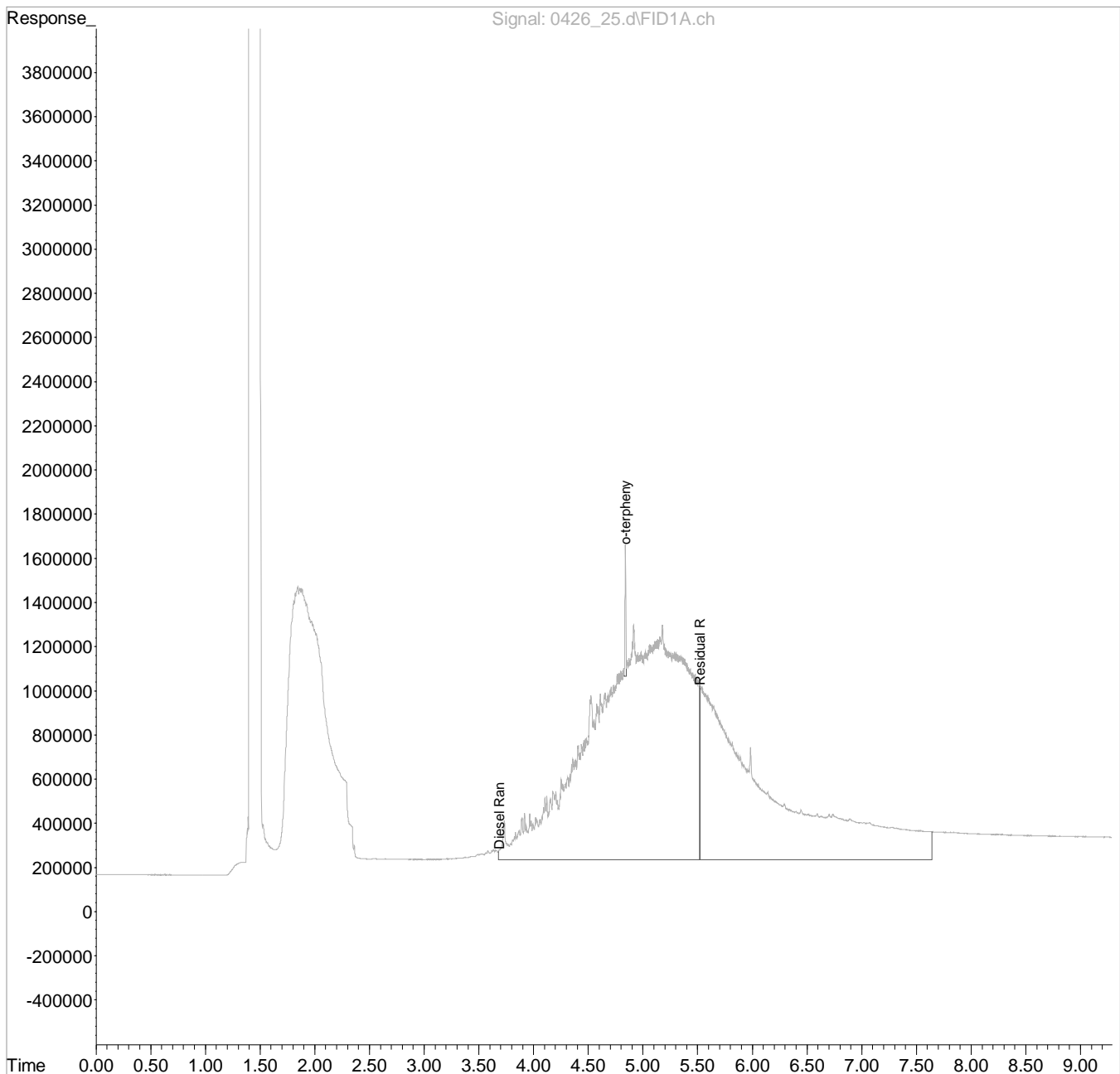
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
Data File : 0426 25.d
Signal(s) : FID1A.ch
Acq On : 26 Apr 2017 3:58 pm
Operator : 784
Sample : L903886-21 5x WG972494 40-2
Misc : water
ALS Vial : 20 Sample Multiplier: 0.25
InstName : SVGC27

Integration File: events.e
Quant Time: Apr 27 13:42:39 2017
Quant Method : C:\msdchem\1\methods\EP27D19Q.M
Quant Title :
QLast Update : Thu Apr 20 09:21:55 2017
Response via : Initial Calibration
Integrator: ChemStation

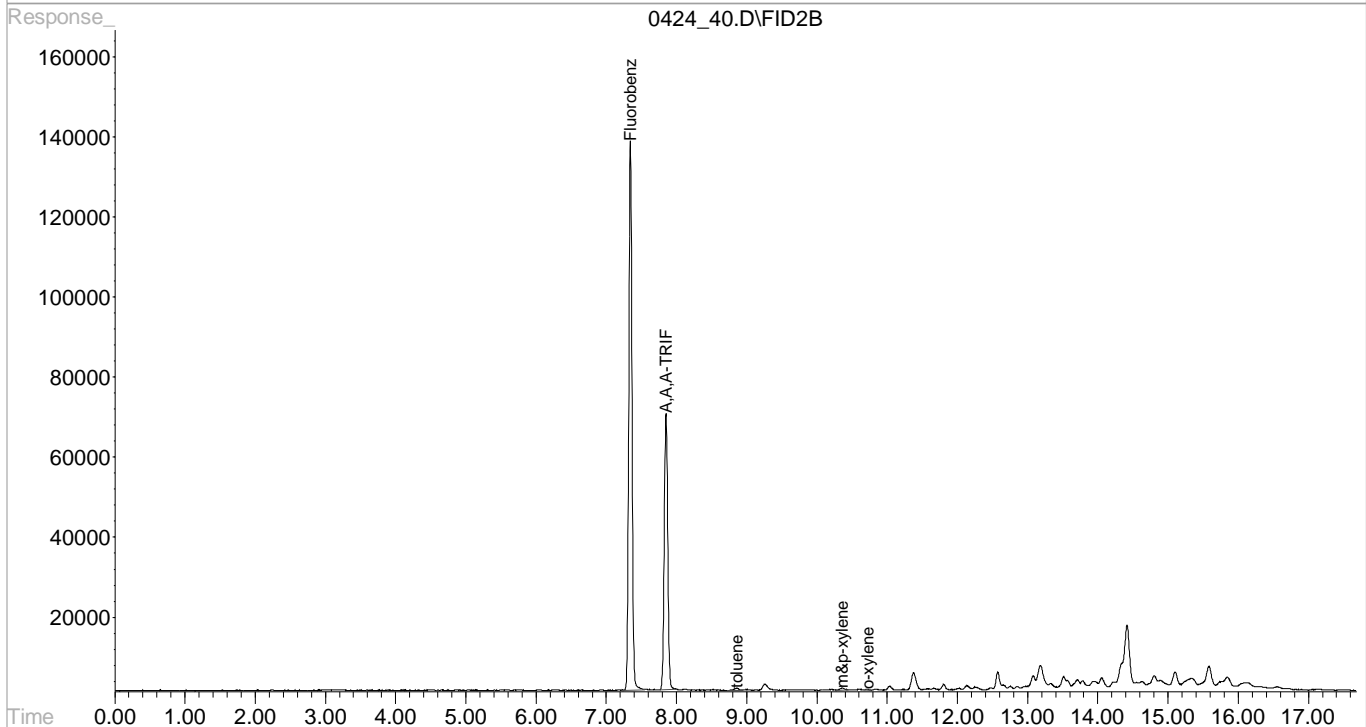
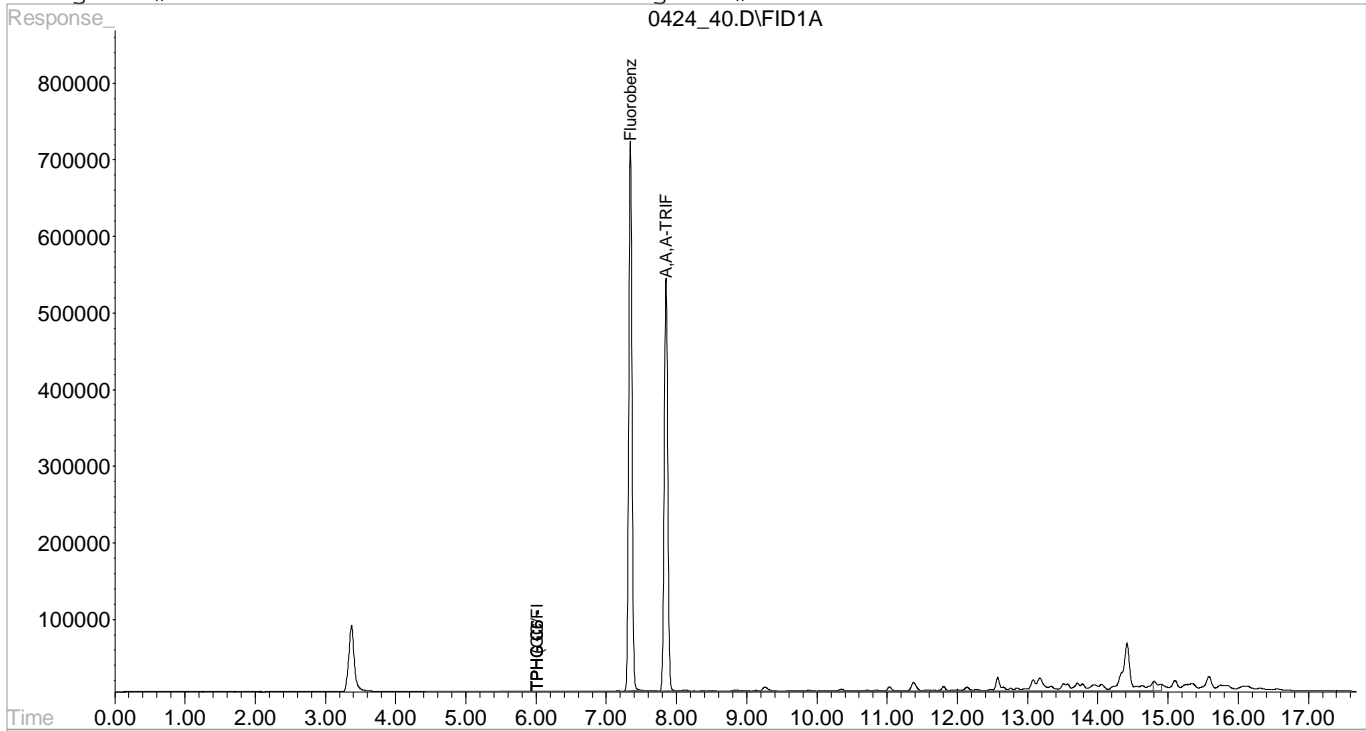
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 40.D\FID1A.CH Vial: 40
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 40.D\FID2B.CH
 Acq On : 25 Apr 2017 2:03 am Operator: 605
 Sample : L903886-21 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

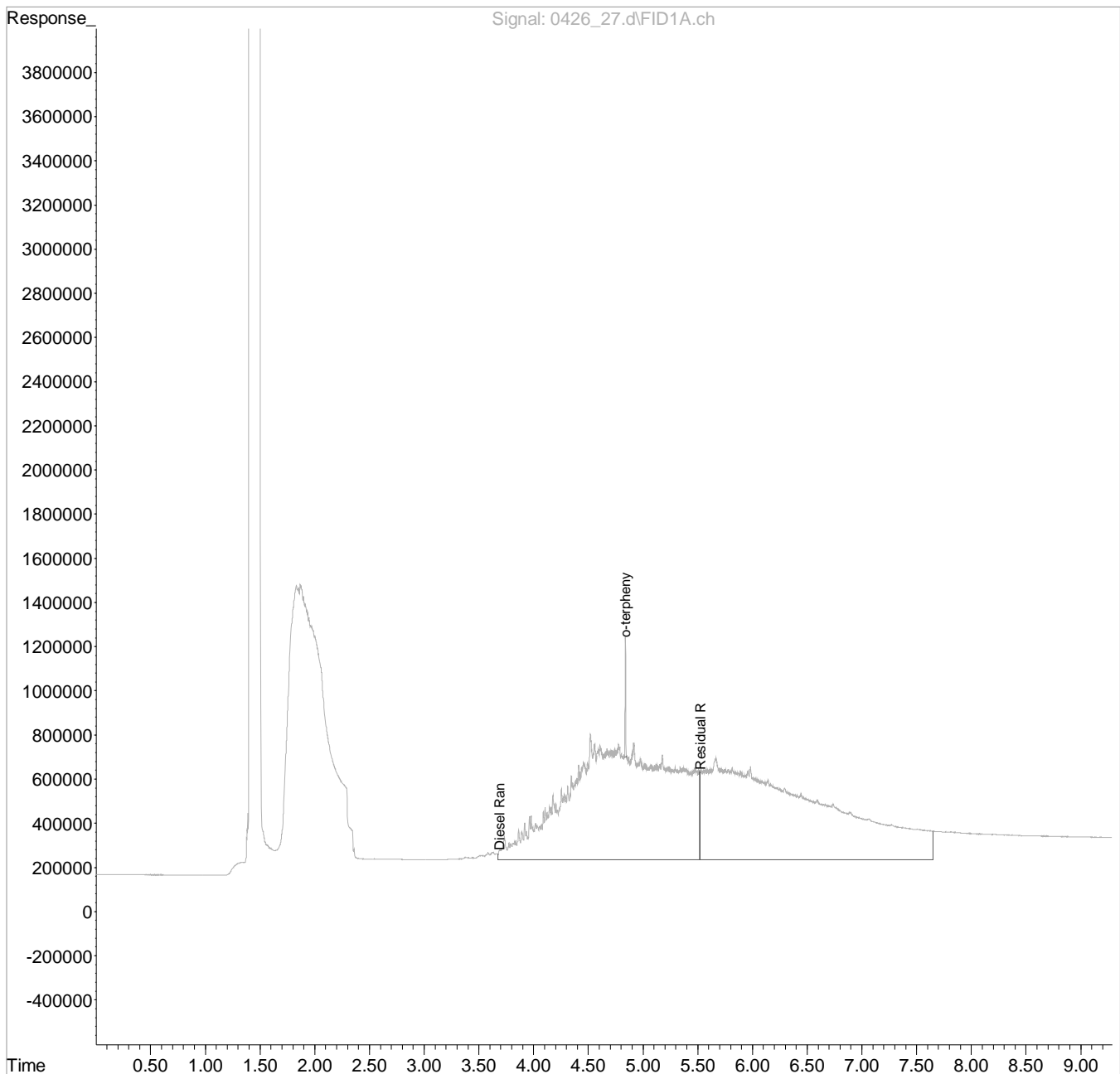
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042617\
Data File : 0426 27.d
Signal(s) : FID1A.ch
Acq On : 26 Apr 2017 4:30 pm
Operator : 784
Sample : L903886-22 5x WG972494 40-2
Misc : water
ALS Vial : 22 Sample Multiplier: 0.25
InstName : SVGC27

Integration File: events.e
Quant Time: Apr 27 13:44:39 2017
Quant Method : C:\msdchem\1\methods\EP27D19Q.M
Quant Title :
QLast Update : Thu Apr 20 09:21:55 2017
Response via : Initial Calibration
Integrator: ChemStation

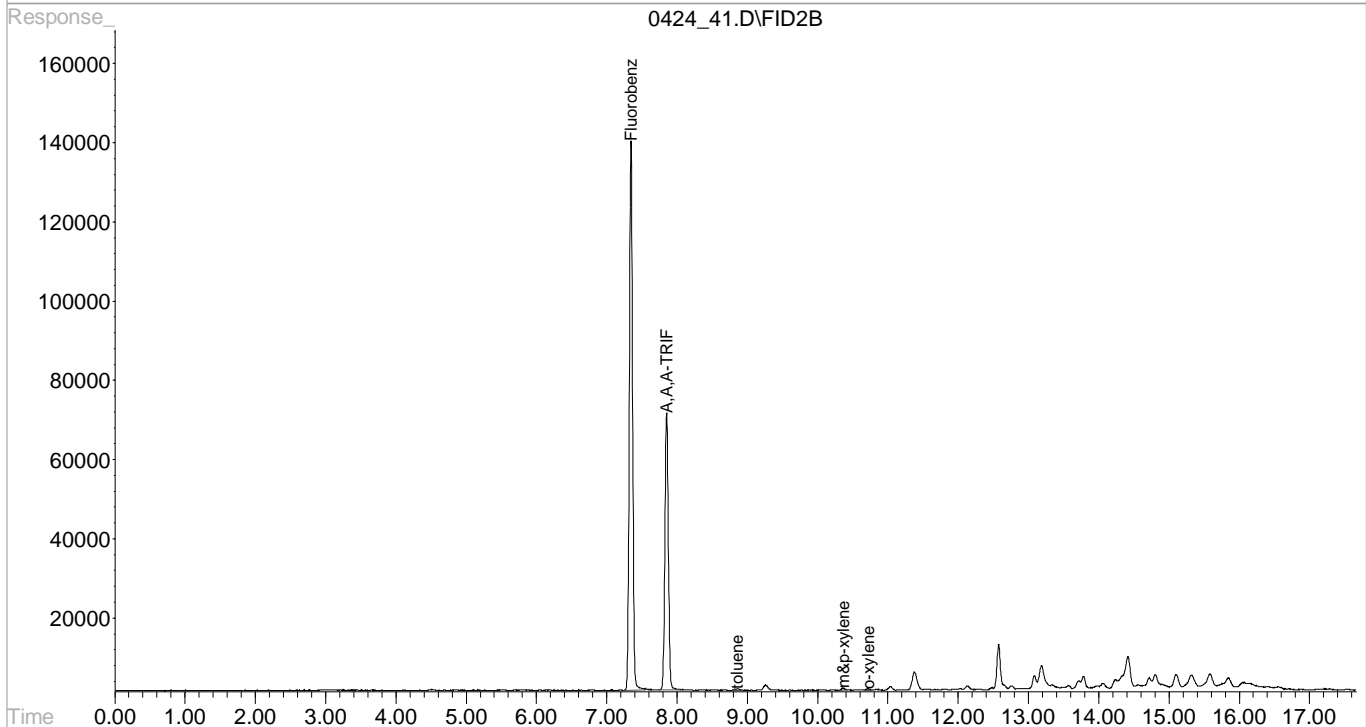
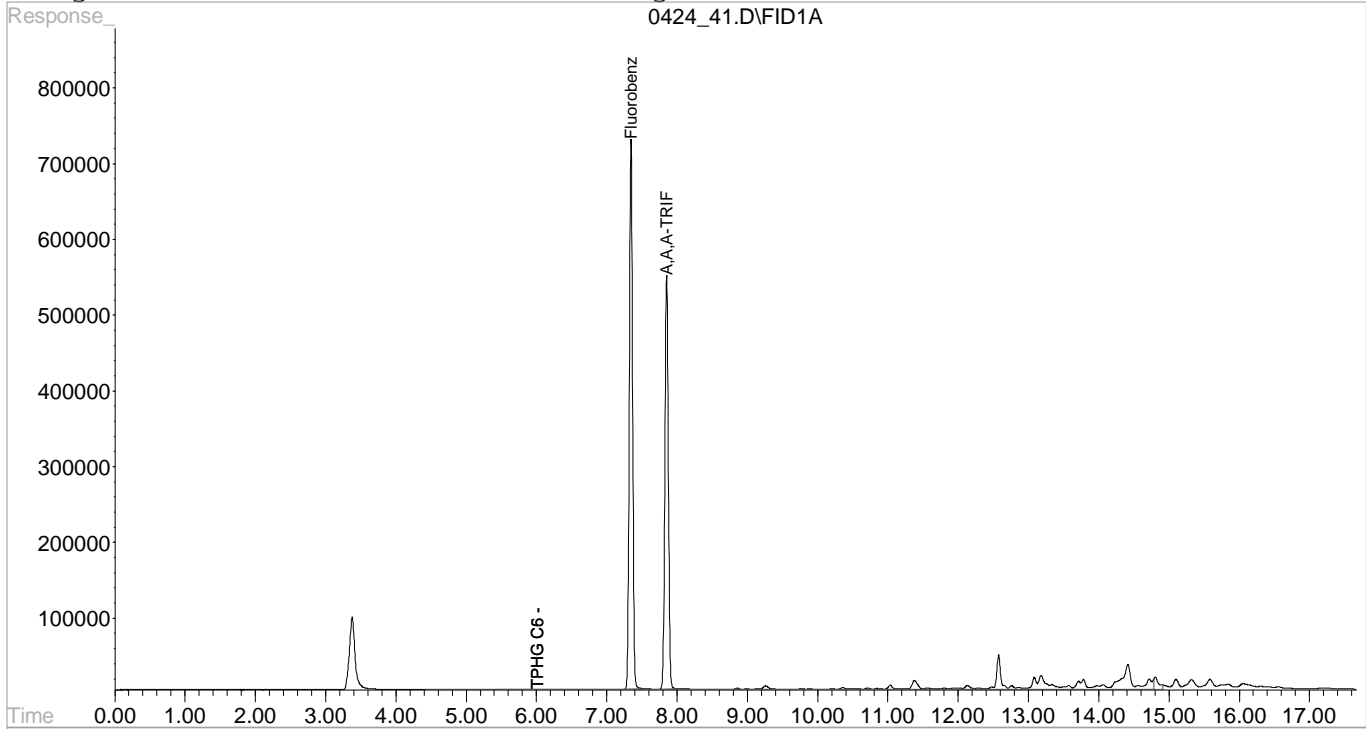
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 41.D\FID1A.CH Vial: 41
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 41.D\FID2B.CH
 Acq On : 25 Apr 2017 2:27 am Operator: 605
 Sample : L903886-22 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

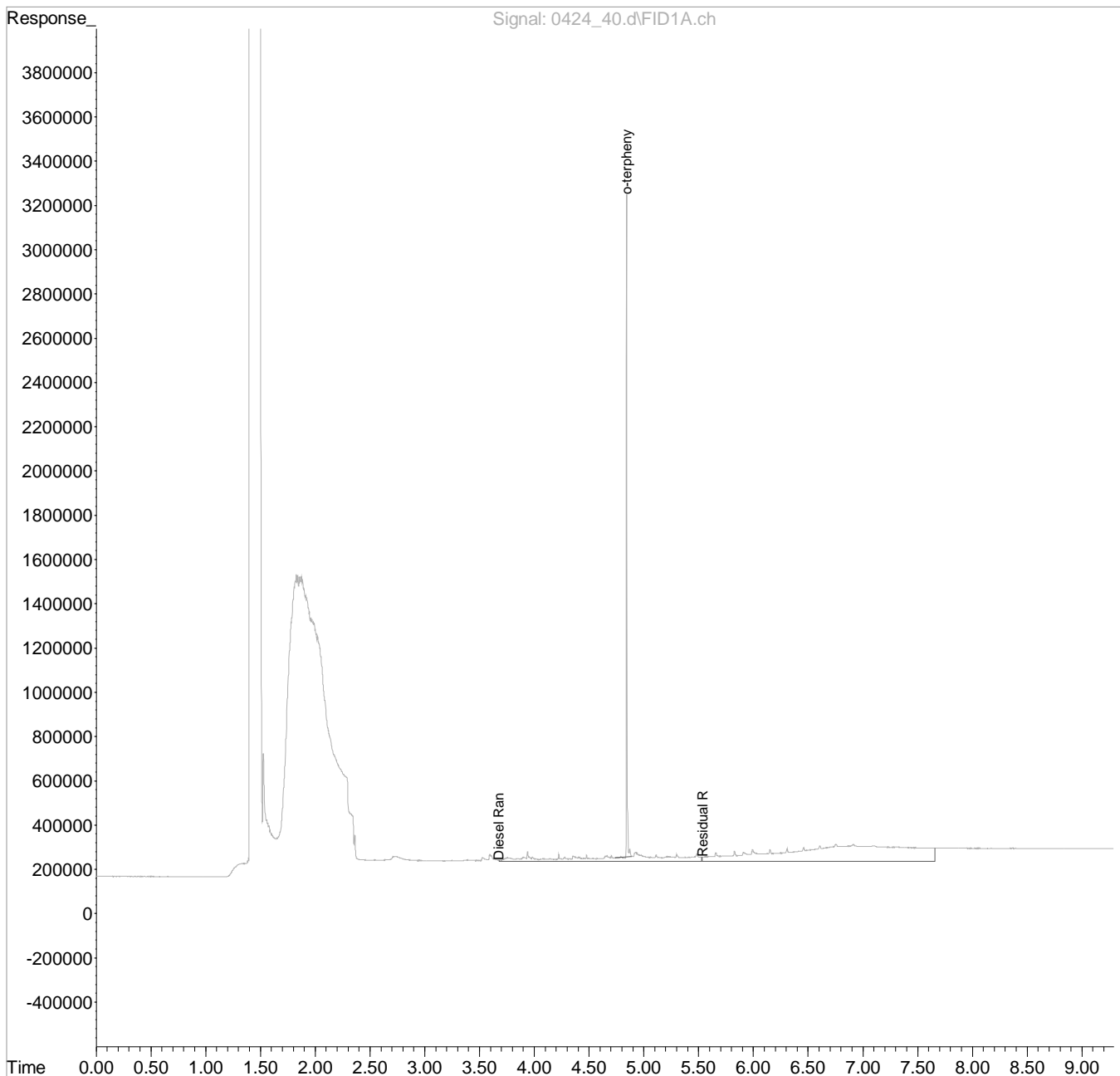
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\042417\
 Data File : 0424 40.d
 Signal(s) : FID1A.ch
 Acq On : 25 Apr 2017 1:01 am
 Operator : 765
 Sample : L903886-23 1x WG972494 40-2
 Misc : water
 ALS Vial : 35 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Apr 25 15:27:33 2017
 Quant Method : C:\msdchem\1\methods\EP27D19Q.M
 Quant Title :
 QLast Update : Thu Apr 20 09:21:55 2017
 Response via : Initial Calibration
 Integrator: ChemStation

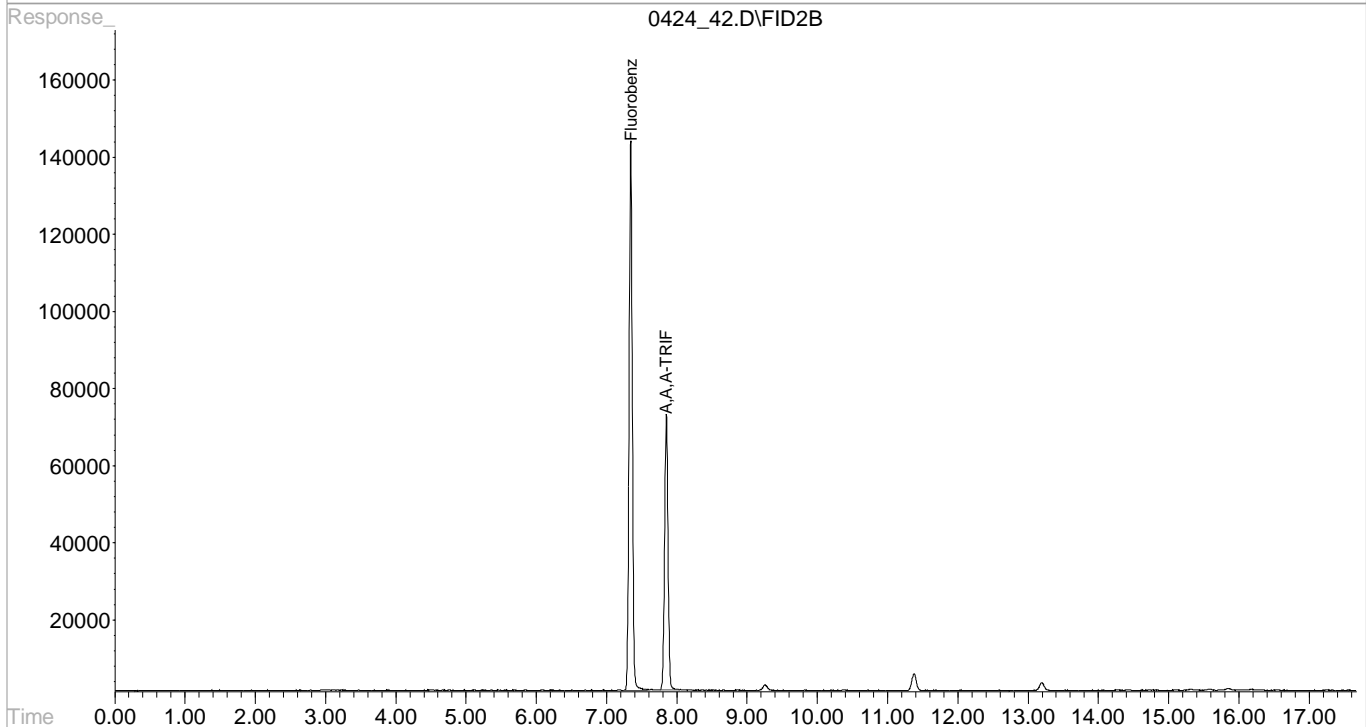
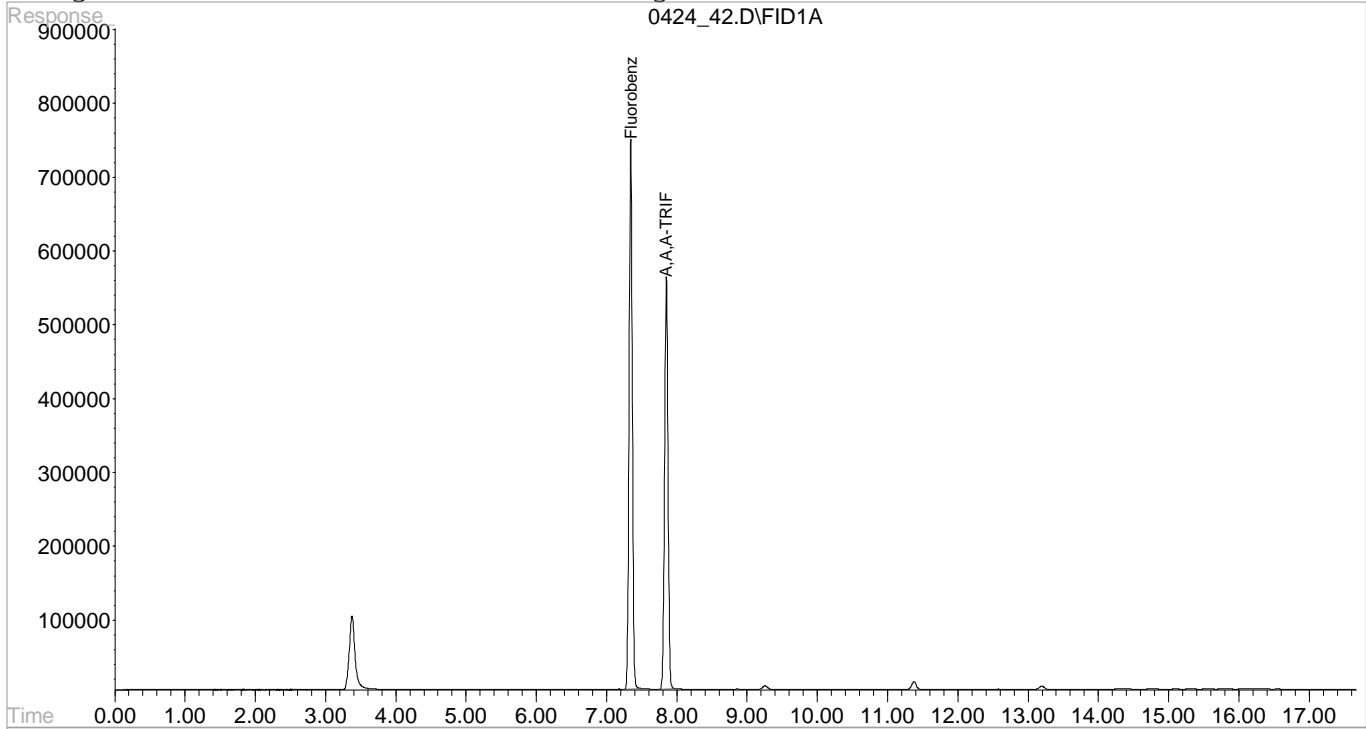
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\042417\0424 42.D\FID1A.CH Vial: 42
 Signal #2 : C:\HPCHEM\1\DATA\042417\0424 42.D\FID2B.CH
 Acq On : 25 Apr 2017 2:51 am Operator: 605
 Sample : L903886-23 1x WG972545 Inst : VOCGC4
 Misc : water Multiplr: 1.00
 IntFile Signal #1: EVENTS.E IntFile Signal #2: autoint2.e
 Quant Time: Apr 27 10:36 2017 Quant Results File: BG04A31Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG04A31Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC04
 Last Update : Wed Feb 01 09:42:52 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC4.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Groundwater Analytical Reports
18 to 20 September 2017

October 03, 2017

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L938609
Samples Received: 09/22/2017
Project Number: 1796120*00
Description: BNSF - Wishram Railyard, WA
Site: BNSF WISHRAM
Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:

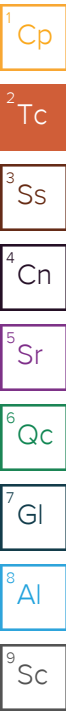


Mark W. Beasley
Technical Service Representative

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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¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

SAMPLE SUMMARY



WMW-11-20170920 L938609-01 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 08:15
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:25	09/29/17 17:25	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 13:51	09/29/17 13:51	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024988	1	09/27/17 12:08	09/27/17 12:08	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 12:59	09/29/17 12:59	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 20:33	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:20	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 12:22	09/27/17 12:22	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 11:11	09/25/17 11:11	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 01:03	09/26/17 01:03	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/25/17 20:45	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	5	09/25/17 09:21	09/26/17 20:28	TH

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

WMW-1-20170920 L938609-02 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 10:20
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:26	09/29/17 17:26	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 13:52	09/29/17 13:52	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024988	1	09/27/17 12:09	09/27/17 12:09	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 13:09	09/29/17 13:09	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 20:37	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:24	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 12:46	09/27/17 12:46	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 11:14	09/25/17 11:14	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1024359	10	09/25/17 15:07	09/25/17 15:07	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	5	10/02/17 02:20	10/02/17 02:20	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	5	09/25/17 09:21	09/26/17 20:45	TH

WMW-3-20170920 L938609-03 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 12:20
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:28	09/29/17 17:28	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 13:53	09/29/17 13:53	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024988	1	09/27/17 12:09	09/27/17 12:09	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 13:19	09/29/17 13:19	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 20:40	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:27	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 13:10	09/27/17 13:10	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 11:16	09/25/17 11:16	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1024359	2	09/25/17 15:14	09/25/17 15:14	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	5	10/02/17 02:41	10/02/17 02:41	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	5	09/25/17 09:21	09/26/17 21:02	TH

WMW-18-20170920 L938609-04 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 15:20
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:31	09/29/17 17:31	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 13:55	09/29/17 13:55	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024988	1	09/27/17 12:10	09/27/17 12:10	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 13:29	09/29/17 13:29	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 20:19	JPD

SAMPLE SUMMARY

WMW-18-20170920 L938609-04 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 15:20
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:06	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 13:34	09/27/17 13:34	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 11:43	09/25/17 11:43	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 04:10	09/26/17 04:10	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/25/17 21:34	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D	WG1024111	1	09/25/17 21:02	09/26/17 18:44	JF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 05:32	FMB

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

WMW-5-20170920 L938609-05 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 16:45
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:41	09/29/17 17:41	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:02	09/29/17 14:02	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024988	1	09/27/17 12:11	09/27/17 12:11	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 14:08	09/29/17 14:08	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 20:51	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:38	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/30/17 15:57	09/30/17 15:57	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 11:45	09/25/17 11:45	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 04:31	09/26/17 04:31	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/25/17 22:24	TH

RMD-4-20170920 L938609-06 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 17:15
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:42	09/29/17 17:42	JER
Wet Chemistry by Method 353.2	WG1025665	5	09/29/17 14:03	09/29/17 14:03	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024988	1	09/27/17 12:12	09/27/17 12:12	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 14:38	09/29/17 14:38	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 20:55	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:41	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 14:21	09/27/17 14:21	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 11:47	09/25/17 11:47	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 04:51	09/26/17 04:51	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/25/17 22:40	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 06:38	FMB

WMW-17-20170920 L938609-07 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 18:25
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:44	09/29/17 17:44	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:04	09/29/17 14:04	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024988	1	09/27/17 12:13	09/27/17 12:13	MA
Wet Chemistry by Method 9056A	WG1025434	200	09/29/17 16:25	09/29/17 16:25	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 20:58	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:45	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 14:45	09/27/17 14:45	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 11:57	09/25/17 11:57	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1024359	5	09/25/17 15:17	09/25/17 15:17	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 05:11	09/26/17 05:11	ACG

SAMPLE SUMMARY



WMW-17-20170920 L938609-07 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 18:25
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/25/17 22:57	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 07:00	FMB

1
Cp

2
Tc

3
Ss

RMD-3-20170920 L938609-08 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 18:35
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:46	09/29/17 17:46	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:05	09/29/17 14:05	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024988	1	09/27/17 12:13	09/27/17 12:13	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 14:58	09/29/17 14:58	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:02	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:48	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 15:09	09/27/17 15:09	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 12:03	09/25/17 12:03	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 05:32	09/26/17 05:32	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/25/17 23:13	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 07:21	FMB

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

D-1-20170920 L938609-09 GW

Collected by
Alice Robinson
Collected date/time
09/20/17 18:30
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:47	09/29/17 17:47	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:06	09/29/17 14:06	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024988	1	09/27/17 12:13	09/27/17 12:13	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 15:08	09/29/17 15:08	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:05	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:52	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 15:33	09/27/17 15:33	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 12:01	09/25/17 12:01	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1024359	5	09/25/17 15:19	09/25/17 15:19	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 05:52	09/26/17 05:52	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/25/17 23:30	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 07:43	FMB

WMW-14-20170919 L938609-10 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 09:00
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:49	09/29/17 17:49	JER
Wet Chemistry by Method 353.2	WG1025665	5	09/29/17 14:07	09/29/17 14:07	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 16:08	09/26/17 16:08	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 15:18	09/29/17 15:18	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:09	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:55	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 15:57	09/27/17 15:57	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024401	1	09/26/17 10:45	09/26/17 10:45	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 06:13	09/26/17 06:13	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/25/17 23:46	TH

SAMPLE SUMMARY



WMW-12-20170919 L938609-11 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 10:20
Received date/time
09/22/17 08:45

- 1
Cp
- 2
Tc
- 3
Ss
- 4
Cn
- 5
Sr
- 6
Qc
- 7
Gl
- 8
Al
- 9
Sc

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:50	09/29/17 17:50	JER
Wet Chemistry by Method 353.2	WG1025665	10	09/29/17 14:08	09/29/17 14:08	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 16:08	09/26/17 16:08	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 15:28	09/29/17 15:28	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:12	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 20:59	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/30/17 16:20	09/30/17 16:20	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG1024401	1	09/26/17 10:01	09/26/17 10:01	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 06:33	09/26/17 06:33	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/26/17 00:03	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D	WG1023146	1	09/26/17 16:59	09/27/17 17:10	JF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 08:05	FMB

WMW-15-20170919 L938609-12 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 10:45
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:52	09/29/17 17:52	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:10	09/29/17 14:10	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 16:09	09/26/17 16:09	MA
Wet Chemistry by Method 9056A	WG1025434	1	09/29/17 15:38	09/29/17 15:38	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:16	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 21:03	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 16:44	09/27/17 16:44	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024401	1	09/26/17 10:05	09/26/17 10:05	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 06:53	09/26/17 06:53	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/26/17 00:19	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	5	09/25/17 09:21	09/26/17 21:18	TH

WMW-13-20170919 L938609-13 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 11:55
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:53	09/29/17 17:53	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:11	09/29/17 14:11	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 17:10	09/26/17 17:10	MA
Wet Chemistry by Method 9056A	WG1025435	1	09/29/17 13:14	09/29/17 13:14	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:19	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 21:06	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/30/17 16:43	09/30/17 16:43	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG1024401	1	09/26/17 10:25	09/26/17 10:25	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 07:14	09/26/17 07:14	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/26/17 00:36	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D	WG1023146	1	09/26/17 16:59	09/27/17 17:33	JF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 08:27	FMB

RMD-1-20170919 L938609-14 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 12:05
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 17:55	09/29/17 17:55	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:12	09/29/17 14:12	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 17:12	09/26/17 17:12	MA

SAMPLE SUMMARY

RMD-1-20170919 L938609-14 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 12:05
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1025435	1	09/29/17 13:55	09/29/17 13:55	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:30	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 21:10	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 17:32	09/27/17 17:32	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024401	1	09/26/17 10:33	09/26/17 10:33	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1024690	10	09/26/17 12:25	09/26/17 12:25	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 07:34	09/26/17 07:34	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/26/17 00:52	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	5	09/25/17 09:21	09/26/17 21:35	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 08:49	FMB

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

WMW-16-20170919 L938609-15 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 14:26
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 18:01	09/29/17 18:01	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:17	09/29/17 14:17	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 17:13	09/26/17 17:13	MA
Wet Chemistry by Method 9056A	WG1025435	1	09/29/17 14:05	09/29/17 14:05	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:33	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 21:20	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 17:55	09/27/17 17:55	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024401	1	09/26/17 10:36	09/26/17 10:36	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1024690	10	09/26/17 12:27	09/26/17 12:27	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	5	10/02/17 03:01	10/02/17 03:01	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	5	09/25/17 09:21	09/26/17 21:52	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270 D	WG1024111	1	09/25/17 21:02	09/26/17 19:53	JF
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 09:10	FMB

WMW-10-20170919 L938609-16 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 14:40
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 18:03	09/29/17 18:03	JER
Wet Chemistry by Method 353.2	WG1025665	5	09/29/17 14:18	09/29/17 14:18	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 17:14	09/26/17 17:14	MA
Wet Chemistry by Method 9056A	WG1025435	1	09/29/17 14:15	09/29/17 14:15	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:37	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 21:24	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 18:19	09/27/17 18:19	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024401	1	09/26/17 10:41	09/26/17 10:41	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 09:02	09/26/17 09:02	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/26/17 01:25	TH

RMD-2-20170919 L938609-17 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 15:52
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 18:05	09/29/17 18:05	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:19	09/29/17 14:19	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 17:14	09/26/17 17:14	MA
Wet Chemistry by Method 9056A	WG1025435	1	09/29/17 14:45	09/29/17 14:45	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:40	JPD

SAMPLE SUMMARY



RMD-2-20170919 L938609-17 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 15:52
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 21:27	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 18:43	09/27/17 18:43	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024401	1	09/26/17 10:57	09/26/17 10:57	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	5	10/02/17 19:57	10/02/17 19:57	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/26/17 01:41	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	5	09/25/17 09:21	09/26/17 22:09	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 09:32	FMB

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

WMW-9-20170919 L938609-18 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 16:00
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 18:06	09/29/17 18:06	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:20	09/29/17 14:20	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 17:14	09/26/17 17:14	MA
Wet Chemistry by Method 9056A	WG1025435	1	09/29/17 14:56	09/29/17 14:56	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:44	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 21:31	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 19:06	09/27/17 19:06	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024401	1	09/26/17 11:00	09/26/17 11:00	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 09:37	09/26/17 09:37	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/26/17 01:58	TH

D-2-20170919 L938609-19 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 16:00
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1025662	1	09/29/17 18:08	09/29/17 18:08	JER
Wet Chemistry by Method 353.2	WG1025665	1	09/29/17 14:21	09/29/17 14:21	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 17:15	09/26/17 17:15	MA
Wet Chemistry by Method 9056A	WG1025435	1	09/29/17 15:06	09/29/17 15:06	DR
Metals (ICPMS) by Method 6020A	WG1025162	1	09/27/17 14:17	09/29/17 21:48	JPD
Metals (ICPMS) by Method 6020A	WG1025448	1	09/28/17 15:59	09/29/17 21:34	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1024796	1	09/27/17 19:30	09/27/17 19:30	ACE
Volatile Organic Compounds (GC) by Method RSK175	WG1024401	1	09/26/17 11:02	09/26/17 11:02	BG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 09:57	09/26/17 09:57	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	1	09/25/17 09:21	09/26/17 02:14	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1024084	5	09/25/17 09:21	09/26/17 22:26	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1024102	1	09/25/17 15:07	09/26/17 09:54	FMB

TRIPBLANK--20170919-1 L938609-20 GW

Collected by
Alice Robinson
Collected date/time
09/19/17 00:00
Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024450	1	09/26/17 00:42	09/26/17 00:42	ACG

SAMPLE SUMMARY



TRIPBLANK--20170919-2 L938609-21 GW

Collected by Alice Robinson	Collected date/time 09/19/17 00:00	Received date/time 09/22/17 08:45
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Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024675	1	09/26/17 12:47	09/26/17 12:47	BMB

¹ Cp

² Tc

³ Ss

TRIPBLANK--20170920-2 L938609-23 GW

Collected by Alice Robinson	Collected date/time 09/20/17 09:00	Received date/time 09/22/17 08:45
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Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1024675	1	09/26/17 13:08	09/26/17 13:08	BMB

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

Mark W. Beasley
Technical Service Representative

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	357		100	1	09/29/2017 17:25	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	ND		100	1	09/29/2017 13:51	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	09/27/2017 12:08	WG1024988

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	76200		5000	1	09/29/2017 12:59	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	2770		100	1	09/29/2017 20:33	WG1025162
Lead	ND		2.00	1	09/29/2017 20:20	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 20:33	WG1025162
Manganese,Dissolved	1740		5.00	1	09/29/2017 20:33	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 12:22	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	97.1		77.0-122		09/27/2017 12:22	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	544		10.0	1	09/25/2017 11:11	WG1024154
Ethane	ND		13.0	1	09/25/2017 11:11	WG1024154
Ethene	ND		13.0	1	09/25/2017 11:11	WG1024154

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 01:03	WG1024450
Toluene	ND		1.00	1	09/26/2017 01:03	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 01:03	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 01:03	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 01:03	WG1024450
(S) Toluene-d8	101		80.0-120		09/26/2017 01:03	WG1024450
(S) Dibromofluoromethane	113		76.0-123		09/26/2017 01:03	WG1024450
(S) a,a,a-Trifluorotoluene	97.7		80.0-120		09/26/2017 01:03	WG1024450
(S) 4-Bromofluorobenzene	111		80.0-120		09/26/2017 01:03	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4840		1000	5	09/26/2017 20:28	WG1024084
Residual Range Organics (RRO)	4920		250	1	09/25/2017 20:45	WG1024084
<i>(S) o-Terphenyl</i>	128		52.0-156		09/26/2017 20:28	WG1024084
<i>(S) o-Terphenyl</i>	114		52.0-156		09/25/2017 20:45	WG1024084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	387		100	1	09/29/2017 17:26	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	09/29/2017 13:52	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	09/27/2017 12:09	WG1024988

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ND		5000	1	09/29/2017 13:09	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	15400		100	1	09/29/2017 20:37	WG1025162
Lead	ND		2.00	1	09/29/2017 20:24	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 20:37	WG1025162
Manganese,Dissolved	2000		5.00	1	09/29/2017 20:37	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	139		100	1	09/27/2017 12:46	WG1024796
(S) a, a, a-Trifluorotoluene(FID)	97.1		77.0-122		09/27/2017 12:46	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	6700		100	10	09/25/2017 15:07	WG1024359
Ethane	ND		13.0	1	09/25/2017 11:14	WG1024154
Ethene	ND		13.0	1	09/25/2017 11:14	WG1024154

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		5.00	5	10/02/2017 02:20	WG1024450
Toluene	ND		5.00	5	10/02/2017 02:20	WG1024450
Ethylbenzene	ND		5.00	5	10/02/2017 02:20	WG1024450
o-Xylene	ND		5.00	5	10/02/2017 02:20	WG1024450
m&p-Xylene	ND		10.0	5	10/02/2017 02:20	WG1024450
(S) Toluene-d8	99.0		80.0-120		10/02/2017 02:20	WG1024450
(S) Dibromofluoromethane	117		76.0-123		10/02/2017 02:20	WG1024450
(S) a, a, a-Trifluorotoluene	96.5		80.0-120		10/02/2017 02:20	WG1024450
(S) 4-Bromofluorobenzene	114		80.0-120		10/02/2017 02:20	WG1024450

Sample Narrative:



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	

L938609-02 WG1024450: Lowest dilution due to sample foaming.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	11700		1000	5	09/26/2017 20:45	WG1024084
Residual Range Organics (RRO)	5700		1250	5	09/26/2017 20:45	WG1024084
(S) o-Terphenyl	129		52.0-156		09/26/2017 20:45	WG1024084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	396		100	1	09/29/2017 17:28	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	09/29/2017 13:53	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	09/27/2017 12:09	WG1024988

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	5160		5000	1	09/29/2017 13:19	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	9840		100	1	09/29/2017 20:40	WG1025162
Lead	ND		2.00	1	09/29/2017 20:27	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 20:40	WG1025162
Manganese,Dissolved	4520		5.00	1	09/29/2017 20:40	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 13:10	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	97.6		77.0-122		09/27/2017 13:10	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	1670		20.0	2	09/25/2017 15:14	WG1024359
Ethane	ND		13.0	1	09/25/2017 11:16	WG1024154
Ethene	ND		13.0	1	09/25/2017 11:16	WG1024154

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		5.00	5	10/02/2017 02:41	WG1024450
Toluene	ND		5.00	5	10/02/2017 02:41	WG1024450
Ethylbenzene	ND		5.00	5	10/02/2017 02:41	WG1024450
o-Xylene	ND		5.00	5	10/02/2017 02:41	WG1024450
m&p-Xylene	ND		10.0	5	10/02/2017 02:41	WG1024450
(S) Toluene-d8	98.5		80.0-120		10/02/2017 02:41	WG1024450
(S) Dibromofluoromethane	117		76.0-123		10/02/2017 02:41	WG1024450
(S) a,a,a-Trifluorotoluene	95.8		80.0-120		10/02/2017 02:41	WG1024450
(S) 4-Bromofluorobenzene	115		80.0-120		10/02/2017 02:41	WG1024450

Sample Narrative:



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	

L938609-03 WG1024450: Lowest dilution due to sample foaming.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	18900		1000	5	09/26/2017 21:02	WG1024084
Residual Range Organics (RRO)	9020		1250	5	09/26/2017 21:02	WG1024084
(S) o-Terphenyl	144		52.0-156		09/26/2017 21:02	WG1024084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	179		100	1	09/29/2017 17:31	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	1540		100	1	09/29/2017 13:55	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND	J6	50.0	1	09/27/2017 12:10	WG1024988

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	25500		5000	1	09/29/2017 13:29	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	14.5		2.00	1	09/29/2017 20:06	WG1025448
Arsenic,Dissolved	14.6		2.00	1	09/29/2017 20:19	WG1025162
Iron,Dissolved	ND		100	1	09/29/2017 20:19	WG1025162
Lead	ND		2.00	1	09/29/2017 20:06	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 20:19	WG1025162
Manganese,Dissolved	683	V	5.00	1	09/29/2017 20:19	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND	J3 J5	100	1	09/27/2017 13:34	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	97.0		77.0-122		09/27/2017 13:34	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	124		10.0	1	09/25/2017 11:43	WG1024154
Ethane	ND		13.0	1	09/25/2017 11:43	WG1024154
Ethene	ND		13.0	1	09/25/2017 11:43	WG1024154

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 04:10	WG1024450
Toluene	ND		1.00	1	09/26/2017 04:10	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 04:10	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 04:10	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 04:10	WG1024450
(S) Toluene-d8	101		80.0-120		09/26/2017 04:10	WG1024450
(S) Dibromofluoromethane	112		76.0-123		09/26/2017 04:10	WG1024450
(S) a,a,a-Trifluorotoluene	98.8		80.0-120		09/26/2017 04:10	WG1024450
(S) 4-Bromofluorobenzene	108		80.0-120		09/26/2017 04:10	WG1024450



Collected date/time: 09/20/17 15:20

L938609

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	09/25/2017 21:34	WG1024084
Residual Range Organics (RRO)	571		250	1	09/25/2017 21:34	WG1024084
(S) o-Terphenyl	104		52.0-156		09/25/2017 21:34	WG1024084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
2-Methylphenol	ND		10.0	1	09/26/2017 18:44	WG1024111
3&4-Methyl Phenol	ND		10.0	1	09/26/2017 18:44	WG1024111
(S) 2-Fluorophenol	49.8		10.0-120		09/26/2017 18:44	WG1024111
(S) Phenol-d5	40.3		10.0-120		09/26/2017 18:44	WG1024111
(S) Nitrobenzene-d5	69.9		10.0-126		09/26/2017 18:44	WG1024111
(S) 2-Fluorobiphenyl	68.5		22.0-127		09/26/2017 18:44	WG1024111
(S) 2,4,6-Tribromophenol	81.8		10.0-153		09/26/2017 18:44	WG1024111
(S) p-Terphenyl-d14	58.8		29.0-141		09/26/2017 18:44	WG1024111

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Acenaphthene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Acenaphthylene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Fluorene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Naphthalene	ND		0.250	1	09/26/2017 05:32	WG1024102
Phenanthrene	ND		0.0500	1	09/26/2017 05:32	WG1024102
Pyrene	ND		0.0500	1	09/26/2017 05:32	WG1024102
1-Methylnaphthalene	ND		0.250	1	09/26/2017 05:32	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 05:32	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 05:32	WG1024102
(S) Nitrobenzene-d5	151		31.0-160		09/26/2017 05:32	WG1024102
(S) 2-Fluorobiphenyl	121		48.0-148		09/26/2017 05:32	WG1024102
(S) p-Terphenyl-d14	125		37.0-146		09/26/2017 05:32	WG1024102



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ND		100	1	09/29/2017 17:41	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	2550		100	1	09/29/2017 14:02	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	09/27/2017 12:11	WG1024988

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	18900		5000	1	09/29/2017 14:08	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	ND		100	1	09/29/2017 20:51	WG1025162
Lead	ND		2.00	1	09/29/2017 20:38	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 20:51	WG1025162
Manganese,Dissolved	18.5		5.00	1	09/29/2017 20:51	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	09/30/2017 15:57	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	101		77.0-122		09/30/2017 15:57	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ND		10.0	1	09/25/2017 11:45	WG1024154
Ethane	ND		13.0	1	09/25/2017 11:45	WG1024154
Ethene	ND		13.0	1	09/25/2017 11:45	WG1024154

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	09/26/2017 04:31	WG1024450
Toluene	ND		1.00	1	09/26/2017 04:31	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 04:31	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 04:31	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 04:31	WG1024450
(S) Toluene-d8	99.5		80.0-120		09/26/2017 04:31	WG1024450
(S) Dibromofluoromethane	117		76.0-123		09/26/2017 04:31	WG1024450
(S) a,a,a-Trifluorotoluene	96.0		80.0-120		09/26/2017 04:31	WG1024450
(S) 4-Bromofluorobenzene	108		80.0-120		09/26/2017 04:31	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	425		200	1	09/25/2017 22:24	WG1024084
Residual Range Organics (RRO)	744		250	1	09/25/2017 22:24	WG1024084
<i>(S) o-Terphenyl</i>	105		52.0-156		09/25/2017 22:24	WG1024084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	09/29/2017 17:42	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	7670		500	5	09/29/2017 14:03	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	09/27/2017 12:12	WG1024988

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	60400		5000	1	09/29/2017 14:38	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	09/29/2017 20:55	WG1025162
Lead	ND		2.00	1	09/29/2017 20:41	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 20:55	WG1025162
Manganese,Dissolved	22.2		5.00	1	09/29/2017 20:55	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 14:21	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	98.2		77.0-122		09/27/2017 14:21	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	09/25/2017 11:47	WG1024154
Ethane	ND		13.0	1	09/25/2017 11:47	WG1024154
Ethene	ND		13.0	1	09/25/2017 11:47	WG1024154

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 04:51	WG1024450
Toluene	ND		1.00	1	09/26/2017 04:51	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 04:51	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 04:51	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 04:51	WG1024450
(S) Toluene-d8	101		80.0-120		09/26/2017 04:51	WG1024450
(S) Dibromofluoromethane	118		76.0-123		09/26/2017 04:51	WG1024450
(S) a,a,a-Trifluorotoluene	97.9		80.0-120		09/26/2017 04:51	WG1024450
(S) 4-Bromofluorobenzene	107		80.0-120		09/26/2017 04:51	WG1024450



Collected date/time: 09/20/17 17:15

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Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	09/25/2017 22:40	WG1024084
Residual Range Organics (RRO)	274		250	1	09/25/2017 22:40	WG1024084
(S) o-Terphenyl	105		52.0-156		09/25/2017 22:40	WG1024084

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Acenaphthene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Acenaphthylene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Fluorene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Naphthalene	ND		0.250	1	09/26/2017 06:38	WG1024102
Phenanthrene	ND		0.0500	1	09/26/2017 06:38	WG1024102
Pyrene	ND		0.0500	1	09/26/2017 06:38	WG1024102
1-Methylnaphthalene	ND		0.250	1	09/26/2017 06:38	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 06:38	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 06:38	WG1024102
(S) Nitrobenzene-d5	151		31.0-160		09/26/2017 06:38	WG1024102
(S) 2-Fluorobiphenyl	121		48.0-148		09/26/2017 06:38	WG1024102
(S) p-Terphenyl-d14	115		37.0-146		09/26/2017 06:38	WG1024102

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	270		100	1	09/29/2017 17:44	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	09/29/2017 14:04	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	09/27/2017 12:13	WG1024988

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	10400000		1000000	200	09/29/2017 16:25	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Arsenic	9.20		2.00	1	09/29/2017 20:45	WG1025448
Arsenic,Dissolved	7.32		2.00	1	09/29/2017 20:58	WG1025162
Iron,Dissolved	3480		100	1	09/29/2017 20:58	WG1025162
Lead	ND		2.00	1	09/29/2017 20:45	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 20:58	WG1025162
Manganese,Dissolved	1370		5.00	1	09/29/2017 20:58	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 14:45	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	97.1		77.0-122		09/27/2017 14:45	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	3460		50.0	5	09/25/2017 15:17	WG1024359
Ethane	ND		13.0	1	09/25/2017 11:57	WG1024154
Ethene	ND		13.0	1	09/25/2017 11:57	WG1024154

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	09/26/2017 05:11	WG1024450
Toluene	ND		1.00	1	09/26/2017 05:11	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 05:11	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 05:11	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 05:11	WG1024450
(S) Toluene-d8	98.1		80.0-120		09/26/2017 05:11	WG1024450
(S) Dibromofluoromethane	120		76.0-123		09/26/2017 05:11	WG1024450
(S) a,a,a-Trifluorotoluene	94.8		80.0-120		09/26/2017 05:11	WG1024450
(S) 4-Bromofluorobenzene	108		80.0-120		09/26/2017 05:11	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2690		200	1	09/25/2017 22:57	WG1024084
Residual Range Organics (RRO)	2040		250	1	09/25/2017 22:57	WG1024084
(S) o-Terphenyl	108		52.0-156		09/25/2017 22:57	WG1024084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Acenaphthene	0.127		0.0500	1	09/26/2017 07:00	WG1024102
Acenaphthylene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Fluorene	0.262		0.0500	1	09/26/2017 07:00	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Naphthalene	ND		0.250	1	09/26/2017 07:00	WG1024102
Phenanthrene	ND		0.0500	1	09/26/2017 07:00	WG1024102
Pyrene	ND		0.0500	1	09/26/2017 07:00	WG1024102
1-Methylnaphthalene	ND		0.250	1	09/26/2017 07:00	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 07:00	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 07:00	WG1024102
(S) Nitrobenzene-d5	155		31.0-160		09/26/2017 07:00	WG1024102
(S) 2-Fluorobiphenyl	120		48.0-148		09/26/2017 07:00	WG1024102
(S) p-Terphenyl-d14	119		37.0-146		09/26/2017 07:00	WG1024102



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ND		100	1	09/29/2017 17:46	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	09/29/2017 14:05	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	09/27/2017 12:13	WG1024988

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	20200		5000	1	09/29/2017 14:58	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	1080		100	1	09/29/2017 21:02	WG1025162
Lead	ND		2.00	1	09/29/2017 20:48	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:02	WG1025162
Manganese,Dissolved	559		5.00	1	09/29/2017 21:02	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 15:09	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	97.1		77.0-122		09/27/2017 15:09	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	53.9		10.0	1	09/25/2017 12:03	WG1024154
Ethane	ND		13.0	1	09/25/2017 12:03	WG1024154
Ethene	ND		13.0	1	09/25/2017 12:03	WG1024154

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	09/26/2017 05:32	WG1024450
Toluene	ND		1.00	1	09/26/2017 05:32	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 05:32	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 05:32	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 05:32	WG1024450
(S) Toluene-d8	99.8		80.0-120		09/26/2017 05:32	WG1024450
(S) Dibromofluoromethane	118		76.0-123		09/26/2017 05:32	WG1024450
(S) a,a,a-Trifluorotoluene	96.5		80.0-120		09/26/2017 05:32	WG1024450
(S) 4-Bromofluorobenzene	109		80.0-120		09/26/2017 05:32	WG1024450



Collected date/time: 09/20/17 18:35

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Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	09/25/2017 23:13	WG1024084
Residual Range Organics (RRO)	315		250	1	09/25/2017 23:13	WG1024084
(S) o-Terphenyl	106		52.0-156		09/25/2017 23:13	WG1024084

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Acenaphthene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Acenaphthylene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Fluorene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Naphthalene	ND		0.250	1	09/26/2017 07:21	WG1024102
Phenanthrene	ND		0.0500	1	09/26/2017 07:21	WG1024102
Pyrene	ND		0.0500	1	09/26/2017 07:21	WG1024102
1-Methylnaphthalene	ND		0.250	1	09/26/2017 07:21	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 07:21	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 07:21	WG1024102
(S) Nitrobenzene-d5	147		31.0-160		09/26/2017 07:21	WG1024102
(S) 2-Fluorobiphenyl	106		48.0-148		09/26/2017 07:21	WG1024102
(S) p-Terphenyl-d14	114		37.0-146		09/26/2017 07:21	WG1024102

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	256		100	1	09/29/2017 17:47	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	09/29/2017 14:06	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	09/27/2017 12:13	WG1024988

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ND		5000	1	09/29/2017 15:08	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Arsenic	7.29		2.00	1	09/29/2017 20:52	WG1025448
Arsenic,Dissolved	7.23		2.00	1	09/29/2017 21:05	WG1025162
Iron,Dissolved	3370		100	1	09/29/2017 21:05	WG1025162
Lead	ND		2.00	1	09/29/2017 20:52	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:05	WG1025162
Manganese,Dissolved	1330		5.00	1	09/29/2017 21:05	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 15:33	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	96.7		77.0-122		09/27/2017 15:33	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	2700		50.0	5	09/25/2017 15:19	WG1024359
Ethane	ND		13.0	1	09/25/2017 12:01	WG1024154
Ethene	ND		13.0	1	09/25/2017 12:01	WG1024154

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	09/26/2017 05:52	WG1024450
Toluene	ND		1.00	1	09/26/2017 05:52	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 05:52	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 05:52	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 05:52	WG1024450
(S) Toluene-d8	98.1		80.0-120		09/26/2017 05:52	WG1024450
(S) Dibromofluoromethane	117		76.0-123		09/26/2017 05:52	WG1024450
(S) a,a,a-Trifluorotoluene	96.6		80.0-120		09/26/2017 05:52	WG1024450
(S) 4-Bromofluorobenzene	106		80.0-120		09/26/2017 05:52	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2410		200	1	09/25/2017 23:30	WG1024084
Residual Range Organics (RRO)	1960		250	1	09/25/2017 23:30	WG1024084
(S) o-Terphenyl	104		52.0-156		09/25/2017 23:30	WG1024084

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Acenaphthene	0.119		0.0500	1	09/26/2017 07:43	WG1024102
Acenaphthylene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Fluorene	0.243		0.0500	1	09/26/2017 07:43	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Naphthalene	ND		0.250	1	09/26/2017 07:43	WG1024102
Phenanthrene	ND		0.0500	1	09/26/2017 07:43	WG1024102
Pyrene	ND		0.0500	1	09/26/2017 07:43	WG1024102
1-Methylnaphthalene	ND		0.250	1	09/26/2017 07:43	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 07:43	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 07:43	WG1024102
(S) Nitrobenzene-d5	143		31.0-160		09/26/2017 07:43	WG1024102
(S) 2-Fluorobiphenyl	108		48.0-148		09/26/2017 07:43	WG1024102
(S) p-Terphenyl-d14	104		37.0-146		09/26/2017 07:43	WG1024102

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	09/29/2017 17:49	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	18400		500	5	09/29/2017 14:07	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	09/26/2017 16:08	WG1024478

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	28900		5000	1	09/29/2017 15:18	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	09/29/2017 21:09	WG1025162
Lead	ND		2.00	1	09/29/2017 20:55	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:09	WG1025162
Manganese,Dissolved	20.6		5.00	1	09/29/2017 21:09	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 15:57	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	97.0		77.0-122		09/27/2017 15:57	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	09/26/2017 10:45	WG1024401
Ethane	ND		13.0	1	09/26/2017 10:45	WG1024401
Ethene	ND		13.0	1	09/26/2017 10:45	WG1024401

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 06:13	WG1024450
Toluene	ND		1.00	1	09/26/2017 06:13	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 06:13	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 06:13	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 06:13	WG1024450
(S) Toluene-d8	98.1		80.0-120		09/26/2017 06:13	WG1024450
(S) Dibromofluoromethane	117		76.0-123		09/26/2017 06:13	WG1024450
(S) a,a,a-Trifluorotoluene	95.4		80.0-120		09/26/2017 06:13	WG1024450
(S) 4-Bromofluorobenzene	111		80.0-120		09/26/2017 06:13	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	09/25/2017 23:46	WG1024084
Residual Range Organics (RRO)	487		250	1	09/25/2017 23:46	WG1024084
<i>(S) o-Terphenyl</i>	110		52.0-156		09/25/2017 23:46	WG1024084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	09/29/2017 17:50	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	22200		1000	10	09/29/2017 14:08	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	09/26/2017 16:08	WG1024478

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	42500		5000	1	09/29/2017 15:28	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	09/29/2017 21:12	WG1025162
Lead	ND		2.00	1	09/29/2017 20:59	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:12	WG1025162
Manganese,Dissolved	7.24		5.00	1	09/29/2017 21:12	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	09/30/2017 16:20	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	100		77.0-122		09/30/2017 16:20	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	09/26/2017 10:01	WG1024401
Ethane	ND		13.0	1	09/26/2017 10:01	WG1024401
Ethene	ND		13.0	1	09/26/2017 10:01	WG1024401

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 06:33	WG1024450
Toluene	ND		1.00	1	09/26/2017 06:33	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 06:33	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 06:33	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 06:33	WG1024450
(S) Toluene-d8	98.8		80.0-120		09/26/2017 06:33	WG1024450
(S) Dibromofluoromethane	115		76.0-123		09/26/2017 06:33	WG1024450
(S) a,a,a-Trifluorotoluene	96.5		80.0-120		09/26/2017 06:33	WG1024450
(S) 4-Bromofluorobenzene	109		80.0-120		09/26/2017 06:33	WG1024450



Collected date/time: 09/19/17 10:20

L938609

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	09/26/2017 00:03	WG1024084
Residual Range Organics (RRO)	ND		250	1	09/26/2017 00:03	WG1024084
(S) o-Terphenyl	105		52.0-156		09/26/2017 00:03	WG1024084

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
2-Methylphenol	ND		10.0	1	09/27/2017 17:10	WG1023146
3&4-Methyl Phenol	ND		10.0	1	09/27/2017 17:10	WG1023146
(S) 2-Fluorophenol	42.6		10.0-120		09/27/2017 17:10	WG1023146
(S) Phenol-d5	27.2		10.0-120		09/27/2017 17:10	WG1023146
(S) Nitrobenzene-d5	67.0		10.0-126		09/27/2017 17:10	WG1023146
(S) 2-Fluorobiphenyl	64.2		22.0-127		09/27/2017 17:10	WG1023146
(S) 2,4,6-Tribromophenol	72.5		10.0-153		09/27/2017 17:10	WG1023146
(S) p-Terphenyl-d14	58.3		29.0-141		09/27/2017 17:10	WG1023146

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Acenaphthene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Acenaphthylene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Fluorene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Naphthalene	ND		0.250	1	09/26/2017 08:05	WG1024102
Phenanthrene	ND		0.0500	1	09/26/2017 08:05	WG1024102
Pyrene	ND		0.0500	1	09/26/2017 08:05	WG1024102
1-Methylnaphthalene	ND		0.250	1	09/26/2017 08:05	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 08:05	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 08:05	WG1024102
(S) Nitrobenzene-d5	141		31.0-160		09/26/2017 08:05	WG1024102
(S) 2-Fluorobiphenyl	113		48.0-148		09/26/2017 08:05	WG1024102
(S) p-Terphenyl-d14	121		37.0-146		09/26/2017 08:05	WG1024102

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	264		100	1	09/29/2017 17:52	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	368		100	1	09/29/2017 14:10	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	09/26/2017 16:09	WG1024478

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	6010		5000	1	09/29/2017 15:38	WG1025434

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	2800		100	1	09/29/2017 21:16	WG1025162
Lead	ND		2.00	1	09/29/2017 21:03	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:16	WG1025162
Manganese,Dissolved	800		5.00	1	09/29/2017 21:16	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 16:44	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	97.3		77.0-122		09/27/2017 16:44	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	805		10.0	1	09/26/2017 10:05	WG1024401
Ethane	ND		13.0	1	09/26/2017 10:05	WG1024401
Ethene	ND		13.0	1	09/26/2017 10:05	WG1024401

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	09/26/2017 06:53	WG1024450
Toluene	ND		1.00	1	09/26/2017 06:53	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 06:53	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 06:53	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 06:53	WG1024450
(S) Toluene-d8	98.2		80.0-120		09/26/2017 06:53	WG1024450
(S) Dibromofluoromethane	119		76.0-123		09/26/2017 06:53	WG1024450
(S) a,a,a-Trifluorotoluene	97.1		80.0-120		09/26/2017 06:53	WG1024450
(S) 4-Bromofluorobenzene	108		80.0-120		09/26/2017 06:53	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5920		1000	5	09/26/2017 21:18	WG1024084
Residual Range Organics (RRO)	3660		250	1	09/26/2017 00:19	WG1024084
(S) o-Terphenyl	116		52.0-156		09/26/2017 00:19	WG1024084
(S) o-Terphenyl	134		52.0-156		09/26/2017 21:18	WG1024084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	09/29/2017 17:53	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	3280		100	1	09/29/2017 14:11	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	09/26/2017 17:10	WG1024478

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	25200		5000	1	09/29/2017 13:14	WG1025435

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	09/29/2017 21:19	WG1025162
Lead	ND		2.00	1	09/29/2017 21:06	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:19	WG1025162
Manganese,Dissolved	ND		5.00	1	09/29/2017 21:19	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	09/30/2017 16:43	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	100		77.0-122		09/30/2017 16:43	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	09/26/2017 10:25	WG1024401
Ethane	ND		13.0	1	09/26/2017 10:25	WG1024401
Ethene	ND		13.0	1	09/26/2017 10:25	WG1024401

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 07:14	WG1024450
Toluene	ND		1.00	1	09/26/2017 07:14	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 07:14	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 07:14	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 07:14	WG1024450
(S) Toluene-d8	97.6		80.0-120		09/26/2017 07:14	WG1024450
(S) Dibromofluoromethane	118		76.0-123		09/26/2017 07:14	WG1024450
(S) a,a,a-Trifluorotoluene	97.9		80.0-120		09/26/2017 07:14	WG1024450
(S) 4-Bromofluorobenzene	108		80.0-120		09/26/2017 07:14	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	09/26/2017 00:36	WG1024084
Residual Range Organics (RRO)	322		250	1	09/26/2017 00:36	WG1024084
(S) o-Terphenyl	98.3		52.0-156		09/26/2017 00:36	WG1024084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
2-Methylphenol	ND		10.0	1	09/27/2017 17:33	WG1023146
3&4-Methyl Phenol	ND		10.0	1	09/27/2017 17:33	WG1023146
(S) 2-Fluorophenol	38.7		10.0-120		09/27/2017 17:33	WG1023146
(S) Phenol-d5	26.5		10.0-120		09/27/2017 17:33	WG1023146
(S) Nitrobenzene-d5	61.4		10.0-126		09/27/2017 17:33	WG1023146
(S) 2-Fluorobiphenyl	57.0		22.0-127		09/27/2017 17:33	WG1023146
(S) 2,4,6-Tribromophenol	76.3		10.0-153		09/27/2017 17:33	WG1023146
(S) p-Terphenyl-d14	55.1		29.0-141		09/27/2017 17:33	WG1023146

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Acenaphthene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Acenaphthylene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Fluorene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Naphthalene	ND		0.250	1	09/26/2017 08:27	WG1024102
Phenanthrene	ND		0.0500	1	09/26/2017 08:27	WG1024102
Pyrene	ND		0.0500	1	09/26/2017 08:27	WG1024102
1-Methylnaphthalene	ND		0.250	1	09/26/2017 08:27	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 08:27	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 08:27	WG1024102
(S) Nitrobenzene-d5	144		31.0-160		09/26/2017 08:27	WG1024102
(S) 2-Fluorobiphenyl	115		48.0-148		09/26/2017 08:27	WG1024102
(S) p-Terphenyl-d14	116		37.0-146		09/26/2017 08:27	WG1024102



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	290		100	1	09/29/2017 17:55	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	ND		100	1	09/29/2017 14:12	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	09/26/2017 17:12	WG1024478

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	ND		5000	1	09/29/2017 13:55	WG1025435

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	6050		100	1	09/29/2017 21:30	WG1025162
Lead	ND		2.00	1	09/29/2017 21:10	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:30	WG1025162
Manganese,Dissolved	2430		5.00	1	09/29/2017 21:30	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	233		100	1	09/27/2017 17:32	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	96.4		77.0-122		09/27/2017 17:32	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	7450		100	10	09/26/2017 12:25	WG1024690
Ethane	ND		13.0	1	09/26/2017 10:33	WG1024401
Ethene	ND		13.0	1	09/26/2017 10:33	WG1024401

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 07:34	WG1024450
Toluene	ND		1.00	1	09/26/2017 07:34	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 07:34	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 07:34	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 07:34	WG1024450
(S) Toluene-d8	97.7		80.0-120		09/26/2017 07:34	WG1024450
(S) Dibromofluoromethane	119		76.0-123		09/26/2017 07:34	WG1024450
(S) a,a,a-Trifluorotoluene	97.3		80.0-120		09/26/2017 07:34	WG1024450
(S) 4-Bromofluorobenzene	108		80.0-120		09/26/2017 07:34	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5030		1000	5	09/26/2017 21:35	WG1024084
Residual Range Organics (RRO)	2180		250	1	09/26/2017 00:52	WG1024084
(S) o-Terphenyl	108		52.0-156		09/26/2017 21:35	WG1024084
(S) o-Terphenyl	110		52.0-156		09/26/2017 00:52	WG1024084

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.126		0.0500	1	09/26/2017 08:49	WG1024102
Acenaphthene	0.741		0.0500	1	09/26/2017 08:49	WG1024102
Acenaphthylene	0.0541		0.0500	1	09/26/2017 08:49	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 08:49	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 08:49	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 08:49	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 08:49	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 08:49	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 08:49	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 08:49	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 08:49	WG1024102
Fluorene	0.835		0.0500	1	09/26/2017 08:49	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 08:49	WG1024102
Naphthalene	1.17		0.250	1	09/26/2017 08:49	WG1024102
Phenanthrene	ND		0.0500	1	09/26/2017 08:49	WG1024102
Pyrene	ND		0.0500	1	09/26/2017 08:49	WG1024102
1-Methylnaphthalene	10.6		0.250	1	09/26/2017 08:49	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 08:49	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 08:49	WG1024102
(S) Nitrobenzene-d5	129		31.0-160		09/26/2017 08:49	WG1024102
(S) 2-Fluorobiphenyl	106		48.0-148		09/26/2017 08:49	WG1024102
(S) p-Terphenyl-d14	113		37.0-146		09/26/2017 08:49	WG1024102

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	1410		100	1	09/29/2017 18:01	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	09/29/2017 14:17	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	09/26/2017 17:13	WG1024478

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ND		5000	1	09/29/2017 14:05	WG1025435

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	13100		100	1	09/29/2017 21:33	WG1025162
Lead	ND		2.00	1	09/29/2017 21:20	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:33	WG1025162
Manganese,Dissolved	2480		5.00	1	09/29/2017 21:33	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 17:55	WG1024796
(S) a, a, a-Trifluorotoluene(FID)	97.1		77.0-122		09/27/2017 17:55	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	5020		100	10	09/26/2017 12:27	WG1024690
Ethane	ND		13.0	1	09/26/2017 10:36	WG1024401
Ethene	ND		13.0	1	09/26/2017 10:36	WG1024401

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		5.00	5	10/02/2017 03:01	WG1024450
Toluene	ND		5.00	5	10/02/2017 03:01	WG1024450
Ethylbenzene	ND		5.00	5	10/02/2017 03:01	WG1024450
o-Xylene	ND		5.00	5	10/02/2017 03:01	WG1024450
m&p-Xylene	ND		10.0	5	10/02/2017 03:01	WG1024450
(S) Toluene-d8	97.9		80.0-120		10/02/2017 03:01	WG1024450
(S) Dibromofluoromethane	117		76.0-123		10/02/2017 03:01	WG1024450
(S) a, a, a-Trifluorotoluene	95.6		80.0-120		10/02/2017 03:01	WG1024450
(S) 4-Bromofluorobenzene	112		80.0-120		10/02/2017 03:01	WG1024450

Sample Narrative:



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
L938609-15 WG1024450: Lowest dilution due to sample foaming.						

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	14300		1000	5	09/26/2017 21:52	WG1024084
Residual Range Organics (RRO)	5610		1250	5	09/26/2017 21:52	WG1024084
(S) o-Terphenyl	115		52.0-156		09/26/2017 21:52	WG1024084

3 Ss

4 Cn

5 Sr

Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
2-Methylphenol	ND		10.0	1	09/26/2017 19:53	WG1024111
3&4-Methyl Phenol	ND		10.0	1	09/26/2017 19:53	WG1024111
(S) 2-Fluorophenol	57.9		10.0-120		09/26/2017 19:53	WG1024111
(S) Phenol-d5	44.0		10.0-120		09/26/2017 19:53	WG1024111
(S) Nitrobenzene-d5	75.5		10.0-126		09/26/2017 19:53	WG1024111
(S) 2-Fluorobiphenyl	74.7		22.0-127		09/26/2017 19:53	WG1024111
(S) 2,4,6-Tribromophenol	110		10.0-153		09/26/2017 19:53	WG1024111
(S) p-Terphenyl-d14	63.2		29.0-141		09/26/2017 19:53	WG1024111

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Acenaphthene	0.511		0.0500	1	09/26/2017 09:10	WG1024102
Acenaphthylene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Fluorene	0.747		0.0500	1	09/26/2017 09:10	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 09:10	WG1024102
Naphthalene	ND		0.250	1	09/26/2017 09:10	WG1024102
Phenanthrene	0.109		0.0500	1	09/26/2017 09:10	WG1024102
Pyrene	0.0562		0.0500	1	09/26/2017 09:10	WG1024102
1-Methylnaphthalene	0.445		0.250	1	09/26/2017 09:10	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 09:10	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 09:10	WG1024102
(S) Nitrobenzene-d5	163	J1	31.0-160		09/26/2017 09:10	WG1024102
(S) 2-Fluorobiphenyl	96.9		48.0-148		09/26/2017 09:10	WG1024102
(S) p-Terphenyl-d14	109		37.0-146		09/26/2017 09:10	WG1024102



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	09/29/2017 18:03	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	8920		500	5	09/29/2017 14:18	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	74.0		50.0	1	09/26/2017 17:14	WG1024478

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	54700		5000	1	09/29/2017 14:15	WG1025435

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	09/29/2017 21:37	WG1025162
Lead	ND		2.00	1	09/29/2017 21:24	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:37	WG1025162
Manganese,Dissolved	ND		5.00	1	09/29/2017 21:37	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 18:19	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	97.3		77.0-122		09/27/2017 18:19	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	09/26/2017 10:41	WG1024401
Ethane	ND		13.0	1	09/26/2017 10:41	WG1024401
Ethene	ND		13.0	1	09/26/2017 10:41	WG1024401

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 09:02	WG1024450
Toluene	ND		1.00	1	09/26/2017 09:02	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 09:02	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 09:02	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 09:02	WG1024450
(S) Toluene-d8	96.8		80.0-120		09/26/2017 09:02	WG1024450
(S) Dibromofluoromethane	115		76.0-123		09/26/2017 09:02	WG1024450
(S) a,a,a-Trifluorotoluene	97.0		80.0-120		09/26/2017 09:02	WG1024450
(S) 4-Bromofluorobenzene	107		80.0-120		09/26/2017 09:02	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	542		200	1	09/26/2017 01:25	WG1024084
Residual Range Organics (RRO)	1260		250	1	09/26/2017 01:25	WG1024084
<i>(S) o-Terphenyl</i>	102		52.0-156		09/26/2017 01:25	WG1024084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	186		100	1	09/29/2017 18:05	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	09/29/2017 14:19	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	09/26/2017 17:14	WG1024478

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ND		5000	1	09/29/2017 14:45	WG1025435

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	5500		100	1	09/29/2017 21:40	WG1025162
Lead	ND		2.00	1	09/29/2017 21:27	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:40	WG1025162
Manganese,Dissolved	2890		5.00	1	09/29/2017 21:40	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	119		100	1	09/27/2017 18:43	WG1024796
(S) a, a, a-Trifluorotoluene(FID)	96.9		77.0-122		09/27/2017 18:43	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	1250		10.0	1	09/26/2017 10:57	WG1024401
Ethane	ND		13.0	1	09/26/2017 10:57	WG1024401
Ethene	ND		13.0	1	09/26/2017 10:57	WG1024401

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		5.00	5	10/02/2017 19:57	WG1024450
Toluene	ND		5.00	5	10/02/2017 19:57	WG1024450
Ethylbenzene	ND		5.00	5	10/02/2017 19:57	WG1024450
o-Xylene	ND		5.00	5	10/02/2017 19:57	WG1024450
m&p-Xylene	ND		10.0	5	10/02/2017 19:57	WG1024450
(S) Toluene-d8	107		80.0-120		10/02/2017 19:57	WG1024450
(S) Dibromofluoromethane	96.3		76.0-123		10/02/2017 19:57	WG1024450
(S) a, a, a-Trifluorotoluene	100		80.0-120		10/02/2017 19:57	WG1024450
(S) 4-Bromofluorobenzene	103		80.0-120		10/02/2017 19:57	WG1024450

Sample Narrative:



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
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L938609-17 WG1024450: Lowest dilution due to sample foaming.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5030		1000	5	09/26/2017 22:09	WG1024084
Residual Range Organics (RRO)	3080		250	1	09/26/2017 01:41	WG1024084
(S) o-Terphenyl	120		52.0-156		09/26/2017 22:09	WG1024084
(S) o-Terphenyl	123		52.0-156		09/26/2017 01:41	WG1024084

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Acenaphthene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Acenaphthylene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Fluorene	0.206		0.0500	1	09/26/2017 09:32	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Naphthalene	0.280		0.250	1	09/26/2017 09:32	WG1024102
Phenanthrene	ND		0.0500	1	09/26/2017 09:32	WG1024102
Pyrene	0.0761		0.0500	1	09/26/2017 09:32	WG1024102
1-Methylnaphthalene	ND		0.250	1	09/26/2017 09:32	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 09:32	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 09:32	WG1024102
(S) Nitrobenzene-d5	144		31.0-160		09/26/2017 09:32	WG1024102
(S) 2-Fluorobiphenyl	116		48.0-148		09/26/2017 09:32	WG1024102
(S) p-Terphenyl-d14	114		37.0-146		09/26/2017 09:32	WG1024102

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	ND		100	1	09/29/2017 18:06	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	3370		100	1	09/29/2017 14:20	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	09/26/2017 17:14	WG1024478

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	18300		5000	1	09/29/2017 14:56	WG1025435

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	ND		100	1	09/29/2017 21:44	WG1025162
Lead	ND		2.00	1	09/29/2017 21:31	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:44	WG1025162
Manganese,Dissolved	442		5.00	1	09/29/2017 21:44	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	09/27/2017 19:06	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	97.1		77.0-122		09/27/2017 19:06	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ND		10.0	1	09/26/2017 11:00	WG1024401
Ethane	ND		13.0	1	09/26/2017 11:00	WG1024401
Ethene	ND		13.0	1	09/26/2017 11:00	WG1024401

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	09/26/2017 09:37	WG1024450
Toluene	ND		1.00	1	09/26/2017 09:37	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 09:37	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 09:37	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 09:37	WG1024450
(S) Toluene-d8	97.5		80.0-120		09/26/2017 09:37	WG1024450
(S) Dibromofluoromethane	121		76.0-123		09/26/2017 09:37	WG1024450
(S) a,a,a-Trifluorotoluene	96.4		80.0-120		09/26/2017 09:37	WG1024450
(S) 4-Bromofluorobenzene	107		80.0-120		09/26/2017 09:37	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	541		200	1	09/26/2017 01:58	WG1024084
Residual Range Organics (RRO)	840		250	1	09/26/2017 01:58	WG1024084
<i>(S) o-Terphenyl</i>	112		52.0-156		09/26/2017 01:58	WG1024084

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	191		100	1	09/29/2017 18:08	WG1025662

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	ND		100	1	09/29/2017 14:21	WG1025665

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	09/26/2017 17:15	WG1024478

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	ND		5000	1	09/29/2017 15:06	WG1025435

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	5500		100	1	09/29/2017 21:48	WG1025162
Lead	ND		2.00	1	09/29/2017 21:34	WG1025448
Lead,Dissolved	ND		2.00	1	09/29/2017 21:48	WG1025162
Manganese,Dissolved	2910		5.00	1	09/29/2017 21:48	WG1025162

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	108		100	1	09/27/2017 19:30	WG1024796
(S) a,a,a-Trifluorotoluene(FID)	96.8		77.0-122		09/27/2017 19:30	WG1024796

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	1190		10.0	1	09/26/2017 11:02	WG1024401
Ethane	ND		13.0	1	09/26/2017 11:02	WG1024401
Ethene	ND		13.0	1	09/26/2017 11:02	WG1024401

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 09:57	WG1024450
Toluene	ND		1.00	1	09/26/2017 09:57	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 09:57	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 09:57	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 09:57	WG1024450
(S) Toluene-d8	96.4		80.0-120		09/26/2017 09:57	WG1024450
(S) Dibromofluoromethane	119		76.0-123		09/26/2017 09:57	WG1024450
(S) a,a,a-Trifluorotoluene	97.1		80.0-120		09/26/2017 09:57	WG1024450
(S) 4-Bromofluorobenzene	106		80.0-120		09/26/2017 09:57	WG1024450



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5310		1000	5	09/26/2017 22:26	WG1024084
Residual Range Organics (RRO)	3170		250	1	09/26/2017 02:14	WG1024084
(S) o-Terphenyl	126		52.0-156		09/26/2017 22:26	WG1024084
(S) o-Terphenyl	124		52.0-156		09/26/2017 02:14	WG1024084

1 Cp

2 Tc

3 Ss

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Acenaphthene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Acenaphthylene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Benzo(a)anthracene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Benzo(a)pyrene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Benzo(b)fluoranthene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Benzo(g,h,i)perylene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Benzo(k)fluoranthene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Chrysene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Dibenz(a,h)anthracene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Fluoranthene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Fluorene	0.218		0.0500	1	09/26/2017 09:54	WG1024102
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Naphthalene	0.274		0.250	1	09/26/2017 09:54	WG1024102
Phenanthrene	ND		0.0500	1	09/26/2017 09:54	WG1024102
Pyrene	0.0770		0.0500	1	09/26/2017 09:54	WG1024102
1-Methylnaphthalene	ND		0.250	1	09/26/2017 09:54	WG1024102
2-Methylnaphthalene	ND		0.250	1	09/26/2017 09:54	WG1024102
2-Chloronaphthalene	ND		0.250	1	09/26/2017 09:54	WG1024102
(S) Nitrobenzene-d5	140		31.0-160		09/26/2017 09:54	WG1024102
(S) 2-Fluorobiphenyl	113		48.0-148		09/26/2017 09:54	WG1024102
(S) p-Terphenyl-d14	112		37.0-146		09/26/2017 09:54	WG1024102

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 00:42	WG1024450
Toluene	ND		1.00	1	09/26/2017 00:42	WG1024450
Ethylbenzene	ND		1.00	1	09/26/2017 00:42	WG1024450
o-Xylene	ND		1.00	1	09/26/2017 00:42	WG1024450
m&p-Xylene	ND		2.00	1	09/26/2017 00:42	WG1024450
(S) Toluene-d8	105		80.0-120		09/26/2017 00:42	WG1024450
(S) Dibromofluoromethane	111		76.0-123		09/26/2017 00:42	WG1024450
(S) a,a,a-Trifluorotoluene	99.7		80.0-120		09/26/2017 00:42	WG1024450
(S) 4-Bromofluorobenzene	110		80.0-120		09/26/2017 00:42	WG1024450

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 12:47	WG1024675
Toluene	ND		1.00	1	09/26/2017 12:47	WG1024675
Ethylbenzene	ND		1.00	1	09/26/2017 12:47	WG1024675
o-Xylene	ND		1.00	1	09/26/2017 12:47	WG1024675
m&p-Xylene	ND		2.00	1	09/26/2017 12:47	WG1024675
(S) Toluene-d8	97.9		80.0-120		09/26/2017 12:47	WG1024675
(S) Dibromofluoromethane	115		76.0-123		09/26/2017 12:47	WG1024675
(S) a,a,a-Trifluorotoluene	97.0		80.0-120		09/26/2017 12:47	WG1024675
(S) 4-Bromofluorobenzene	108		80.0-120		09/26/2017 12:47	WG1024675

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	09/26/2017 13:08	WG1024675
Toluene	ND		1.00	1	09/26/2017 13:08	WG1024675
Ethylbenzene	ND		1.00	1	09/26/2017 13:08	WG1024675
o-Xylene	ND		1.00	1	09/26/2017 13:08	WG1024675
m&p-Xylene	ND		2.00	1	09/26/2017 13:08	WG1024675
(S) Toluene-d8	98.1		80.0-120		09/26/2017 13:08	WG1024675
(S) Dibromofluoromethane	118		76.0-123		09/26/2017 13:08	WG1024675
(S) a,a,a-Trifluorotoluene	96.6		80.0-120		09/26/2017 13:08	WG1024675
(S) 4-Bromofluorobenzene	109		80.0-120		09/26/2017 13:08	WG1024675

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3253591-1 09/29/17 17:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L938609-03 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-03 09/29/17 17:28 • (DUP) R3253591-4 09/29/17 17:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	396	402	1	2		20

L938609-19 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-19 09/29/17 18:08 • (DUP) R3253591-7 09/29/17 18:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	191	192	1	1		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3253591-2 09/29/17 17:22 • (LCSD) R3253591-3 09/29/17 17:23

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7370	7420	98	99	90-110			1	20

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/29/17 17:31 • (MS) R3253591-5 09/29/17 17:33 • (MSD) R3253591-6 09/29/17 17:34

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	5000	179	5090	5090	98	98	1	90-110			0	20

L938616-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L938616-02 09/29/17 18:11 • (MS) R3253591-8 09/29/17 18:12

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	5280	9990	94	1	90-110	



Method Blank (MB)

(MB) R3253499-1 09/29/17 13:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L938609-03 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-03 09/29/17 13:53 • (DUP) R3253499-4 09/29/17 13:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	0		20

L938609-19 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-19 09/29/17 14:21 • (DUP) R3253499-7 09/29/17 14:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3253499-2 09/29/17 13:48 • (LCSD) R3253499-3 09/29/17 13:50

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	3880	3860	97	97	90-110			0	20

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/29/17 13:55 • (MS) R3253499-5 09/29/17 13:56 • (MSD) R3253499-6 09/29/17 13:57

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	2500	1540	3950	3980	96	97	1	90-110			1	20

L938679-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L938679-01 09/29/17 14:23 • (MS) R3253499-8 09/29/17 14:24

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	192	2270	83	1	90-110	J6



Method Blank (MB)

(MB) R3252513-1 09/26/17 16:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L938609-11 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-11 09/26/17 16:08 • (DUP) R3252513-5 09/26/17 16:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3252513-2 09/26/17 16:01 • (LCSD) R3252513-3 09/26/17 16:01

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	527	526	105	105	85-115			0	20

L938609-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-19 09/26/17 17:15 • (MS) R3252513-6 09/26/17 17:15 • (MSD) R3252513-7 09/26/17 17:15

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfide	1000	ND	855	855	86	86	1	80-120			0	20



Method Blank (MB)

(MB) R3252697-1 09/27/17 12:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L937984-01 Original Sample (OS) • Duplicate (DUP)

(OS) L937984-01 09/27/17 12:07 • (DUP) R3252697-4 09/27/17 12:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0		20

L938609-09 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-09 09/27/17 12:13 • (DUP) R3252697-7 09/27/17 12:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3252697-2 09/27/17 12:07 • (LCSD) R3252697-3 09/27/17 12:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	521	521	104	104	85-115			0	20

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/27/17 12:10 • (MS) R3252697-5 09/27/17 12:11 • (MSD) R3252697-6 09/27/17 12:11

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfide	1000	ND	766	766	77	77	1	80-120	J6	J6	0	20



Method Blank (MB)

(MB) R3253555-1 09/29/17 10:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L938609-04 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-04 09/29/17 13:29 • (DUP) R3253555-6 09/29/17 13:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	25500	27800	1	9		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3253555-2 09/29/17 10:30 • (LCSD) R3253555-3 09/29/17 10:39

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	40400	40400	101	101	80-120			0	15

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/29/17 13:29 • (MS) R3253555-7 09/29/17 13:49 • (MSD) R3253555-8 09/29/17 13:58

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfate	50000	25500	71900	72400	93	94	1	80-120			1	15



Method Blank (MB)

(MB) R3253553-1 09/29/17 12:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L938609-13 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-13 09/29/17 13:14 • (DUP) R3253553-4 09/29/17 13:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	25200	25000	1	1		15

L938808-09 Original Sample (OS) • Duplicate (DUP)

(OS) L938808-09 09/29/17 17:28 • (DUP) R3253553-7 09/29/17 17:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	41600	36800	1	12		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3253553-2 09/29/17 12:33 • (LCSD) R3253553-3 09/29/17 12:43

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	39700	39700	99	99	80-120			0	15

L938609-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-13 09/29/17 13:14 • (MS) R3253553-5 09/29/17 13:34 • (MSD) R3253553-6 09/29/17 13:44

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfate	50000	25200	65000	65300	80	80	1	80-120			0	15

L938808-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L938808-09 09/29/17 17:28 • (MS) R3253553-8 09/29/17 17:48

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	41600	83500	84	1	80-120	



Method Blank (MB)

(MB) R3253653-1 09/29/17 20:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		0.250	2.00
Iron,Dissolved	U		15.0	100
Lead,Dissolved	0.327	↓	0.240	2.00
Manganese,Dissolved	0.614	↓	0.250	5.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3253653-2 09/29/17 20:12 • (LCSD) R3253653-3 09/29/17 20:16

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 %
Arsenic,Dissolved	50.0	49.1	47.7	98	95	80-120			3	20
Iron,Dissolved	5000	4980	4980	100	100	80-120			0	20
Lead,Dissolved	50.0	49.6	49.5	99	99	80-120			0	20
Manganese,Dissolved	50.0	46.8	47.1	94	94	80-120			0	20

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/29/17 20:19 • (MS) R3253653-5 09/29/17 20:26 • (MSD) R3253653-6 09/29/17 20:30

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 %
Arsenic,Dissolved	50.0	14.6	62.1	61.3	95	93	1	75-125			1	20
Iron,Dissolved	5000	ND	4950	4930	99	99	1	75-125			0	20
Lead,Dissolved	50.0	ND	49.9	48.7	99	96	1	75-125			3	20
Manganese,Dissolved	50.0	683	707	716	47	65	1	75-125	↓	↓	1	20



Method Blank (MB)

(MB) R3253627-1 09/29/17 19:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		0.250	2.00
Lead	0.372	J	0.240	2.00

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3253627-2 09/29/17 19:59 • (LCSD) R3253627-3 09/29/17 20:03

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	50.0	46.6	46.9	93	94	80-120			1	20
Lead	50.0	46.3	46.7	93	93	80-120			1	20

5 Sr

6 Qc

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/29/17 20:06 • (MS) R3253627-5 09/29/17 20:13 • (MSD) R3253627-6 09/29/17 20:17

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	50.0	14.5	62.8	60.5	96	92	1	75-125			4	20
Lead	50.0	ND	47.8	46.9	96	94	1	75-125			2	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3253568-3 09/27/17 11:59

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	97.6			77.0-122

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3253568-1 09/27/17 10:48 • (LCSD) R3253568-2 09/27/17 11:11

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 %
Gasoline Range Organics-NWTPH	5500	4900	5360	89.1	97.5	72.0-134			9.06	20
(S) a,a,a-Trifluorotoluene(FID)				106	106	77.0-122				

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/27/17 13:34 • (MS) R3253568-4 09/27/17 20:18 • (MSD) R3253568-5 09/27/17 20:41

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 %
Gasoline Range Organics-NWTPH	5500	ND	7340	10500	134	191	1	23.0-159		J3 J5	35.7	20
(S) a,a,a-Trifluorotoluene(FID)					111	114		77.0-122				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3252008-1 09/25/17 10:04

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L938384-10 Original Sample (OS) • Duplicate (DUP)

(OS) L938384-10 09/25/17 10:30 • (DUP) R3252008-2 09/25/17 11:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L938609-08 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-08 09/25/17 12:03 • (DUP) R3252008-3 09/25/17 12:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	53.9	57.7	1	6.86		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3252008-4 09/25/17 12:16 • (LCSD) R3252008-5 09/25/17 12:18

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	%	%	%			%	%
Methane	67.8	71.6	70.4	106	104	85.0-115			1.76	20
Ethane	129	125	127	97.1	98.4	85.0-115			1.33	20
Ethene	127	121	121	94.9	95.1	85.0-115			0.150	20



Method Blank (MB)

(MB) R3252096-1 09/25/17 14:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L938351-03 Original Sample (OS) • Duplicate (DUP)

(OS) L938351-03 09/25/17 14:47 • (DUP) R3252096-2 09/25/17 15:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	10900	10700	20	1.58		20

L938609-03 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-03 09/25/17 15:14 • (DUP) R3252096-3 09/25/17 15:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	1670	1700	2	1.67		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3252096-4 09/25/17 15:26 • (LCSD) R3252096-5 09/25/17 15:29

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	72.4	69.6	107	103	85.0-115			3.96	20



Method Blank (MB)

(MB) R3252298-1 09/26/17 09:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L938609-10 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-10 09/26/17 10:45 • (DUP) R3252298-2 09/26/17 10:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L938673-01 Original Sample (OS) • Duplicate (DUP)

(OS) L938673-01 09/26/17 11:23 • (DUP) R3252298-3 09/26/17 11:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3252298-4 09/26/17 11:46 • (LCSD) R3252298-5 09/26/17 11:54

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	%	%	%			%	%
Methane	67.8	67.5	66.1	99.5	97.5	85.0-115			2.08	20
Ethane	129	124	123	96.3	95.4	85.0-115			0.980	20
Ethene	127	119	118	93.8	93.2	85.0-115			0.610	20



Method Blank (MB)

(MB) R3252373-1 09/26/17 12:19

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L938609-14 Original Sample (OS) • Duplicate (DUP)

(OS) L938609-14 09/26/17 12:25 • (DUP) R3252373-2 09/26/17 12:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	7450	7410	10	0.590		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3252373-3 09/26/17 13:25 • (LCSD) R3252373-4 09/26/17 13:31

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	76.0	66.1	112	97.5	85.0-115			14.0	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3253780-3 09/26/17 00:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Toluene	U		0.412	1.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	102			80.0-120
(S) Dibromofluoromethane	112			76.0-123
(S) a,a,a-Trifluorotoluene	98.1			80.0-120
(S) 4-Bromofluorobenzene	109			80.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3253780-1 09/25/17 23:16 • (LCSD) R3253780-2 09/25/17 23:37

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	%	%	%			%	%
Benzene	25.0	26.3	27.0	105	108	69.0-123			2.69	20
Ethylbenzene	25.0	25.9	26.0	104	104	77.0-120			0.160	20
Toluene	25.0	24.8	25.4	99.3	101	77.0-120			2.10	20
o-Xylene	25.0	25.8	26.1	103	104	78.0-120			1.14	20
m&p-Xylenes	50.0	52.2	52.7	104	105	77.0-120			0.790	20
(S) Toluene-d8				101	100	80.0-120				
(S) Dibromofluoromethane				102	105	76.0-123				
(S) a,a,a-Trifluorotoluene				97.9	98.6	80.0-120				
(S) 4-Bromofluorobenzene				95.8	98.3	80.0-120				

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/26/17 04:10 • (MS) R3253780-4 09/26/17 10:18 • (MSD) R3253780-5 09/26/17 10:38

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	%	%		%			%	%
Benzene	25.0	ND	28.0	27.1	112	109	1	34.0-147			3.27	20
Ethylbenzene	25.0	ND	24.2	24.8	96.6	99.4	1	42.0-147			2.78	20
Toluene	25.0	ND	24.0	24.6	96.0	98.6	1	42.0-141			2.59	20
o-Xylene	25.0	ND	24.3	25.2	97.4	101	1	44.0-146			3.56	20
m&p-Xylenes	50.0	ND	49.4	51.5	98.7	103	1	41.0-147			4.18	20
(S) Toluene-d8					95.4	97.8		80.0-120				
(S) Dibromofluoromethane					111	109		76.0-123				
(S) a,a,a-Trifluorotoluene					92.3	96.3		80.0-120				
(S) 4-Bromofluorobenzene					97.1	97.3		80.0-120				



Method Blank (MB)

(MB) R3252894-3 09/26/17 12:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Toluene	U		0.412	1.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
<i>(S) Toluene-d8</i>	98.6			80.0-120
<i>(S) Dibromofluoromethane</i>	117			76.0-123
<i>(S) a,a,a-Trifluorotoluene</i>	97.1			80.0-120
<i>(S) 4-Bromofluorobenzene</i>	108			80.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3252894-1 09/26/17 11:26 • (LCSD) R3252894-2 09/26/17 11:46

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	%	%	%			%	%
Benzene	25.0	26.5	25.5	106	102	69.0-123			3.52	20
Ethylbenzene	25.0	23.1	23.6	92.3	94.3	77.0-120			2.11	20
o-Xylene	25.0	24.0	24.2	95.9	96.9	78.0-120			1.01	20
m&p-Xylenes	50.0	47.8	48.5	95.6	97.0	77.0-120			1.52	20
Toluene	25.0	22.8	23.3	91.1	93.2	77.0-120			2.35	20
<i>(S) Toluene-d8</i>				97.8	99.5	80.0-120				
<i>(S) Dibromofluoromethane</i>				110	108	76.0-123				
<i>(S) a,a,a-Trifluorotoluene</i>				95.2	98.0	80.0-120				
<i>(S) 4-Bromofluorobenzene</i>				96.4	99.5	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3252310-1 09/25/17 19:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	99.9			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3252310-2 09/25/17 20:12 • (LCSD) R3252310-3 09/25/17 20:29

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	807	885	108	118	50.0-150			9.17	20
Residual Range Organics (RRO)	750	760	838	101	112	50.0-150			9.73	20
(S) o-Terphenyl				107	116	52.0-156				

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/25/17 21:34 • (MS) R3252310-4 09/25/17 21:51 • (MSD) R3252310-5 09/25/17 22:08

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	%	%		%			%	%
Diesel Range Organics (DRO)	750	ND	1010	955	112	105	1	50.0-150			5.43	20
Residual Range Organics (RRO)	750	571	1250	1150	90.0	77.3	1	50.0-150			7.99	20
(S) o-Terphenyl					112	105		52.0-156				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3252756-3 09/27/17 10:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
2-Methylphenol	U		0.312	10.0
3&4-Methyl Phenol	U		0.266	10.0
(S) Nitrobenzene-d5	57.1			10.0-126
(S) 2-Fluorobiphenyl	61.8			22.0-127
(S) p-Terphenyl-d14	62.2			29.0-141
(S) Phenol-d5	22.5			10.0-120
(S) 2-Fluorophenol	33.3			10.0-120
(S) 2,4,6-Tribromophenol	76.3			10.0-153

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) R3252756-1 09/27/17 09:49 • (LCSD) R3252756-2 09/27/17 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	%	%	%			%	%
2-Methylphenol	50.0	26.9	26.3	53.8	52.7	26.0-120			2.06	27
3&4-Methyl Phenol	50.0	28.5	28.8	57.0	57.6	27.0-120			1.11	28
(S) Nitrobenzene-d5				66.7	62.9	10.0-126				
(S) 2-Fluorobiphenyl				71.8	69.7	22.0-127				
(S) p-Terphenyl-d14				59.3	58.8	29.0-141				
(S) Phenol-d5				25.4	27.0	10.0-120				
(S) 2-Fluorophenol				38.4	38.8	10.0-120				
(S) 2,4,6-Tribromophenol				92.8	95.4	10.0-153				



Method Blank (MB)

(MB) R3252461-3 09/26/17 11:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
2-Methylphenol	U		0.312	10.0
3&4-Methyl Phenol	U		0.266	10.0
(S) Nitrobenzene-d5	75.6			10.0-126
(S) 2-Fluorobiphenyl	77.4			22.0-127
(S) p-Terphenyl-d14	62.1			29.0-141
(S) Phenol-d5	45.6			10.0-120
(S) 2-Fluorophenol	59.8			10.0-120
(S) 2,4,6-Tribromophenol	70.8			10.0-153

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) R3252461-1 09/26/17 10:59 • (LCSD) R3252461-2 09/26/17 11:23

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	%	%	%			%	%
2-Methylphenol	50.0	36.1	36.3	72.1	72.6	26.0-120			0.690	27
3&4-Methyl Phenol	50.0	41.2	40.9	82.5	81.8	27.0-120			0.830	28
(S) Nitrobenzene-d5				79.7	76.1	10.0-126				
(S) 2-Fluorobiphenyl				90.5	82.0	22.0-127				
(S) p-Terphenyl-d14				74.5	68.4	29.0-141				
(S) Phenol-d5				49.1	46.7	10.0-120				
(S) 2-Fluorophenol				67.2	63.2	10.0-120				
(S) 2,4,6-Tribromophenol				113	104	10.0-153				

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/26/17 18:44 • (MS) R3252461-4 09/26/17 19:07 • (MSD) R3252461-5 09/26/17 19:30

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	%	%		%			%	%
2-Methylphenol	50.0	ND	33.6	32.6	67.1	65.2	1	14.0-120			2.81	29
3&4-Methyl Phenol	50.0	ND	37.9	35.9	75.7	71.9	1	13.0-124			5.26	26
(S) Nitrobenzene-d5					75.1	66.9		10.0-126				
(S) 2-Fluorobiphenyl					81.5	73.6		22.0-127				
(S) p-Terphenyl-d14					64.3	61.7		29.0-141				
(S) Phenol-d5					44.1	40.3		10.0-120				
(S) 2-Fluorophenol					54.6	52.5		10.0-120				
(S) 2,4,6-Tribromophenol					103	93.6		10.0-153				



Method Blank (MB)

(MB) R3252712-3 09/26/17 01:54

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	U		0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	U		0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	139			31.0-160
(S) 2-Fluorobiphenyl	112			48.0-148
(S) p-Terphenyl-d14	112			37.0-146

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) R3252712-1 09/26/17 01:11 • (LCSD) R3252712-2 09/26/17 01:33

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 %
Anthracene	2.00	2.49	2.32	124	116	64.0-142			7.04	20
Acenaphthene	2.00	2.23	2.10	111	105	66.0-132			6.06	20
Acenaphthylene	2.00	2.32	2.18	116	109	65.0-132			6.30	20
Benzo(a)anthracene	2.00	2.32	2.19	116	109	59.0-134			5.76	20
Benzo(a)pyrene	2.00	2.18	1.97	109	98.5	61.0-145			9.93	20
Benzo(b)fluoranthene	2.00	2.26	2.03	113	101	57.0-136			10.7	20
Benzo(g,h,i)perylene	2.00	1.91	1.84	95.4	92.2	54.0-140			3.38	20
Benzo(k)fluoranthene	2.00	2.05	1.81	103	90.6	57.0-141			12.4	20
Chrysene	2.00	2.37	2.26	119	113	63.0-140			5.12	20
Dibenz(a,h)anthracene	2.00	1.92	1.84	95.8	91.8	49.0-141			4.29	20
Fluoranthene	2.00	2.38	2.19	119	109	65.0-143			8.57	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3252712-1 09/26/17 01:11 • (LCSD) R3252712-2 09/26/17 01:33

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 %
Fluorene	2.00	2.22	2.09	111	104	64.0-129			6.36	20
Indeno(1,2,3-cd)pyrene	2.00	1.96	1.90	97.9	95.2	53.0-141			2.78	20
Naphthalene	2.00	2.24	2.11	112	106	68.0-129			5.81	20
Phenanthrene	2.00	2.19	2.05	109	103	62.0-132			6.25	20
Pyrene	2.00	2.65	2.44	133	122	58.0-156			8.30	20
1-Methylnaphthalene	2.00	2.31	2.17	116	109	68.0-137			6.14	20
2-Methylnaphthalene	2.00	2.19	2.07	110	103	68.0-134			5.84	20
2-Chloronaphthalene	2.00	2.30	2.15	115	108	65.0-129			6.61	20
(S) Nitrobenzene-d5				153	141	31.0-160				
(S) 2-Fluorobiphenyl				121	113	48.0-148				
(S) p-Terphenyl-d14				123	111	37.0-146				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L938609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L938609-04 09/26/17 05:32 • (MS) R3252712-4 09/26/17 05:54 • (MSD) R3252712-5 09/26/17 06:16

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 %
Anthracene	2.00	ND	2.47	2.50	124	125	1	60.0-142			1.07	20
Acenaphthene	2.00	ND	2.11	2.19	106	110	1	46.0-149			3.87	20
Acenaphthylene	2.00	ND	2.21	2.30	110	115	1	54.0-142			4.11	20
Benzo(a)anthracene	2.00	ND	2.22	2.30	111	115	1	55.0-134			3.61	20
Benzo(a)pyrene	2.00	ND	2.09	2.17	105	109	1	58.0-136			3.88	20
Benzo(b)fluoranthene	2.00	ND	2.11	2.15	106	107	1	54.0-130			1.79	20
Benzo(g,h,i)perylene	2.00	ND	2.16	2.24	108	112	1	46.0-135			3.42	20
Benzo(k)fluoranthene	2.00	ND	1.96	2.05	97.8	102	1	52.0-131			4.57	20
Chrysene	2.00	ND	2.29	2.37	115	119	1	55.0-137			3.39	20
Dibenz(a,h)anthracene	2.00	ND	2.20	2.26	110	113	1	36.0-140			2.85	20
Fluoranthene	2.00	ND	2.36	2.41	118	121	1	58.0-144			2.47	20
Fluorene	2.00	ND	2.08	2.18	104	109	1	49.0-142			4.69	20
Indeno(1,2,3-cd)pyrene	2.00	ND	2.18	2.24	109	112	1	46.0-134			2.64	20
Naphthalene	2.00	ND	2.14	2.20	107	110	1	29.0-154			3.08	20
Phenanthrene	2.00	ND	2.05	2.16	103	108	1	44.0-145			5.03	20
Pyrene	2.00	ND	2.45	2.54	122	127	1	62.0-150			3.55	20
1-Methylnaphthalene	2.00	ND	2.13	2.29	106	114	1	26.0-160			7.13	20
2-Methylnaphthalene	2.00	ND	2.05	2.17	103	108	1	51.0-150			5.46	20
2-Chloronaphthalene	2.00	ND	2.08	2.21	104	110	1	57.0-136			6.00	20
(S) Nitrobenzene-d5					145	152		31.0-160				
(S) 2-Fluorobiphenyl					107	120		48.0-148				
(S) p-Terphenyl-d14					115	122		37.0-146				



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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, 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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Report to: **Ryan Hultgren**

Project Description: **BNSF - Wishram Railyard, WA**

City/State Collected: **Wishram, WA**

Client Project #: **1796120*00**

Lab Project #: **BNSF1KEN-WISHRAM**

Site/Facility ID #: **BNSF Wishram**

P.O. #: **4358**

Quote #

Immediately Packed on Ice **N** **Y**

Billing Information:

Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Email To: **Ryan.Hultgren@kennedyjenks.com,**
Joseph.Sawdey@kennedyjenks.com,

Pres Chk	Analysis / Container / Preservative
✓	8270 - Cresols 100ml Amb NoPres
✓	Diss. As, Fe, Mn, Pb 250mlHDPE-HNO3
✓	Diss. Fe, Mn, Pb 250mlHDPE-HNO3
✓	NH3 125mlHDPE-H2SO4
	NO2NO3 250mlHDPE-H2SO4
	NWTPHDXLVINOSGT 40mlAmb-HCl-BT
	NWTPHGX 40mlAmb HCl
	PAHSIMLVID 40mlAmb-NoPres-WT
	RSK175 40mlAmb HCl
	Sulfate 125mlHDPE-NoPres

Chain of Custody Page of



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Phone: **253-835-6400**

Fax:

Collected by (print): **Alice Robinson**

Collected by (signature): **Alice Robinson**

Immediately Packed on Ice **N** **Y**

Site/Facility ID #: **BNSF Wishram**

Rush? (Lab MUST Be Notified)

Same Day Five Day

Next Day 5 Day (Rad Only)

Two Day 10 Day (Rad Only)

Three Day

Date Results Needed

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	8270 - Cresols 100ml Amb NoPres	Diss. As, Fe, Mn, Pb 250mlHDPE-HNO3	Diss. Fe, Mn, Pb 250mlHDPE-HNO3	NH3 125mlHDPE-H2SO4	NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Remarks	Sample # (lab only)	
WMW-11-20170920	grab	GW		9-20-17	8:15	14			X	X	X	X	X	X	X	X			-01
WMW-1-20170920		GW			10:20	14			X	X	X	X	X	X	X	X			-02
WMW-3-20170920		GW			12:20	14			X	X	X	X	X	X	X	X		MSIMSD	-03
WMW-15-20170920		GW			15:20	54	X	X		X	X	X	X	X	X	X			-04
WMW-5-20170920		GW			16:45	14			X	X	X	X	X	X	X	X			-05
BMD-4-20170920		GW			17:15	18		X		X	X	X	X	X	X	X			-06
WMW-17-20170920		GW			18:25	16		X		X	X	X	X	X	X	X			-07
BMD-3-20170920		GW			18:35	18			X	X	X	X	X	X	X	X			-08
D-1-20170920		GW			18:30	16	X	X	AR	X	X	X	X	X	X	X			-09
		GW																	-10 TP

* Matrix: SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: **TT9156-R04, PO# 4358**

MSIMSD from WMW 15-20170920

Samples returned via: UPS FedEx Courier

Tracking #

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact: Y N

COC Signed/Accurate: Y N

Bottles arrive intact: Y N

Correct bottles used: Y N

Sufficient volume sent: Y N

If Applicable
VQA Zero Headspace: Y N

Preservation Correct/Checked: Y N

Relinquished by: (Signature) Alice Robinson	Date: 9-21-17	Time: 11:30	Received by: (Signature)	Trip Blank Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 4xTB HCL/MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.8 m/s 30 340 Bottles Received: 340
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) Kelly Men	Date: 9/22/17 Time: 0845 Hold: Condition: NCF / OK

Kennedy/Jenks Con-BNSF Region 1
 32001 32nd Avenue South, Ste 100
 Federal Way, WA 98001

Billing Information:
 Shane DeGross
 605 Puyallup Ave S
 Tacoma, WA 98421

Report to:
 Ryan Hultgren

Project Description: **BNSF - Wishram Rail yard, WA**

City/State Collected: **Wishram, WA**

Client Project # **1796120*00**

Lab Project # **BNSF1KEN-WISHRAM**

Phone: 253-835-6400

Site/Facility ID # **BNSF Wishram**

Collected by (print): **Alice Robinson**

Collected by (signature): **Alice Robinson**

Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote # _____

Date Results Needed _____

No. of Cntrs _____

Analysis / Container / Preservative	
Sulfide 125mlAmb-S-NaOH+ZnAc	7/2
Total As, Pb 250mlHDPE-HNO3	6/2
Total Pb 250mlHDPE-HNO3	6/2
V8260BTEXC 40mlAmb-HCl	

Chain of Custody Page ___ of ___



12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **1938 609**

Table # _____

Acctnum: **BNSF1KEN**

Template: **T122528**

Prelogin: **P618204**

TSR: **134 - Mark W. Beasley**

PB: **9-11-17**

Shipped Via: **FedEX Ground**

Remarks _____ Sample # (lab only) _____

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Sulfide 125mlAmb-S-NaOH+ZnAc	Total As, Pb 250mlHDPE-HNO3	Total Pb 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl
WMW-11-20170920	grab	GW		9-20-17	8:15	14	X		X	X
WMW-1-20170920		GW			10:20	14	X		X	X
WMW-3-20170920		GW			12:20	14	X		X	X
WMW-18-20170920		GW			15:20	54	X	X	X	X
WMW-5-20170920		GW			16:45	14	X		X	X
RMD-4-20170920		GW			17:15	18	X		X	X
WMW-17-20170920		GW			18:25	16	X	X	X	X
TRIP BLANK		GW							X	X
RMD-3-20170920		GW			18:35	18	X		X	X
D-1-20170920		GW			18:30	16	X	X	X	X

* Matrix: SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other _____

Remarks: **TT9156-R04, PO# 4358**
MS/MSD from WMW-18-20170920

pH _____ Temp _____
 Flow _____ Other _____

Samples returned via: UPS FedEx Courier _____

Tracking # _____

Sample Receipt Checklist

COC Seal Present/Intact: Y N

COC Signed/Accurate: Y N

Bottles arrive intact: Y N

Correct bottles used: Y N

Sufficient volume sent: Y N

If Applicable

VDA Zero Headspace: Y N

Preservation Correct/Checked: Y N

Relinquished by: (Signature) Alice Robinson	Date: 9-21-17	Time: 11:30	Received by: (Signature)	Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 4 x TB NCL/MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.8 m/s°C 340 Bottles Received: _____
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) Kelly/Kenn	Date: 9/22/17 Time: 0845 Hold: _____ Condition: NCF / OK

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:

Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project
Description: BNSF - Wishram Railyard, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1796120*00

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson

Site/Facility ID #
BNSF Wishram

P.O. #
4358

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)

Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Date Results Needed

Immediately
Packed on Ice N Y

Pres
Chk

Analysis / Container / Preservative

8270 - Cresols 100ml Amb NoPres	Diss. As, Fe, Mn, Pb 250mlHDPE-HNO3	Diss. Fe, Mn, Pb 250mlHDPE-HNO3	NH3 125mlHDPE-H2SO4	NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres
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Chain of Custody Page ___ of ___



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# L938609

Table #

Accnum: BNSF1KEN
Template: T122528
Prelogin: P618204
TSR: 134 - Mark W. Beasley
PB: 9-11-17
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270 - Cresols 100ml Amb NoPres	Diss. As, Fe, Mn, Pb 250mlHDPE-HNO3	Diss. Fe, Mn, Pb 250mlHDPE-HNO3	NH3 125mlHDPE-H2SO4	NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Remarks	Sample # (lab only)
WMW-14-20170919	grab	GW		9-19-17	9:00	14			X	X	X	X	X	X	X	X		-10
WMW-12-20170919		GW		9-19-17	10:20	15	X		X	X	X	X	X	X	X	X		-11
WMW-15-20170919		GW		9-19-17	10:45	14			X	X	X	X	X	X	X	X		-12
WMW-13-20170919		GW		9-19-17	11:55	18	X		X	X	X	X	X	X	X	X		-13
RMD-1-20170919		GW		9-19-17	12:05	18			X	X	X	X	X	X	X	X		-14
WMW-16-20170919		GW		9-19-17	14:26	18	X		X	X	X	X	X	X	X	X		-15
WMW-10-20170919		GW		9-19-17	14:40	14			X	X	X	X	X	X	X	X		-16
RMD-2-20170919		GW		9-19-17	15:52	18	16		X	X	X	X	X	X	X	X		-17
WMW-9-20170919		GW		9-19-17	16:00	14			X	X	X	X	X	X	X	X		-18
D-2-20170919		GW		9-19-17	16:00	18			X	X	X	X	X	X	X	X		-19

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: TT9156-R04, PO# 4358

16km

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist	
COC Seal Present/Intact:	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
COC Signed/Accurate:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Correct bottles used:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Sufficient volume sent:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
If Applicable	
VOA Zero Headspace:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Preservation Correct/Checked:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Samples returned via:
 UPS FedEx Courier

Tracking #

Relinquished by: (Signature) <u>Alice Robinson</u>	Date: 9-21-17	Time: 11:30	Received by: (Signature)	Trip Blank Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> FC / MeOH TBR	Bottles Received: 340	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.8 ^{meq/L} 30		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <u>Kelly Meram</u>	Date: 9/22/17	Time: 0845	Hold: Condition: NCF / 0

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



LAB SCIENCES
a subsidiary of PanAnalyst

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project:
Description: BNSF - Wishram Railyard, WA

City/State
Collected: Wishram, WA

Phone: 253-835-6400
Fax:

Client Project #
1796120*00

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Alice Robinson

Site/Facility ID #
BNSF Wishram

P.O. #
4358

Collected by (signature):
Alice Robinson

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

Immediately
Packed on ice N Y

No.
of
Entrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Entrs
-----------	-----------	----------	-------	------	------	--------------

WMW-14-20170919	grab	GW		9-19-17	9:00	14
WMW-12-20170919	}	GW		}	10:20	18
WMW-15-20170919		GW			10:45	14
WMW-13-20170919		GW			11:55	18
RMD-1-20170919		GW			12:05	18
WMW-16-20170919		GW			14:26	18
WMW-10-20170919		GW			14:40	14
RMD-2-20170919		GW			15:52	14
WMW-9-20170919		GW			16:00	14
D-2-20170919		GW			16:00	18

Sulfide 125mlAmb-S-NaOH+ZnAC

Total As, Pb 250mlHDPE-HNO3

Total Pb 250mlHDPE-HNO3

V82608TEXC 40mlAmb-HCl

Diss Fe Mn Pb

Total Pb

Remarks

Sample # (lab only)
-10
-11
-12
-13
-14
-15
-16
-17
-18
-19

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: TT9156-R04, PO# 4358

Samples returned via:
 UPS FedEx Courier

Tracking #

Relinquished by: (Signature)
Alice Robinson

Date: 9-21-17
Time: 11:30

Received by: (Signature)

Trip Blank Received: Yes No
NCL / MeOH
TBR

Relinquished by: (Signature)

Date: _____
Time: _____

Received by: (Signature)

Temp: 6.8 °C
50
Bottles Received: 340

Relinquished by: (Signature)

Date: _____
Time: _____


Received for lab by: (Signature)

Date: 9/22/17
Time: 0845

Sample Receipt Check
COC Seal Present/Intact: Yes No
COC Signed/Accurate: Yes No
Bottles arrive intact: Yes No
Correct bottles used: Yes No
Sufficient volume sent: Yes No
If Applicable
VOA Zero Headspace: Yes No
Preservation Correct/Checked: Yes No

If preservation required by Login: Date/Time
Hold: _____
Condition: NCF /

16 KM

Kennedy/Jenks Con-BNSF Region 1 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001	Billing Information: Shane DeGross 605 Puyallup Ave S Tacoma, WA 98421	Pres Chk	Analysis / Container / Preservative						Chain of Custody Page ___ of ___
	Report to: Ryan Hultgren		Email To: RyanHultgren@kennedyjenks.com, JosephSawdey@KennedyJenks.com,						

Project Description: BNSF - Wishram Railyard, WA	City/State Collected: Wishram, WA
--	---

Phone: 253-835-6400 Fax:	Client Project # 1796120*00	Lab Project # BNSF1KEN-WISHRAM
------------------------------------	---------------------------------------	--

Collected by (print): <i>Alice Robinson</i>	Site/Facility ID # BNSF Wishram	P.O. # 4358
--	---	-----------------------

Collected by (signature): <i>Alice Robinson</i>	Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day	Quote #	Date Results Needed	No. of Cntrs TD
--	---	---------	---------------------	------------------------------

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time														
TRIP BLANK-20170919-1		GW		9-19-17															
TRIP BLANK-20170919-2		GW		9-19-17															
TRIP BLANK-20170920-1		GW		9-20-17															
TRIP BLANK-20170920-2		GW		9-20-17															
		GW																	
		GW																	
		GW																	
		GW																	
		GW																	

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other	Remarks: TT9156-R04, PO# 4358	pH _____ Temp _____ Flow _____ Other _____	Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> NP <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input checked="" type="checkbox"/> <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> <input type="checkbox"/> N
--	-------------------------------	---	---

Relinquished by: (Signature) <i>Alice Robinson</i>	Date: 9-21-17	Time: 11:30	Received by: (Signature)	Trip Blank Received: <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No 4xTB	HCl/ MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 6.8 °C Bottles Received: 340	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature) <i>Kelly Hem</i>	Date: 9/21/17 Time: 0845	Hold: Condition: NCF / OK

Sulfide 125mlAmb-S-NaOH+ZnAc
 Total As Pb 250mlHDPE-HNO3
 Total Pb 250mlHDPE-HNO3
 V8260BTEXC 40mlAmb-HCl

L# 1938609
Table #
Acctnum: BNSF1KEN Template: T122528 Prelogin: P618204 TSR: 134 - Mark W. Beasley PB: <i>9/11/17</i>
Shipped Via: FedEX Ground
Remarks Sample # (lab only)

Troy Dunlap

ESC Lab Sciences
Non-Conformance Form

Login #: L938609	Client: BNSF1KEN	Date: 9/22/17	Evaluated by: Troy Dunlap
------------------	------------------	---------------	---------------------------

Non-Conformance (check applicable items)

Sample Integrity		Chain of Custody Clarification	
Parameter(s) past holding time	X	Login Clarification Needed	If Broken Container:
Improper temperature		Chain of custody is incomplete	Insufficient packing material around container
Improper container type		Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation		Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courier)
Insufficient sample volume.		Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.		Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.		Trip Blank not received.	If no Chain of Custody:
Broken container		Client did not "X" analysis.	Received by:
Broken container:		Chain of Custody is missing	Date/Time:
Sufficient sample remains			Temp./Cont. Rec./pH:
			Carrier:
			Tracking#

Login Comments: Received 100ml containers for RMD-4, RMD-3 and RMD-1 not listed on the COC.

Client informed by:	Call	Email	Voice Mail	Date: 9/25/17	Time: 0935
TSR Initials: MB	Client Contact: Ryan Hultgren				

Login Instructions:

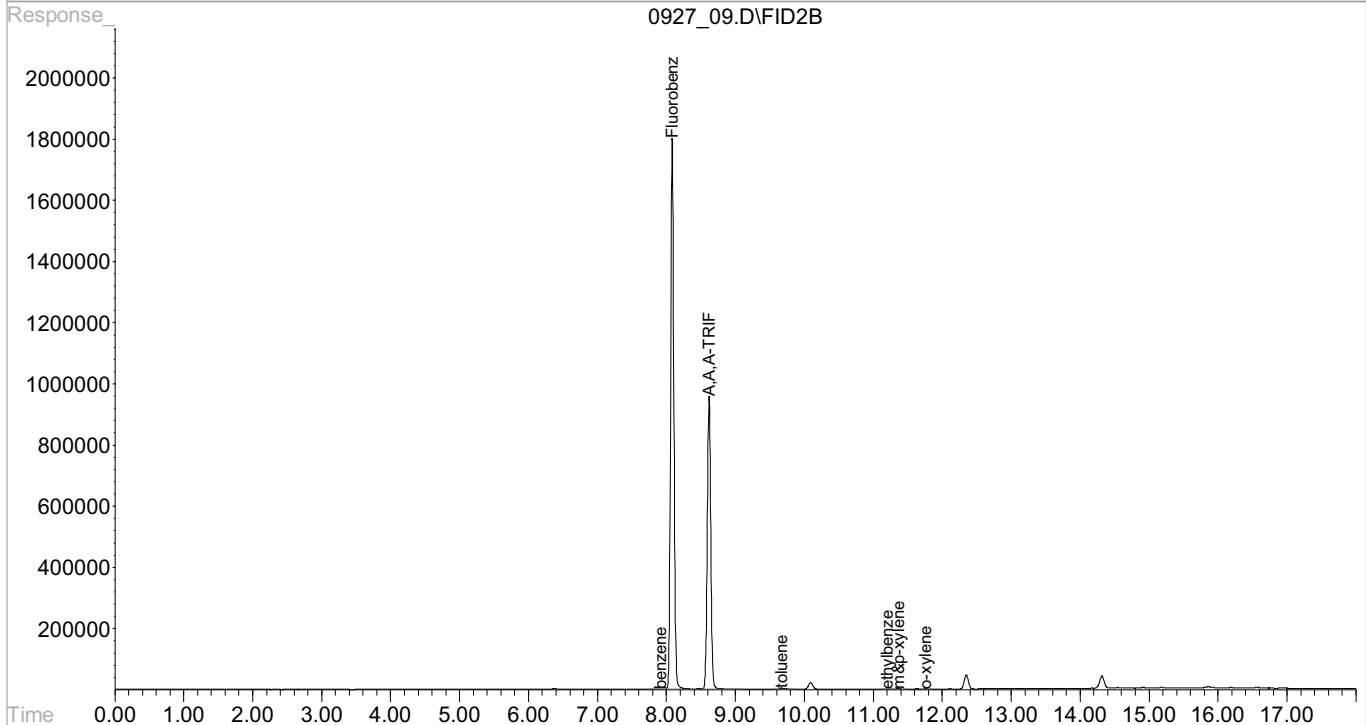
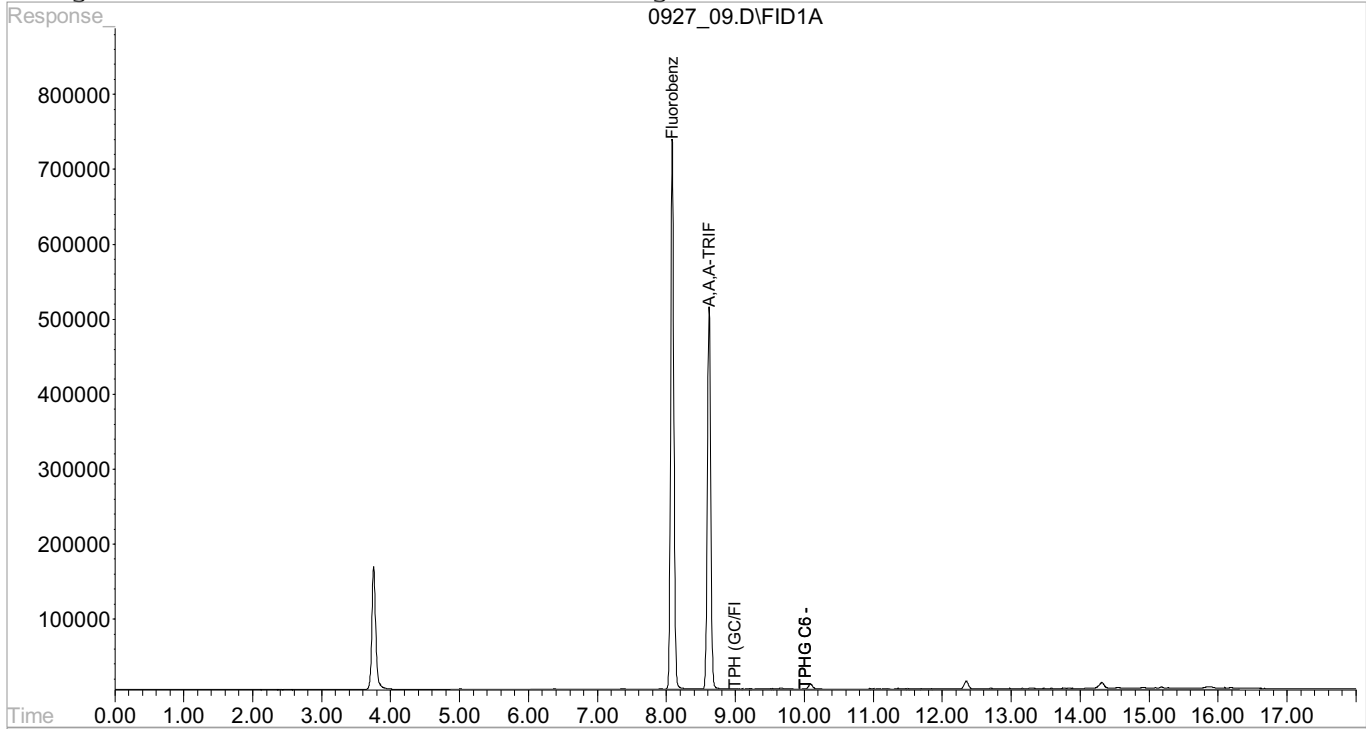
Place extra bottles on hold

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

Signal #1 : C:\HPCHEM\1\DATA\092717\0927 09.D\FID1A.CH Vial: 9
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 09.D\FID2B.CH
 Acq On : 27 Sep 2017 12:22 pm Operator: 605
 Sample : L938609-01 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:02 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

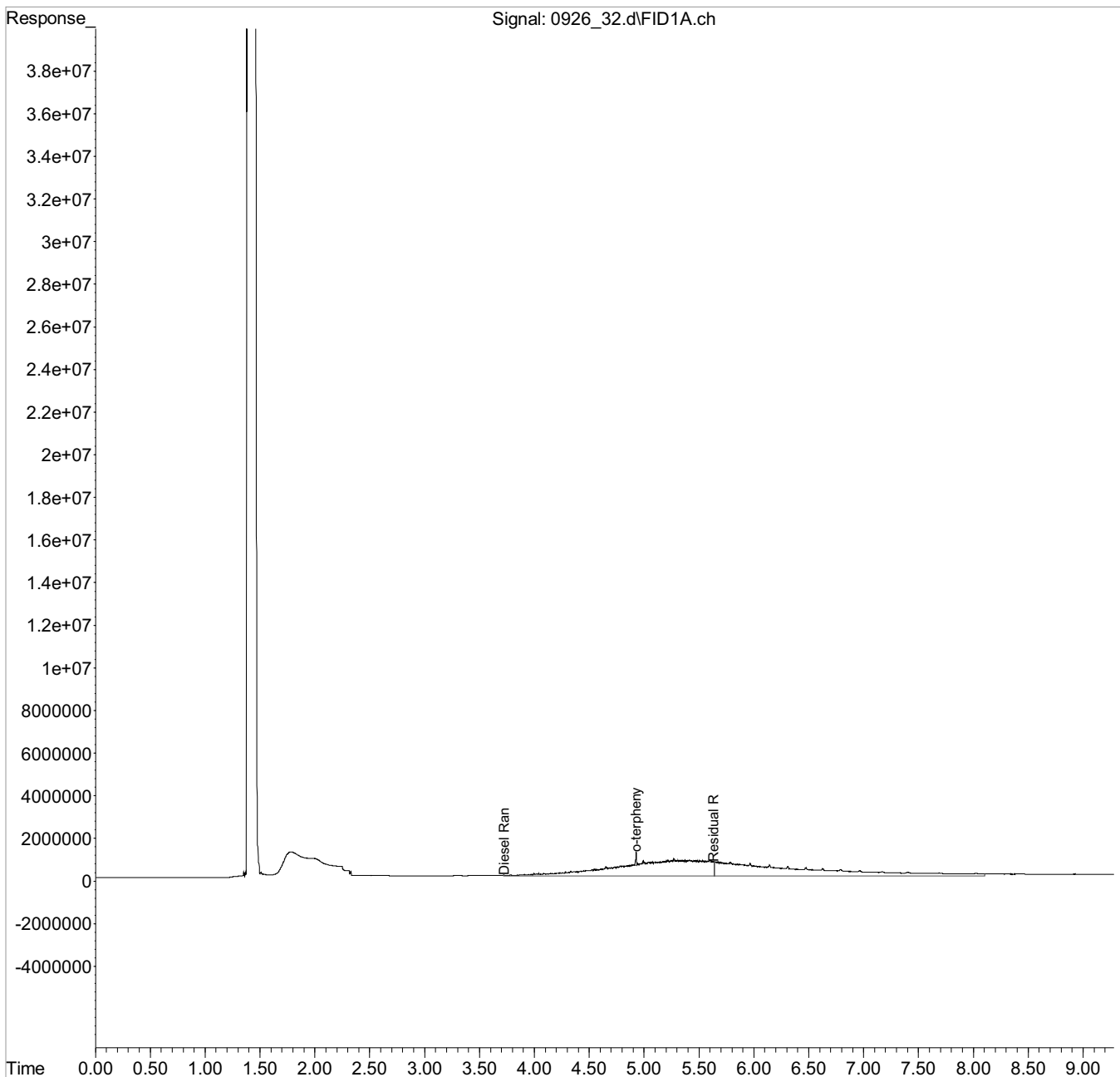
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092617\
 Data File : 0926 32.d
 Signal(s) : FID1A.ch
 Acq On : 26 Sep 2017 8:28 pm
 Operator : 773
 Sample : L938609-01 5x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 25 Sample Multiplier: 0.25
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 27 14:05:08 2017
 Quant Method : C:\msdchem\1\methods\EP27I26Q.M
 Quant Title :
 QLast Update : Tue Sep 26 15:47:15 2017
 Response via : Initial Calibration
 Integrator: ChemStation

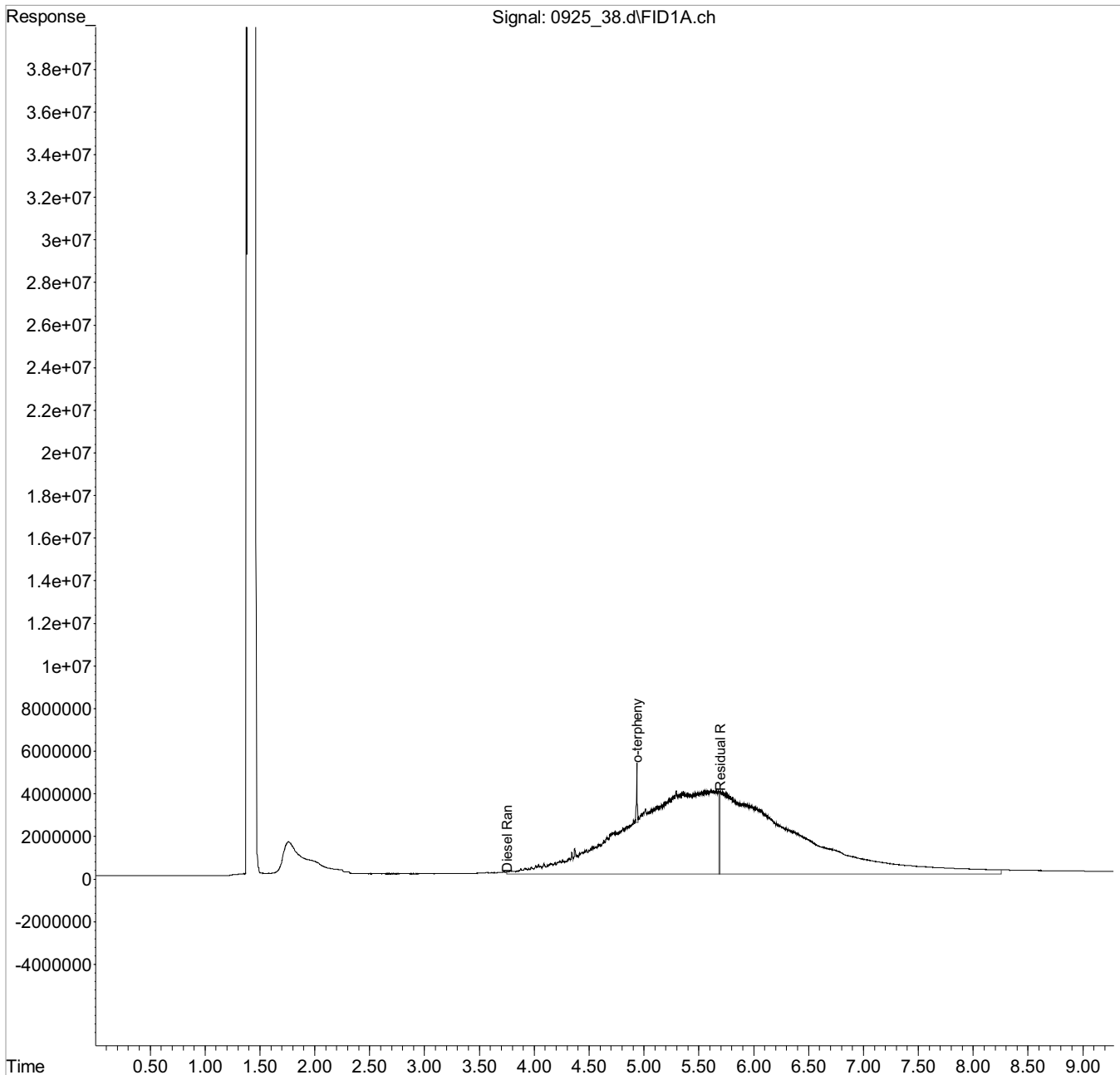
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925 38.d
 Signal(s) : FID1A.ch
 Acq On : 25 Sep 2017 8:45 pm
 Operator : 725
 Sample : L938609-01 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 34 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:04:41 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

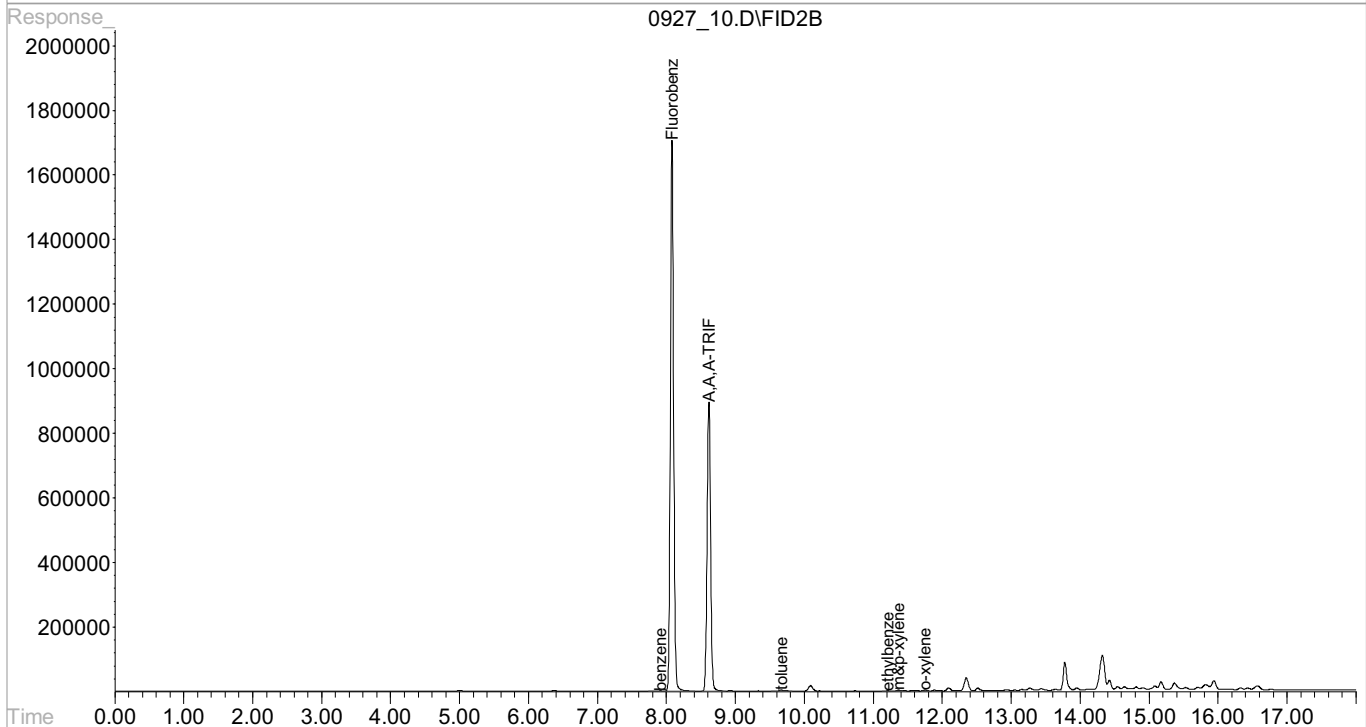
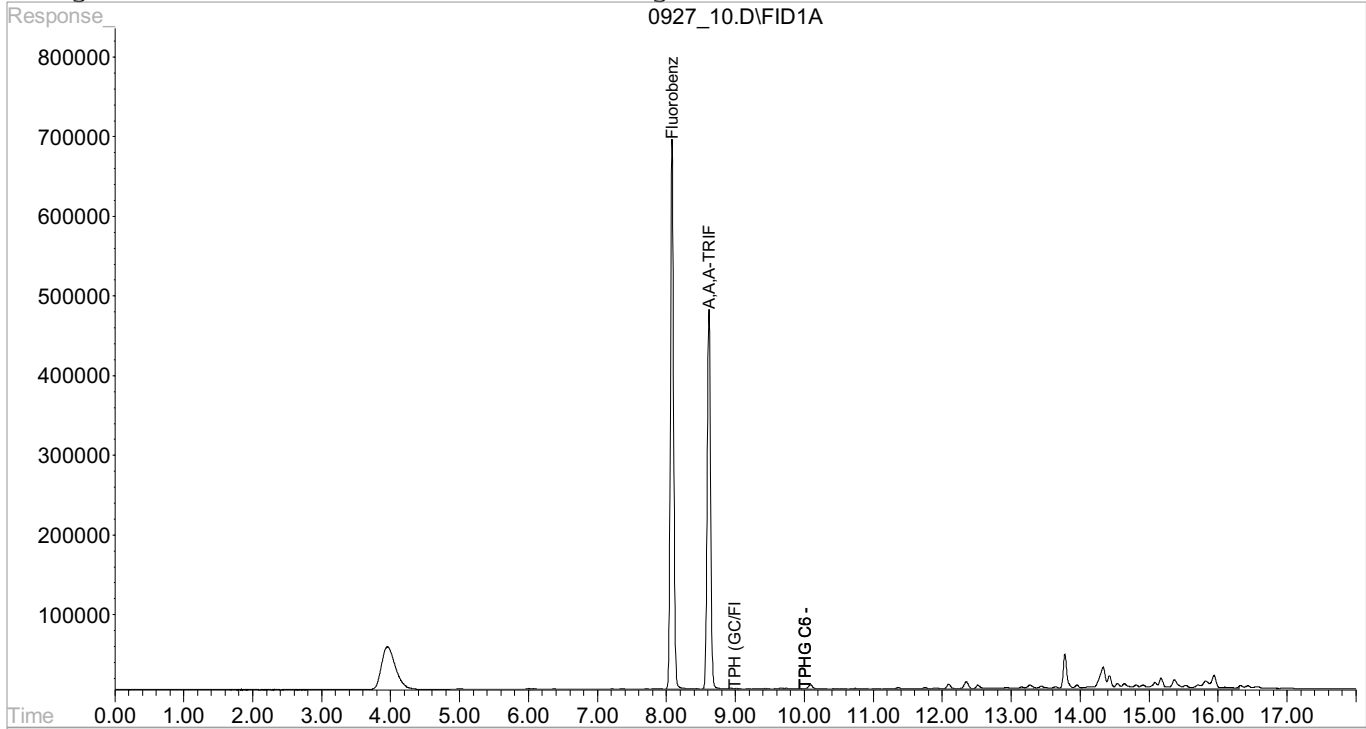
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 10.D\FID1A.CH Vial: 10
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 10.D\FID2B.CH
 Acq On : 27 Sep 2017 12:46 pm Operator: 605
 Sample : L938609-02 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:02 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

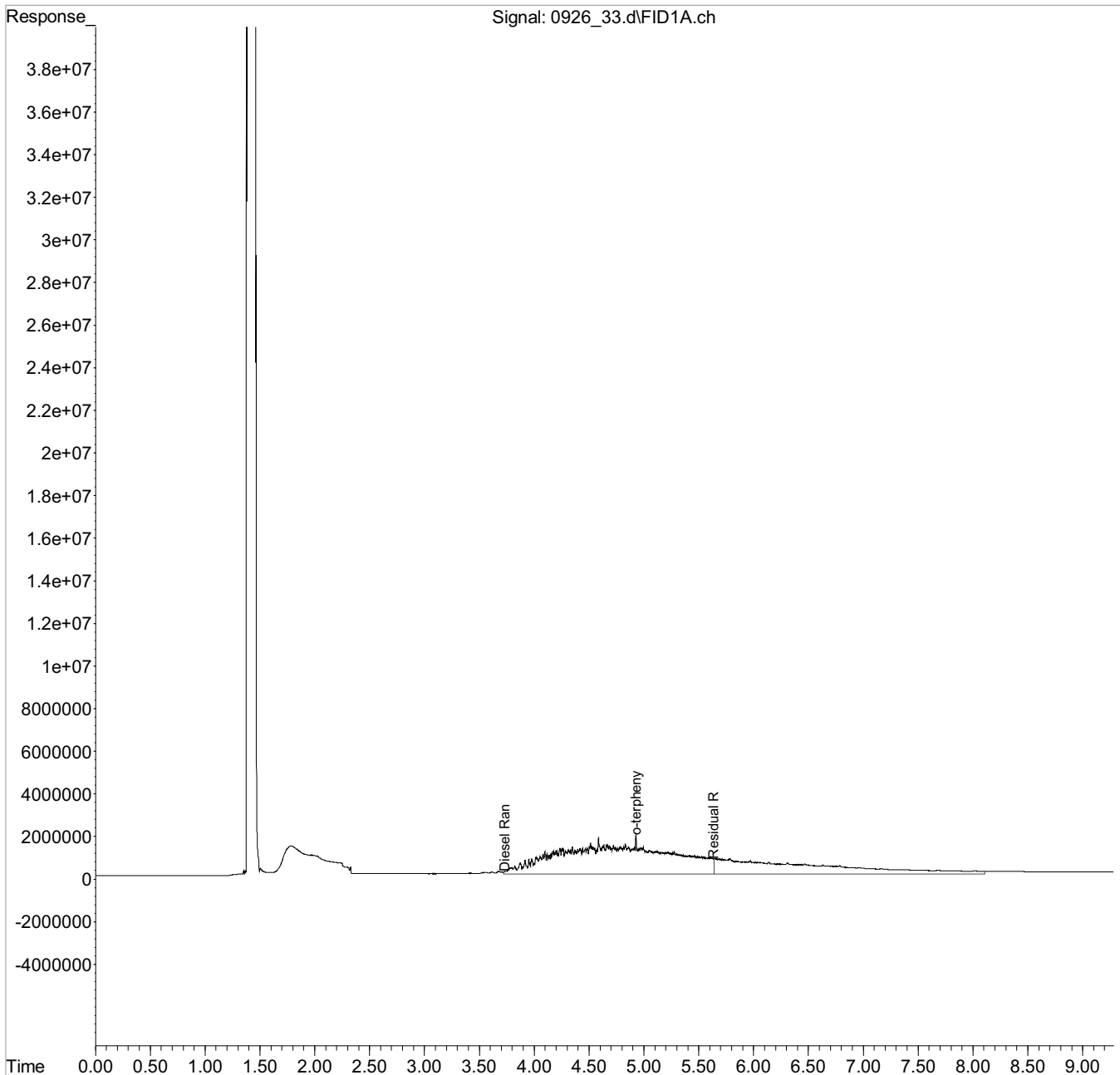
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092617\
 Data File : 0926 33.d
 Signal(s) : FID1A.ch
 Acq On : 26 Sep 2017 8:45 pm
 Operator : 773
 Sample : L938609-02 5x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 26 Sample Multiplier: 0.25
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 27 14:06:05 2017
 Quant Method : C:\msdchem\1\methods\EP27I26Q.M
 Quant Title :
 QLast Update : Tue Sep 26 15:47:15 2017
 Response via : Initial Calibration
 Integrator: ChemStation

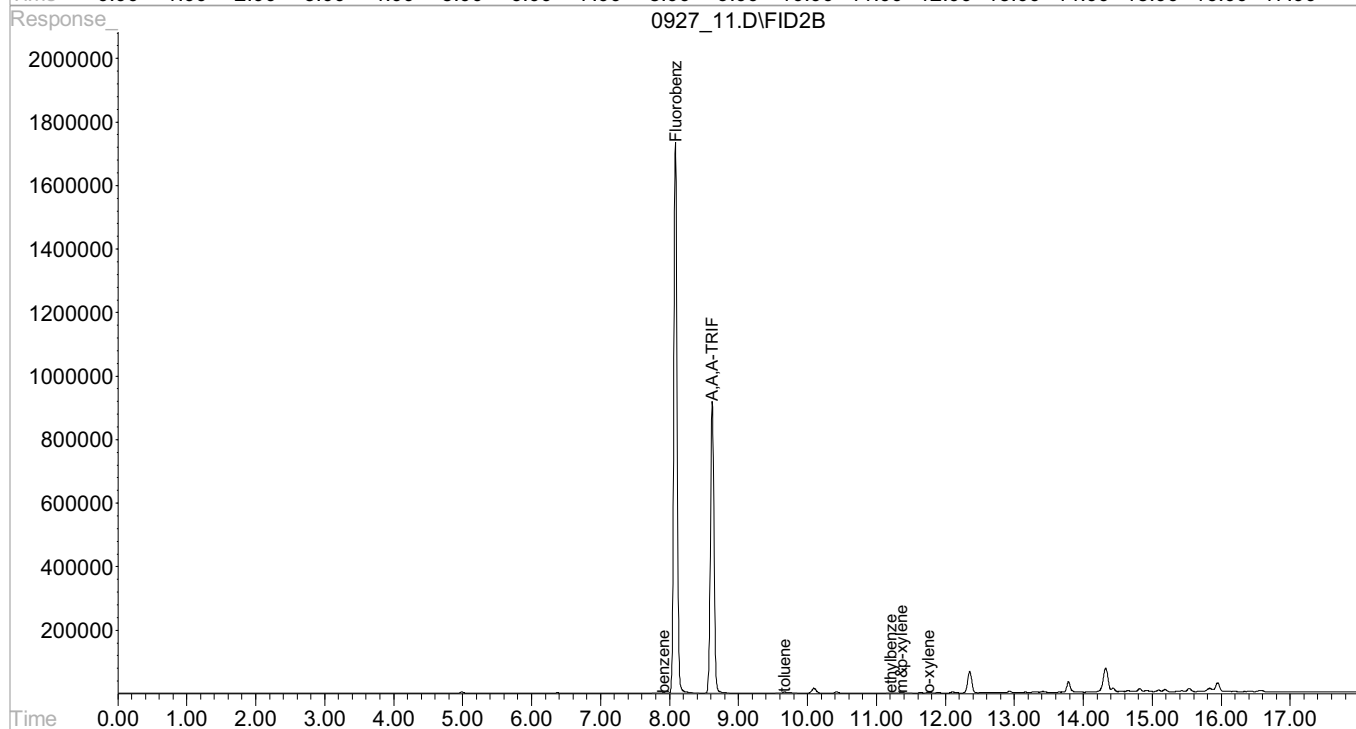
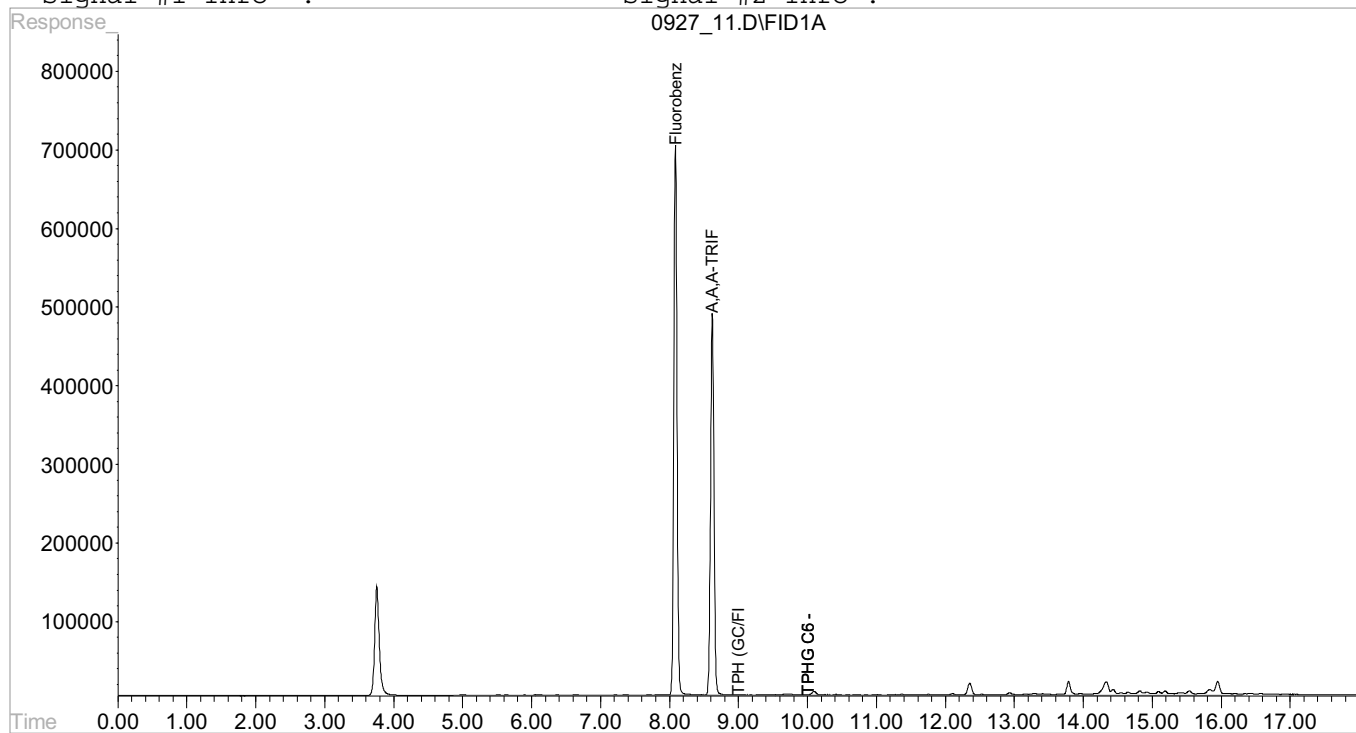
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 11.D\FID1A.CH Vial: 11
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 11.D\FID2B.CH
 Acq On : 27 Sep 2017 1:10 pm Operator: 605
 Sample : L938609-03 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:02 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

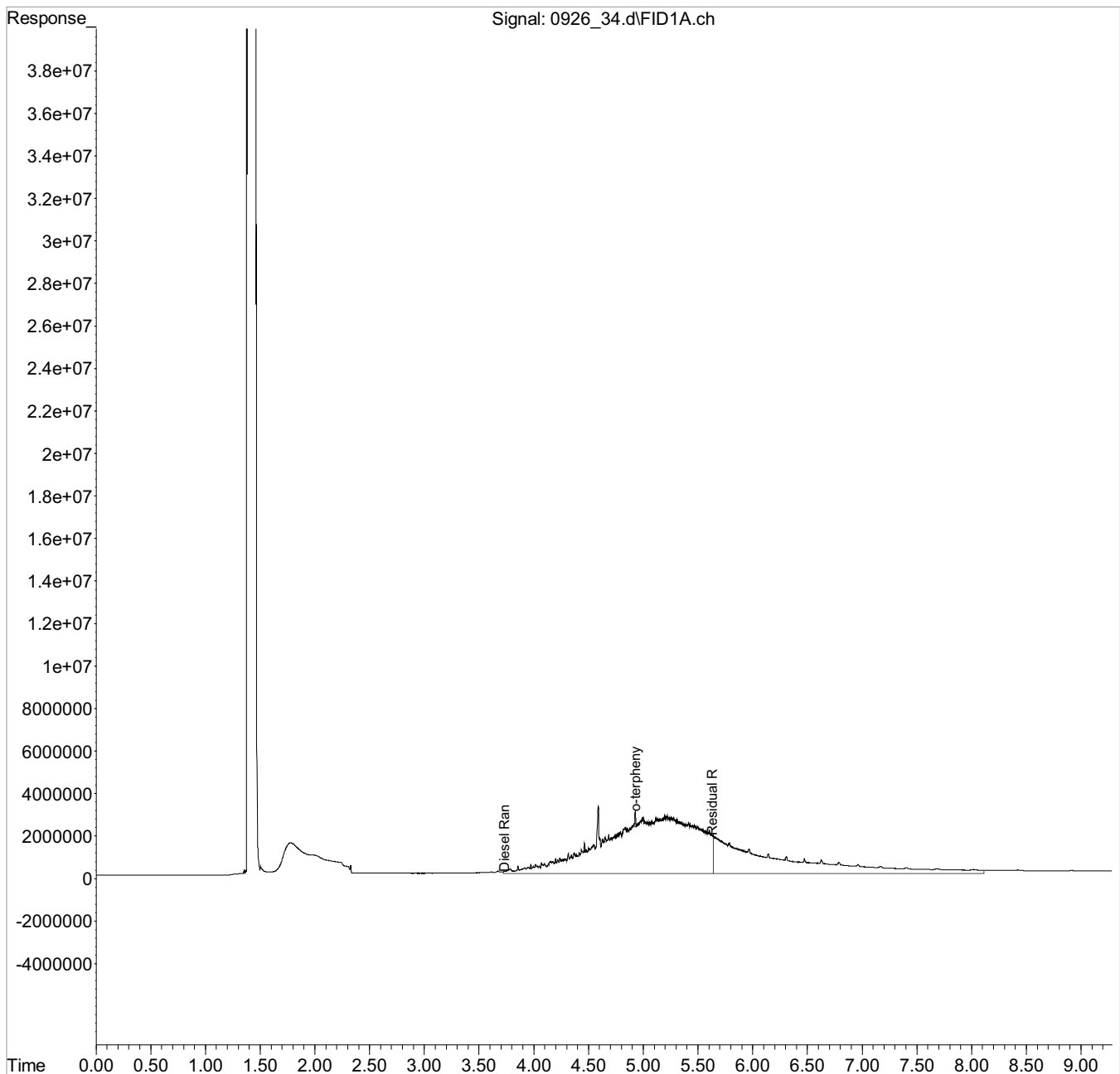
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092617\
Data File : 0926 34.d
Signal(s) : FID1A.ch
Acq On : 26 Sep 2017 9:02 pm
Operator : 773
Sample : L938609-03 5x WG1024084 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 27 Sample Multiplier: 0.25
InstName : SVGC27

Integration File: events.e
Quant Time: Sep 27 14:08:09 2017
Quant Method : C:\msdchem\1\methods\EP27I26Q.M
Quant Title :
QLast Update : Tue Sep 26 15:47:15 2017
Response via : Initial Calibration
Integrator: ChemStation

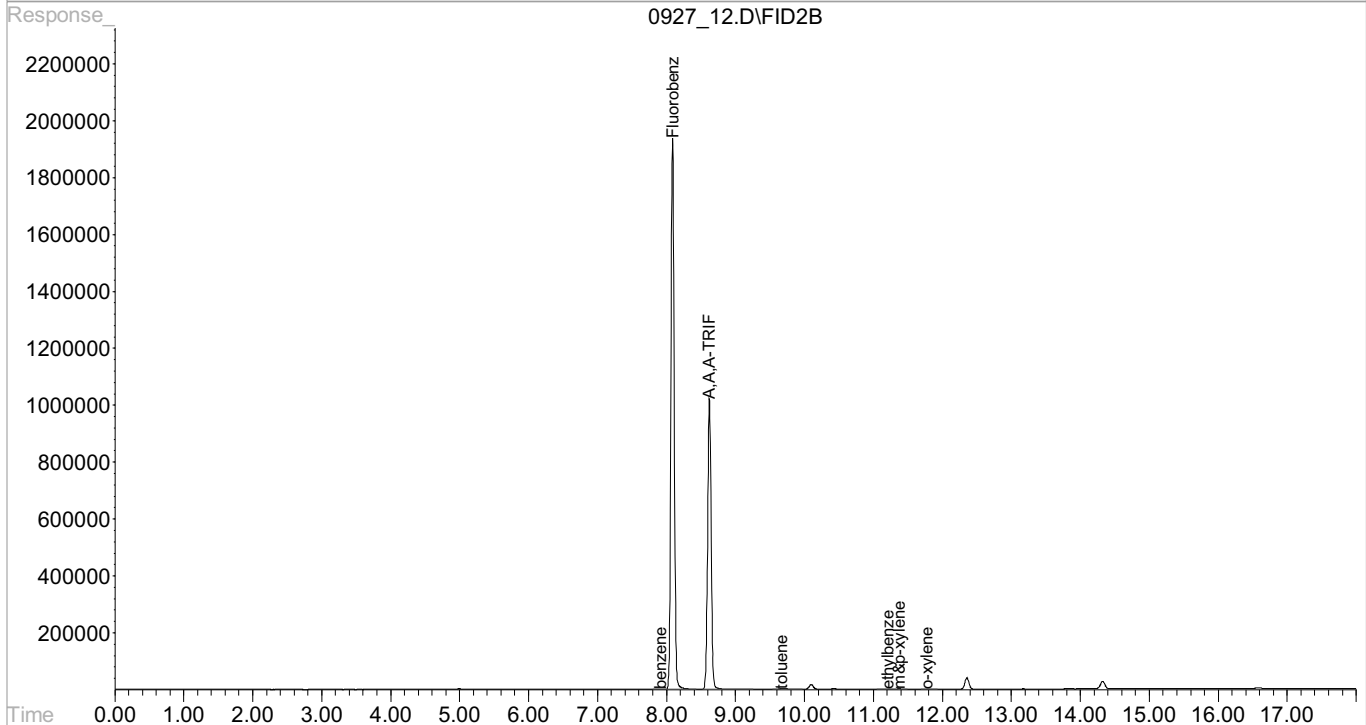
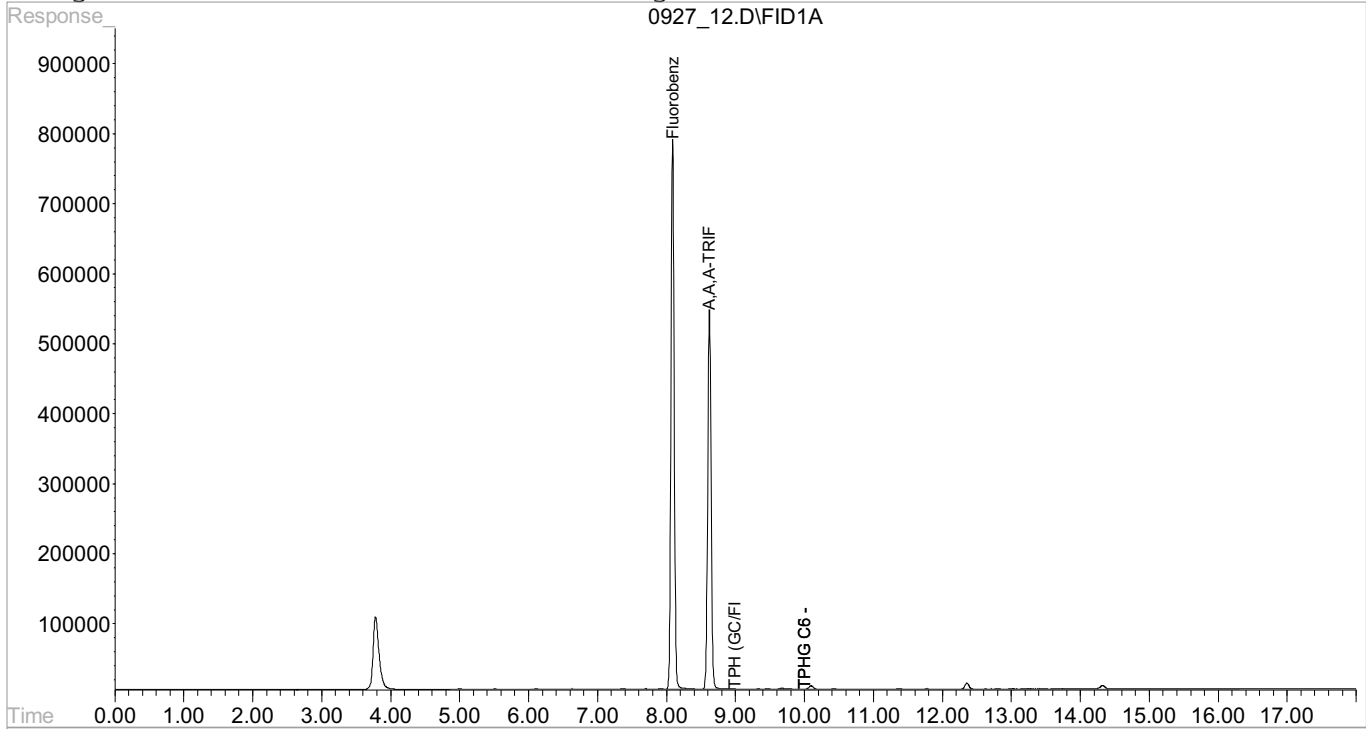
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 12.D\FID1A.CH Vial: 12
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 12.D\FID2B.CH
 Acq On : 27 Sep 2017 1:34 pm Operator: 605
 Sample : L938609-04 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:02 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

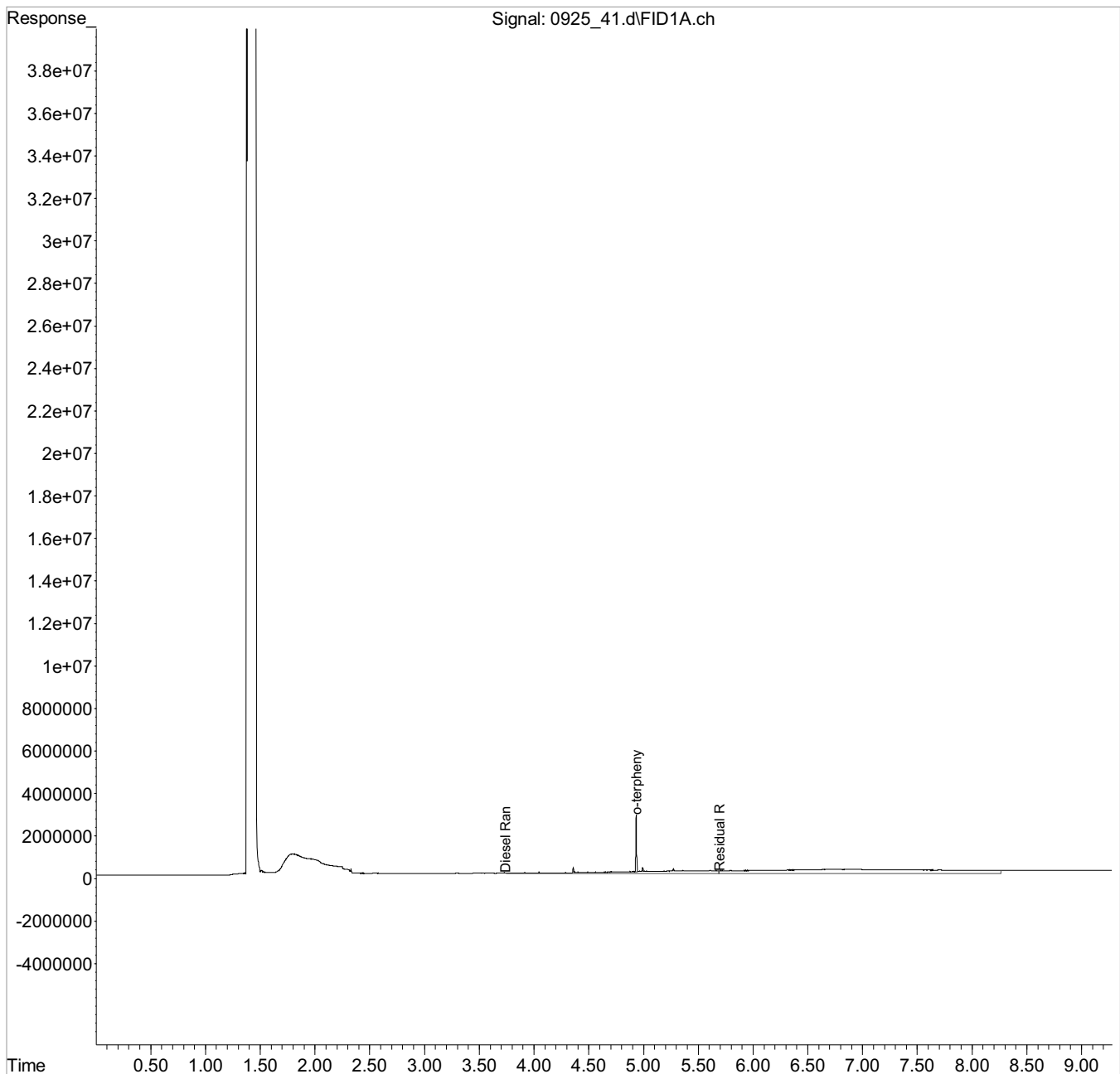
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
Data File : 0925_41.d
Signal(s) : FID1A.ch
Acq On : 25 Sep 2017 9:34 pm
Operator : 725
Sample : L938609-04 1x WG1024084 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 37 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Sep 26 11:10:14 2017
Quant Method : C:\msdchem\1\methods\EP27H31Q.M
Quant Title :
QLast Update : Mon Sep 04 13:19:35 2017
Response via : Initial Calibration
Integrator: ChemStation

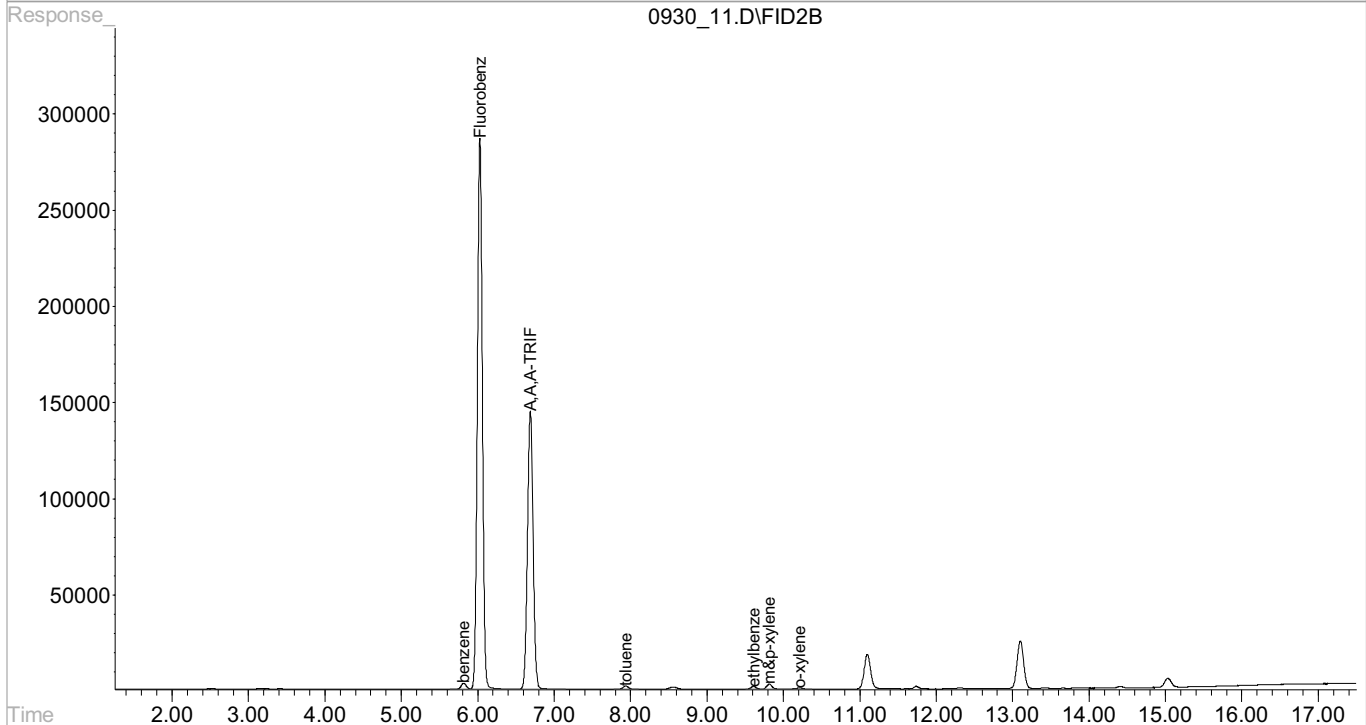
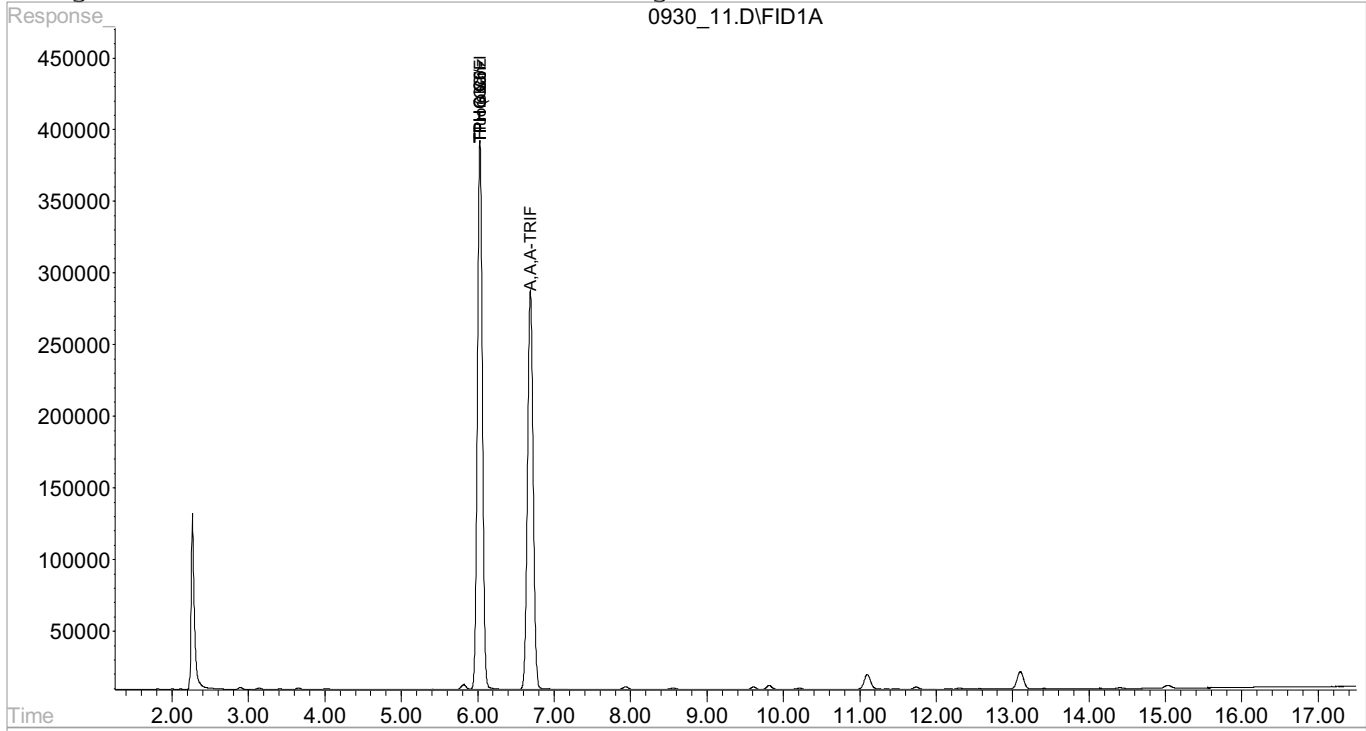
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\093017\0930 11.D\FID1A.CH Vial: 11
 Signal #2 : C:\HPCHEM\1\DATA\093017\0930 11.D\FID2B.CH
 Acq On : 30 Sep 2017 3:57 pm Operator: 621
 Sample : L938609-05 1x WG1024796 RE Inst : VOCGC3
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Oct 2 15:16 2017 Quant Results File: BG03I28Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG03I28Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC03
 Last Update : Fri Sep 29 08:49:49 2017
 Response via : Single Level Calibration
 DataAcq Meth : BTEXGRO.M

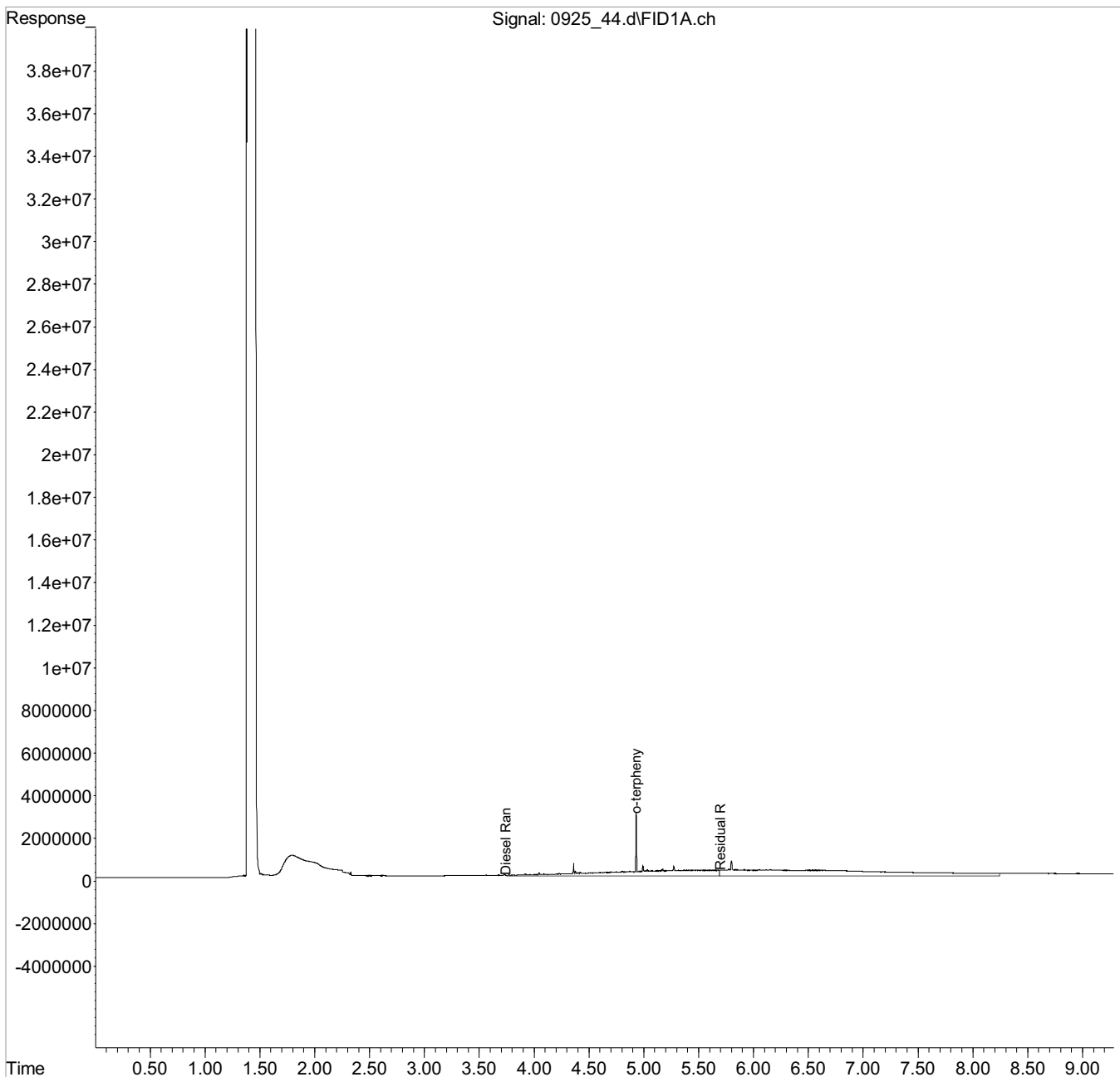
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925 44.d
 Signal(s) : FID1A.ch
 Acq On : 25 Sep 2017 10:24 pm
 Operator : 725
 Sample : L938609-05 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 40 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:13:30 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

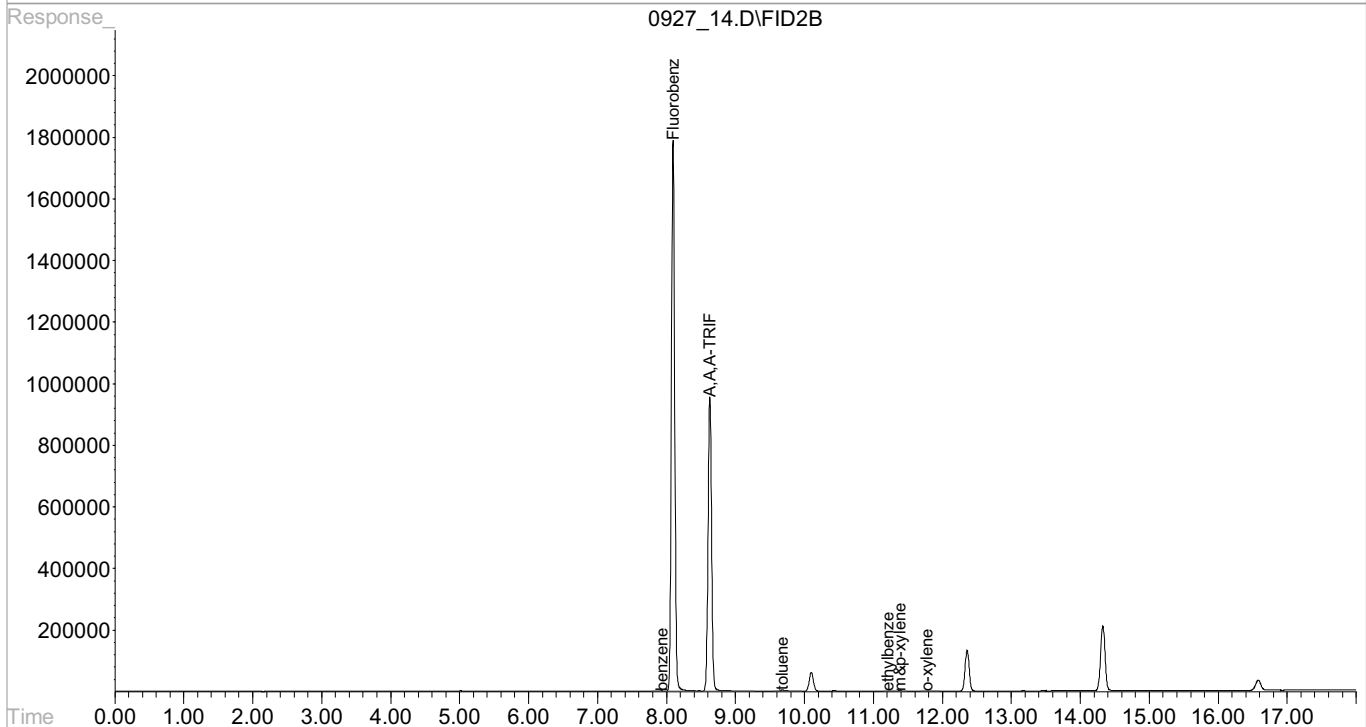
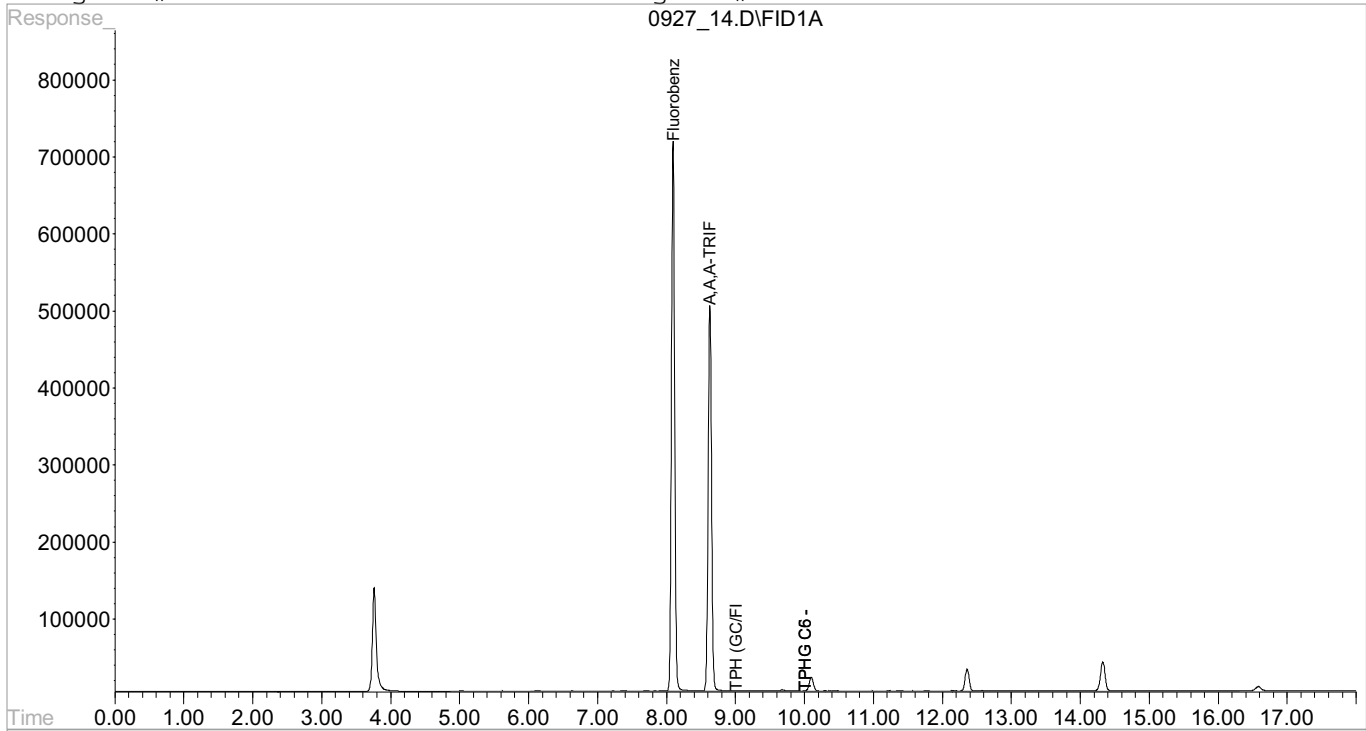
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 14.D\FID1A.CH Vial: 14
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 14.D\FID2B.CH
 Acq On : 27 Sep 2017 2:21 pm Operator: 605
 Sample : L938609-06 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

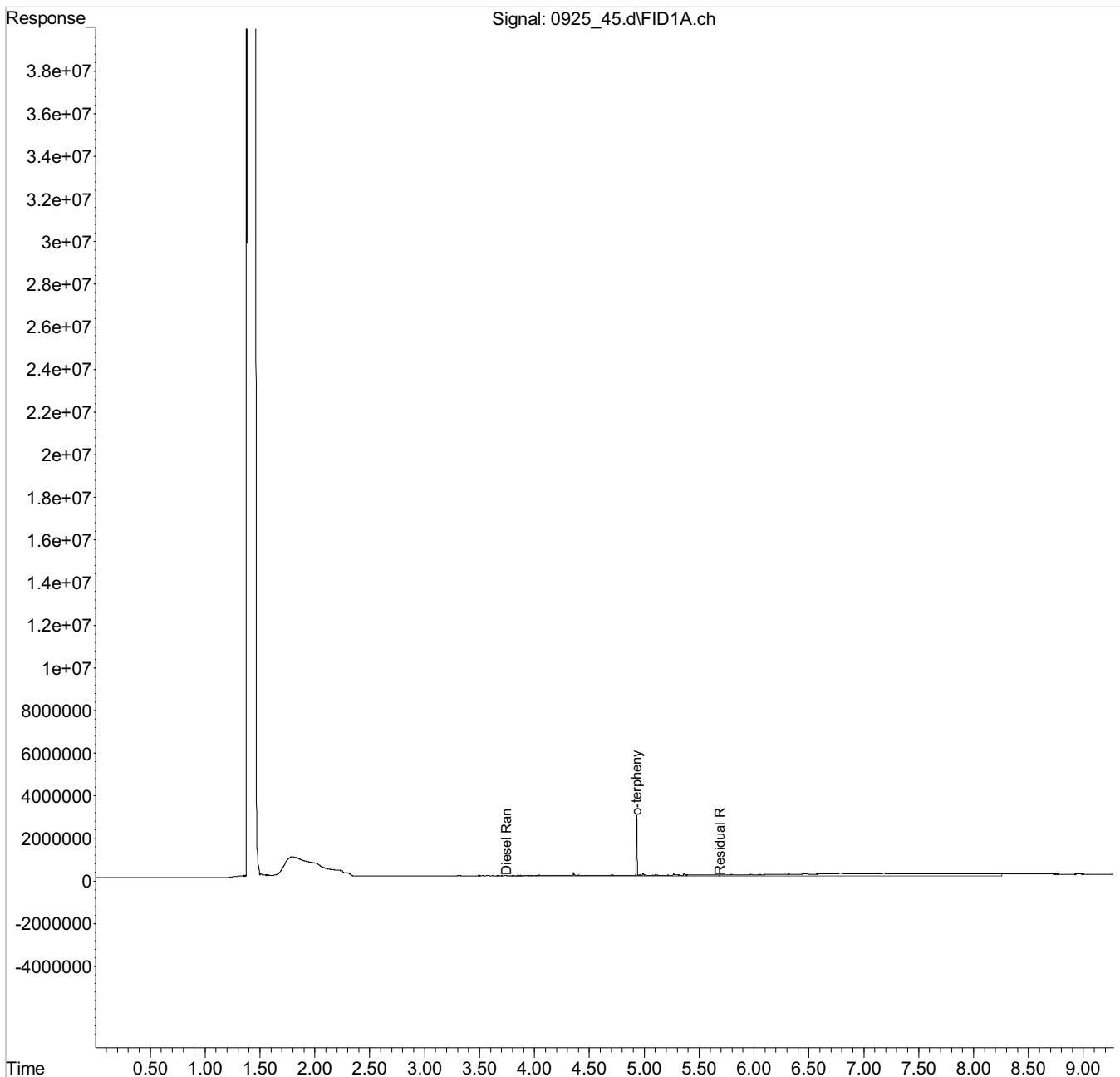
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925 45.d
 Signal(s) : FID1A.ch
 Acq On : 25 Sep 2017 10:40 pm
 Operator : 725
 Sample : L938609-06 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 41 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:14:38 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

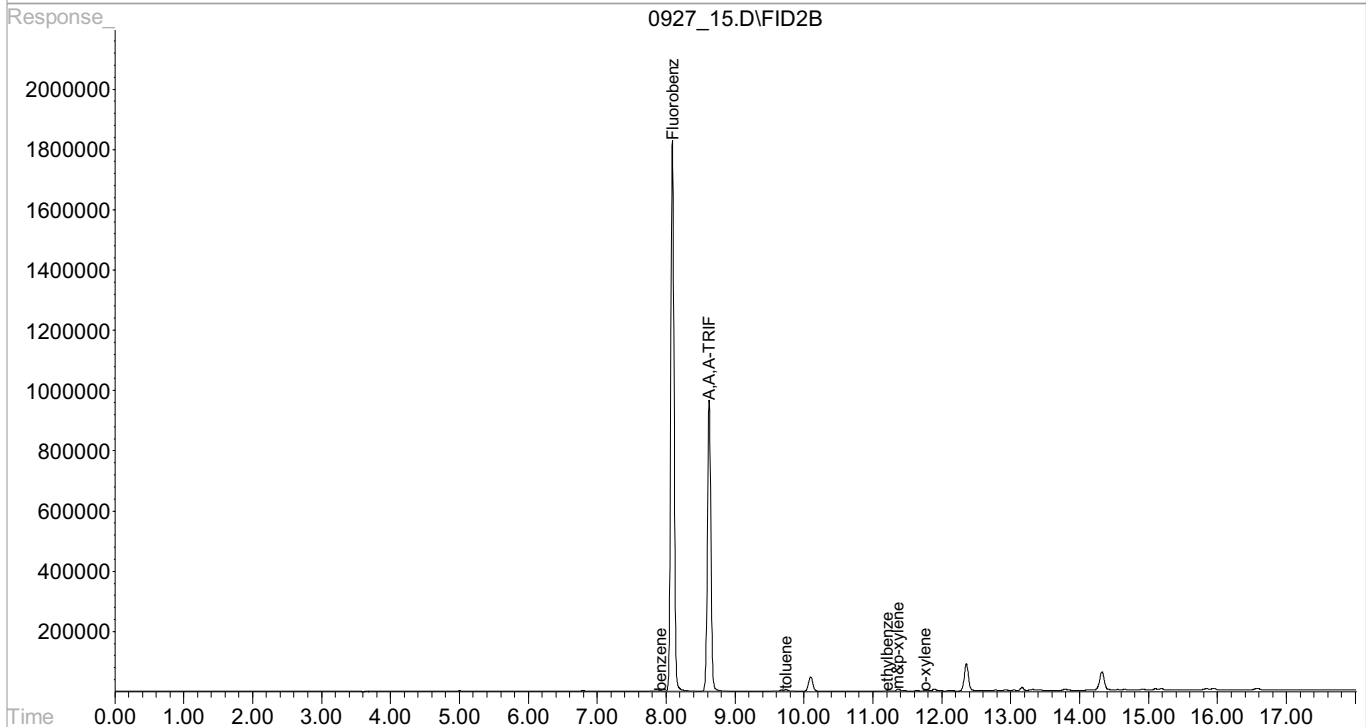
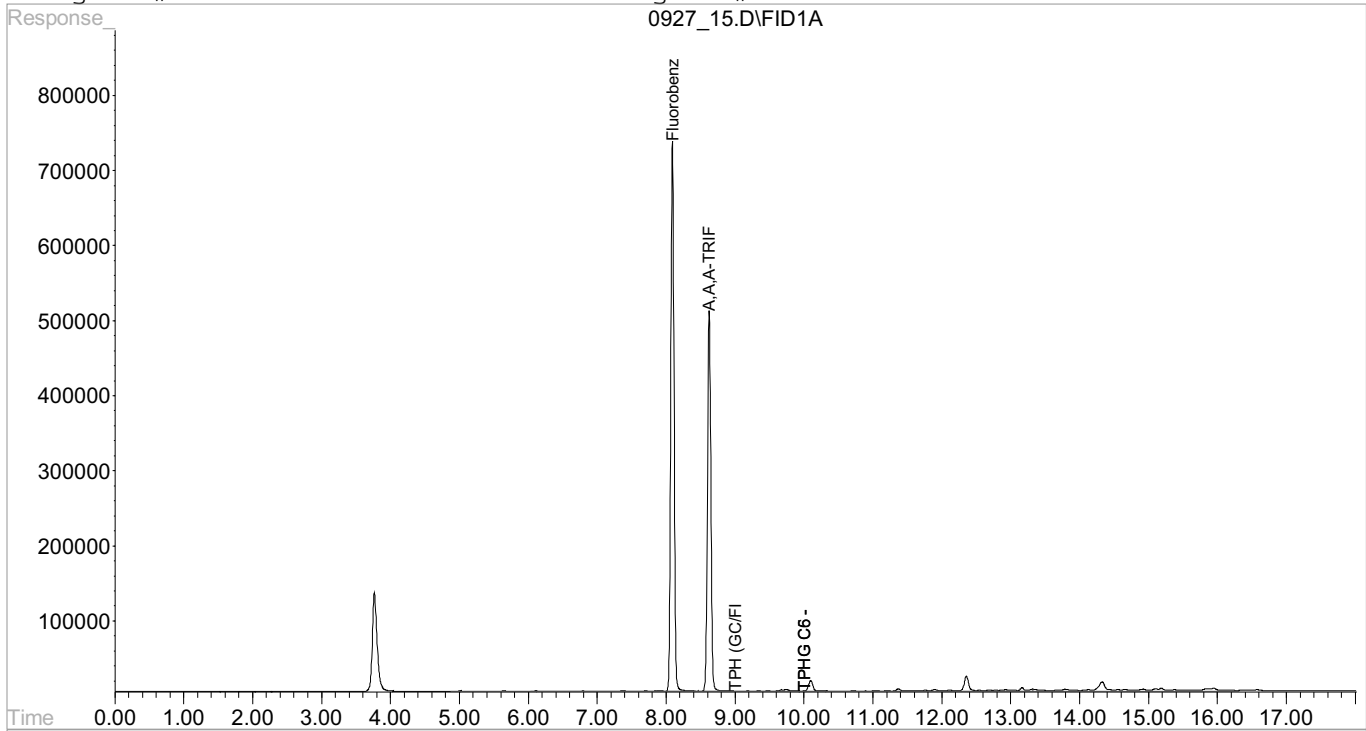
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 15.D\FID1A.CH Vial: 15
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 15.D\FID2B.CH
 Acq On : 27 Sep 2017 2:45 pm Operator: 605
 Sample : L938609-07 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

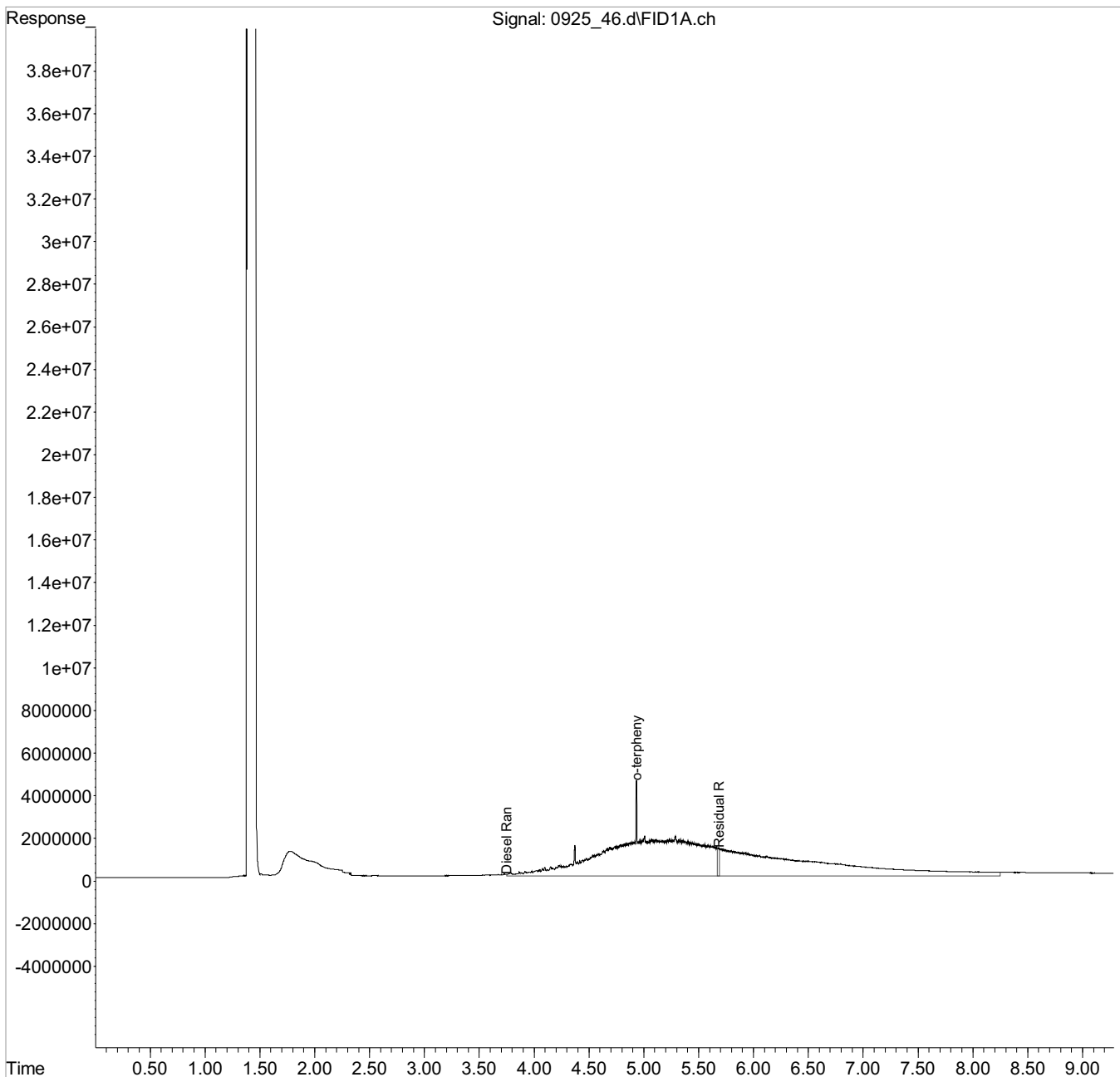
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925 46.d
 Signal(s) : FID1A.ch
 Acq On : 25 Sep 2017 10:57 pm
 Operator : 725
 Sample : L938609-07 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 42 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:15:41 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

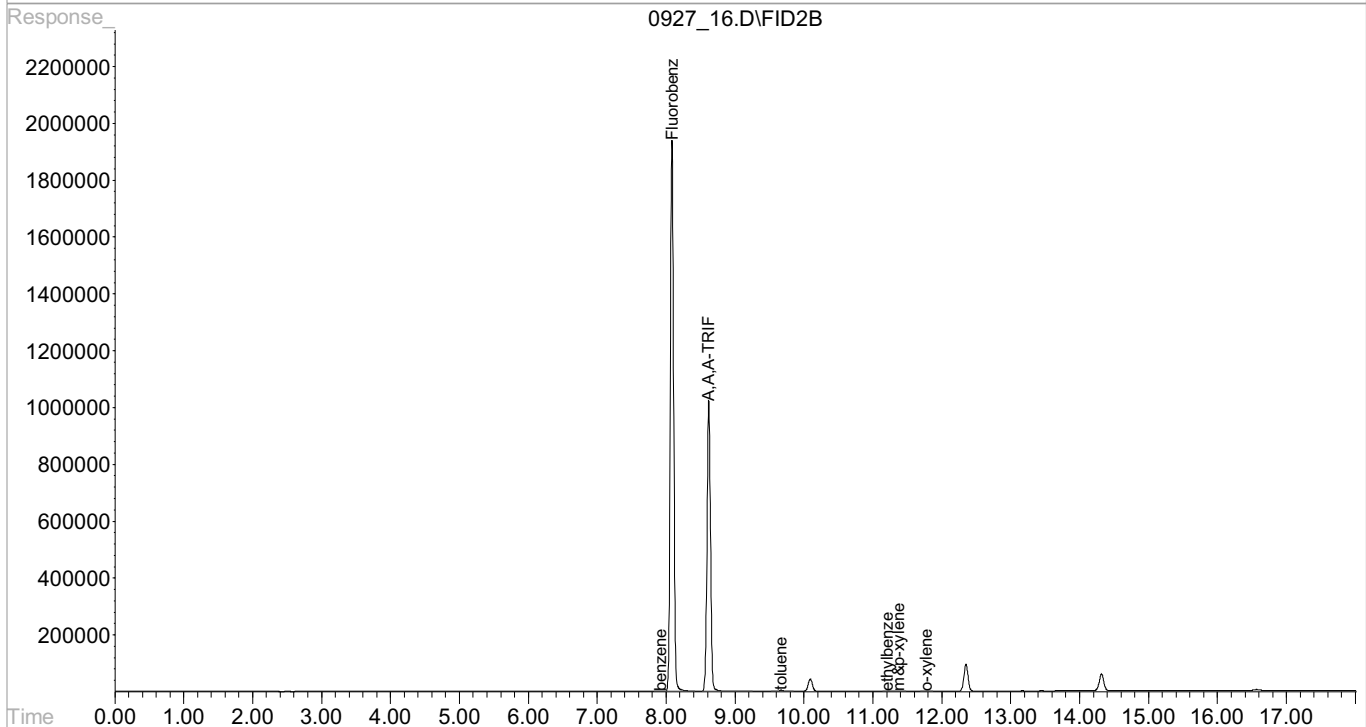
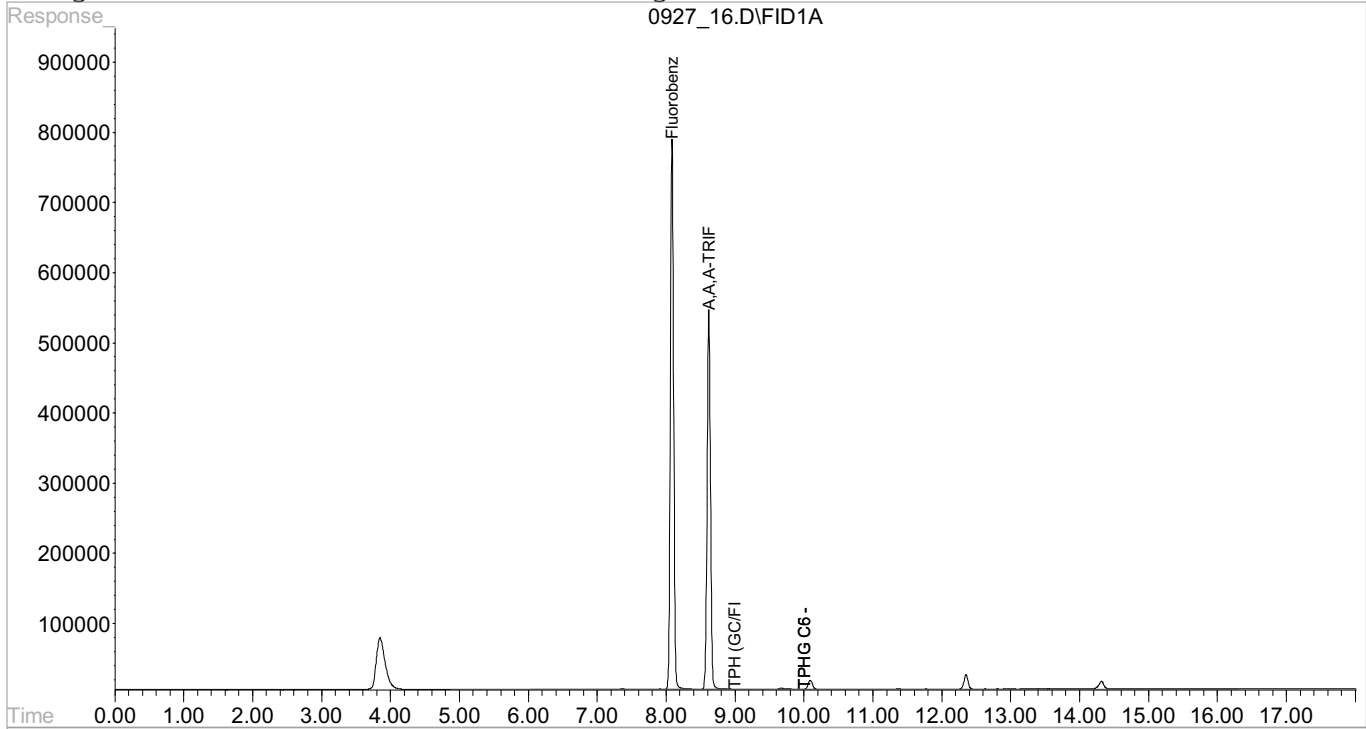
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 16.D\FID1A.CH Vial: 16
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 16.D\FID2B.CH
 Acq On : 27 Sep 2017 3:09 pm Operator: 605
 Sample : L938609-08 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

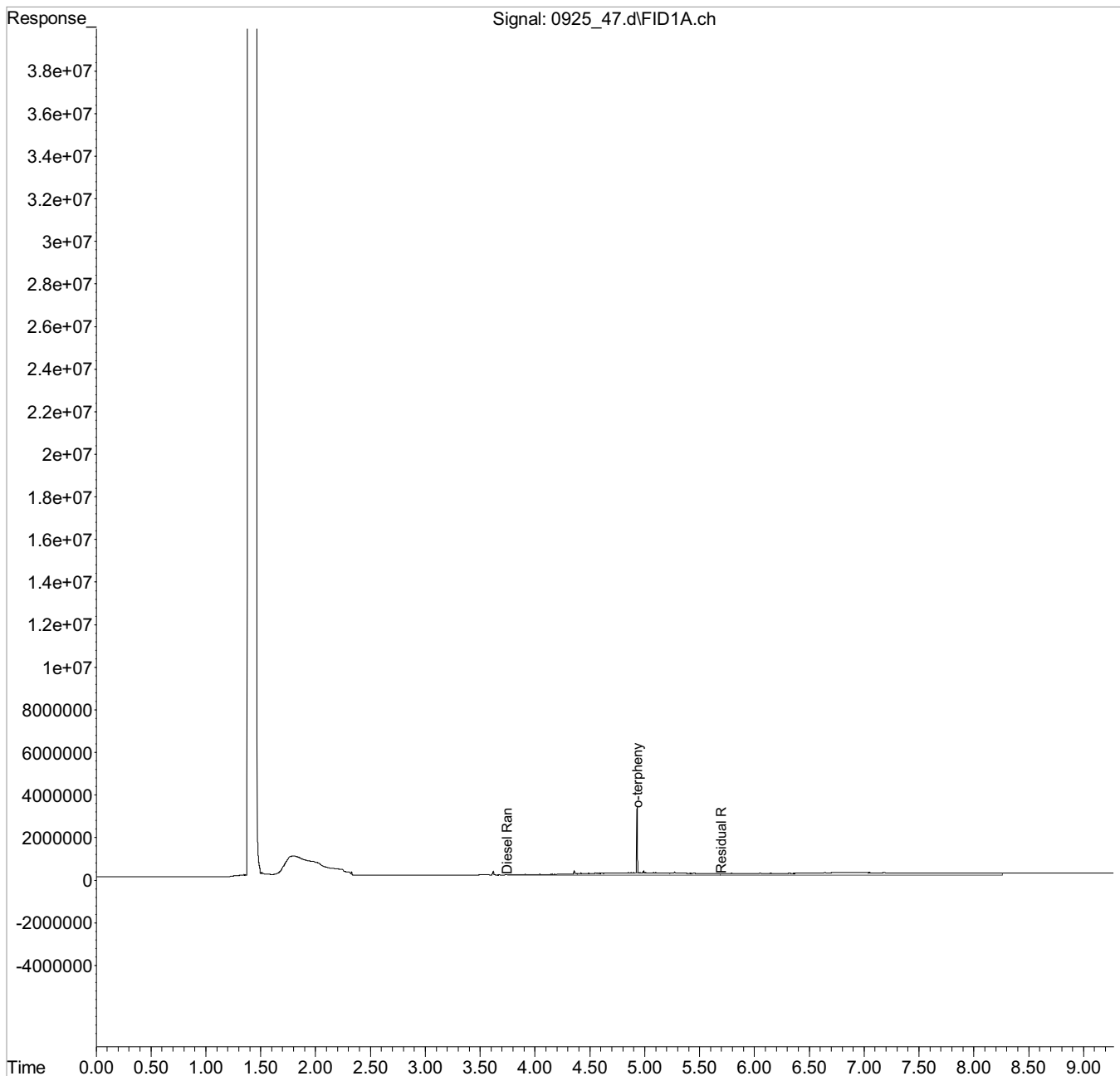
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925_47.d
 Signal(s) : FID1A.ch
 Acq On : 25 Sep 2017 11:13 pm
 Operator : 725
 Sample : L938609-08 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 43 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:16:44 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

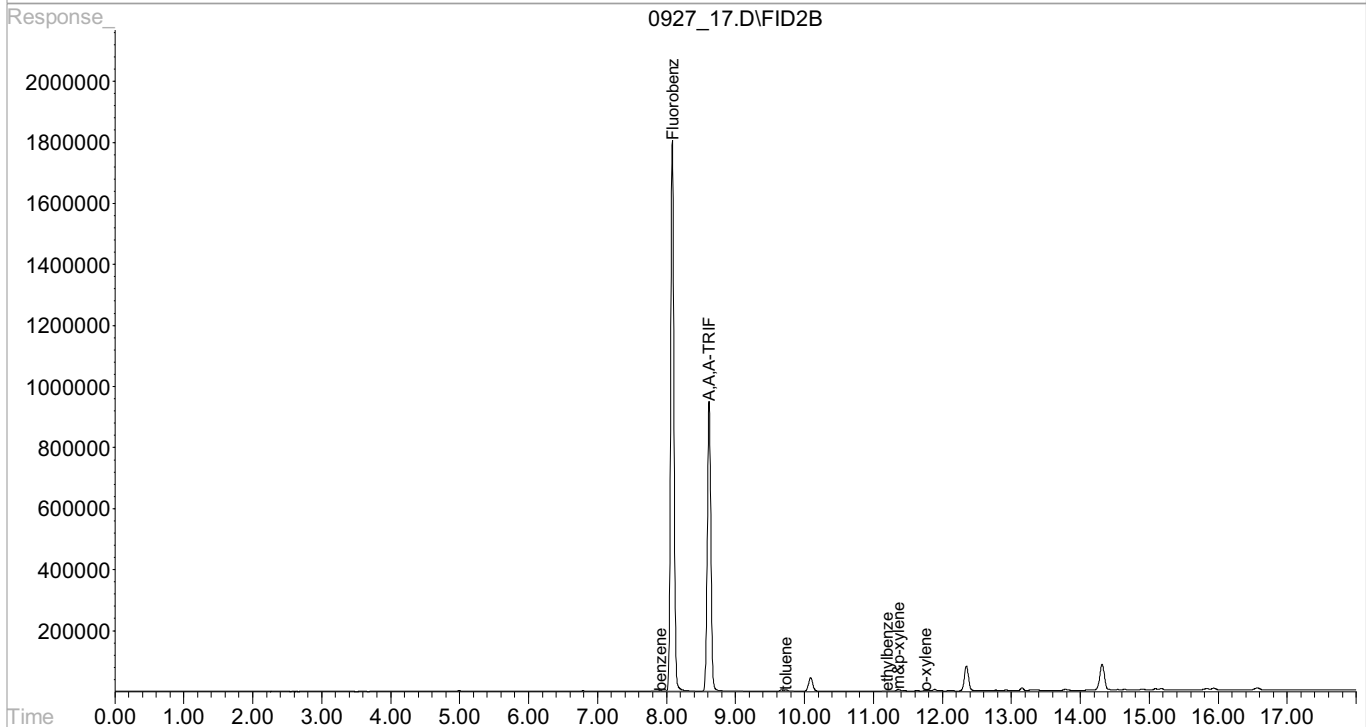
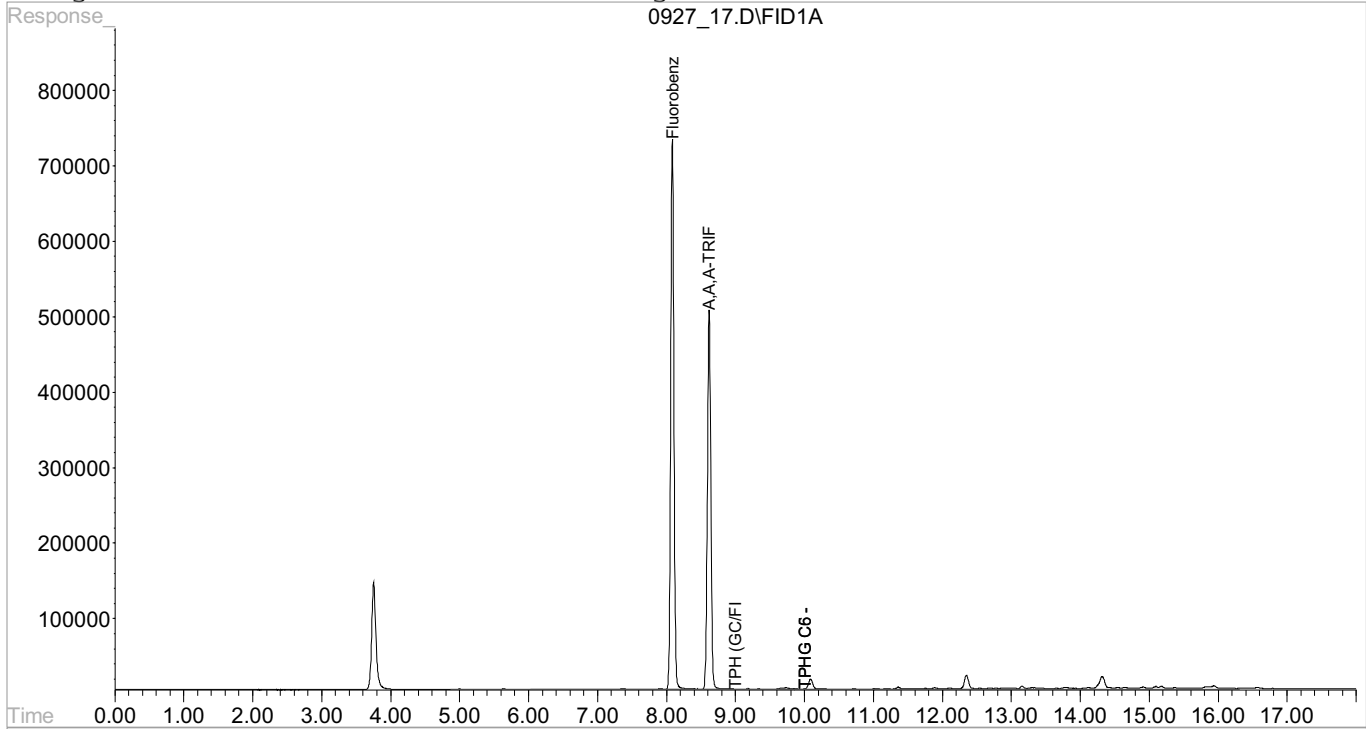
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 17.D\FID1A.CH Vial: 17
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 17.D\FID2B.CH
 Acq On : 27 Sep 2017 3:33 pm Operator: 605
 Sample : L938609-09 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

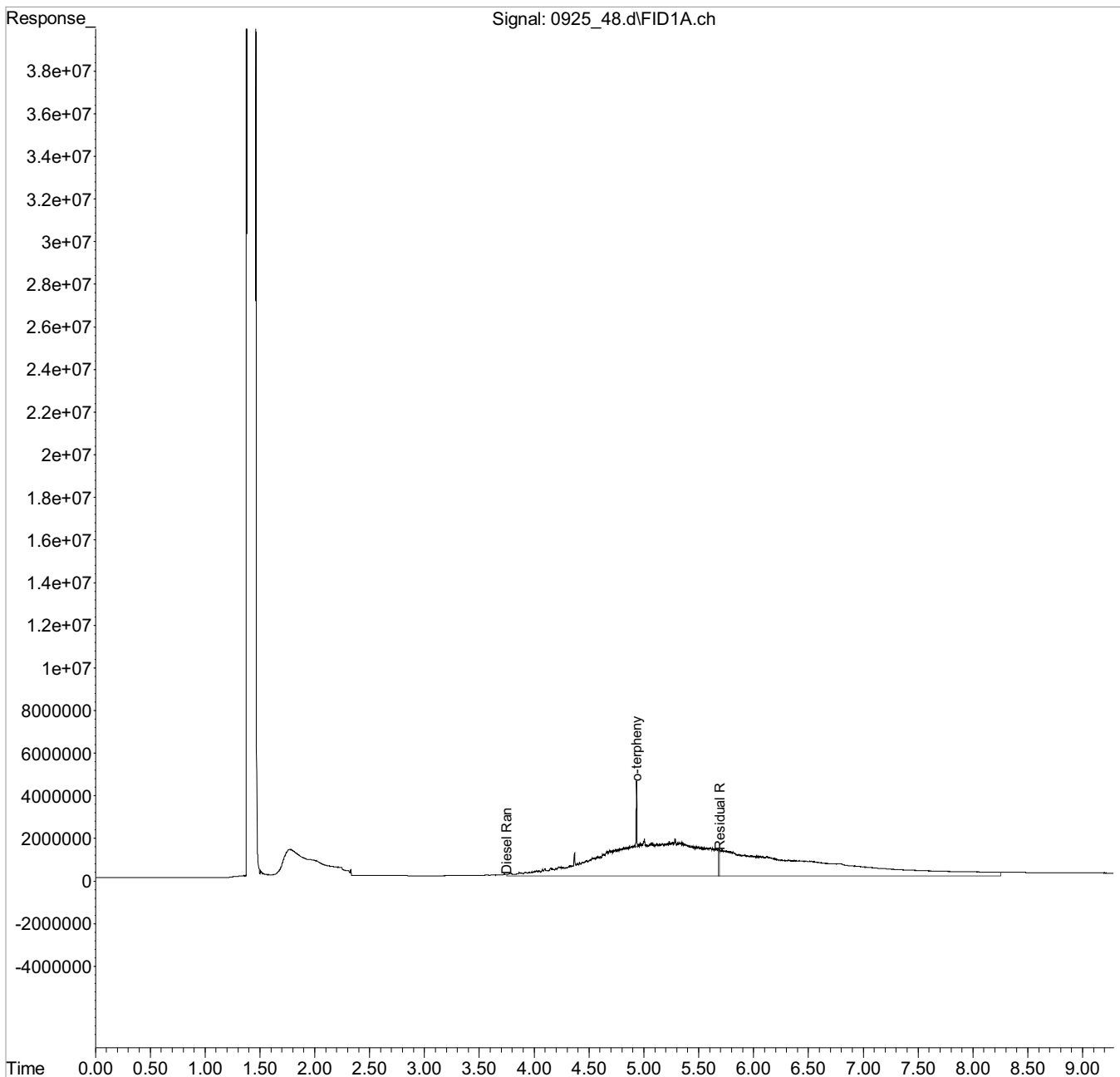
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925 48.d
 Signal(s) : FID1A.ch
 Acq On : 25 Sep 2017 11:30 pm
 Operator : 725
 Sample : L938609-09 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 44 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:17:29 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

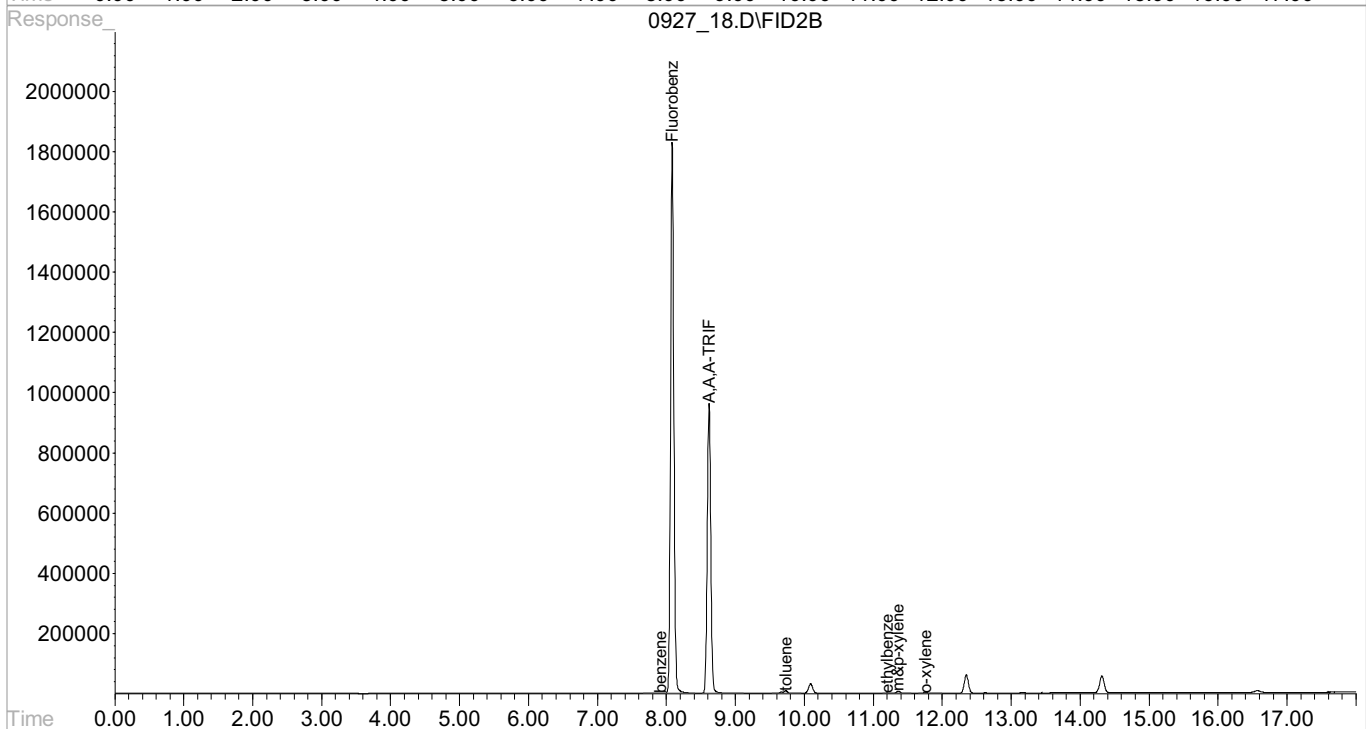
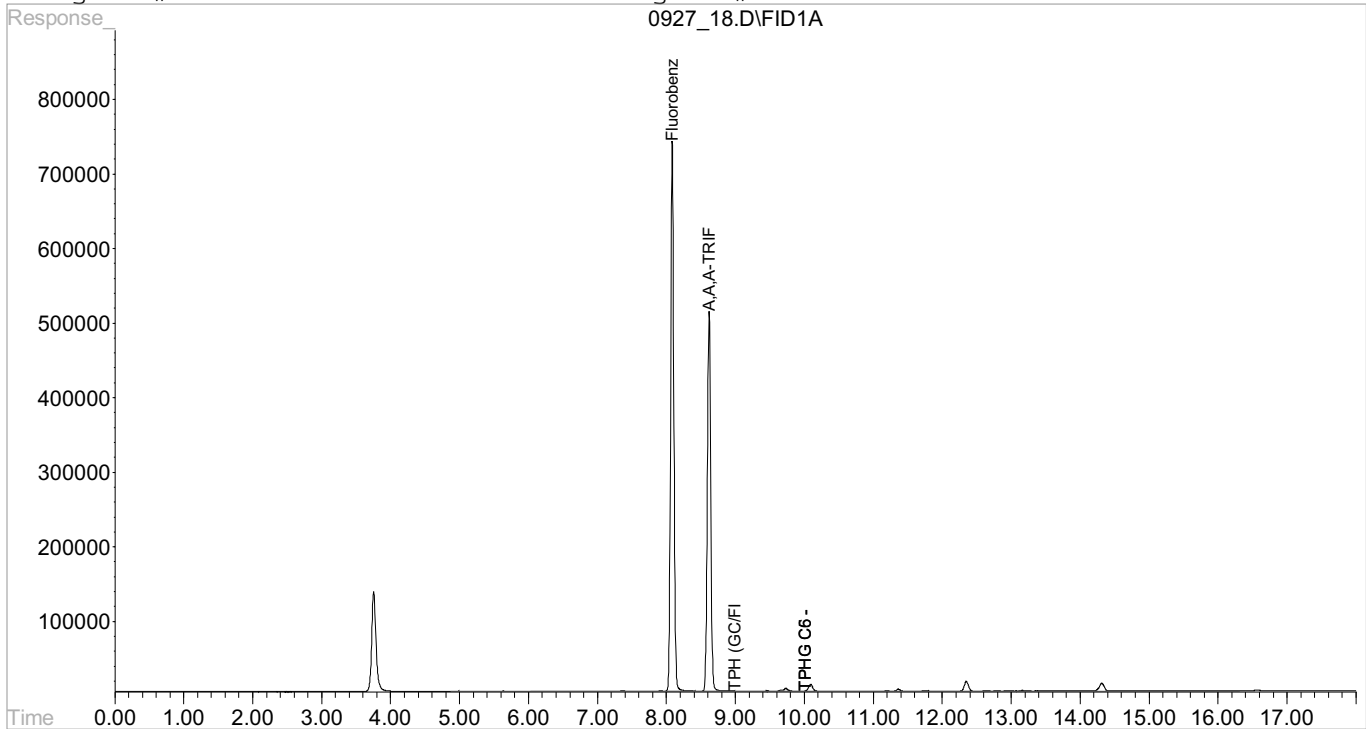
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 18.D\FID1A.CH Vial: 18
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 18.D\FID2B.CH
 Acq On : 27 Sep 2017 3:57 pm Operator: 605
 Sample : L938609-10 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

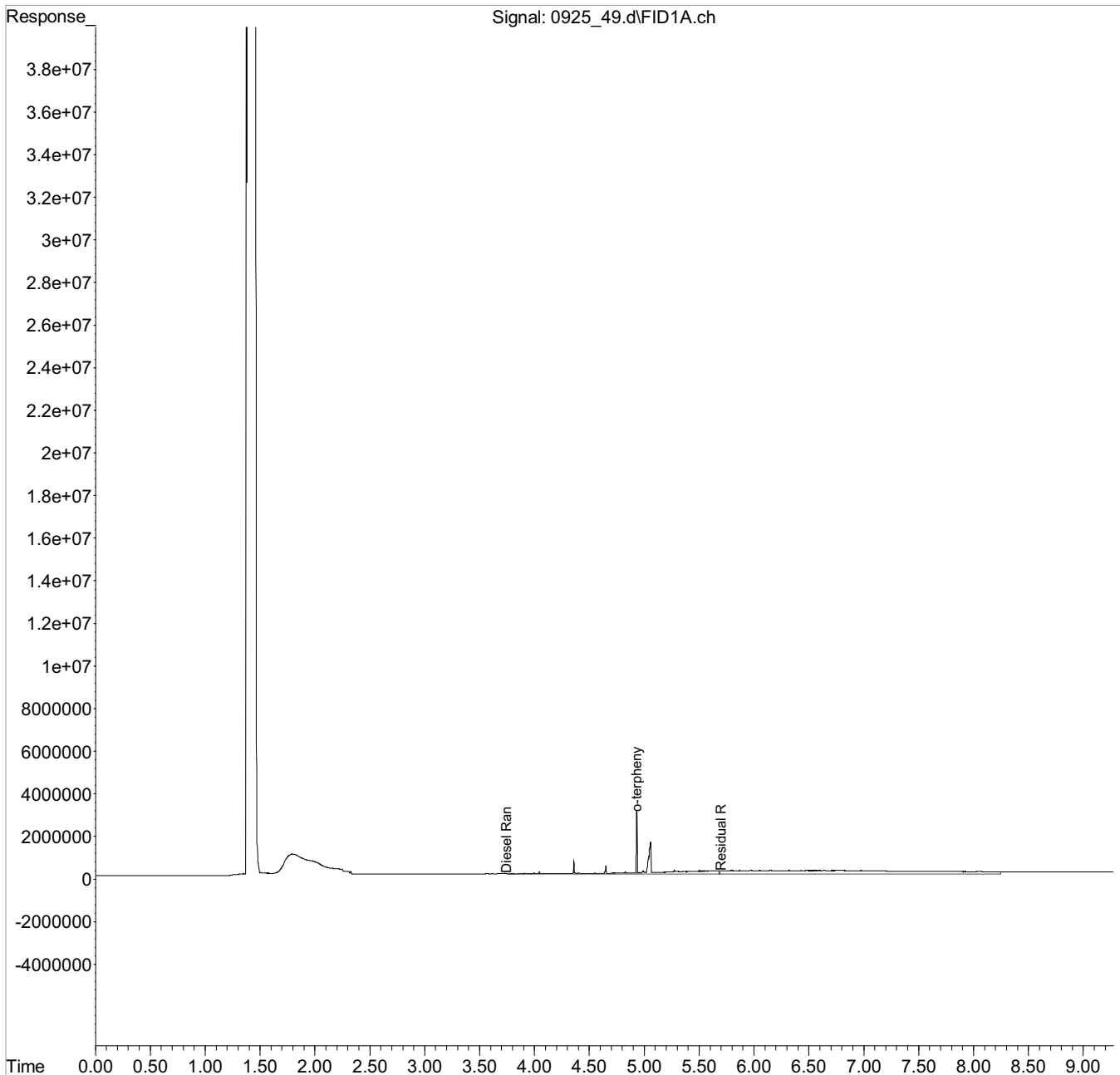
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925 49.d
 Signal(s) : FID1A.ch
 Acq On : 25 Sep 2017 11:46 pm
 Operator : 725
 Sample : L938609-10 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 45 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:18:18 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

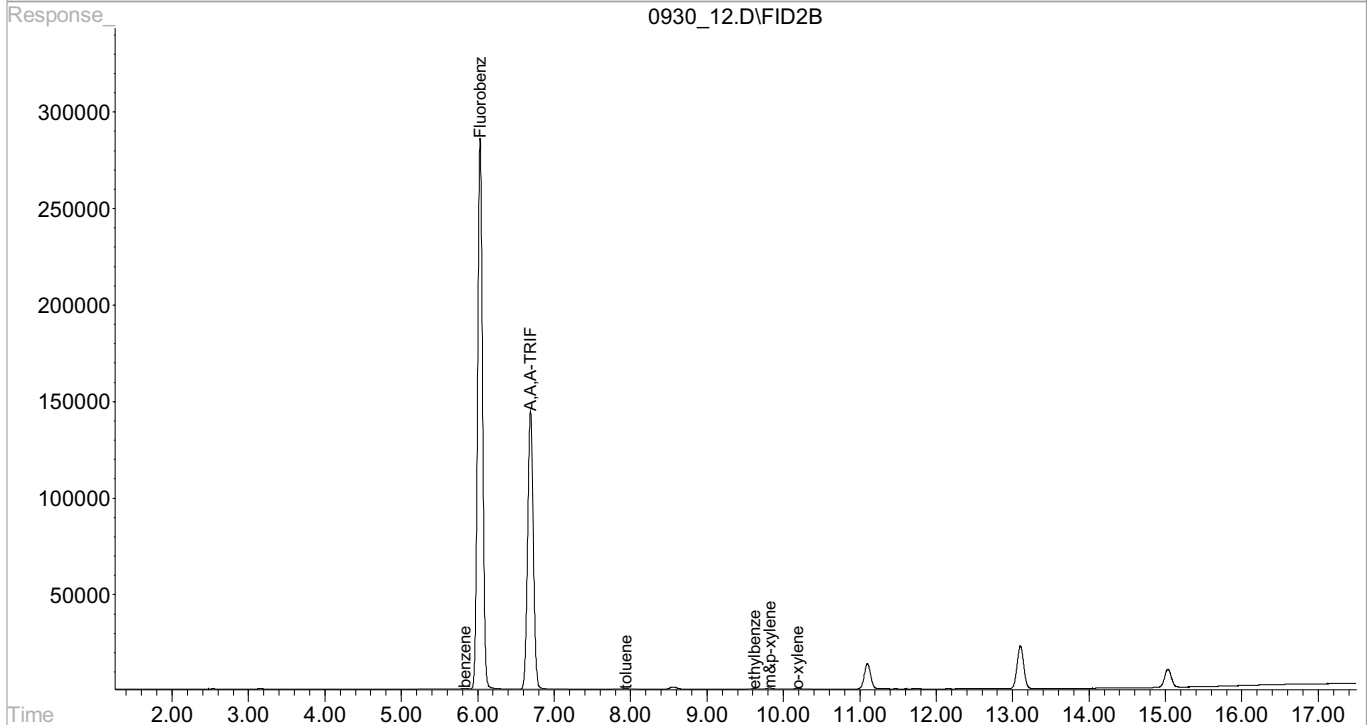
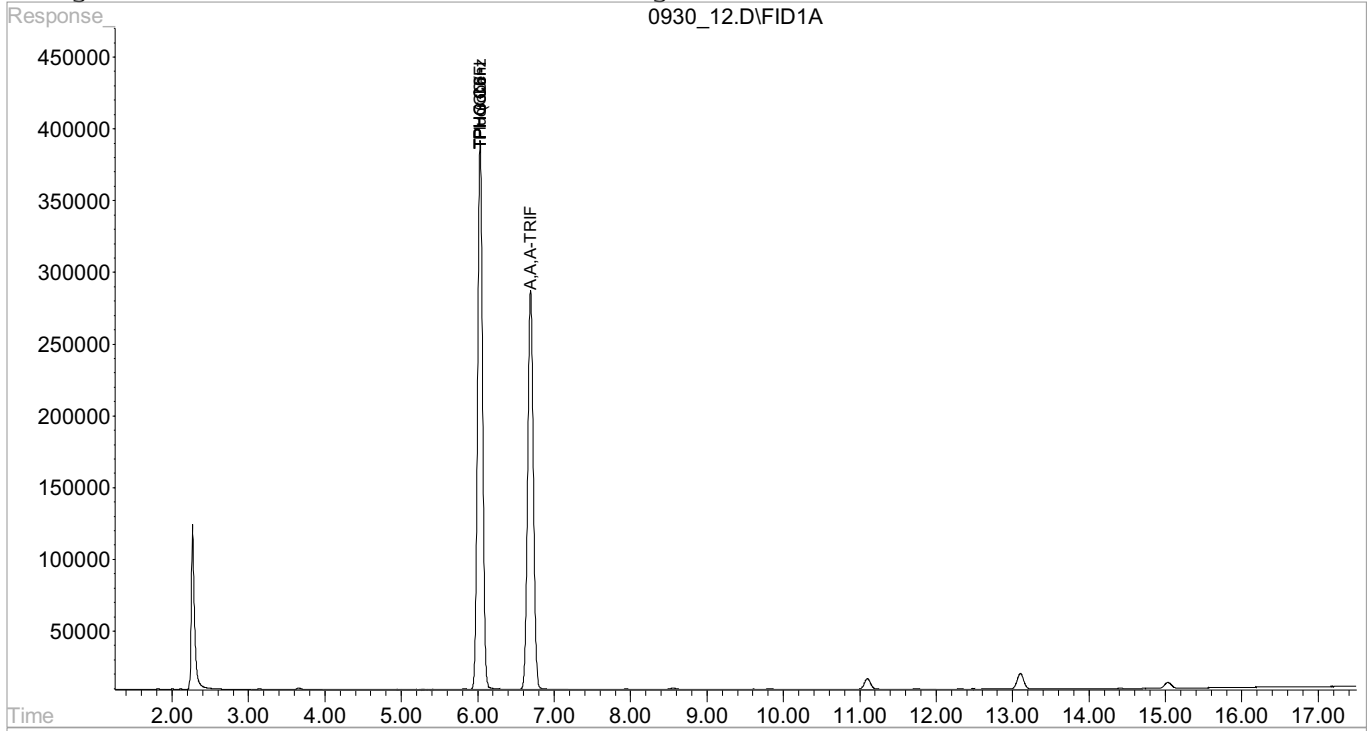
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\093017\0930 12.D\FID1A.CH Vial: 12
 Signal #2 : C:\HPCHEM\1\DATA\093017\0930 12.D\FID2B.CH
 Acq On : 30 Sep 2017 4:20 pm Operator: 621
 Sample : L938609-11 1x WG1024796 RE Inst : VOCGC3
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Oct 2 15:16 2017 Quant Results File: BG03I28Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG03I28Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC03
 Last Update : Fri Sep 29 08:49:49 2017
 Response via : Single Level Calibration
 DataAcq Meth : BTEXGRO.M

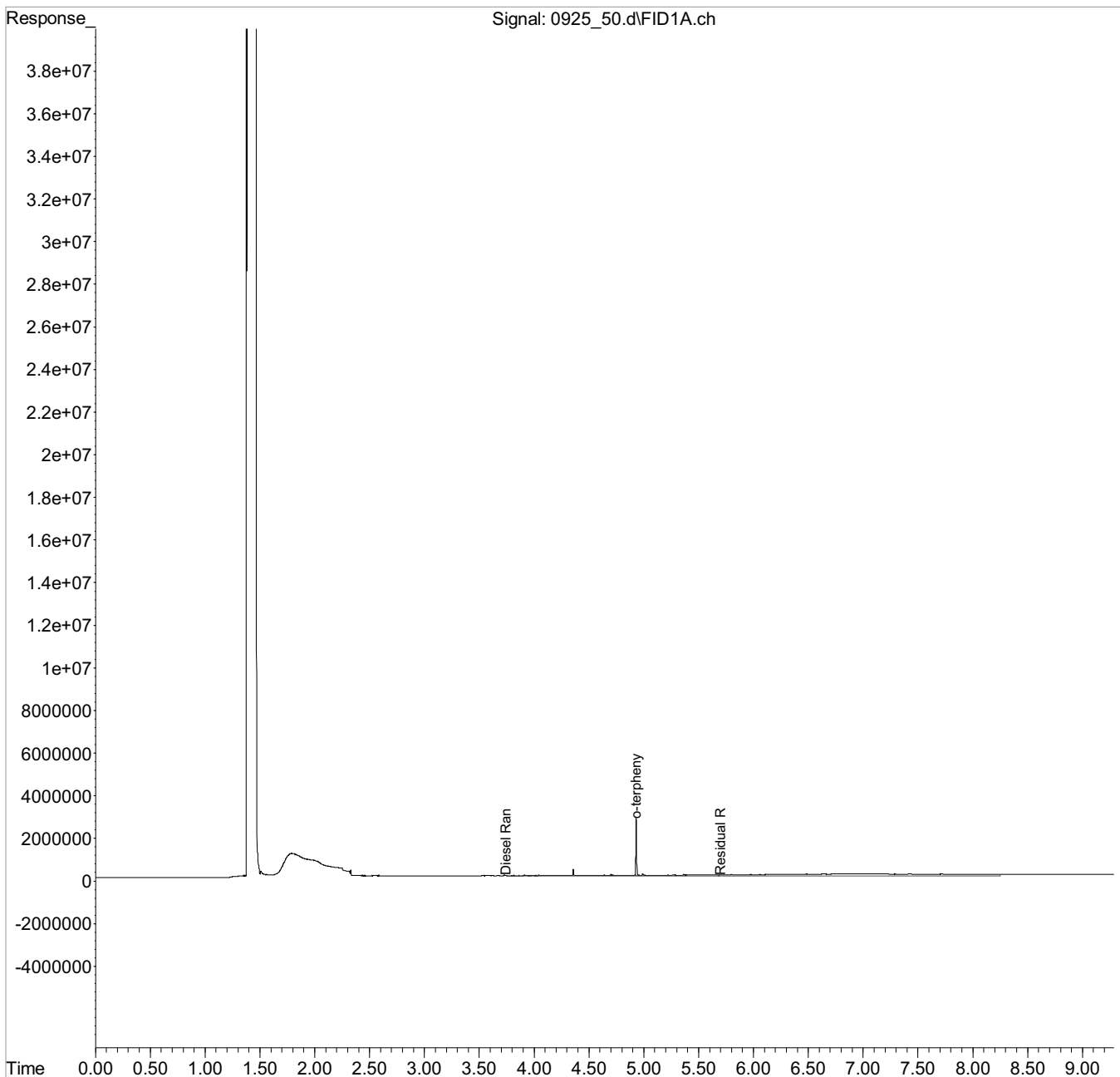
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
Data File : 0925 50.d
Signal(s) : FID1A.ch
Acq On : 26 Sep 2017 12:03 am
Operator : 725
Sample : L938609-11 1x WG1024084 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 46 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Sep 26 11:19:06 2017
Quant Method : C:\msdchem\1\methods\EP27H31Q.M
Quant Title :
QLast Update : Mon Sep 04 13:19:35 2017
Response via : Initial Calibration
Integrator: ChemStation

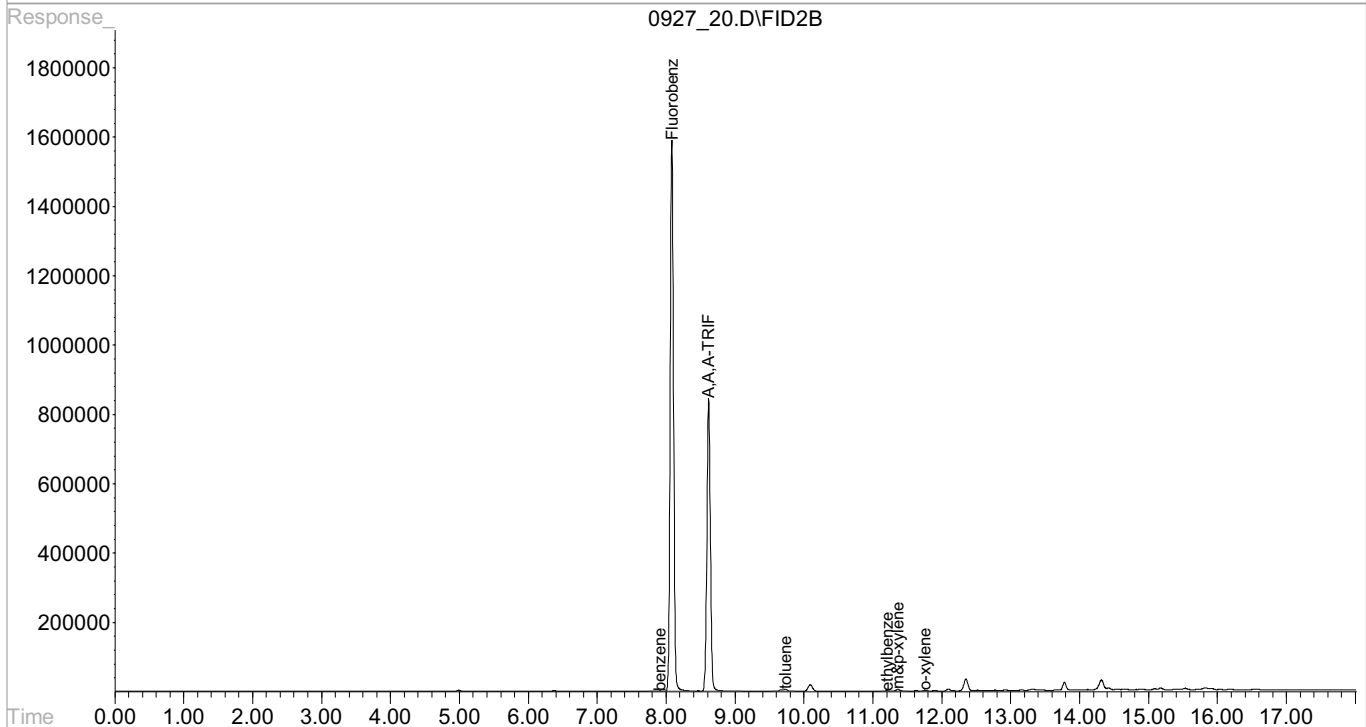
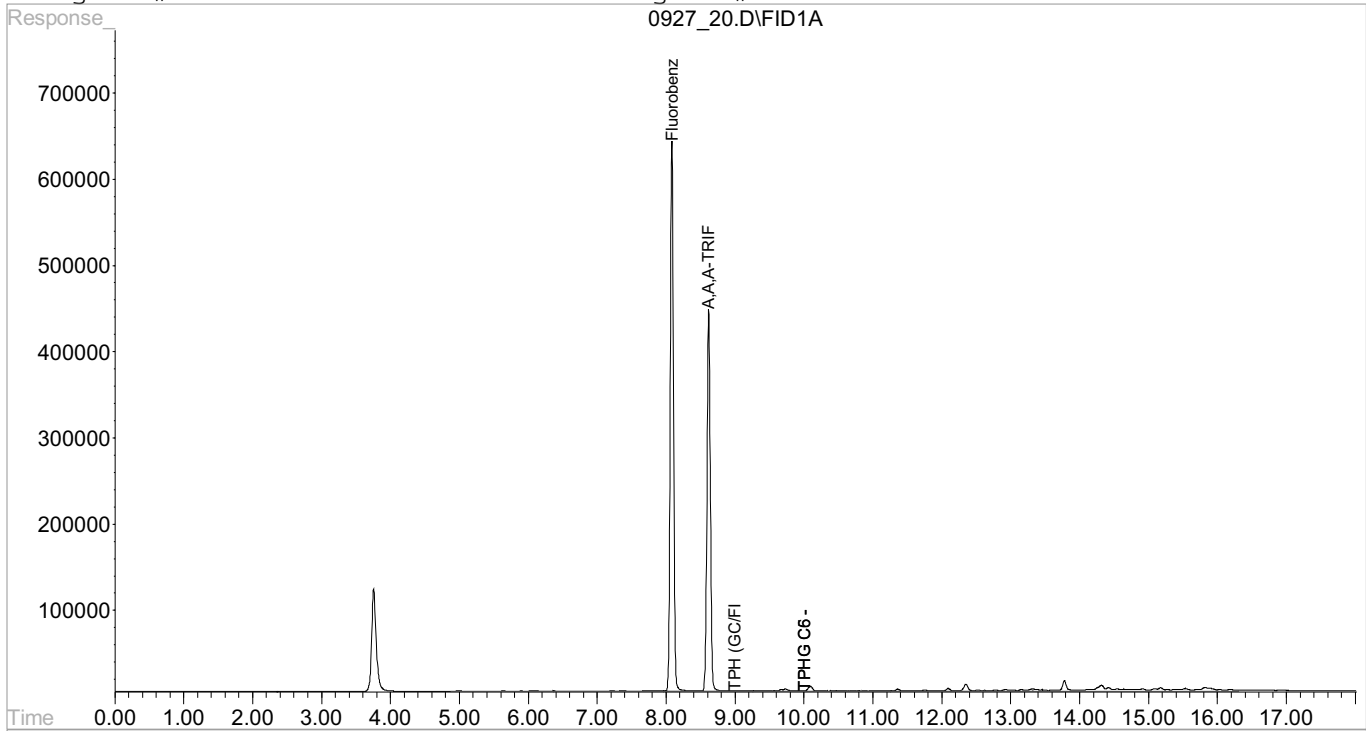
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 20.D\FID1A.CH Vial: 20
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 20.D\FID2B.CH
 Acq On : 27 Sep 2017 4:44 pm Operator: 605
 Sample : L938609-12 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

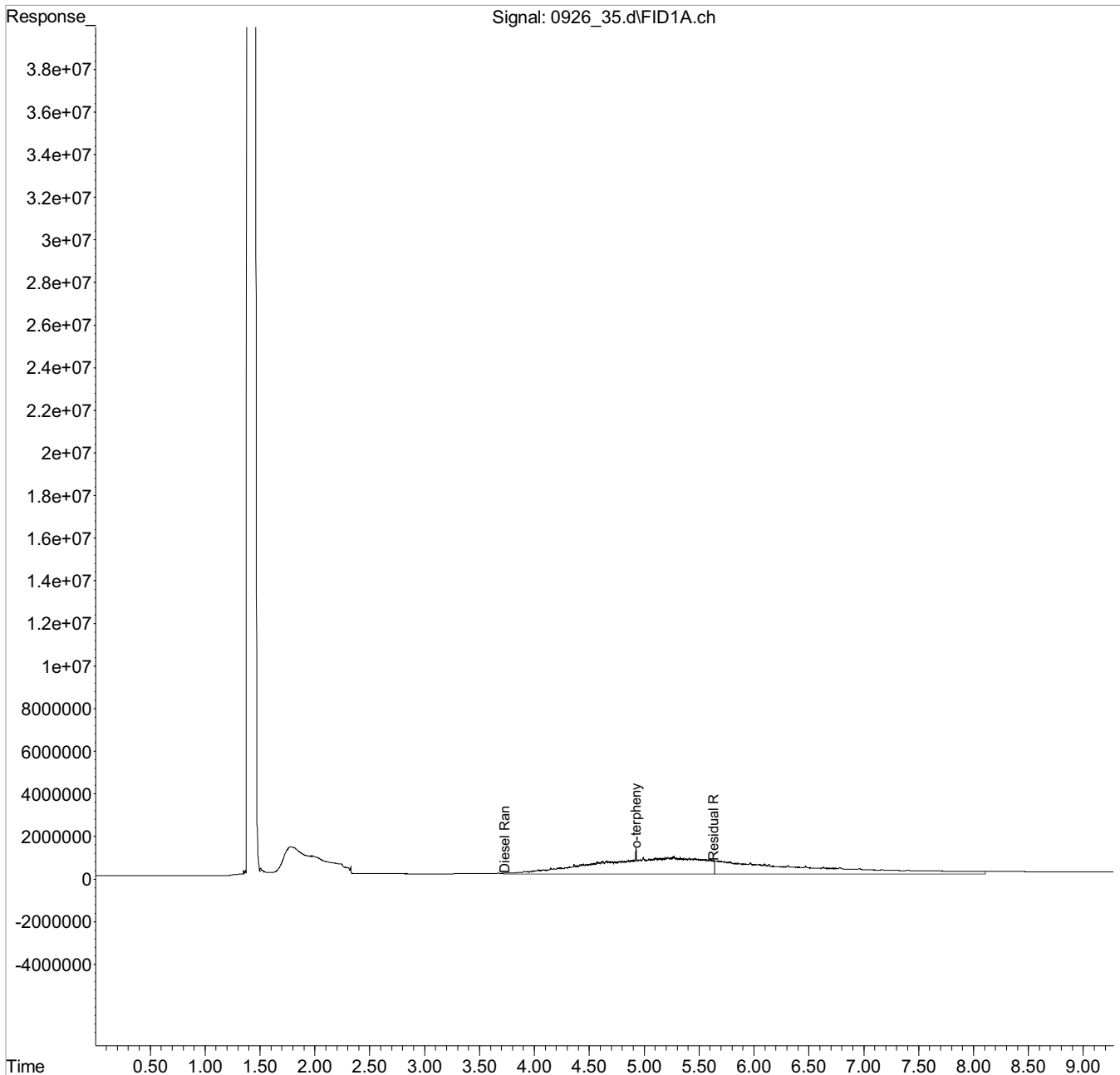
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092617\
 Data File : 0926 35.d
 Signal(s) : FID1A.ch
 Acq On : 26 Sep 2017 9:18 pm
 Operator : 773
 Sample : L938609-12 5x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 28 Sample Multiplier: 0.25
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 27 14:09:00 2017
 Quant Method : C:\msdchem\1\methods\EP27I26Q.M
 Quant Title :
 QLast Update : Tue Sep 26 15:47:15 2017
 Response via : Initial Calibration
 Integrator: ChemStation

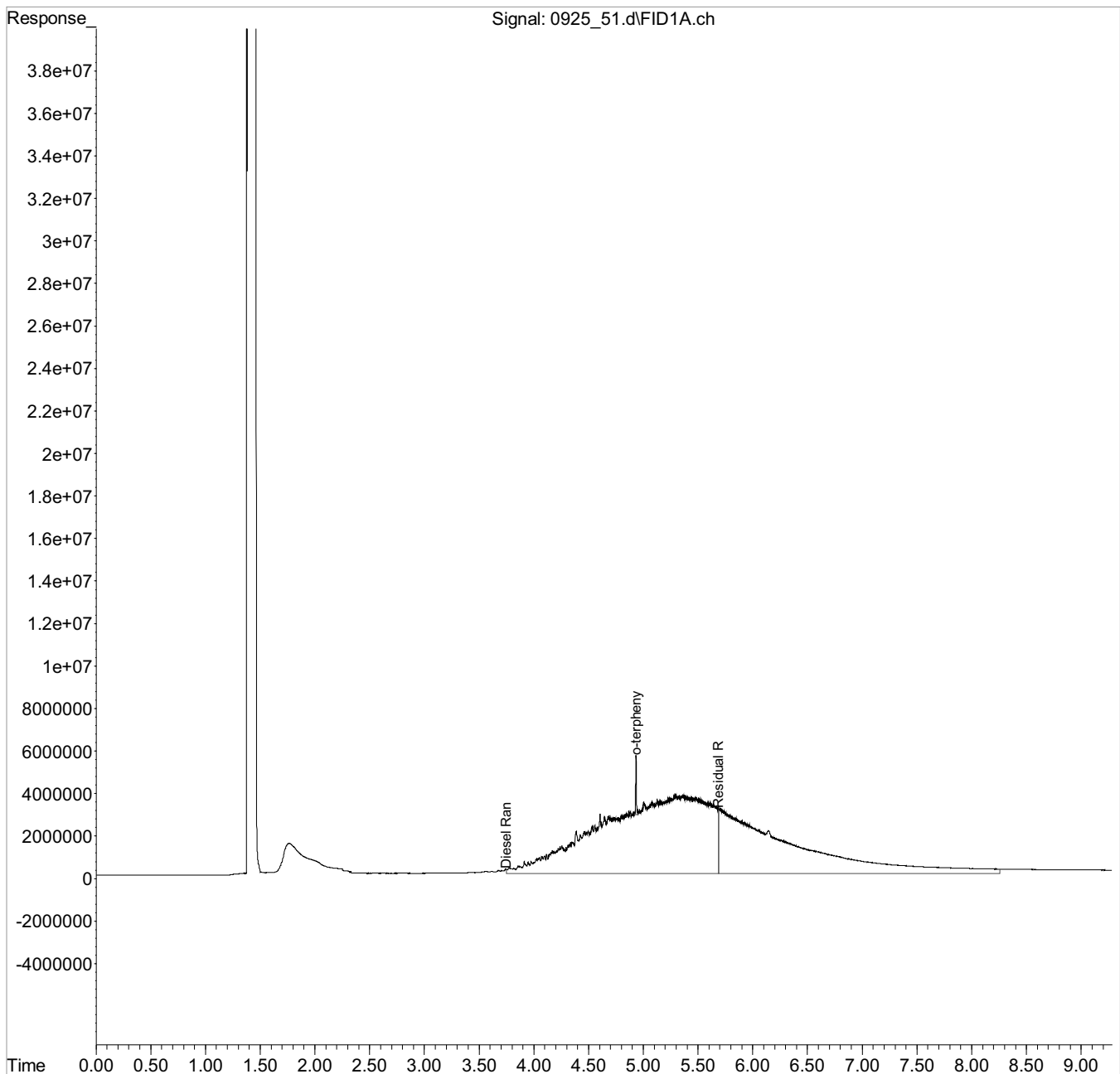
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\092517\
Data File : 0925 51.d
Signal(s) : FID1A.ch
Acq On : 26 Sep 2017 12:19 am
Operator : 725
Sample : L938609-12 1x WG1024084 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 47 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Sep 26 11:19:55 2017
Quant Method : C:\msdchem\1\methods\EP27H31Q.M
Quant Title :
QLast Update : Mon Sep 04 13:19:35 2017
Response via : Initial Calibration
Integrator: ChemStation

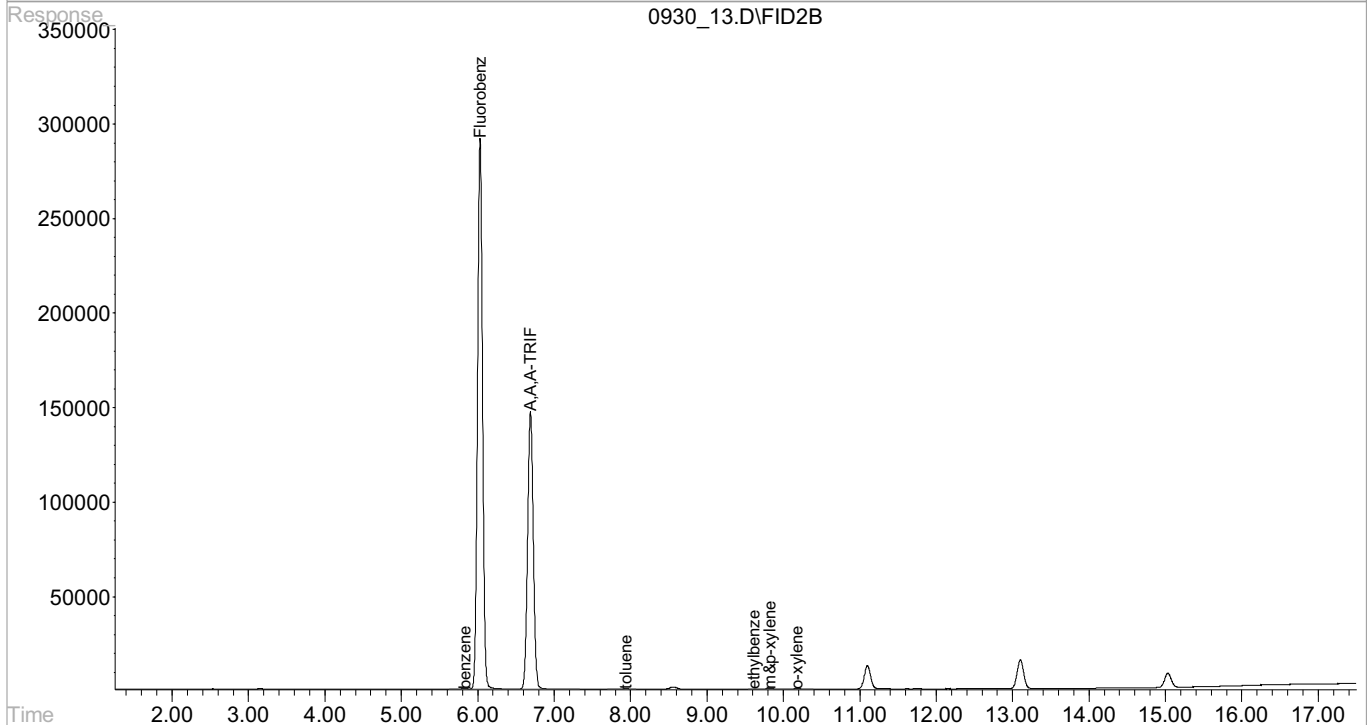
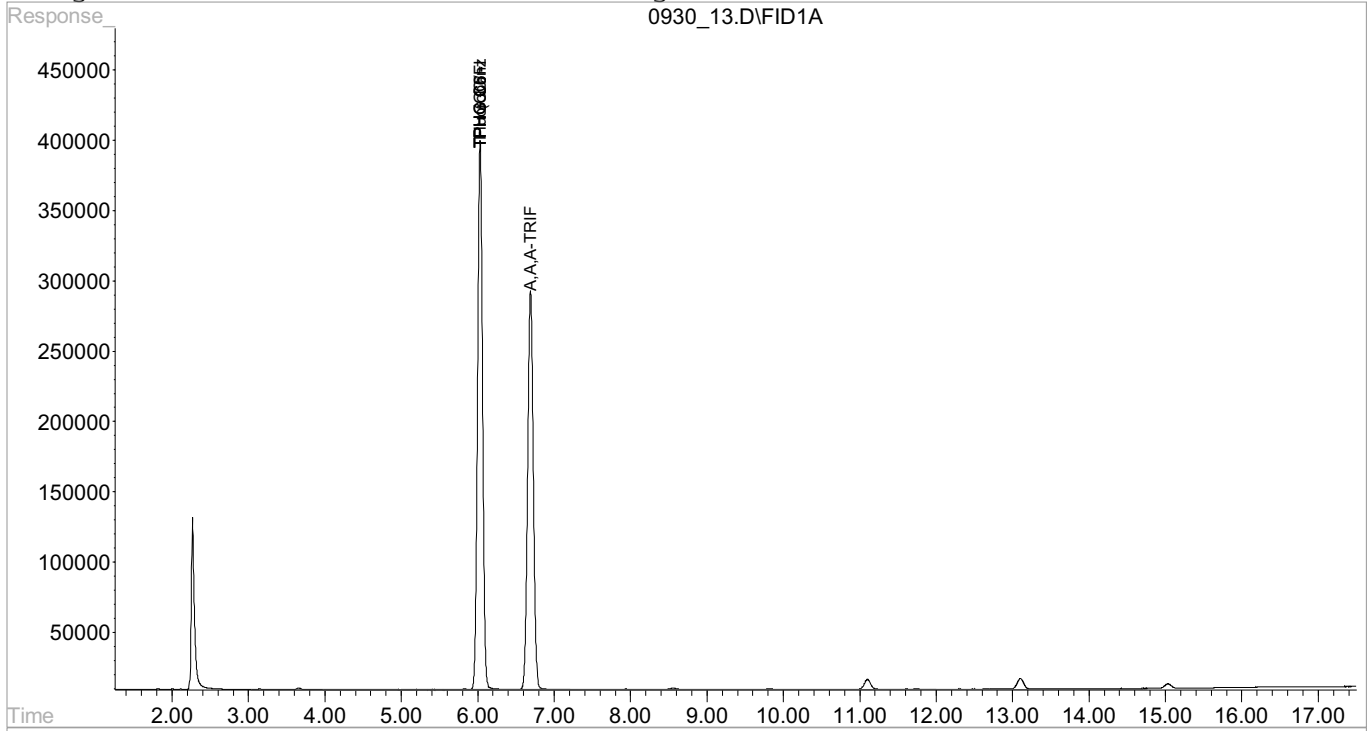
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\093017\0930 13.D\FID1A.CH Vial: 13
 Signal #2 : C:\HPCHEM\1\DATA\093017\0930 13.D\FID2B.CH
 Acq On : 30 Sep 2017 4:43 pm Operator: 621
 Sample : L938609-13 1x WG1024796 RE Inst : VOCGC3
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Oct 2 15:16 2017 Quant Results File: BG03I28Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG03I28Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC03
 Last Update : Fri Sep 29 08:49:49 2017
 Response via : Single Level Calibration
 DataAcq Meth : BTEXGRO.M

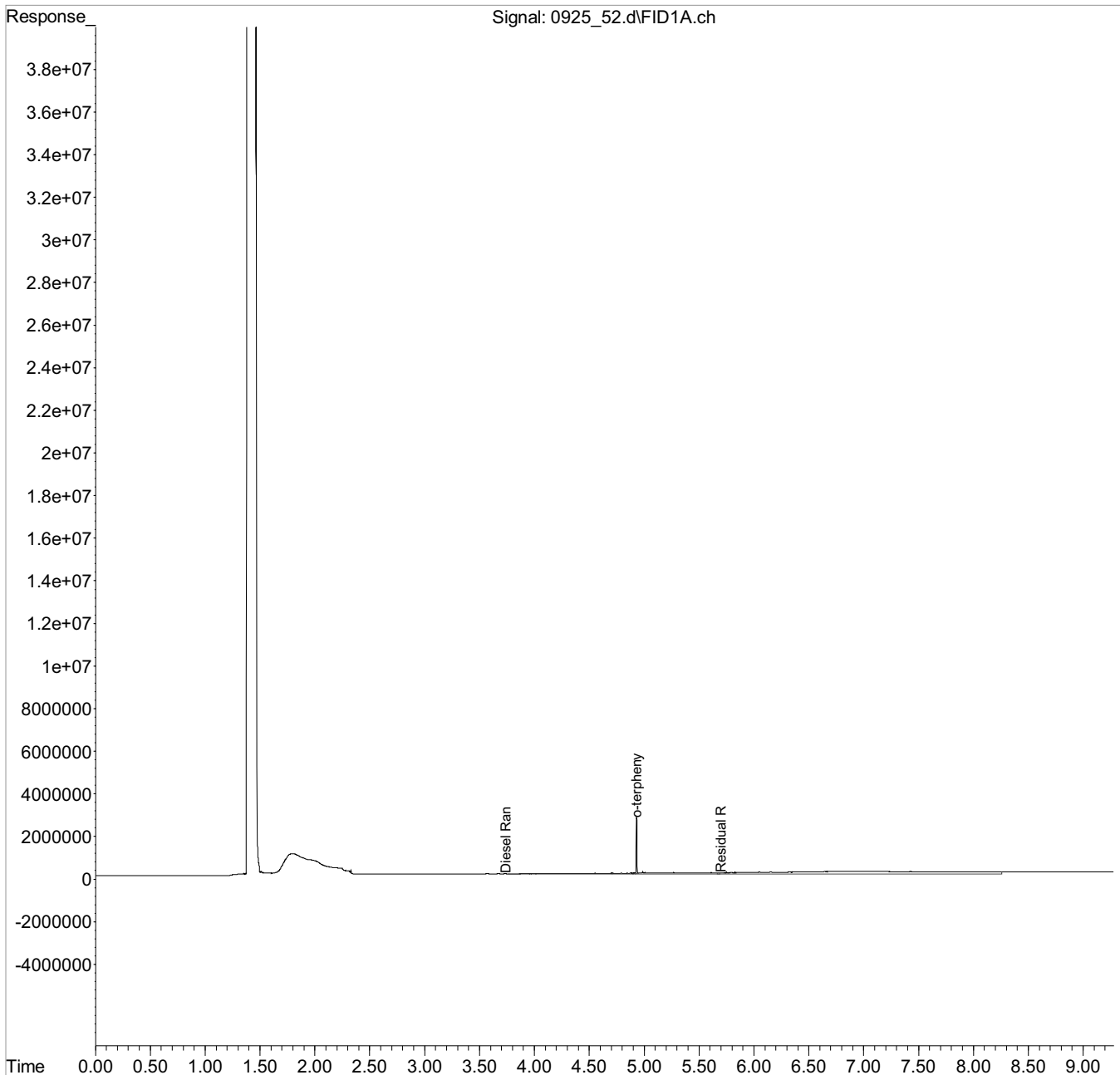
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925 52.d
 Signal(s) : FID1A.ch
 Acq On : 26 Sep 2017 12:36 am
 Operator : 725
 Sample : L938609-13 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 48 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:21:39 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

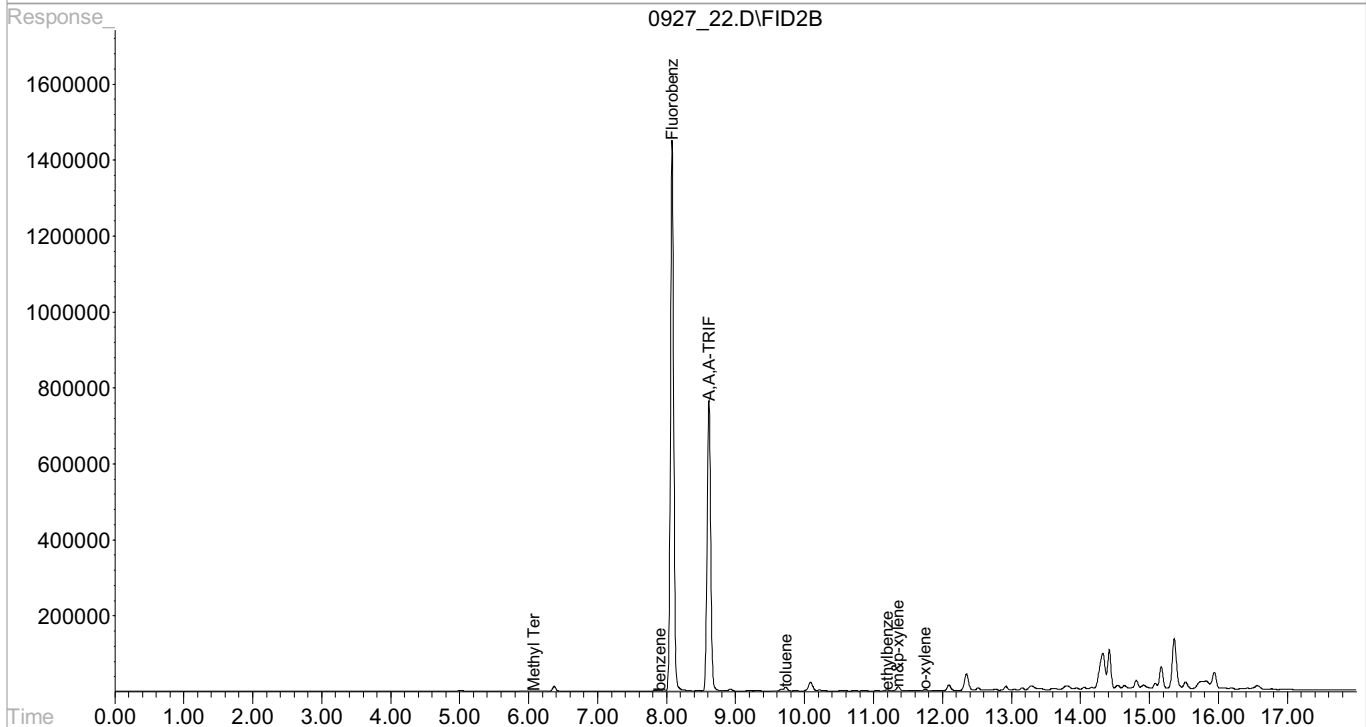
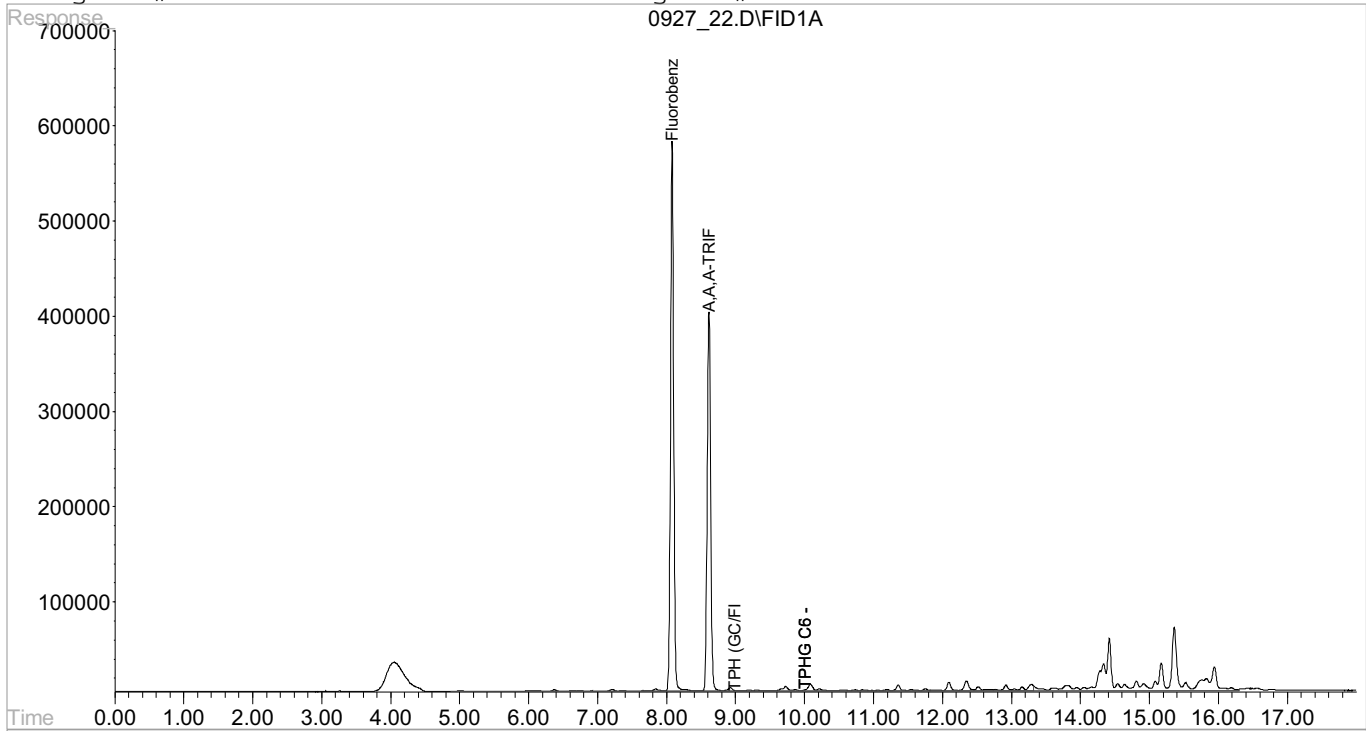
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 22.D\FID1A.CH Vial: 22
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 22.D\FID2B.CH
 Acq On : 27 Sep 2017 5:32 pm Operator: 605
 Sample : L938609-14 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

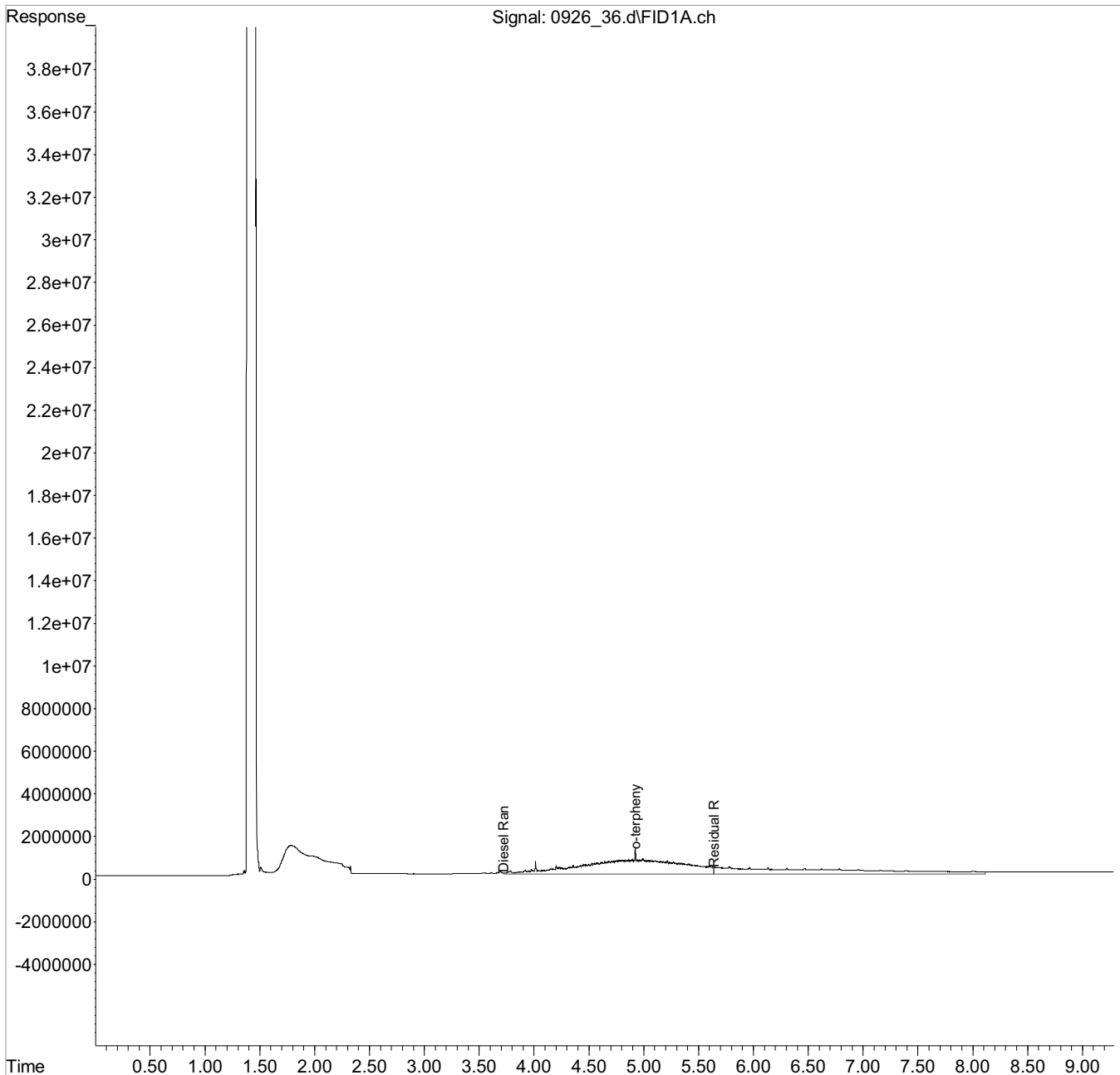
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092617\
 Data File : 0926 36.d
 Signal(s) : FID1A.ch
 Acq On : 26 Sep 2017 9:35 pm
 Operator : 773
 Sample : L938609-14 5x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 29 Sample Multiplier: 0.25
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 27 14:10:27 2017
 Quant Method : C:\msdchem\1\methods\EP27I26Q.M
 Quant Title :
 QLast Update : Tue Sep 26 15:47:15 2017
 Response via : Initial Calibration
 Integrator: ChemStation

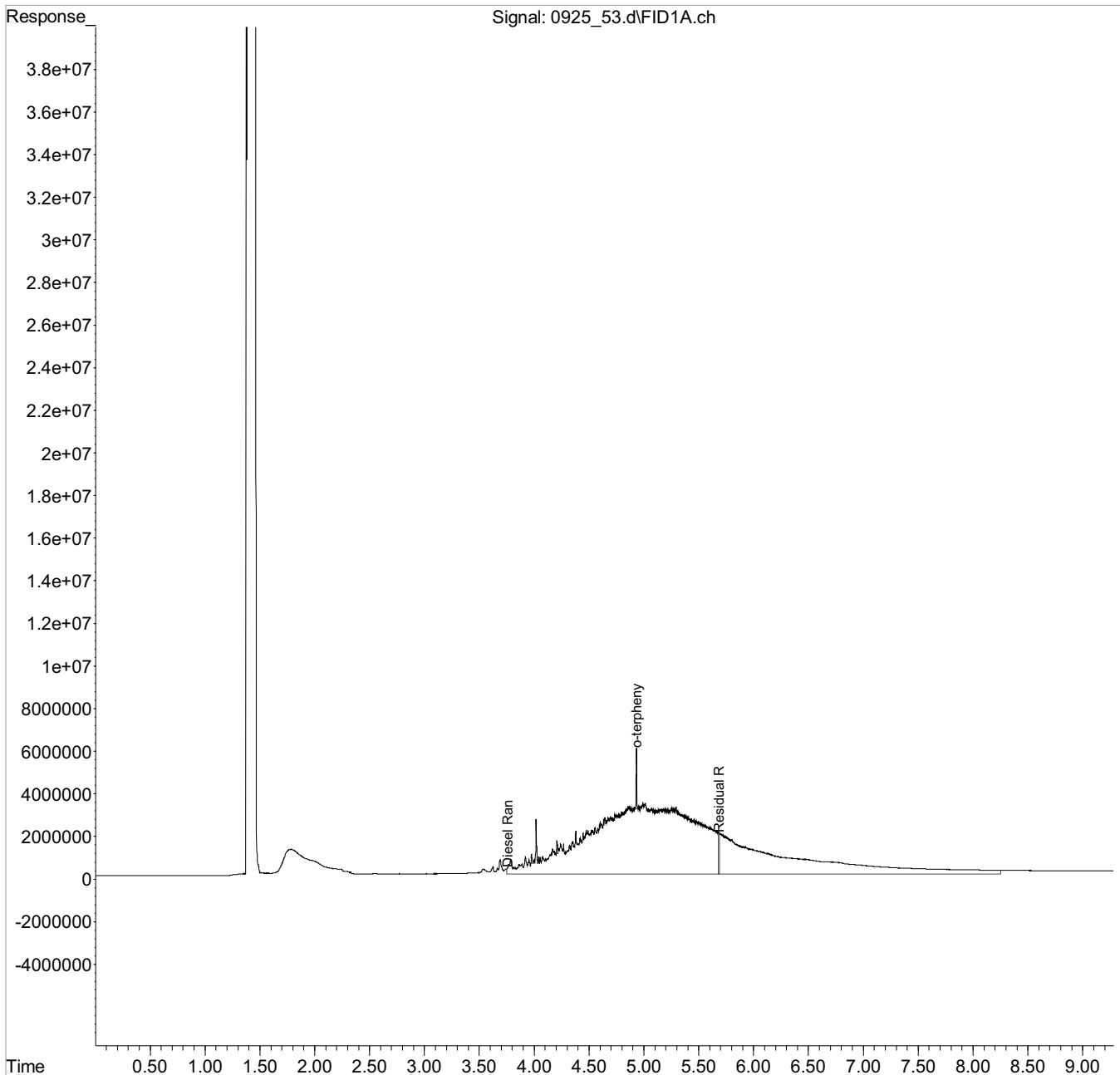
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925 53.d
 Signal(s) : FID1A.ch
 Acq On : 26 Sep 2017 12:52 am
 Operator : 725
 Sample : L938609-14 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 49 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:22:19 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

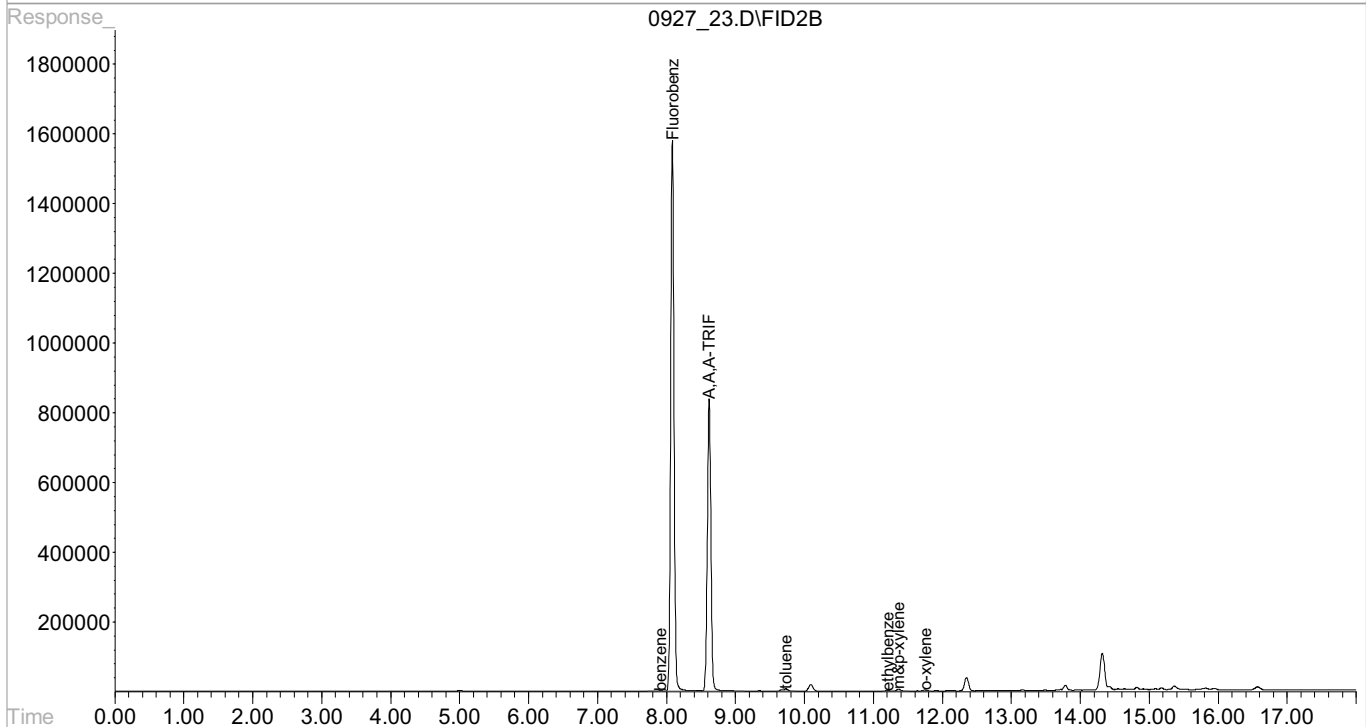
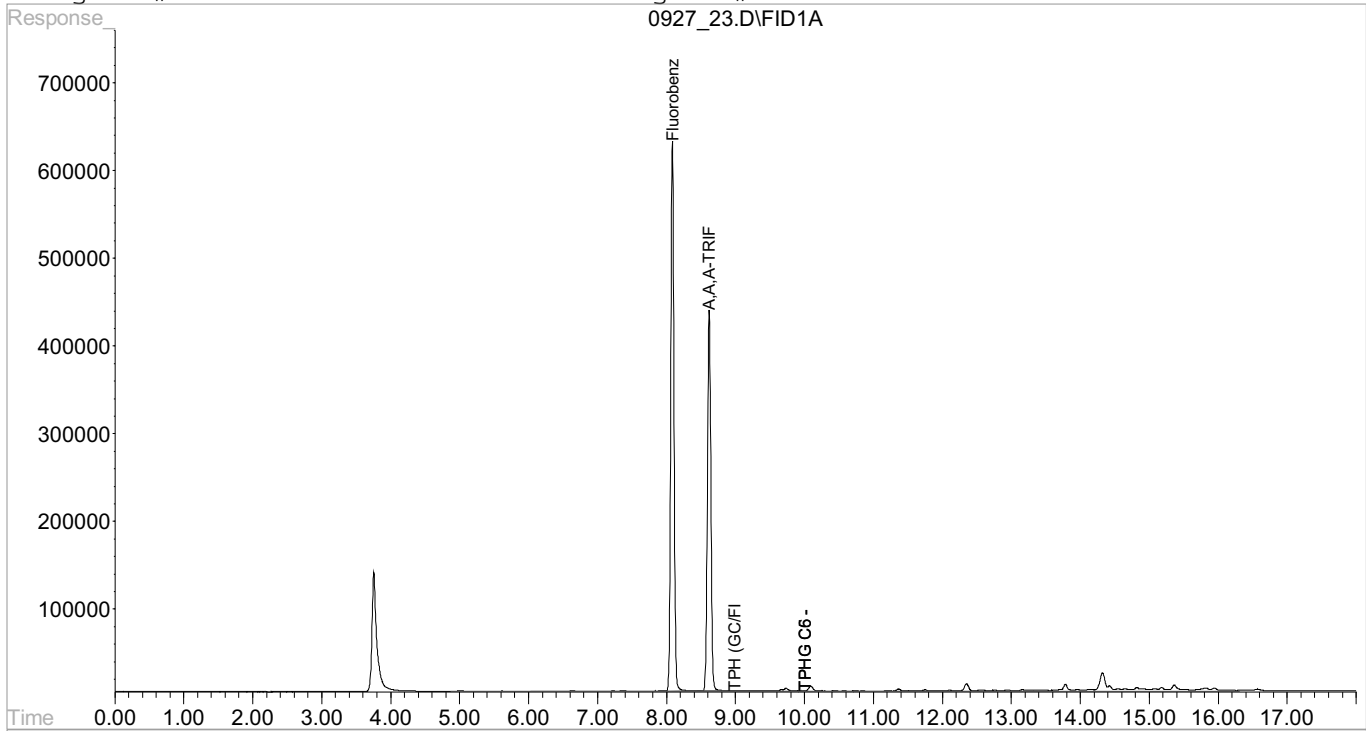
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 23.D\FID1A.CH Vial: 23
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 23.D\FID2B.CH
 Acq On : 27 Sep 2017 5:55 pm Operator: 605
 Sample : L938609-15 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

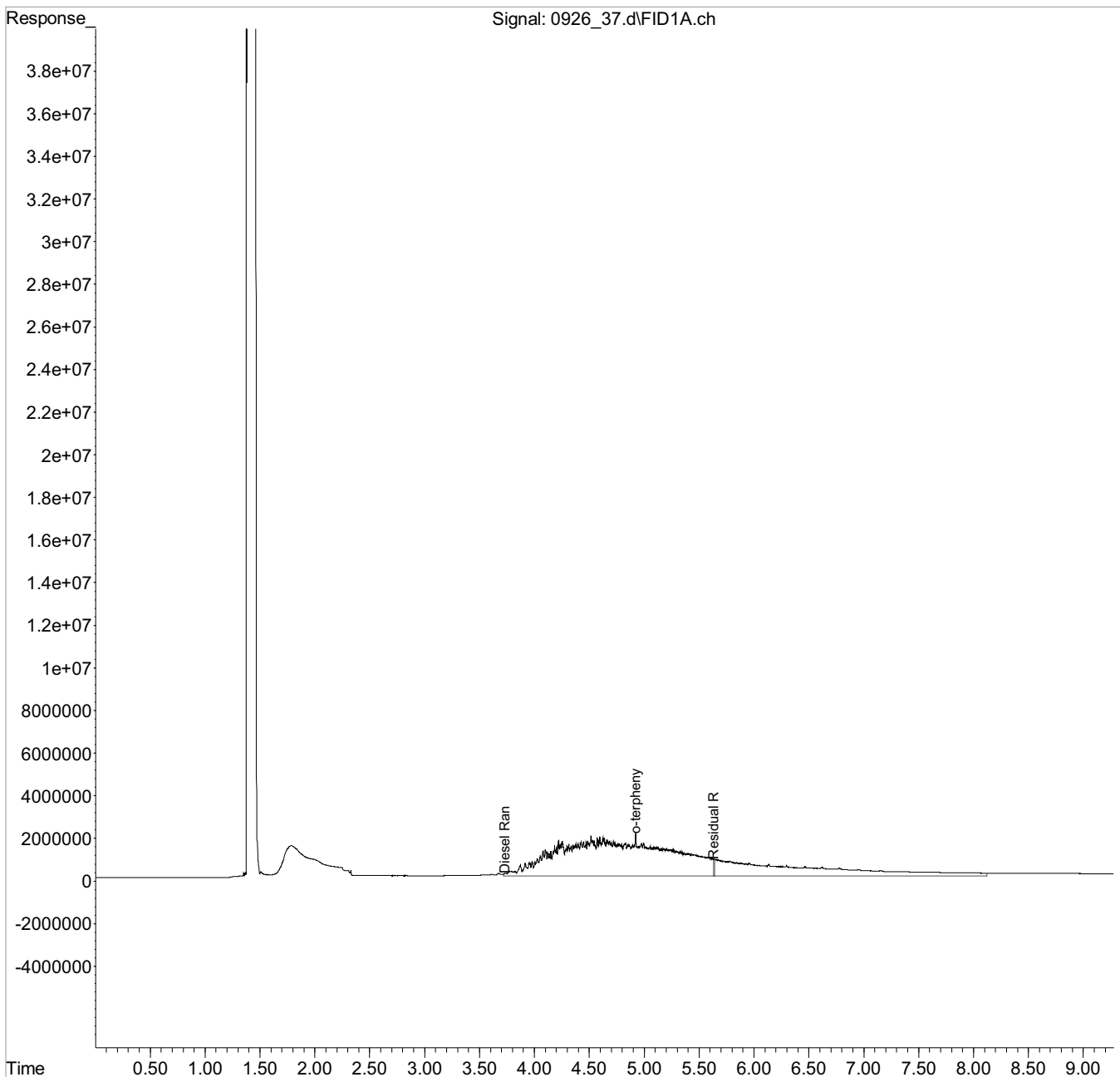
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092617\
Data File : 0926 37.d
Signal(s) : FID1A.ch
Acq On : 26 Sep 2017 9:52 pm
Operator : 773
Sample : L938609-15 5x WG1024084 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 30 Sample Multiplier: 0.25
InstName : SVGC27

Integration File: events.e
Quant Time: Sep 27 14:12:26 2017
Quant Method : C:\msdchem\1\methods\EP27I26Q.M
Quant Title :
QLast Update : Tue Sep 26 15:47:15 2017
Response via : Initial Calibration
Integrator: ChemStation

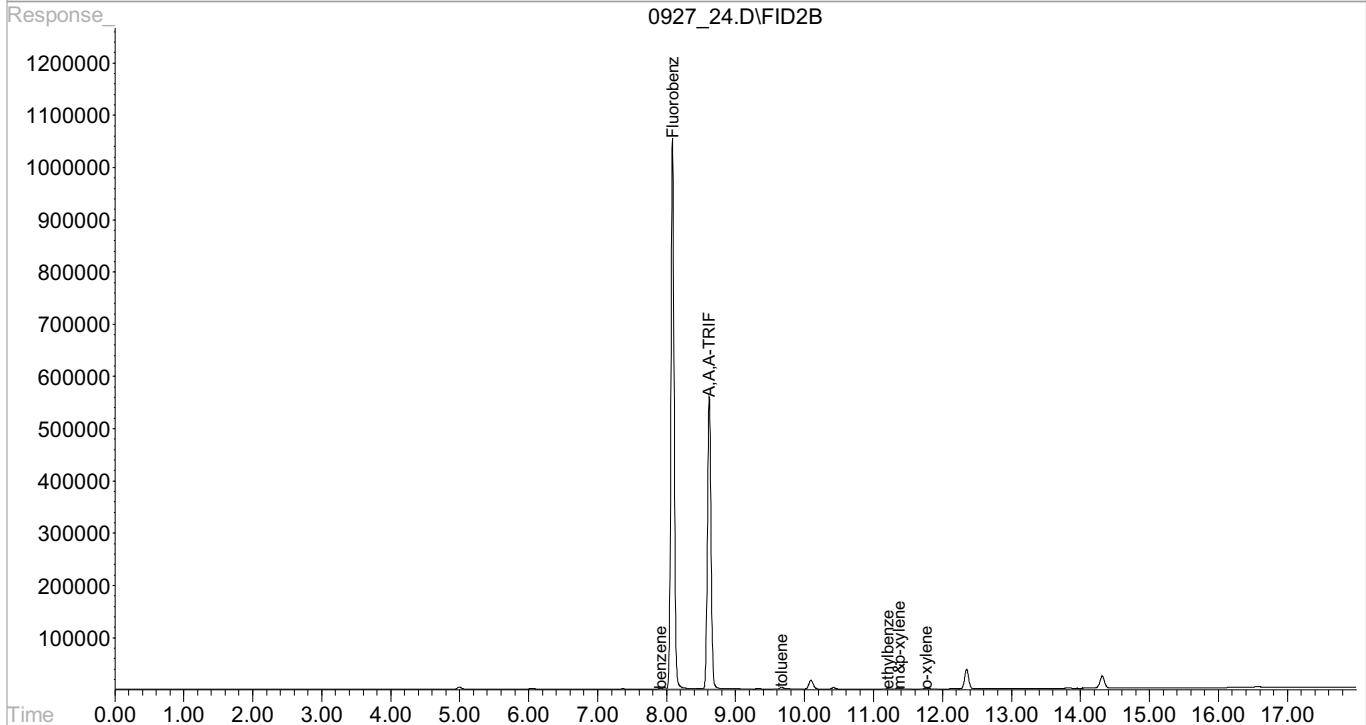
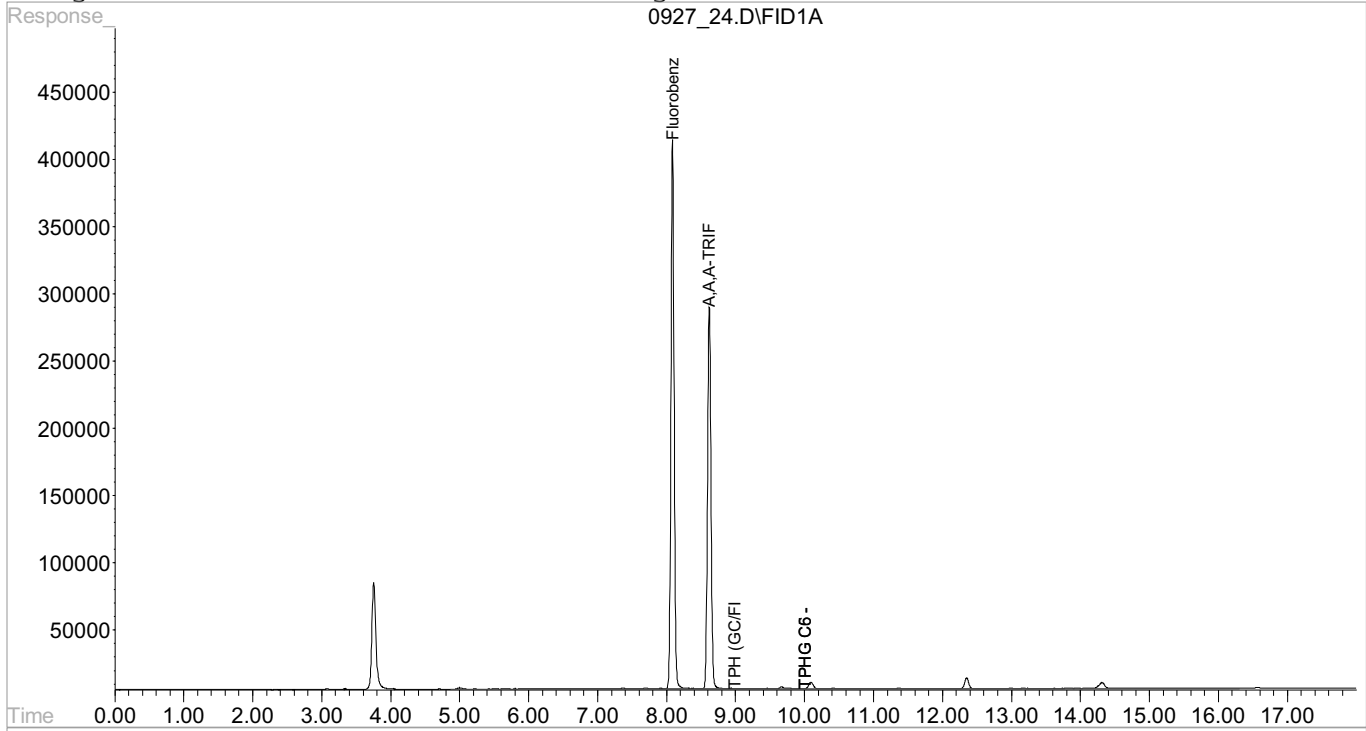
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 24.D\FID1A.CH Vial: 24
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 24.D\FID2B.CH
 Acq On : 27 Sep 2017 6:19 pm Operator: 605
 Sample : L938609-16 1x WG1024796 Inst : VOCGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VOCGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VOCGC14A.M

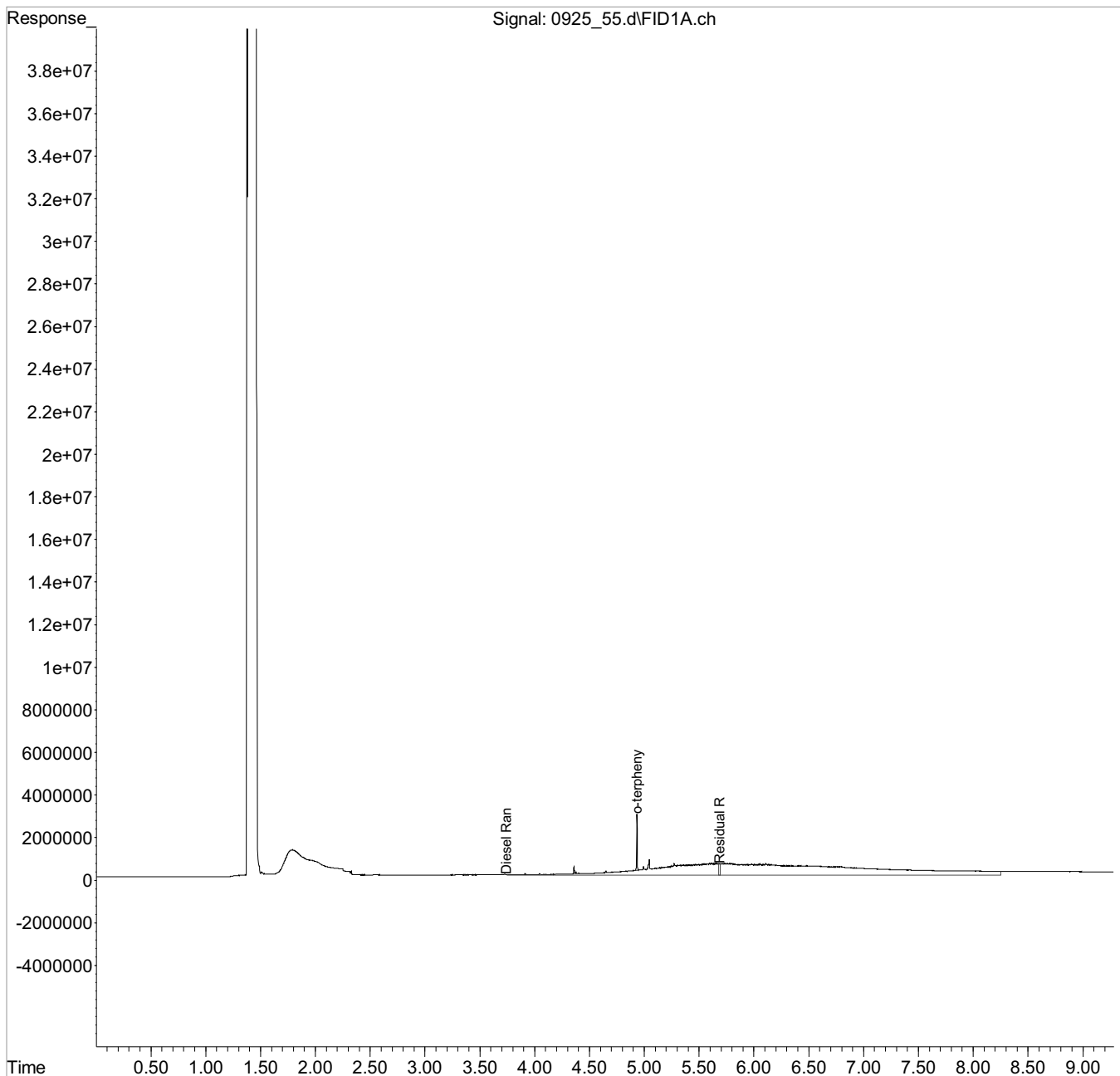
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
Data File : 0925 55.d
Signal(s) : FID1A.ch
Acq On : 26 Sep 2017 1:25 am
Operator : 725
Sample : L938609-16 1x WG1024084 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 51 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Sep 26 11:24:25 2017
Quant Method : C:\msdchem\1\methods\EP27H31Q.M
Quant Title :
QLast Update : Mon Sep 04 13:19:35 2017
Response via : Initial Calibration
Integrator: ChemStation

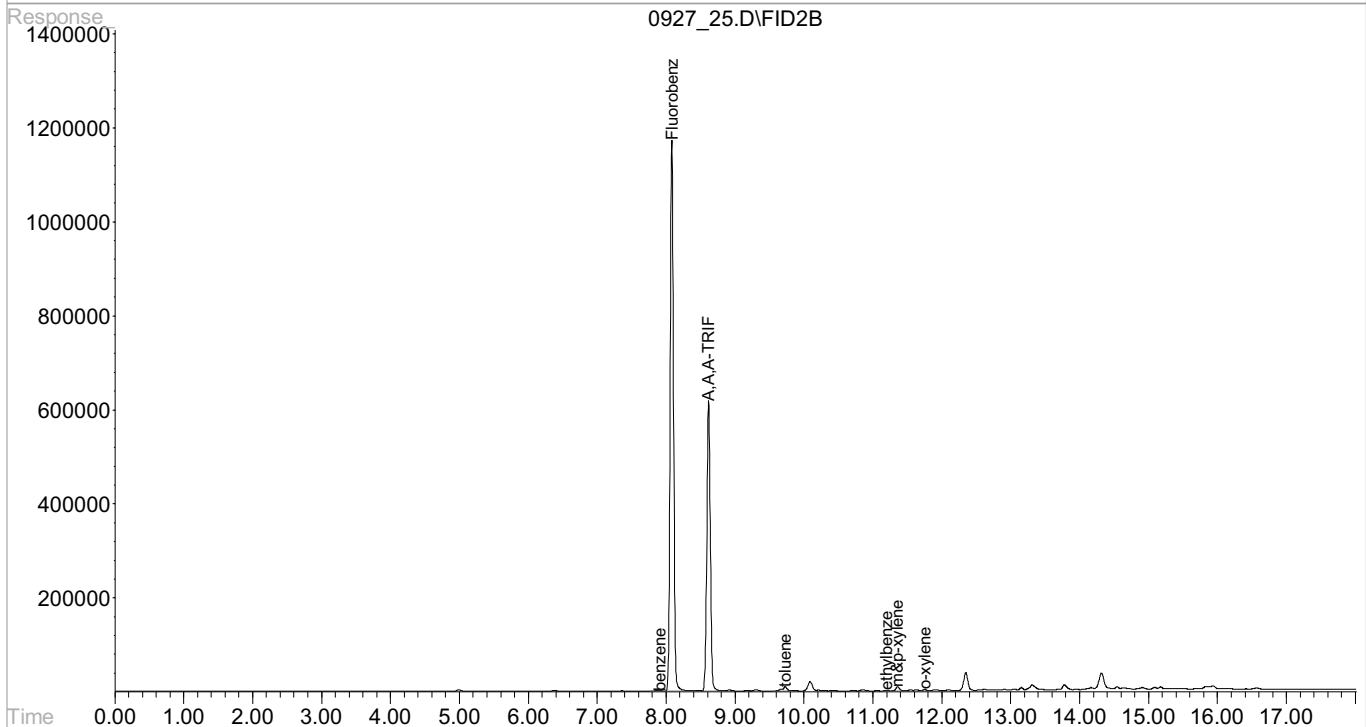
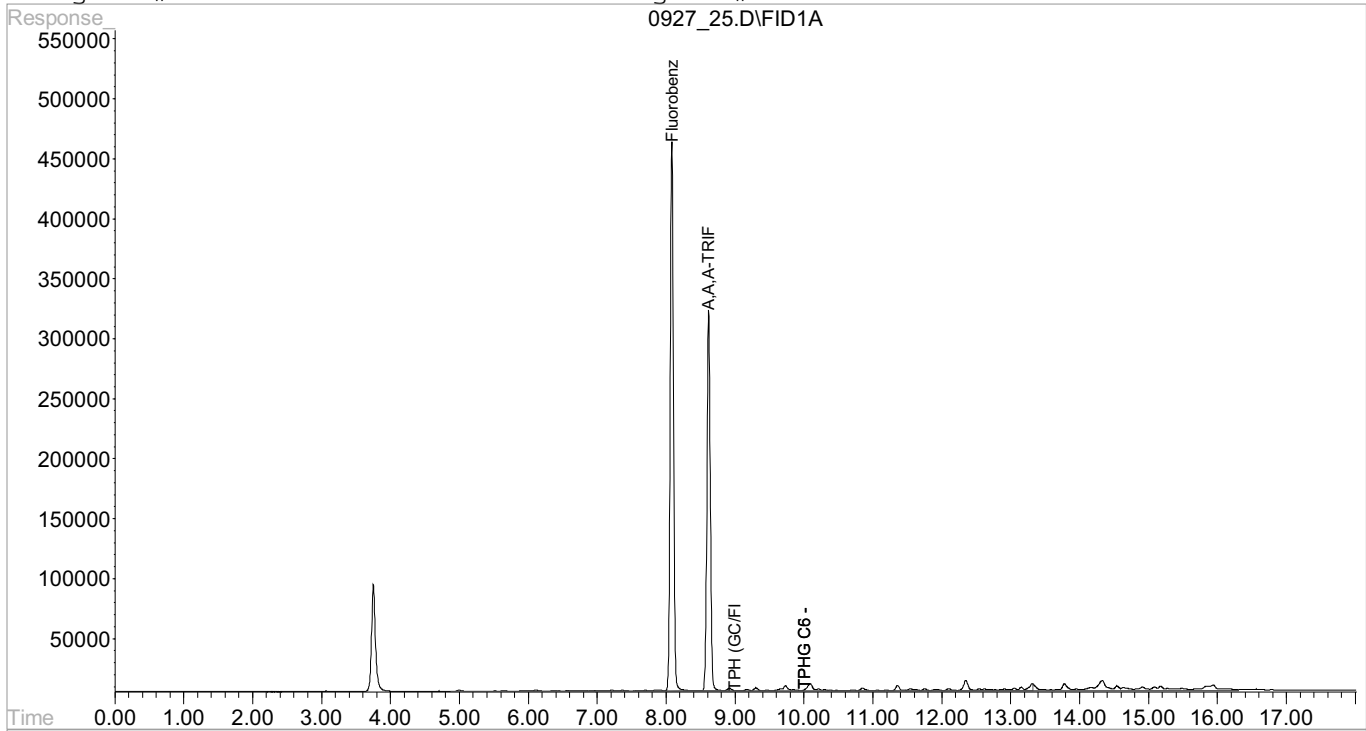
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 25.D\FID1A.CH Vial: 25
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 25.D\FID2B.CH
 Acq On : 27 Sep 2017 6:43 pm Operator: 605
 Sample : L938609-17 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

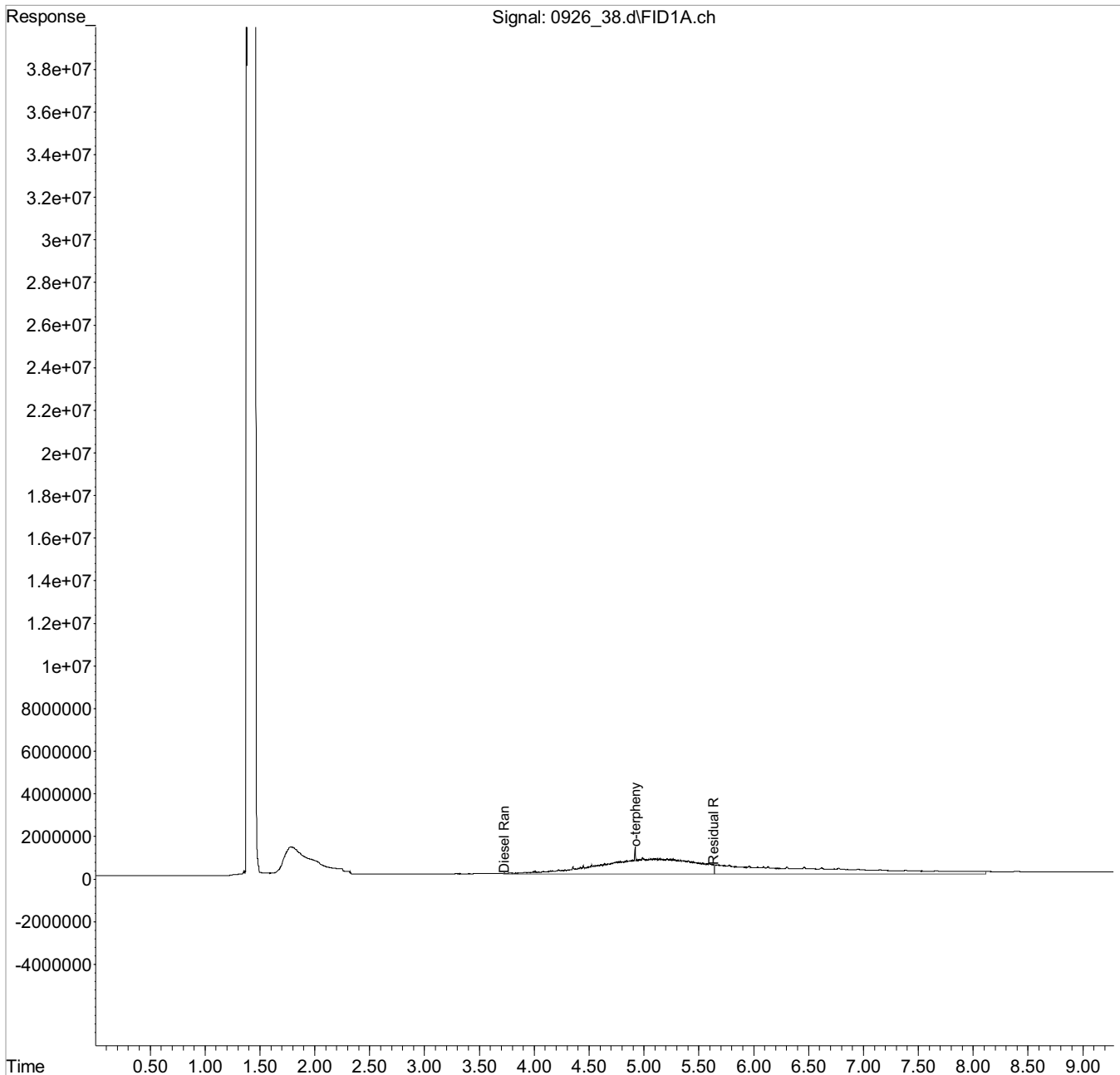
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092617\
 Data File : 0926 38.d
 Signal(s) : FID1A.ch
 Acq On : 26 Sep 2017 10:09 pm
 Operator : 773
 Sample : L938609-17 5x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 31 Sample Multiplier: 0.25
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 27 14:13:15 2017
 Quant Method : C:\msdchem\1\methods\EP27I26Q.M
 Quant Title :
 QLast Update : Tue Sep 26 15:47:15 2017
 Response via : Initial Calibration
 Integrator: ChemStation

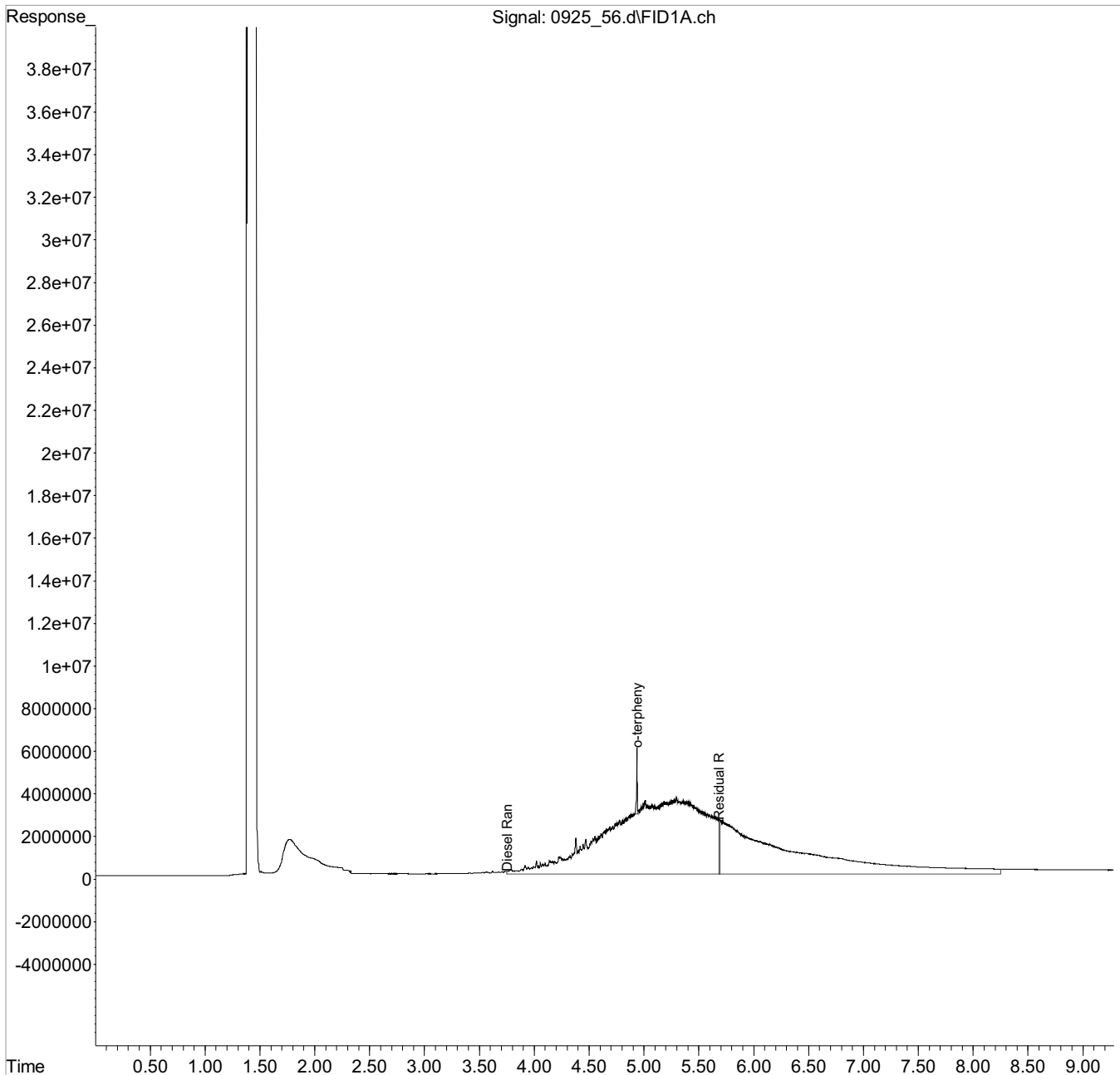
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925 56.d
 Signal(s) : FID1A.ch
 Acq On : 26 Sep 2017 1:41 am
 Operator : 725
 Sample : L938609-17 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 52 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:25:10 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

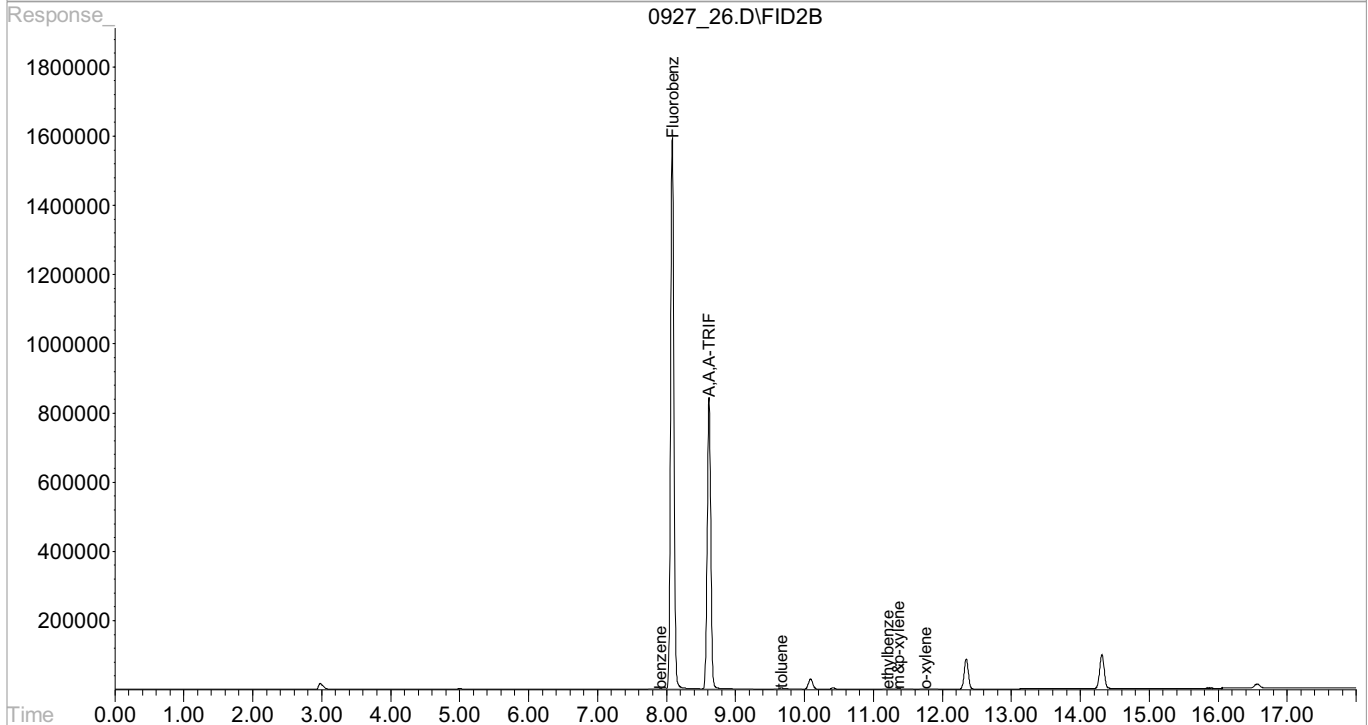
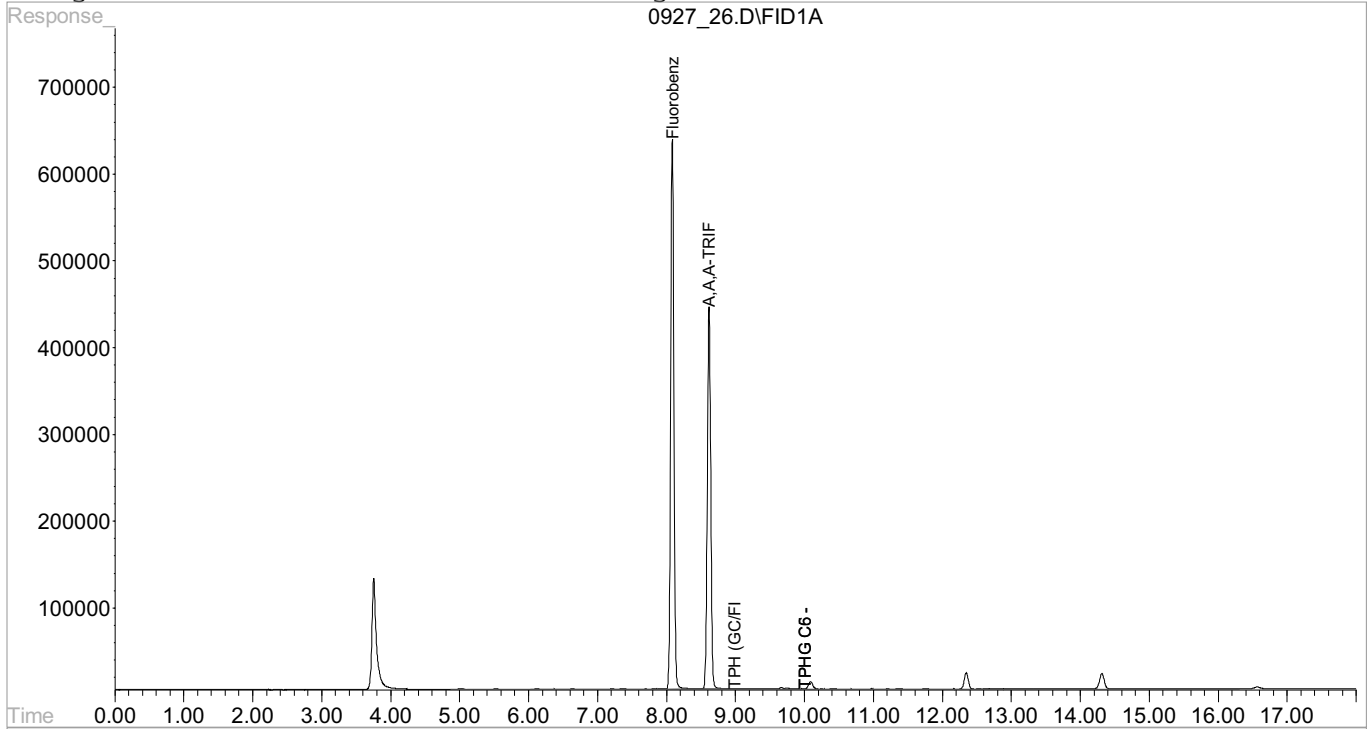
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 26.D\FID1A.CH Vial: 26
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 26.D\FID2B.CH
 Acq On : 27 Sep 2017 7:06 pm Operator: 605
 Sample : L938609-18 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

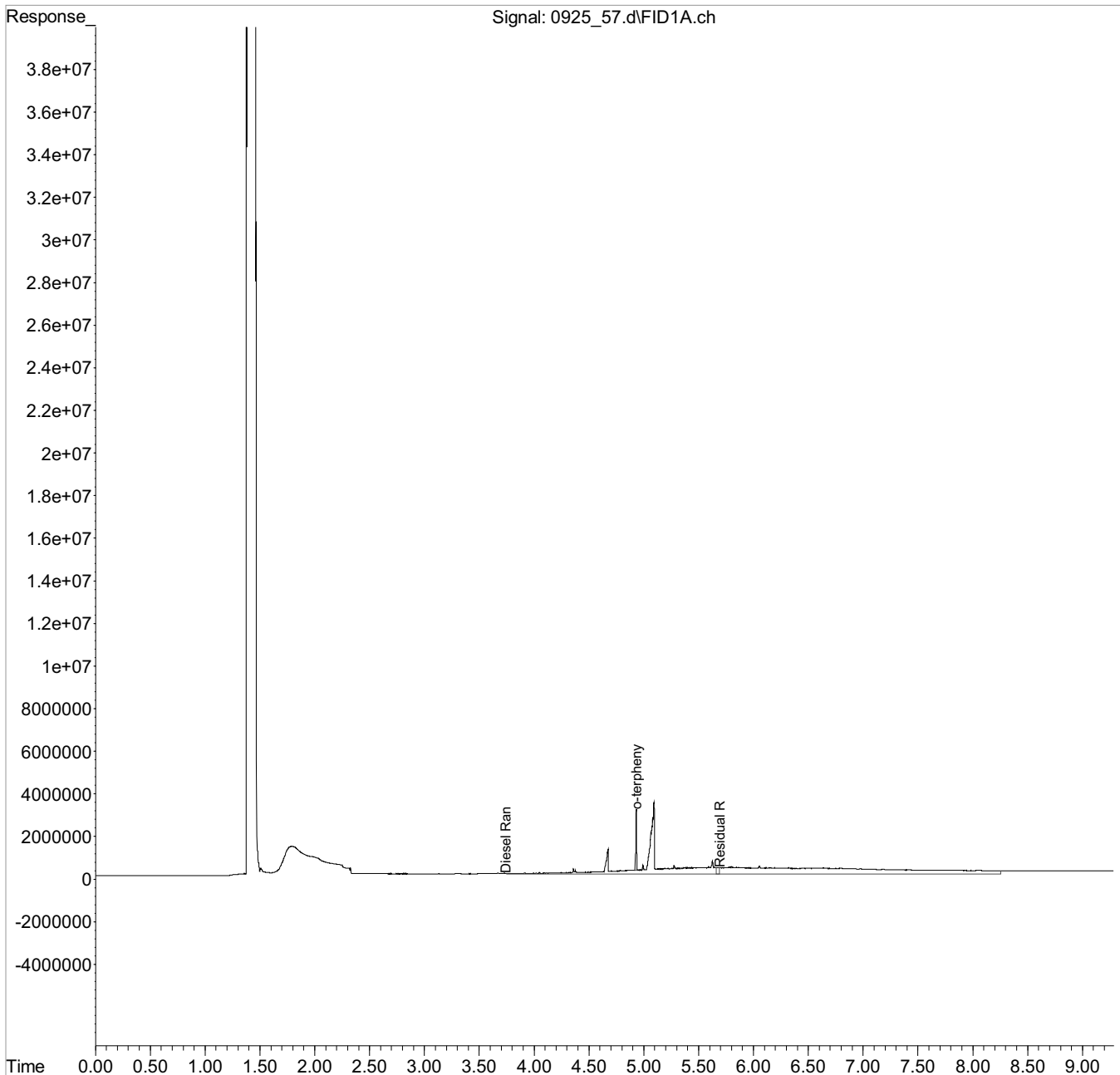
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092517\
Data File : 0925 57.d
Signal(s) : FID1A.ch
Acq On : 26 Sep 2017 1:58 am
Operator : 725
Sample : L938609-18 1x WG1024084 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 53 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Sep 26 11:26:04 2017
Quant Method : C:\msdchem\1\methods\EP27H31Q.M
Quant Title :
QLast Update : Mon Sep 04 13:19:35 2017
Response via : Initial Calibration
Integrator: ChemStation

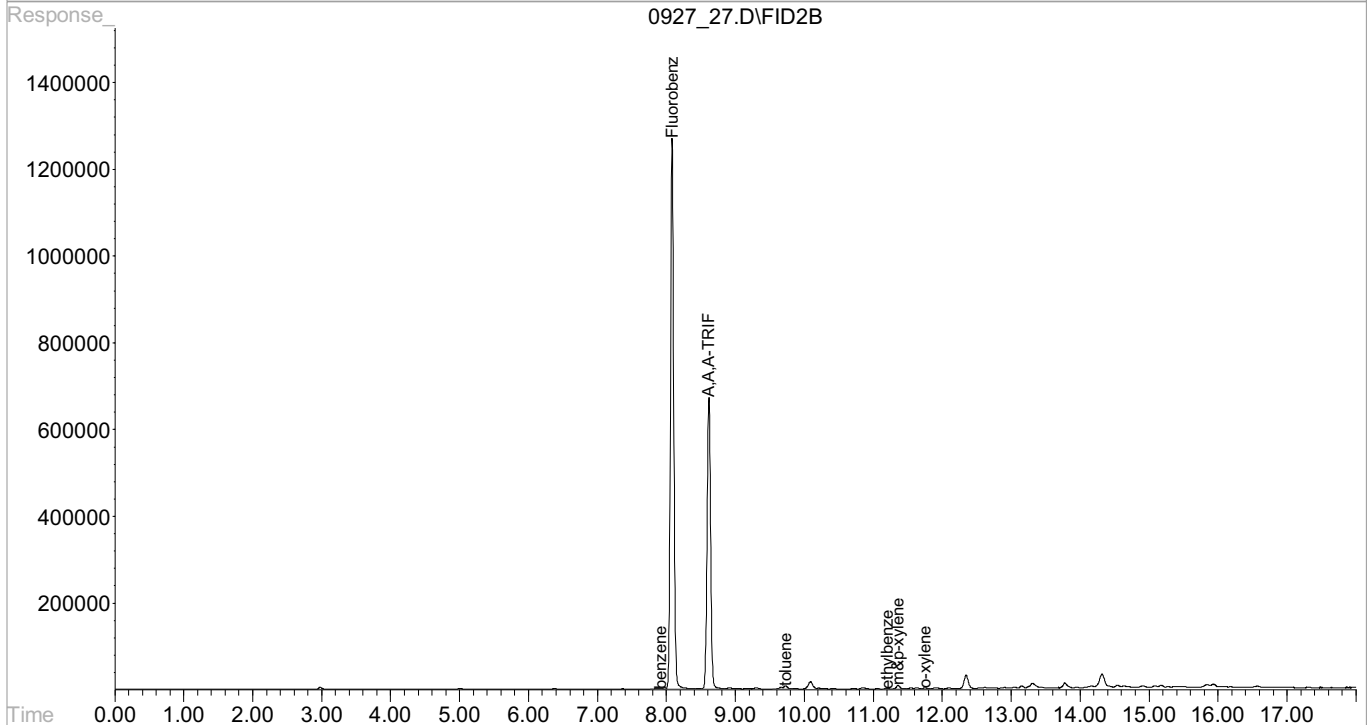
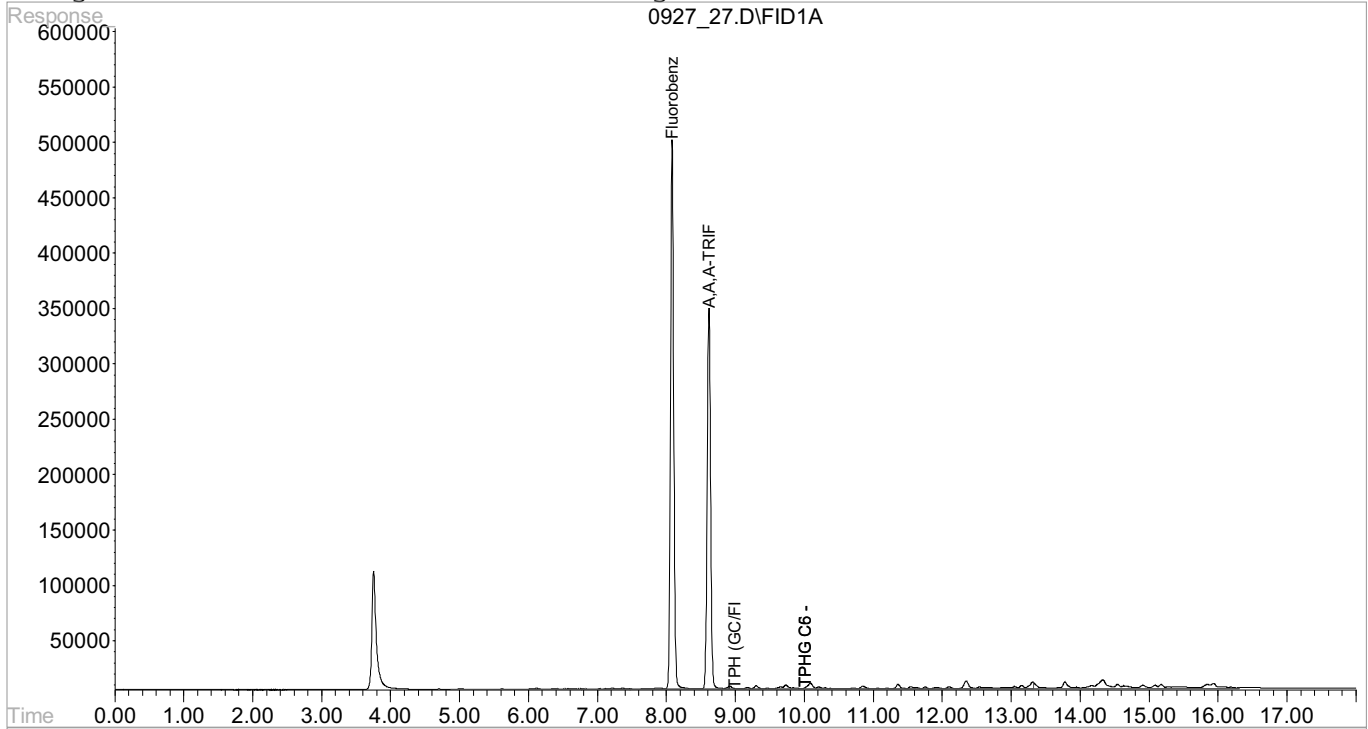
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\092717\0927 27.D\FID1A.CH Vial: 27
 Signal #2 : C:\HPCHEM\1\DATA\092717\0927 27.D\FID2B.CH
 Acq On : 27 Sep 2017 7:30 pm Operator: 605
 Sample : L938609-19 1x WG1024796 Inst : VO CGC7
 Misc : water Multiplr: 1.00
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E
 Quant Time: Sep 29 17:03 2017 Quant Results File: BG07I01Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG07I01Q.M (Chemstation Integrator)
 Title : WIS GRO VO CGC07
 Last Update : Fri Sep 01 09:55:56 2017
 Response via : Single Level Calibration
 DataAcq Meth : VO CGC14A.M

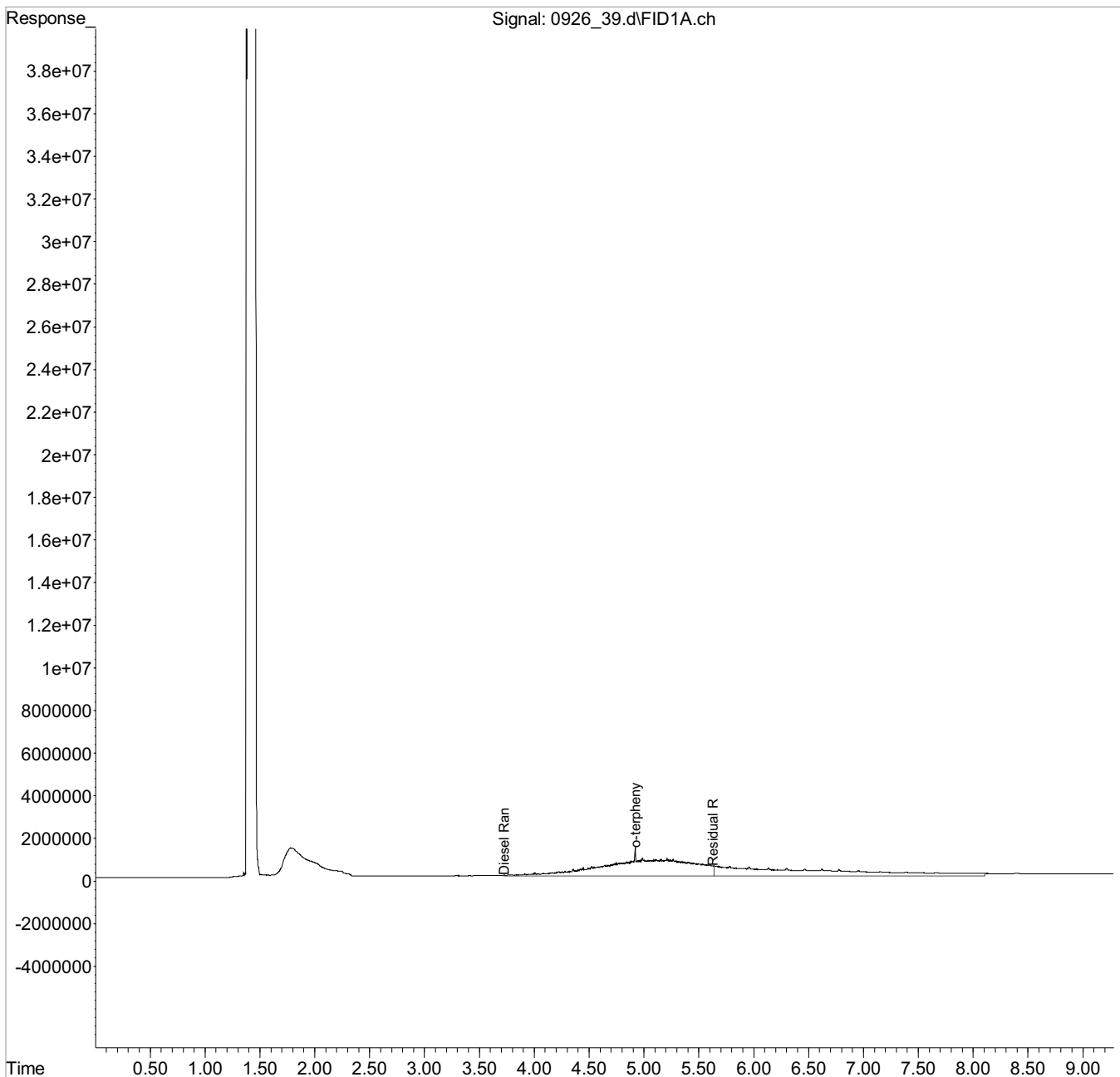
Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\092617\
 Data File : 0926 39.d
 Signal(s) : FID1A.ch
 Acq On : 26 Sep 2017 10:26 pm
 Operator : 773
 Sample : L938609-19 5x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 32 Sample Multiplier: 0.25
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 27 14:14:46 2017
 Quant Method : C:\msdchem\1\methods\EP27I26Q.M
 Quant Title :
 QLast Update : Tue Sep 26 15:47:15 2017
 Response via : Initial Calibration
 Integrator: ChemStation

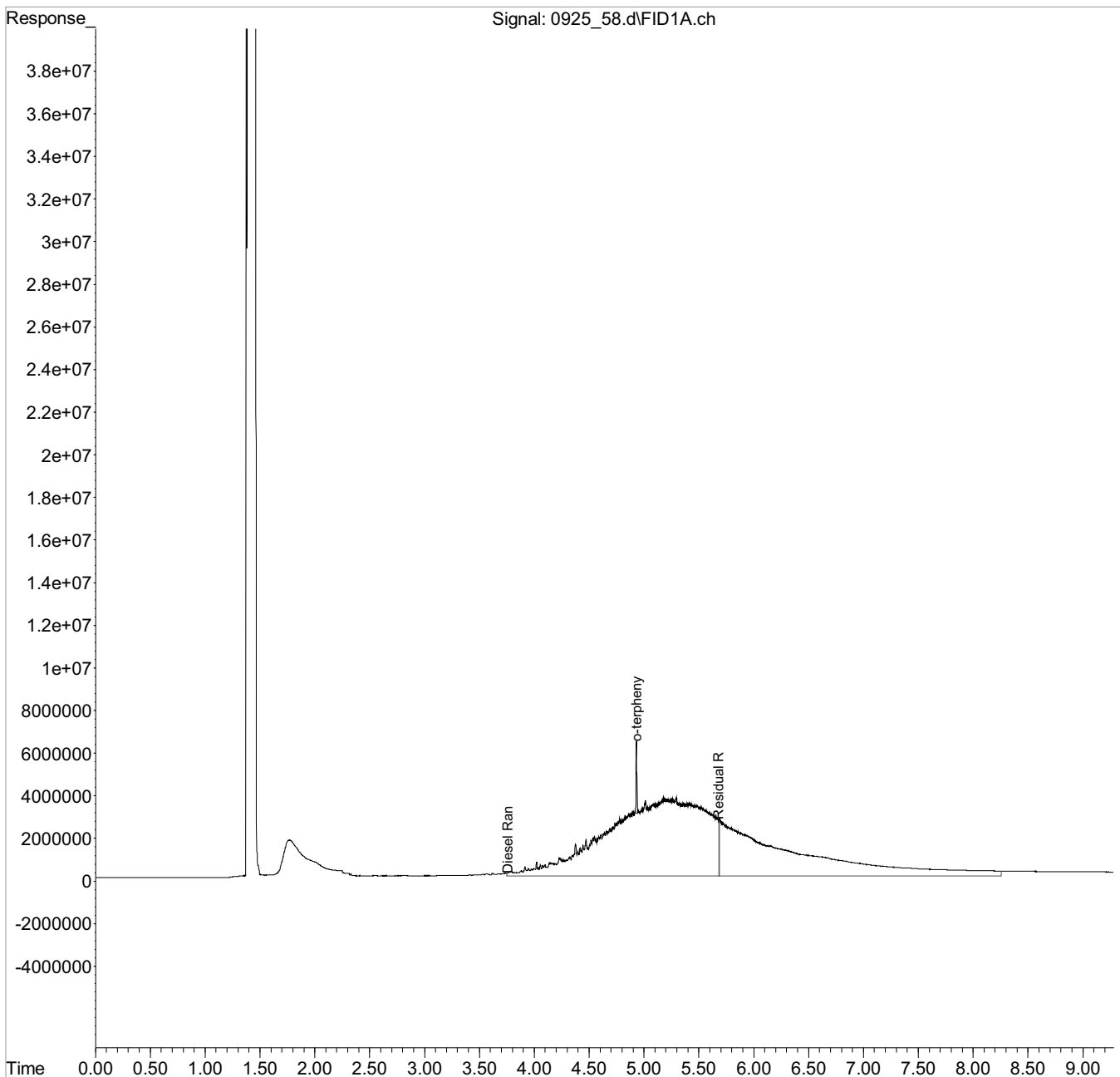
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\092517\
 Data File : 0925 58.d
 Signal(s) : FID1A.ch
 Acq On : 26 Sep 2017 2:14 am
 Operator : 725
 Sample : L938609-19 1x WG1024084 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 54 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Sep 26 11:27:01 2017
 Quant Method : C:\msdchem\1\methods\EP27H31Q.M
 Quant Title :
 QLast Update : Mon Sep 04 13:19:35 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Groundwater Analytical Report
28 to 30 November 2017

December 18, 2017

Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L954618
Samples Received: 12/02/2017
Project Number: 1796120
Description: BNSF - Wishram Railyard, WA

Report To: Ryan Hultgren
32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Entire Report Reviewed By:



Mark W. Beasley
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

WMW-14-20171130 L954618-01 GW

Collected by
Joseph Sawdey
Collected date/time
11/30/17 14:45
Received date/time
12/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1050197	1	12/11/17 14:01	12/11/17 14:01	JER
Wet Chemistry by Method 353.2	WG1050207	5	12/07/17 15:55	12/07/17 15:55	JER
Wet Chemistry by Method 4500S2 D-2011	WG1049071	1	12/03/17 14:02	12/03/17 14:02	TH
Wet Chemistry by Method 9056A	WG1048854	1	12/04/17 13:08	12/04/17 13:08	DR
Metals (ICPMS) by Method 6020A	WG1048869	1	12/05/17 11:25	12/05/17 21:31	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1050140	1	12/07/17 10:27	12/07/17 10:27	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1049006	1	12/05/17 14:34	12/06/17 20:08	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1049374	1	12/06/17 22:35	12/07/17 22:06	LM

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WMW-15-20171130 L954618-02 GW

Collected by
Joseph Sawdey
Collected date/time
11/30/17 13:35
Received date/time
12/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1050197	1	12/11/17 14:11	12/11/17 14:11	JER
Wet Chemistry by Method 353.2	WG1050207	1	12/07/17 15:37	12/07/17 15:37	JER
Wet Chemistry by Method 4500S2 D-2011	WG1049071	1	12/03/17 14:04	12/03/17 14:04	TH
Wet Chemistry by Method 9056A	WG1048854	1	12/04/17 10:27	12/04/17 10:27	DR
Metals (ICPMS) by Method 6020A	WG1048869	1	12/05/17 11:25	12/05/17 21:45	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1050140	1	12/07/17 10:33	12/07/17 10:33	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1049006	1	12/05/17 14:34	12/15/17 12:01	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1049006	5	12/05/17 14:34	12/15/17 13:06	CLG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1049374	1	12/06/17 22:35	12/15/17 12:17	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1049374	5	12/06/17 22:35	12/15/17 13:22	TH

WMW-16-20171130 L954618-03 GW

Collected by
Joseph Sawdey
Collected date/time
11/30/17 11:40
Received date/time
12/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1050197	1	12/11/17 14:14	12/11/17 14:14	JER
Wet Chemistry by Method 353.2	WG1050207	1	12/07/17 15:39	12/07/17 15:39	JER
Wet Chemistry by Method 4500S2 D-2011	WG1049071	1	12/03/17 14:05	12/03/17 14:05	TH
Wet Chemistry by Method 9056A	WG1049512	1	12/05/17 22:19	12/05/17 22:19	DR
Metals (ICPMS) by Method 6020A	WG1048869	1	12/05/17 11:25	12/05/17 21:49	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1049480	1	12/05/17 18:34	12/05/17 18:34	DWR
Volatile Organic Compounds (GC) by Method RSK175	WG1050140	1	12/07/17 10:37	12/07/17 10:37	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1050841	10	12/07/17 14:45	12/07/17 14:45	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1049006	10	12/05/17 14:34	12/15/17 13:38	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1049374	1	12/06/17 22:35	12/15/17 12:49	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1049374	10	12/06/17 22:35	12/15/17 13:54	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1050329	1	12/06/17 17:08	12/07/17 12:02	KM
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1050329	20	12/06/17 17:08	12/10/17 20:12	KM

WMW-17-20171130 L954618-04 GW

Collected by
Joseph Sawdey
Collected date/time
11/30/17 10:30
Received date/time
12/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1050197	1	12/11/17 14:16	12/11/17 14:16	JER
Wet Chemistry by Method 353.2	WG1050207	1	12/07/17 15:40	12/07/17 15:40	JER
Wet Chemistry by Method 4500S2 D-2011	WG1049071	1	12/03/17 14:05	12/03/17 14:05	TH
Wet Chemistry by Method 9056A	WG1049512	1	12/05/17 22:33	12/05/17 22:33	DR
Metals (ICPMS) by Method 6020A	WG1048869	1	12/05/17 11:25	12/05/17 21:52	LAT
Metals (ICPMS) by Method 6020A	WG1048874	1	12/05/17 17:36	12/06/17 00:37	WBD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1049480	1	12/05/17 19:33	12/05/17 19:33	DWR

SAMPLE SUMMARY



WMW-17-20171130 L954618-04 GW

Collected by
Joseph Sawdey
Collected date/time
11/30/17 10:30
Received date/time
12/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method RSK175	WG1050140	1	12/07/17 10:45	12/07/17 10:45	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1049006	1	12/05/17 14:34	12/06/17 21:32	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1049374	1	12/06/17 22:35	12/07/17 23:27	LM

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WMW-18-20171129 L954618-05 GW

Collected by
Joseph Sawdey
Collected date/time
11/29/17 15:20
Received date/time
12/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1050197	1	12/11/17 14:17	12/11/17 14:17	JER
Wet Chemistry by Method 353.2	WG1050207	1	12/07/17 15:41	12/07/17 15:41	JER
Wet Chemistry by Method 4500S2 D-2011	WG1049071	1	12/03/17 14:16	12/03/17 14:16	TH
Wet Chemistry by Method 9056A	WG1049512	1	12/05/17 16:06	12/05/17 16:06	DR
Metals (ICPMS) by Method 6020A	WG1048869	1	12/05/17 11:25	12/05/17 22:07	LAT
Metals (ICPMS) by Method 6020A	WG1048874	1	12/05/17 17:36	12/06/17 00:40	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG1050140	1	12/07/17 10:49	12/07/17 10:49	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1050841	10	12/07/17 15:00	12/07/17 15:00	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1049006	1	12/05/17 14:34	12/06/17 21:48	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1049374	1	12/06/17 22:35	12/08/17 00:32	LM

D-1-20171130 L954618-06 GW

Collected by
Joseph Sawdey
Collected date/time
11/30/17 00:00
Received date/time
12/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020A	WG1048664	1	12/04/17 16:24	12/05/17 22:19	WBD
Metals (ICPMS) by Method 6020A	WG1048869	1	12/05/17 11:25	12/05/17 22:10	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1049480	1	12/05/17 19:55	12/05/17 19:55	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1049006	1	12/05/17 14:34	12/06/17 22:04	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1049374	1	12/06/17 22:35	12/08/17 00:48	LM

TRIP BLANK L954618-07 GW

Collected by
Joseph Sawdey
Collected date/time
11/30/17 00:00
Received date/time
12/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1049480	1	12/05/17 12:19	12/05/17 12:19	DWR



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. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

Mark W. Beasley
Technical Service Representative

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	12/11/2017 14:01	WG1050197

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	17500		500	5	12/07/2017 15:55	WG1050207

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND	J6	50.0	1	12/03/2017 14:02	WG1049071

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	26600		5000	1	12/04/2017 13:08	WG1048854

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	ND		100	1	12/05/2017 21:31	WG1048869
Manganese,Dissolved	16.1	B	5.00	1	12/05/2017 21:31	WG1048869

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/07/2017 10:27	WG1050140
Ethane	ND		13.0	1	12/07/2017 10:27	WG1050140
Ethene	ND		13.0	1	12/07/2017 10:27	WG1050140

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	12/06/2017 20:08	WG1049006
Residual Range Organics (RRO)	269		250	1	12/06/2017 20:08	WG1049006
(S) o-Terphenyl	85.5		52.0-156		12/06/2017 20:08	WG1049006

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	12/07/2017 22:06	WG1049374
Residual Range Organics (RRO)	ND		250	1	12/07/2017 22:06	WG1049374
(S) o-Terphenyl	79.7		52.0-156		12/07/2017 22:06	WG1049374



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	469	P1	100	1	12/11/2017 14:11	WG1050197

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND	P1	100	1	12/07/2017 15:37	WG1050207

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		50.0	1	12/03/2017 14:04	WG1049071

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	12/04/2017 10:27	WG1048854

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	5630		100	1	12/05/2017 21:45	WG1048869
Manganese,Dissolved	1080		5.00	1	12/05/2017 21:45	WG1048869

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	1630		10.0	1	12/07/2017 10:33	WG1050140
Ethane	ND		13.0	1	12/07/2017 10:33	WG1050140
Ethene	ND		13.0	1	12/07/2017 10:33	WG1050140

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6910		1000	5	12/15/2017 13:06	WG1049006
Residual Range Organics (RRO)	4550		250	1	12/15/2017 12:01	WG1049006
(S) o-Terphenyl	71.5		52.0-156		12/15/2017 13:06	WG1049006
(S) o-Terphenyl	85.0		52.0-156		12/15/2017 12:01	WG1049006

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5320		1000	5	12/15/2017 13:22	WG1049374
Residual Range Organics (RRO)	2590		250	1	12/15/2017 12:17	WG1049374
(S) o-Terphenyl	79.5		52.0-156		12/15/2017 13:22	WG1049374
(S) o-Terphenyl	83.1		52.0-156		12/15/2017 12:17	WG1049374



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	1830		100	1	12/11/2017 14:14	WG1050197

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	12/07/2017 15:39	WG1050207

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	12/03/2017 14:05	WG1049071

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ND		5000	1	12/05/2017 22:19	WG1049512

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	18400		100	1	12/05/2017 21:49	WG1048869
Manganese,Dissolved	3110		5.00	1	12/05/2017 21:49	WG1048869

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	12/05/2017 18:34	WG1049480
(S) a,a,a-Trifluorotoluene(FID)	95.8		77.0-122		12/05/2017 18:34	WG1049480

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	6800		100	10	12/07/2017 14:45	WG1050841
Ethane	ND		13.0	1	12/07/2017 10:37	WG1050140
Ethene	ND		13.0	1	12/07/2017 10:37	WG1050140

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	28600		2000	10	12/15/2017 13:38	WG1049006
Residual Range Organics (RRO)	7670		2500	10	12/15/2017 13:38	WG1049006
(S) o-Terphenyl	67.6		52.0-156		12/15/2017 13:38	WG1049006

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	21100		2000	10	12/15/2017 13:54	WG1049374
Residual Range Organics (RRO)	3810		250	1	12/15/2017 12:49	WG1049374
(S) o-Terphenyl	145		52.0-156		12/15/2017 13:54	WG1049374
(S) o-Terphenyl	12.8	J2	52.0-156		12/15/2017 12:49	WG1049374



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.113		0.0500	1	12/07/2017 12:02	WG1050329
Acenaphthene	1.36		1.00	20	12/10/2017 20:12	WG1050329
Acenaphthylene	ND		1.00	20	12/10/2017 20:12	WG1050329
Benzo(a)anthracene	ND		0.0500	1	12/07/2017 12:02	WG1050329
Benzo(a)pyrene	ND		0.0500	1	12/07/2017 12:02	WG1050329
Benzo(b)fluoranthene	ND		0.0500	1	12/07/2017 12:02	WG1050329
Benzo(g,h,i)perylene	ND		0.0500	1	12/07/2017 12:02	WG1050329
Benzo(k)fluoranthene	ND		0.0500	1	12/07/2017 12:02	WG1050329
Chrysene	ND		0.0500	1	12/07/2017 12:02	WG1050329
Dibenz(a,h)anthracene	ND		0.0500	1	12/07/2017 12:02	WG1050329
Fluoranthene	ND		0.0500	1	12/07/2017 12:02	WG1050329
Fluorene	ND		1.00	20	12/10/2017 20:12	WG1050329
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	12/07/2017 12:02	WG1050329
Naphthalene	0.669		0.250	1	12/07/2017 12:02	WG1050329
Phenanthrene	0.119		0.0500	1	12/07/2017 12:02	WG1050329
Pyrene	0.0560		0.0500	1	12/07/2017 12:02	WG1050329
1-Methylnaphthalene	3.06		0.250	1	12/07/2017 12:02	WG1050329
2-Methylnaphthalene	1.95		0.250	1	12/07/2017 12:02	WG1050329
2-Chloronaphthalene	ND		5.00	20	12/10/2017 20:12	WG1050329
(S) Nitrobenzene-d5	131	<u>J7</u>	31.0-160		12/10/2017 20:12	WG1050329
(S) Nitrobenzene-d5	141		31.0-160		12/07/2017 12:02	WG1050329
(S) 2-Fluorobiphenyl	110	<u>J7</u>	48.0-148		12/10/2017 20:12	WG1050329
(S) 2-Fluorobiphenyl	57.8		48.0-148		12/07/2017 12:02	WG1050329
(S) p-Terphenyl-d14	99.0	<u>J7</u>	37.0-146		12/10/2017 20:12	WG1050329
(S) p-Terphenyl-d14	91.7		37.0-146		12/07/2017 12:02	WG1050329

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

L954618-03 WG1050329: IS/SURR failed on lower dilution.



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	310		100	1	12/11/2017 14:16	WG1050197

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	ND		100	1	12/07/2017 15:40	WG1050207

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	12/03/2017 14:05	WG1049071

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	ND		5000	1	12/05/2017 22:33	WG1049512

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	23.1		2.00	1	12/06/2017 00:37	WG1048874
Arsenic,Dissolved	23.4		2.00	1	12/05/2017 21:52	WG1048869
Iron,Dissolved	4790		100	1	12/05/2017 21:52	WG1048869
Manganese,Dissolved	2060		5.00	1	12/05/2017 21:52	WG1048869

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	12/05/2017 19:33	WG1049480
(S) a,a,a-Trifluorotoluene(FID)	96.8		77.0-122		12/05/2017 19:33	WG1049480

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	3190		10.0	1	12/07/2017 10:45	WG1050140
Ethane	ND		13.0	1	12/07/2017 10:45	WG1050140
Ethene	ND		13.0	1	12/07/2017 10:45	WG1050140

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	3550		200	1	12/06/2017 21:32	WG1049006
Residual Range Organics (RRO)	3470		250	1	12/06/2017 21:32	WG1049006
(S) o-Terphenyl	97.6		52.0-156		12/06/2017 21:32	WG1049006

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	2320		200	1	12/07/2017 23:27	WG1049374
Residual Range Organics (RRO)	1310		250	1	12/07/2017 23:27	WG1049374
(S) o-Terphenyl	84.5		52.0-156		12/07/2017 23:27	WG1049374



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	208		100	1	12/11/2017 14:17	WG1050197

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate-Nitrite	1330		100	1	12/07/2017 15:41	WG1050207

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	12/03/2017 14:16	WG1049071

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	22400		5000	1	12/05/2017 16:06	WG1049512

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	14.3		2.00	1	12/06/2017 00:40	WG1048874
Arsenic,Dissolved	14.4		2.00	1	12/05/2017 22:07	WG1048869
Iron,Dissolved	ND		100	1	12/05/2017 22:07	WG1048869
Manganese,Dissolved	730		5.00	1	12/05/2017 22:07	WG1048869

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	8170		100	10	12/07/2017 15:00	WG1050841
Ethane	ND		13.0	1	12/07/2017 10:49	WG1050140
Ethene	ND		13.0	1	12/07/2017 10:49	WG1050140

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	12/06/2017 21:48	WG1049006
Residual Range Organics (RRO)	442		250	1	12/06/2017 21:48	WG1049006
(S) o-Terphenyl	88.3		52.0-156		12/06/2017 21:48	WG1049006

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		200	1	12/08/2017 00:32	WG1049374
Residual Range Organics (RRO)	ND		250	1	12/08/2017 00:32	WG1049374
(S) o-Terphenyl	81.4		52.0-156		12/08/2017 00:32	WG1049374



Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	34.9		2.00	1	12/05/2017 22:19	WG1048664
Arsenic,Dissolved	35.9		2.00	1	12/05/2017 22:10	WG1048869

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	12/05/2017 19:55	WG1049480
(S) a,a,a-Trifluorotoluene(FID)	95.9		77.0-122		12/05/2017 19:55	WG1049480

4 Cn

5 Sr

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	3800		200	1	12/06/2017 22:04	WG1049006
Residual Range Organics (RRO)	3470		250	1	12/06/2017 22:04	WG1049006
(S) o-Terphenyl	91.5		52.0-156		12/06/2017 22:04	WG1049006

6 Qc

7 Gl

8 Al

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	2670		200	1	12/08/2017 00:48	WG1049374
Residual Range Organics (RRO)	1410		250	1	12/08/2017 00:48	WG1049374
(S) o-Terphenyl	91.1		52.0-156		12/08/2017 00:48	WG1049374

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	12/05/2017 12:19	WG1049480
(S) a,a,a-Trifluorotoluene(FID)	94.4		77.0-122		12/05/2017 12:19	WG1049480

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3272010-1 12/11/17 13:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

L954618-02 Original Sample (OS) • Duplicate (DUP)

(OS) L954618-02 12/11/17 14:11 • (DUP) R3272010-6 12/11/17 14:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	469	386	1	19.4	P1	10

⁶ Qc

L953931-01 Original Sample (OS) • Duplicate (DUP)

(OS) L953931-01 12/11/17 14:33 • (DUP) R3272010-7 12/11/17 14:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	32.0	1	0		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3272010-2 12/11/17 13:30 • (LCSD) R3272010-3 12/11/17 13:31

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7700	7700	103	103	90-110			0.0519	20

⁹ Sc

L954618-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954618-01 12/11/17 14:01 • (MS) R3272010-4 12/11/17 14:03 • (MSD) R3272010-5 12/11/17 14:09

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	5000	ND	5520	5490	109	108	1	90-110			0.545	20

L953935-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L953935-01 12/11/17 14:37 • (MS) R3272010-8 12/11/17 14:38

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	300	5150	96.9	1	90-110	



Method Blank (MB)

(MB) R3271241-1 12/07/17 15:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L954433-21 Original Sample (OS) • Duplicate (DUP)

(OS) L954433-21 12/07/17 15:09 • (DUP) R3271241-4 12/07/17 15:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	0		20

L954618-02 Original Sample (OS) • Duplicate (DUP)

(OS) L954618-02 12/07/17 15:37 • (DUP) R3271241-8 12/07/17 15:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	42.0	1	21.3	J P1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271241-2 12/07/17 15:07 • (LCSD) R3271241-3 12/07/17 15:08

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	4020	3970	101	99.3	90-110			1.25	20

L954433-22 Original Sample (OS) • Matrix Spike (MS)

(OS) L954433-22 12/07/17 15:11 • (MS) R3271241-5 12/07/17 15:12

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	ND	1910	76.3	1	90-110	J6



[L954618-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3269968-1 12/03/17 13:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L954618-02 Original Sample (OS) • Duplicate (DUP)

(OS) L954618-02 12/03/17 14:04 • (DUP) R3269968-6 12/03/17 14:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3269968-2 12/03/17 13:59 • (LCSD) R3269968-3 12/03/17 14:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	428	450	86	90	85-115			5	20

L954618-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954618-01 12/03/17 14:02 • (MS) R3269968-4 12/03/17 14:02 • (MSD) R3269968-5 12/03/17 14:03

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfide	1000	ND	706	698	71	70	1	80-120	<u>J6</u>	<u>J6</u>	1	20



Method Blank (MB)

(MB) R3270222-1 12/04/17 06:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L954592-09 Original Sample (OS) • Duplicate (DUP)

(OS) L954592-09 12/04/17 11:21 • (DUP) R3270222-6 12/04/17 11:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	24400	24400	1	0		15

L954594-05 Original Sample (OS) • Duplicate (DUP)

(OS) L954594-05 12/04/17 13:49 • (DUP) R3270222-9 12/04/17 14:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	170000	171000	5	1		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3270222-2 12/04/17 06:39 • (LCSD) R3270222-3 12/04/17 06:53

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	40100	40200	100	100	80-120			0	15

L954594-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L954594-01 12/04/17 07:33 • (MS) R3270222-4 12/04/17 07:46

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	72100	118000	92	1	80-120	E

L954618-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954618-01 12/04/17 13:08 • (MS) R3270222-7 12/04/17 13:22 • (MSD) R3270222-8 12/04/17 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
Sulfate	50000	26600	75100	76400	97	100	1	80-120			2	15



Method Blank (MB)

(MB) R3270590-1 12/05/17 10:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L954824-07 Original Sample (OS) • Duplicate (DUP)

(OS) L954824-07 12/05/17 17:39 • (DUP) R3270590-7 12/05/17 18:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	ND	3180	1	3	↓	15

L954618-04 Original Sample (OS) • Duplicate (DUP)

(OS) L954618-04 12/05/17 22:33 • (DUP) R3270590-9 12/05/17 22:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	ND	2420	1	0	↓	15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3270590-2 12/05/17 10:50 • (LCSD) R3270590-3 12/05/17 11:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	39900	39800	100	100	80-120			0	15

L954618-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954618-04 12/05/17 22:33 • (MS) R3270590-5 12/05/17 15:39 • (MSD) R3270590-6 12/05/17 15:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfate	50000	ND	52500	53000	100	101	1	80-120			1	15

L954824-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L954824-07 12/05/17 17:39 • (MS) R3270590-8 12/05/17 18:33

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	ND	53600	101	1	80-120	



Method Blank (MB)

(MB) R3270653-1 12/05/17 21:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		0.250	2.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3270653-2 12/05/17 21:15 • (LCSD) R3270653-3 12/05/17 21:19

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 %
Arsenic	50.0	48.0	48.1	96	96	80-120			0	20

L954723-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954723-02 12/05/17 21:23 • (MS) R3270653-5 12/05/17 21:30 • (MSD) R3270653-6 12/05/17 21:34

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 %
Arsenic	50.0	34.1	80.9	80.3	94	92	1	75-125			1	20

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3270661-1 12/05/17 21:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		0.250	2.00
Iron,Dissolved	73.8	↓	15.0	100
Manganese,Dissolved	3.43	↓	0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3270661-2 12/05/17 21:24 • (LCSD) R3270661-3 12/05/17 21:28

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 %
Arsenic,Dissolved	50.0	49.6	50.5	99	101	80-120			2	20
Iron,Dissolved	5000	5150	5120	103	102	80-120			1	20
Manganese,Dissolved	50.0	48.2	49.5	96	99	80-120			3	20

L954618-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954618-01 12/05/17 21:31 • (MS) R3270661-5 12/05/17 21:38 • (MSD) R3270661-6 12/05/17 21:42

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 %
Arsenic,Dissolved	50.0	3.90	53.7	54.0	100	100	1	75-125			1	20
Iron,Dissolved	5000	ND	5040	5100	101	102	1	75-125			1	20
Manganese,Dissolved	50.0	16.1	62.8	63.9	93	95	1	75-125			2	20



Method Blank (MB)

(MB) R3270646-1 12/06/17 00:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		0.250	2.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3270646-2 12/06/17 00:10 • (LCSD) R3270646-3 12/06/17 00:14

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 %
Arsenic	50.0	47.8	47.3	96	95	80-120			1	20

L954596-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954596-01 12/06/17 00:18 • (MS) R3270646-5 12/06/17 00:25 • (MSD) R3270646-6 12/06/17 00:29

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 %
Arsenic	50.0	6.00	53.3	53.1	95	94	1	75-125			0	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3271168-3 12/05/17 11:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	94.1			77.0-122

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271168-1 12/05/17 09:53 • (LCSD) R3271168-2 12/05/17 10:16

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 %
Gasoline Range Organics-NWTPH	5500	5210	5500	94.8	100	72.0-134			5.29	20
(S) a,a,a-Trifluorotoluene(FID)				108	109	77.0-122				

L954555-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954555-10 12/05/17 12:54 • (MS) R3271168-4 12/05/17 23:03 • (MSD) R3271168-5 12/05/17 23:26

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 %
Gasoline Range Organics-NWTPH	5500	34.4	5080	5510	91.8	99.6	1	23.0-159			8.15	20
(S) a,a,a-Trifluorotoluene(FID)					100	102		77.0-122				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3271065-1 12/07/17 08:30

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L954590-06 Original Sample (OS) • Duplicate (DUP)

(OS) L954590-06 12/07/17 09:58 • (DUP) R3271065-2 12/07/17 10:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L954618-02 Original Sample (OS) • Duplicate (DUP)

(OS) L954618-02 12/07/17 10:33 • (DUP) R3271065-3 12/07/17 11:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	1630	1640	1	0.826		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271065-4 12/07/17 11:22 • (LCSD) R3271065-5 12/07/17 11:26

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	%	%	%			%	%
Methane	67.8	75.1	74.9	111	110	85.0-115			0.242	20
Ethane	129	112	112	86.6	86.5	85.0-115			0.174	20
Ethene	127	114	113	89.5	89.0	85.0-115			0.614	20



Method Blank (MB)

(MB) R3271213-1 12/07/17 14:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L954824-12 Original Sample (OS) • Duplicate (DUP)

(OS) L954824-12 12/07/17 15:03 • (DUP) R3271213-2 12/07/17 15:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	8170	8220	10	0.680		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271213-3 12/07/17 15:19 • (LCSD) R3271213-4 12/07/17 15:22

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	74.7	76.3	110	112	85.0-115			2.00	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3270845-1 12/05/17 17:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	110			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3270845-2 12/05/17 17:19 • (LCSD) R3270845-3 12/05/17 17:36

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 %
Diesel Range Organics (DRO)	750	777	770	104	103	50.0-150			0.938	20
Residual Range Organics (RRO)	750	833	777	111	104	50.0-150			6.96	20
(S) o-Terphenyl				89.7	82.1	52.0-156				

L954618-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954618-01 12/06/17 20:08 • (MS) R3271166-1 12/06/17 20:25 • (MSD) R3271166-2 12/06/17 20:42

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 %
Diesel Range Organics (DRO)	750	ND	971	964	106	105	1	50.0-150			0.792	20
Residual Range Organics (RRO)	750	269	1100	1110	111	112	1	50.0-150			0.161	20
(S) o-Terphenyl					90.6	87.4		52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3271729-1 12/07/17 18:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	77.2			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271729-2 12/07/17 18:36 • (LCSD) R3271729-3 12/07/17 18:52

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	719	697	95.9	93.0	50.0-150			3.05	20
Residual Range Organics (RRO)	750	633	614	84.4	81.9	50.0-150			3.00	20
<i>(S) o-Terphenyl</i>				73.4	72.2	52.0-156				

L954618-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954618-01 12/07/17 22:06 • (MS) R3271729-4 12/07/17 22:22 • (MSD) R3271729-5 12/07/17 22:38

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	%	%		%			%	%
Diesel Range Organics (DRO)	750	ND	619	622	74.2	74.5	1	50.0-150			0.418	20
Residual Range Organics (RRO)	750	ND	526	536	63.5	64.8	1	50.0-150			1.94	20
<i>(S) o-Terphenyl</i>					63.3	61.8		52.0-156				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3271503-3 12/07/17 09:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	0.0120	U	0.0116	0.0500
Benzo(b)fluoranthene	U		0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	0.0250	U	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	117			31.0-160
(S) 2-Fluorobiphenyl	117			48.0-148
(S) p-Terphenyl-d14	104			37.0-146

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) R3271503-1 12/07/17 08:45 • (LCSD) R3271503-2 12/07/17 09:07

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 %
Anthracene	2.00	1.76	1.71	88.0	85.6	64.0-142			2.80	20
Acenaphthene	2.00	1.97	1.87	98.3	93.3	66.0-132			5.20	20
Acenaphthylene	2.00	1.94	1.87	97.1	93.6	65.0-132			3.67	20
Benzo(a)anthracene	2.00	1.93	1.80	96.6	89.9	59.0-134			7.20	20
Benzo(a)pyrene	2.00	1.90	1.70	95.1	84.8	61.0-145			11.5	20
Benzo(b)fluoranthene	2.00	2.04	1.70	102	85.1	57.0-136			18.1	20
Benzo(g,h,i)perylene	2.00	1.87	1.60	93.3	80.1	54.0-140			15.3	20
Benzo(k)fluoranthene	2.00	1.66	1.71	83.2	85.6	57.0-141			2.84	20
Chrysene	2.00	1.93	1.80	96.4	89.8	63.0-140			7.08	20
Dibenz(a,h)anthracene	2.00	1.77	1.57	88.4	78.6	49.0-141			11.7	20
Fluoranthene	2.00	2.04	1.92	102	96.1	65.0-143			6.04	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271503-1 12/07/17 08:45 • (LCSD) R3271503-2 12/07/17 09:07

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	1.88	1.81	94.0	90.4	64.0-129			3.87	20
Indeno(1,2,3-cd)pyrene	2.00	1.92	1.68	95.8	83.9	53.0-141			13.2	20
Naphthalene	2.00	1.92	1.86	95.9	92.9	68.0-129			3.14	20
Phenanthrene	2.00	1.86	1.78	92.8	88.9	62.0-132			4.31	20
Pyrene	2.00	1.94	1.81	96.9	90.4	58.0-156			7.00	20
1-Methylnaphthalene	2.00	2.11	2.17	105	108	68.0-137			2.91	20
2-Methylnaphthalene	2.00	2.05	2.09	102	105	68.0-134			2.27	20
2-Chloronaphthalene	2.00	2.20	2.11	110	106	65.0-129			3.99	20
<i>(S) Nitrobenzene-d5</i>				113	117	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				120	117	48.0-148				
<i>(S) p-Terphenyl-d14</i>				104	95.6	37.0-146				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
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.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

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		

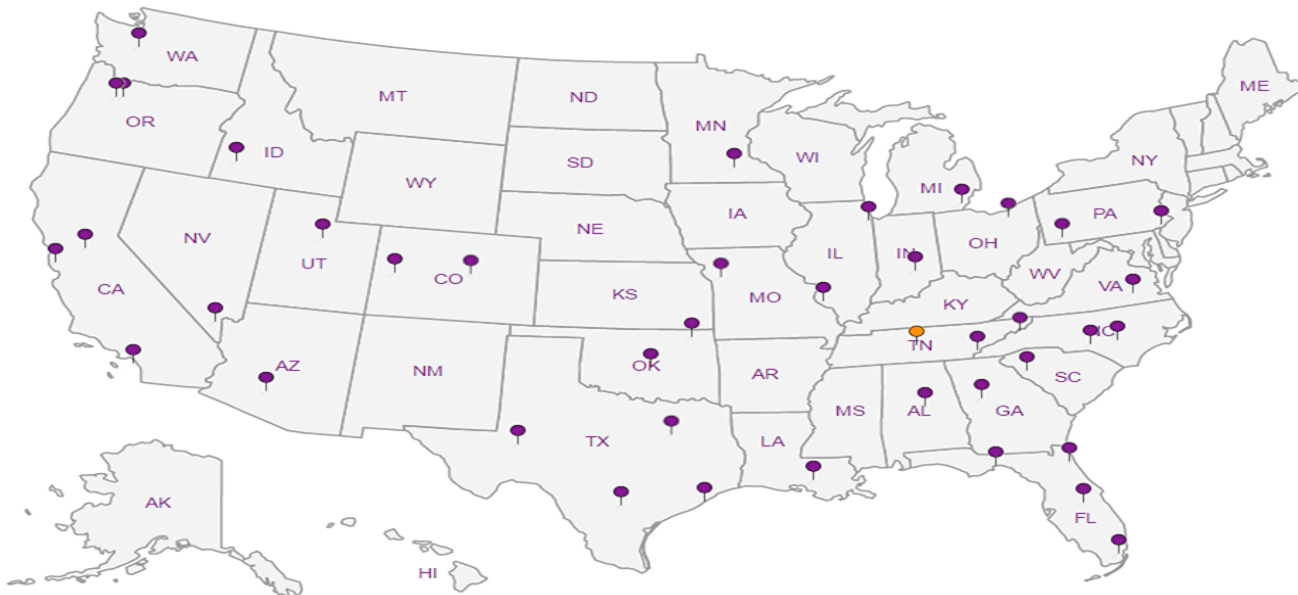
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	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.**



Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project
Description: BNSF - Wishram Railyard, WA

City/State
Collected: WA

Phone: 253-835-6400
Fax:

Client Project #
1796120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joseph Sawdey

Site/Facility ID #

P.O. #
4358

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

Immediately
Packed on Ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
WMW-14-20171130		GW	20	11/30	1445	12
WMW-15-20171130		GW			1335	12
WMW-16-20171130		GW			1140	16
WMW-17-20171130		GW			1030	14
WMW-18-20171129		GW		11/29	1520	12
D-1-20171130		GW		11/30	-	10
		GW				
		GW				
TRIP BLANK		GW				
		GW				

Pres Chk	Analysis / Container / Preservative													
	2	2	2											
	Dissolved As 250mlHDPE-HNO3	Dissolved Fe, Mn 250mlHDPE-HNO3	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT	NWTPHDXLVI- w/o SGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Sulfide 125mlAmb-S-NaOH+ZnAc				
	X	X	X	X	X	X	X	X	X	X	X	X	X	

Chain of Custody Page ___ of ___



LAB SCIENCES
a subsidiary of *[Logo]*

12055 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L # 1954618
D154

Acctnum: BNSF1KEN
Template: T130227
Prelogin: P627573
TSR: 134 - Mark W. Beasley
PB: 11-21-17
Shipped Via: FedEX Saver

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: TT9156-R04, PO# 4358
MS + MSDs from WMW-14-20171130 sample

Samples returned via:
 UPS FedEx Courier

Tracking # 4142 5220 8990

pH _____ Temp _____
Flow _____ Other _____

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) <i>[Signature]</i>	Date: 12/1	Time: 0815	Received by: (Signature)	Trip Blank Received: Yes/No 2 <input checked="" type="checkbox"/> / MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 47°C Bottles Received: 100
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i> 861	Date: 12/17 Time: 0815

Condition:
NCF / OK

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Pres
Chk

22

Analysis / Container / Preservative

Chain of Custody Page of



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@KennedyJenks.com,

Project
Description: BNSF - Wishram Railyard, WA

City/State
Collected: WA

Phone: 253-835-6400
Fax:

Client Project #
1796120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joseph Sawdey

Site/Facility ID #

P.O. #
4358

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

Immediately
Packed on Ice N Y X

No.
of
Cnts

Total As 250mlHDPE-HNO3

L# 1954618

Table #

Acctnum: BNSF1KEN

Template: T130227

Prelogin: P627573

TSR: 134 - Mark W. Beasley

PB: 11-21-17

Shipped Via: FedEX Saver

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
WMW-14-20171130		GW	20	11/30	1445	1
WMW-15-20171130		GW			1335	
WMW-16-20171130		GW			1140	
WMW-17-20171130		GW			1030	
WMW-18-20171129		GW		11/29	1520	
D-1-20171130		GW		11/30	-	
		GW				
		GW				
		GW				
		GW				

Remarks

Sample # (lab only)

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: TT9156-R04, PO# 4358
MS + MSRs from WMW-14-20171130 sample

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist
 COC Seal Present/Intact: 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

Samples returned via:
 UPS FedEx Courier

Tracking #

Relinquished by: (Signature)
[Signature]

Date: 12/1
Time: 0815

Received by: (Signature)

Trip Blank Received: Yes/No
 No Yes
 MeOH TBR

Relinquished by: (Signature)

Date:

Received by: (Signature)

Temp: 1.6 °C
 Bottles Received: 100

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Received for lab by: (Signature)
[Signature] 861

Date: 12/2/17
Time: 08145

Hold: Condition NCF / OK

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing information:
Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@kennedyjenks.com.

Project
Description: BNSF - Wishram Railway, WA

City/State
Collected: WA

Phone: 253-835-6400
Fax:

Client Project #
1796120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joseph Sawdey

Site/Facility ID #

P.O. #
4358

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

Immediately Packed on Ice: N Y

No. of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Dissolved As 250mlHDPE-HNO3	Dissolved Fe, Mn 250mlHDPE-HNO3	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVI-w/SGT 40mlAmb-HCl-BT	NWTPHDXLVI-w/oSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Sulfide 125mlAmb-S-NaOH+ZnAc
WMW-14-20171130		GW	20	11/30	1445	12	X	X	X	X	X	X	X	X	X	X
WMW-15-20171130		GW			1335	12	X	X	X	X	X	X	X	X	X	X
WMW-16-20171130		GW			1140	16	X	X	X	X	X	X	X	X	X	X
WMW-17-20171130		GW			1030	14	X	X	X	X	X	X	X	X	X	X
WMW-18-20171129		GW		11/29	1500	12	X	X	X	X	X	X	X	X	X	X
D-1-20171130		GW		11/30	-	10	X	X	X	X	X	X	X	X	X	X
		GW														
		GW														
TRIP BLANK		GW														
		GW														

Dissolved Arsenic only for:
WMW-17-20171130
WMW-18-20171129
D-1-20171130
RPH (12/04/17)

No PAHs by SIM for
D-1-20171130
RPH (12/04/17)

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - Waste Water
DW - Drinking Water
OT - Other

Remarks: TT9156-R04, POW 4358

M6 + MSDs from WMW-14-20171130 sample

Samples returned via:
UPS FedEx Courier

Tracking # 4142 5220 8990

Relinquished by: (Signature) <i>[Signature]</i>	Date: 12/1	Time: 0815	Received by: (Signature) <i>[Signature]</i>	Trip Blank Received: <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No MeOH TRR	Temp: 47°C	Bottles Received: 100	Sample Receipt Checklist: CDC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N CDC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottle used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headpace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)				If preservation required by Login: Date/Time	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 12/17	Time: 0845	Hold:	Condition: NCF <input checked="" type="checkbox"/> OR	

Analysis / Container / Preservative

Pres Chk: C2 C2 C2

Chain of Custody Page: 1 of 1

ESC
Environmental Sciences Corporation

12005 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1954618
D154

Account: BNSF1KEN
Template: T130227
Prelgin: P627573
TSR 134 - Mark W. Beasley
FB: 11-21-17
Shipped Via: FedEX Saver

Andy Vann

From: Olivia Studebaker
Sent: Monday, December 04, 2017 11:38 AM
To: Login
Cc: Mark Beasley
Subject: L954618 *BNSF1KEN*
Attachments: COCL954618_RH 120417_markup.pdf

For L954618 -06, please add back ASG /ASDG and remove PAHSIMLVID.

From: Ryan Hultgren [mailto:RyanHultgren@kennedyjenks.com]
Sent: Monday, December 04, 2017 10:57 AM
To: Mark Beasley; Janice Sloan; Joseph Sawdey; Todd Miller
Cc: Olivia Studebaker
Subject: RE: ESC Lab Sciences Login for 1726120 BNSF - Wishram Railyard, WA L954618

Mark,

There are a couple other changes for one sample in that batch.

For sample ID:

- D-1-20171130

Please add total and dissolved arsenic (back) but remove the PAHs by SIM.

Sorry for the confusion. Please let me know if any questions.

Thanks,
Ryan

Ryan Hultgren, P.E. | Project Manager
Kennedy/Jenks Consultants
32001 32nd Ave S. Suite 100 | Federal Way, WA 98001
P: 253.835.6400 | Direct: 253.835.6432 | Mobile: 253.549.9725

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From: Mark Beasley [mailto:MBeasley@esclabsciences.com]
Sent: December 04, 2017 8:27 AM
To: Ryan Hultgren <RyanHultgren@kennedyjenks.com>; Janice Sloan <JaniceSloan@kennedyjenks.com>; Joseph Sawdey <JosephSawdey@KennedyJenks.com>; Todd Miller <ToddMiller@KennedyJenks.com>
Cc: Olivia Studebaker <OStudebaker@esclabsciences.com>
Subject: RE: ESC Lab Sciences Login for 1726120 BNSF - Wishram Railyard, WA L954618

Ryan:

We will get this corrected.

Thanks
Mark

From: Ryan Hultgren [<mailto:RyanHultgren@kennedyjenks.com>]
Sent: Sunday, December 03, 2017 7:06 PM
To: Mark Beasley; Janice Sloan; Joseph Sawdey; Todd Miller
Subject: FW: ESC Lab Sciences Login for 1726120 BNSF - Wishram Railyard, WA L954618

Mark,

For the attached sample set for the BNSF Wishram Railyard project, only two of the samples should be analyzed for total and dissolved arsenic:

- WMW-17-20171130
- WMW-18-20171129

Can you please revise the sample login report for this change? The attached COC has been marked up to reflect this change. Please let me know if you have any questions.

Thank you,
Ryan

Ryan Hultgren, P.E. | Project Manager
Kennedy/Jenks Consultants
32001 32nd Ave S. Suite 100 | Federal Way, WA 98001
P: 253.835.6400 | Direct: 253.835.6432 | Mobile: 253.549.9725

CONFIDENTIALITY NOTICE - This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited, and we request that you destroy or permanently delete this message, and notify the sender.

-----Original Message-----

From: Mark W. Beasley [<mailto:mbeasley@esclabsciences.com>]
Sent: December 02, 2017 10:03 PM
To: Joseph Sawdey <JosephSawdey@KennedyJenks.com>; Ryan Hultgren <RyanHultgren@kennedyjenks.com>; Janice Sloan <JaniceSloan@kennedyjenks.com>; Ty Schreiner <TySchreiner@KennedyJenks.com>
Subject: ESC Lab Sciences Login for 1726120 BNSF - Wishram Railyard, WA L954618

Thank you for choosing ESC Lab Sciences! Please find enclosed PDF files containing your laboratory login confirmation and chain of custody.

Happy Holidays from ESC Lab Sciences.

ESC will be closed Thursday November 23rd, Monday December 25th, and Monday January 1st, 2018. Considering these dates, please refrain from shipping to ESC Lab Sciences the work-day prior to these dates to avoid a minimum 24-hour

delay in processing your samples which may result in unavoidable non-conformance issues. Also, please note that samples requesting 5 day BOD analysis cannot be received in the laboratory on Saturday, November 18, Wednesday December 20, or Wednesday December 27. For all submittals and microbiological testing, please contact your Project Manager with any questions or for scheduling assistance.

ESC ... "Your Lab of Choice"

Mark W. Beasley
Technical Service Representative
615-773-9672

ESC Lab Sciences
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Notice: This communication and any attached files may contain privileged or other confidential information. If you have received this in error, please contact the sender immediately via reply email and immediately delete the message and any attachments without copying or disclosing the contents. Thank you.

Notice: This communication and any attached files may contain privileged or other confidential information. If you have received this in error, please contact the sender immediately via reply email and immediately delete the message and any attachments without copying or disclosing the contents. Thank you.

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: Ryan.Hultgren@kennedyjenks.com,
Joseph.Sawdey@kennedyjenks.com

Project Description: BNSF - Wishram Railyard, WA

City/State Collected: WA

Phone: 253-835-6400
Fax:

Client Project #
1796120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joseph Sawdey

Site/Facility ID #

P.O. #
4358

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

Immediately Packed on Ice: N Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
-----------	-----------	----------	-------	------	------	--------------

WMW-14-20171130		GW	20	11/30	1445	12
WMW-15-20171130		GW			1335	12
WMW-16-20171130		GW			1140	16
WMW-17-20171130		GW			1030	14
WMW-18-20171129		GW		11/29	1520	12
D-1-20171130		GW		11/30	-	10
		GW				
		GW				
TRIP BLANK		GW				
		GW				

Dissolved Arsenic only for:
WMW-17-20171130
WMW-18-20171129
RPH (12/03/17)

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - Waste Water
DW - Drinking Water
OT - Other

Remarks: TT9156-R04, POW 4358

Mg, MSDs from WMW-14-20171130 sample

Samples returned via:
 UPS FedEx Courier

Tracking # 4142 5220 8990

Relinquished by: (Signature)

Date:

Time:

12/1

0815

Received by: (Signature)

Trip Blank Received: No MeOH
TBR

Relinquished by: (Signature)

Date:

Time:

Temp: 47°C Bottles Received: 100

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 12/17 Time: 0815

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Analysis / Container / Preservative

Pres Chk

C2 C2 C2

Dissolved As 250mlHDPE-HNO3
 Dissolved Fe, Mn 250mlHDPE-HNO3
 NH3, NO2NO3 250mlHDPE-H2SO4
 NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT
 NWTPHDXLVI- w/o SGT 40mlAmb-HCl-BT
 NWTPHGX 40mlAmb HCl
 PAHSIMLVID 40mlAmb-NoPres-WT
 RSK175 40mlAmb HCl
 Sulfate 125mlHDPE-NoPres
 Sulfide 125mlAmb-S-NaOH+ZnAc

Chain of Custody Page ___ of ___



LAB SCIENCE SERVICES

12085 Landon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# 1954618
D154

Acctnum: BNSF1KEN

Template: T130227

Prelogin: P627573

TSR: 134 - Mark W. Beasley

PB: 11-21-17

Shipped Via: FedEx Saver

Remarks Sample # (Lab only)

	-01
	-02
	-03
	-04
	-05
	-06
	-07

Sample Receipt Checklist:

COO Seal Present/Intact: Y N
 COO 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

Kennedy/Jenks Con-BNSF Region 1

32001 32nd Avenue South, Ste 100
Federal Way, WA 98001

Billing Information:
Shane DeGross
605 Puyallup Ave S
Tacoma, WA 98421

Report to:
Ryan Hultgren

Email To: RyanHultgren@kennedyjenks.com,
JosephSawdey@Kennedyjenks.com,

Project Description: BNSF - Wishram Railyard, WA

City/State Collected: WA

Phone: 253-835-6400
Fax:

Client Project #
1796120

Lab Project #
BNSF1KEN-WISHRAM

Collected by (print):
Joseph Sawdey

Site/Facility ID #

P.O. #
4358

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

Immediately Packed on Ice: N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Conts
WMW-14-20171130		GW	20	11/30	1445	1
WMW-15-20171130		GW			1325	
WMW-16-20171130		GW			1140	
WMW-17-20171130		GW			1030	
WMW-18-20171129		GW		11/29	1520	
D-1-20171130		GW		11/30	-	
		GW				
		GW				
		GW				
		GW				

Total As 250m HDPE-HNO3

Total Arsenic only for:
WMW-17-20171130
WMW-18-20171129
RPH (12/3/17)

X
X

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



13005 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5858
Fax: 615-758-5899



L# 1954618
Table #
Acctnum: BNSF1KEN
Template: T130227
Prelogin: P627573
TSR: 134 - Mark W. Beasley
PB: 11-21-17
Shipped Via: FedEx Saver

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Biotassay
WW - Waste Water
DW - Drinking Water
OT - Other

Remarks: TT9156-R04, PO# 4358

MS + MS₂ for WMW-14-20171130 sample

Samples returned via:
 UPS FedEx Courier

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Check

COC Seal Present/Intact:	<input checked="" type="checkbox"/>	Y	N
COC Signed/Accurate:	<input checked="" type="checkbox"/>	Y	N
Bottles arrive intact:	<input checked="" type="checkbox"/>	Y	N
Correct bottles used:	<input checked="" type="checkbox"/>	Y	N
Sufficient volume sent:	<input checked="" type="checkbox"/>	Y	N
IA Applicable	<input checked="" type="checkbox"/>	Y	N
POA zero headspace:	<input checked="" type="checkbox"/>	Y	N
Preservation Correct/Checked:	<input checked="" type="checkbox"/>	Y	N

Relinquished by: (Signature)
[Signature]

Date: 12/1 Time: 0815

Received by: (Signature)

Trip Blank Received: Yes/No
2 HC/Meat
TBR

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp: 1.6 °C Bottles Received: 100

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature)

Date: 12/2/17 Time: 0815

If preservation required by Login: Date/Time

Hold: Condition NCF / OK

Andy Vann

From: Mark Beasley
Sent: Monday, December 04, 2017 10:27 AM
To: Ryan Hultgren; Janice Sloan; Joseph Sawdey; Todd Miller
Cc: Olivia Studebaker
Subject: RE: ESC Lab Sciences Login for 1726120 BNSF - Wishram Railyard, WA L954618
Attachments: In01L954618.pdf; COCL954618_RH 120317 markup.pdf

Ryan:

We will get this corrected.

Thanks
Mark

From: Ryan Hultgren [<mailto:RyanHultgren@kennedyjenks.com>]
Sent: Sunday, December 03, 2017 7:06 PM
To: Mark Beasley; Janice Sloan; Joseph Sawdey; Todd Miller
Subject: FW: ESC Lab Sciences Login for 1726120 BNSF - Wishram Railyard, WA L954618

Mark,

For the attached sample set for the BNSF Wishram Railyard project, only two of the samples should be analyzed for total and dissolved arsenic:

- WMW-17-20171130
- WMW-18-20171129

Can you please revise the sample login report for this change? The attached COC has been marked up to reflect this change. Please let me know if you have any questions.

Thank you,
Ryan

Ryan Hultgren, P.E. | Project Manager
Kennedy/Jenks Consultants
32001 32nd Ave S, Suite 100 | Federal Way, WA 98001
P: 253.835.6400 | Direct: 253.835.6432 | Mobile: 253.549.9725

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-----Original Message-----

From: Mark W. Beasley [<mailto:mbeasley@esclabsciences.com>]
Sent: December 02, 2017 10:03 PM
To: Joseph Sawdey <JosephSawdey@KennedyJenks.com>; Ryan Hultgren <RyanHultgren@kennedyjenks.com>; Janice

Sloan <JaniceSloan@kennedyjenks.com>; Ty Schreiner <TySchreiner@KennedyJenks.com>
Subject: ESC Lab Sciences Login for 1726120 BNSF - Wishram Railyard, WA L954618

Thank you for choosing ESC Lab Sciences! Please find enclosed PDF files containing your laboratory login confirmation and chain of custody.

Happy Holidays from ESC Lab Sciences.

ESC will be closed Thursday November 23rd, Monday December 25th, and Monday January 1st, 2018. Considering these dates, please refrain from shipping to ESC Lab Sciences the work-day prior to these dates to avoid a minimum 24-hour delay in processing your samples which may result in unavoidable non-conformance issues. Also, please note that samples requesting 5 day BOD analysis cannot be received in the laboratory on Saturday, November 18, Wednesday December 20, or Wednesday December 27. For all submittals and microbiological testing, please contact your Project Manager with any questions or for scheduling assistance.

ESC ... "Your Lab of Choice"

Mark W. Beasley
Technical Service Representative
615-773-9672

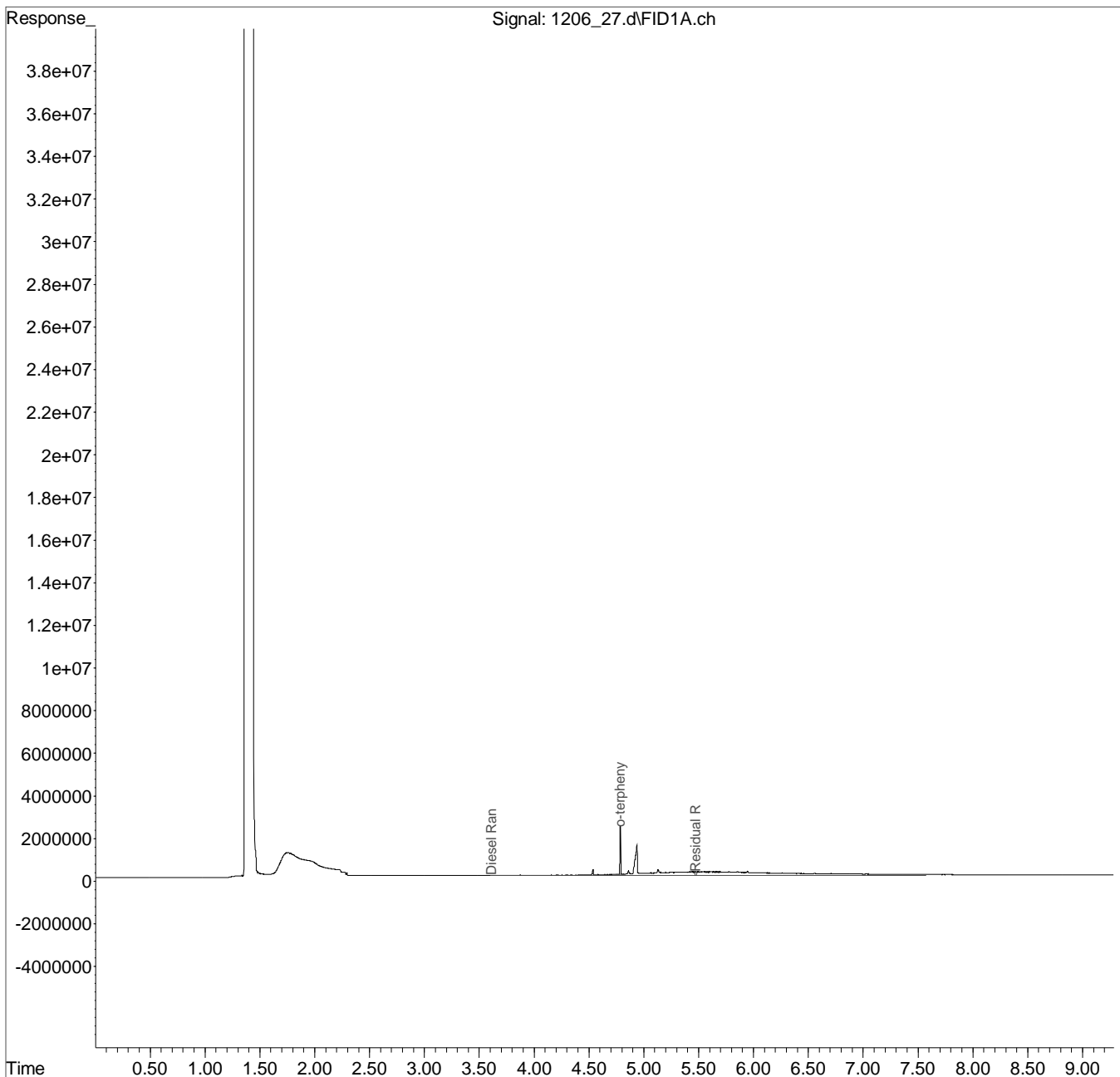
ESC Lab Sciences
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Notice: This communication and any attached files may contain privileged or other confidential information. If you have received this in error, please contact the sender immediately via reply email and immediately delete the message and any attachments without copying or disclosing the contents. Thank you.

Data Path : C:\msdchem\1\data\120617\
 Data File : 1206 27.d
 Signal(s) : FID1A.ch
 Acq On : 6 Dec 2017 8:08 pm
 Operator : 725
 Sample : L954618-01 1x WG1049006 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 57 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 07 12:02:48 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

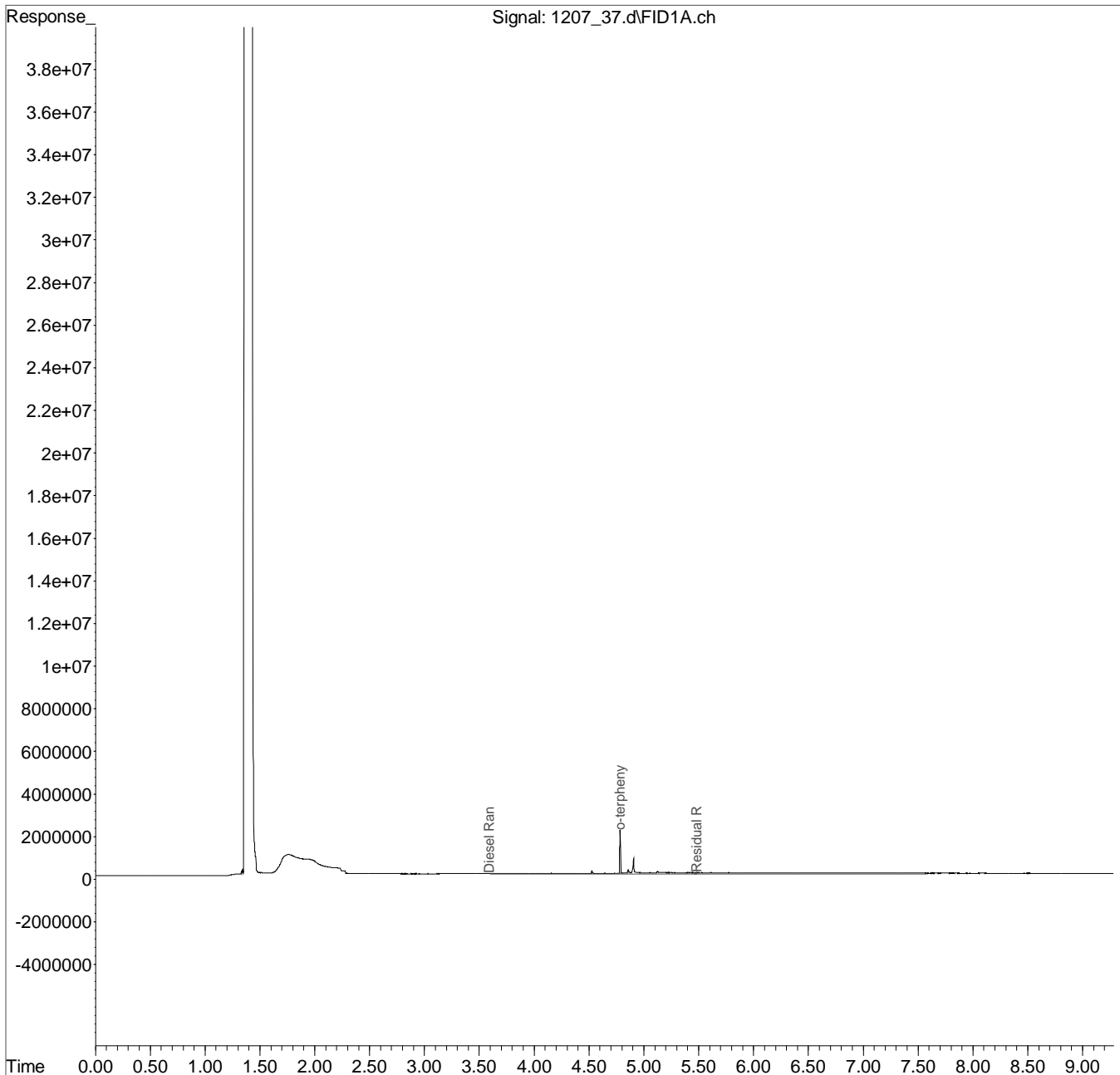
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\120717\
 Data File : 1207 37.d
 Signal(s) : FID1A.ch
 Acq On : 7 Dec 2017 10:06 pm
 Operator : 784
 Sample : L954618-01 1x WG1049374 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 31 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 10 11:11:13 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

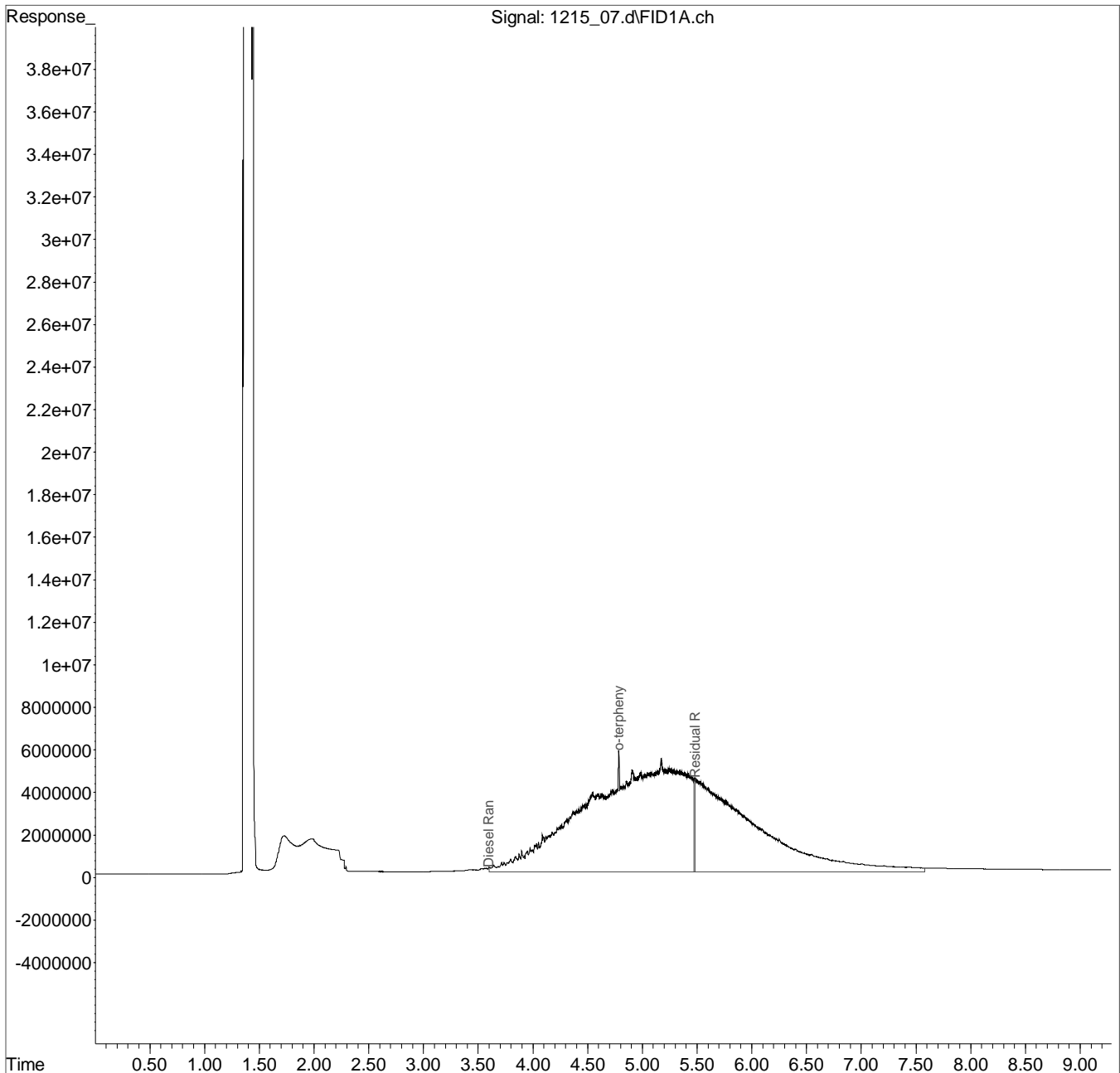
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\121517\
 Data File : 1215_07.d
 Signal(s) : FID1A.ch
 Acq On : 15 Dec 2017 12:01 pm
 Operator : 784
 Sample : L954618-02 1x WG1049006 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 5 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 15 12:44:43 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

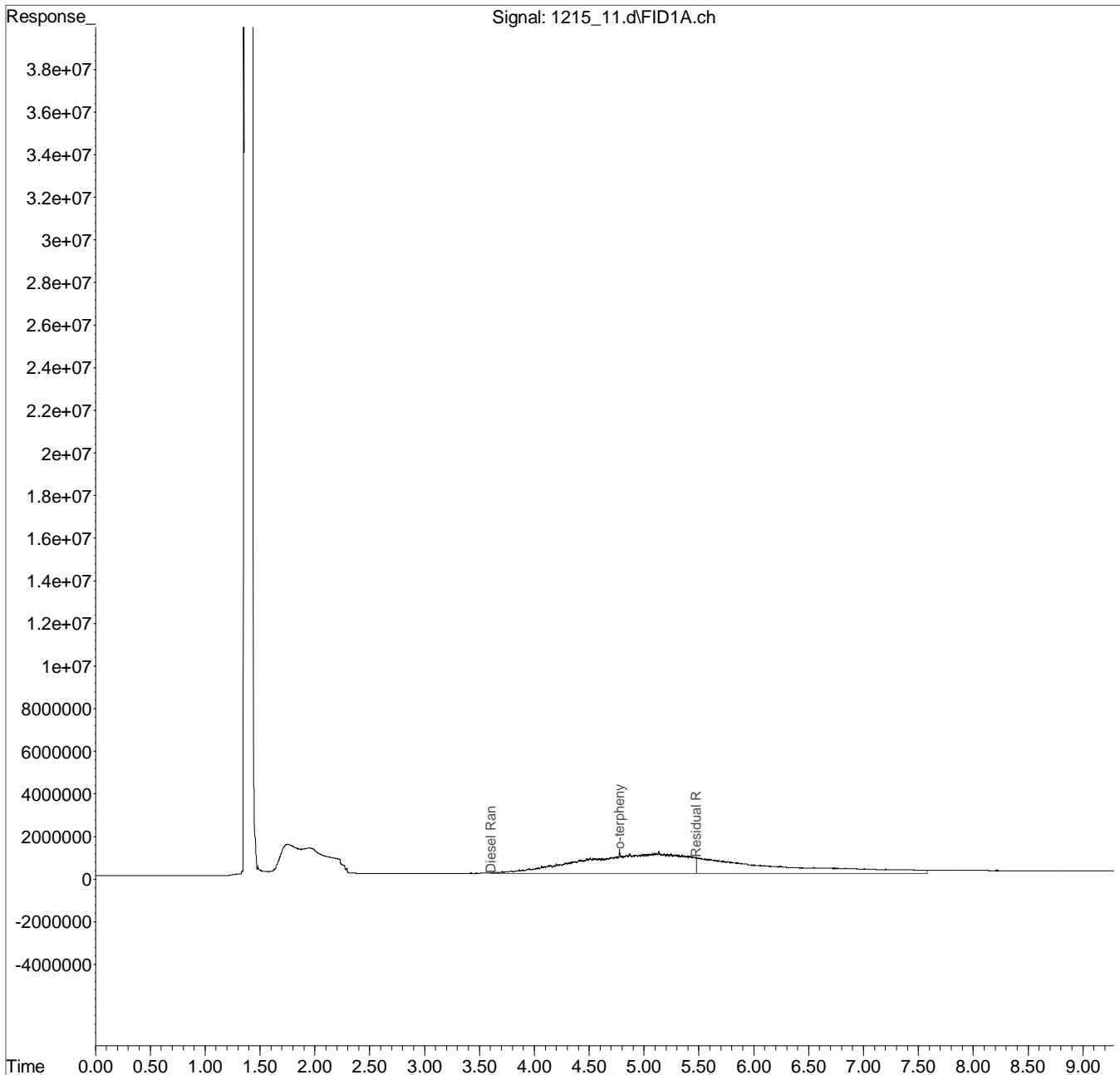
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\121517\
 Data File : 1215 11.d
 Signal(s) : FID1A.ch
 Acq On : 15 Dec 2017 1:06 pm
 Operator : 784
 Sample : L954618-02 5x WG1049006 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 9 Sample Multiplier: 0.25
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 15 14:56:44 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

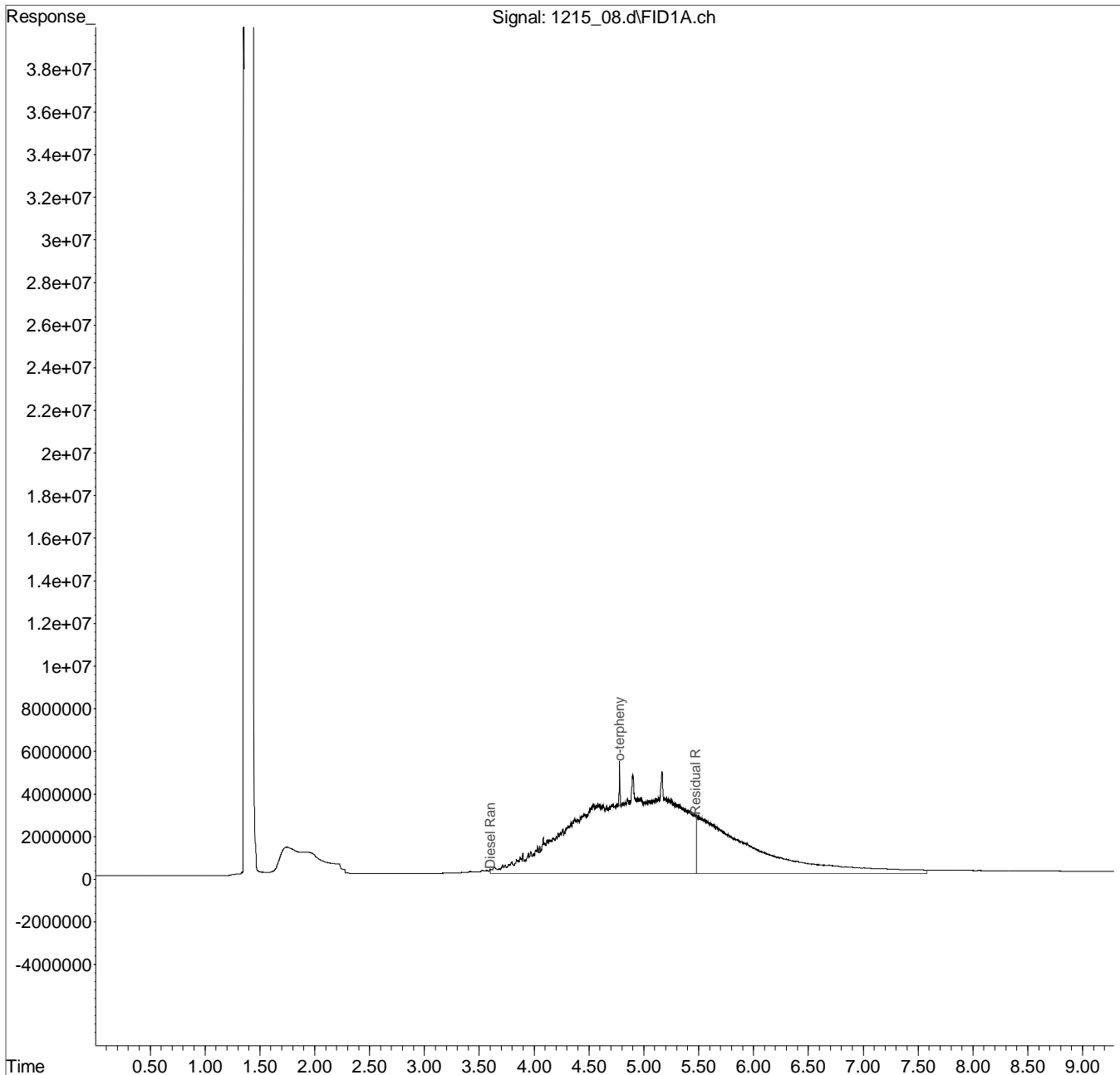
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\121517\
 Data File : 1215_08.d
 Signal(s) : FID1A.ch
 Acq On : 15 Dec 2017 12:17 pm
 Operator : 784
 Sample : L954618-02 1x WG1049374 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 6 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 15 12:46:44 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

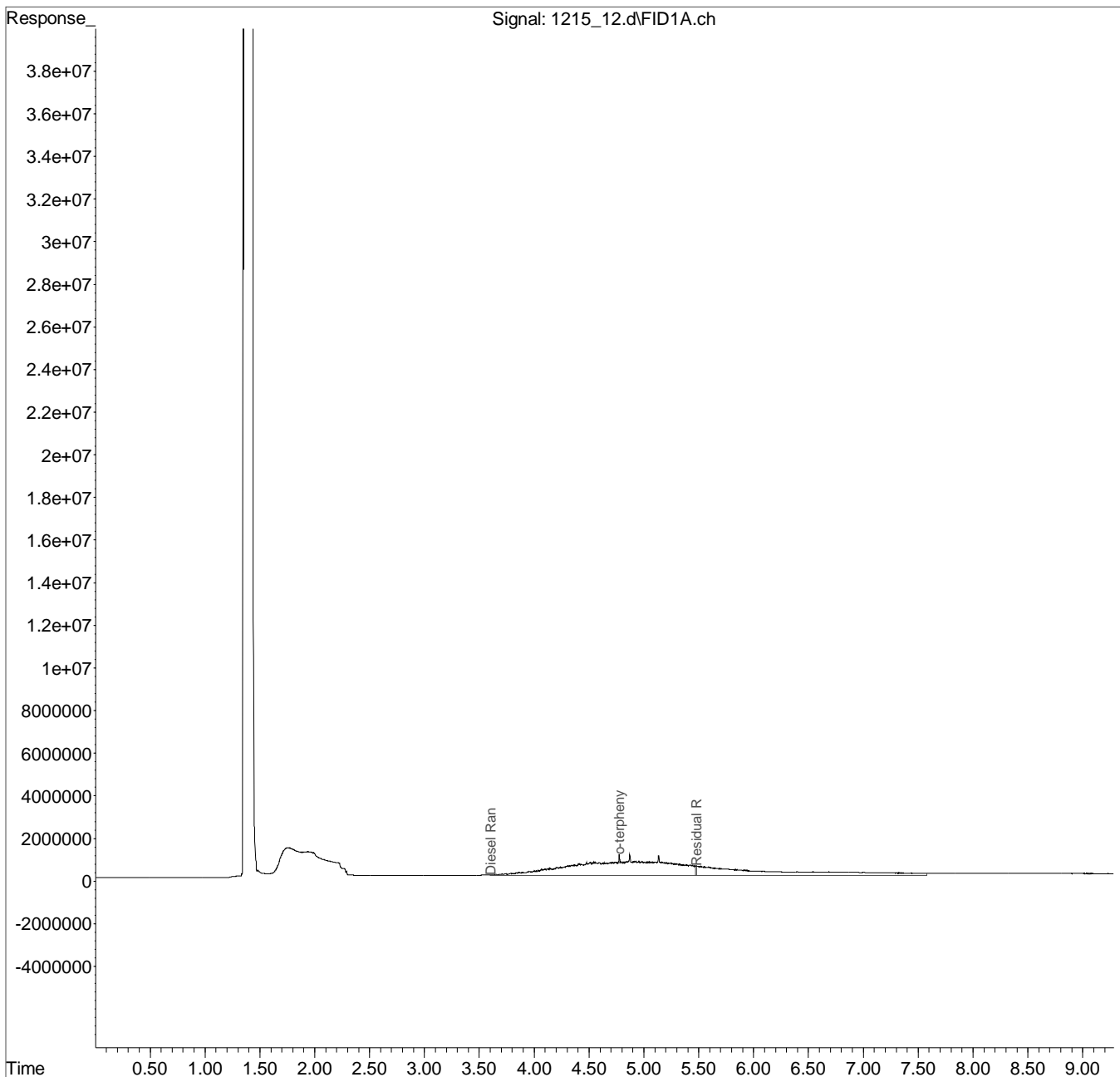
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\121517\
 Data File : 1215 12.d
 Signal(s) : FID1A.ch
 Acq On : 15 Dec 2017 1:22 pm
 Operator : 784
 Sample : L954618-02 5x WG1049374 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 10 Sample Multiplier: 0.25
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 15 14:57:29 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

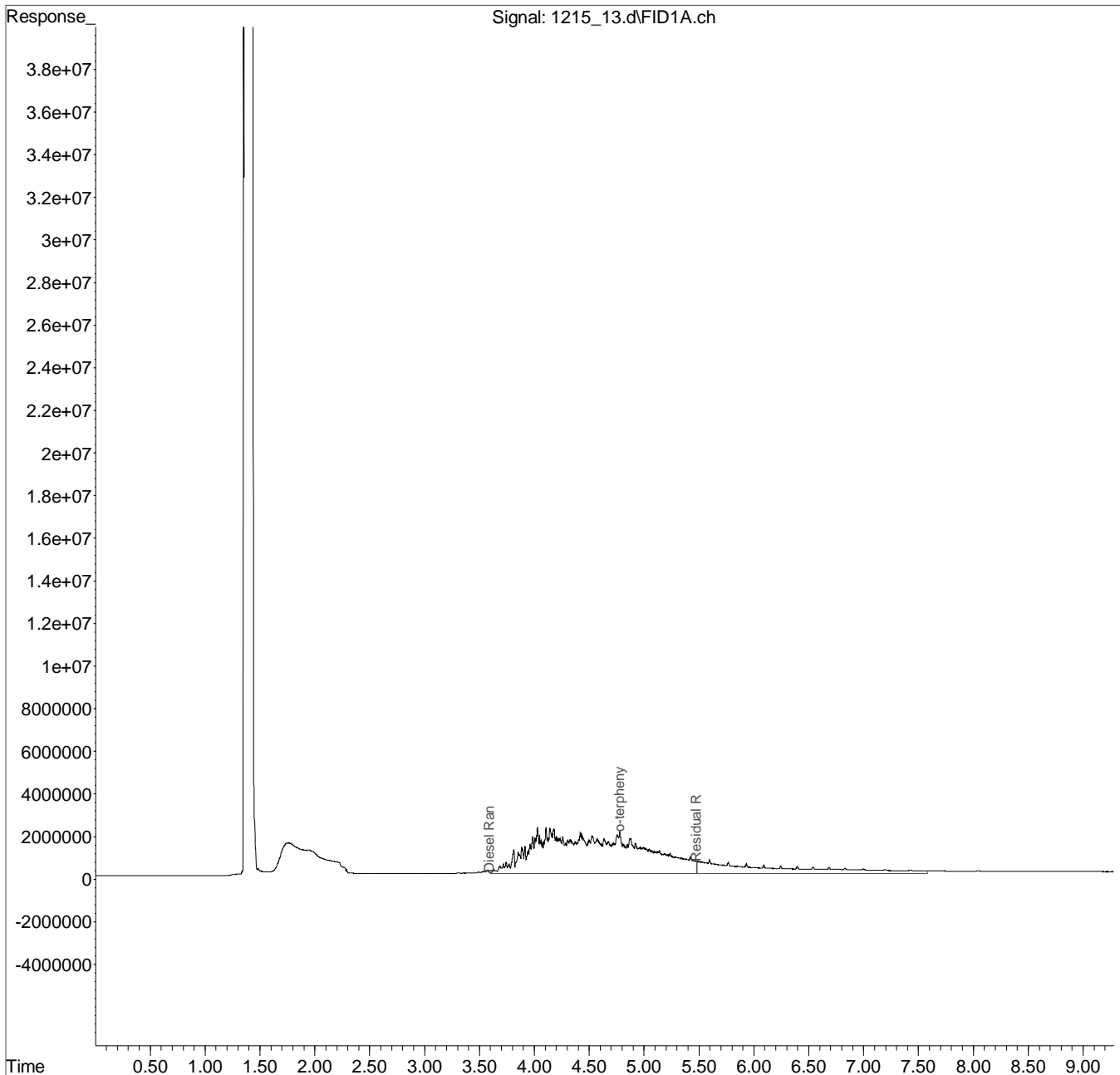
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\121517\
 Data File : 1215_13.d
 Signal(s) : FID1A.ch
 Acq On : 15 Dec 2017 1:38 pm
 Operator : 784
 Sample : L954618-03 10x WG1049006 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 11 Sample Multiplier: 0.5
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 15 15:02:05 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

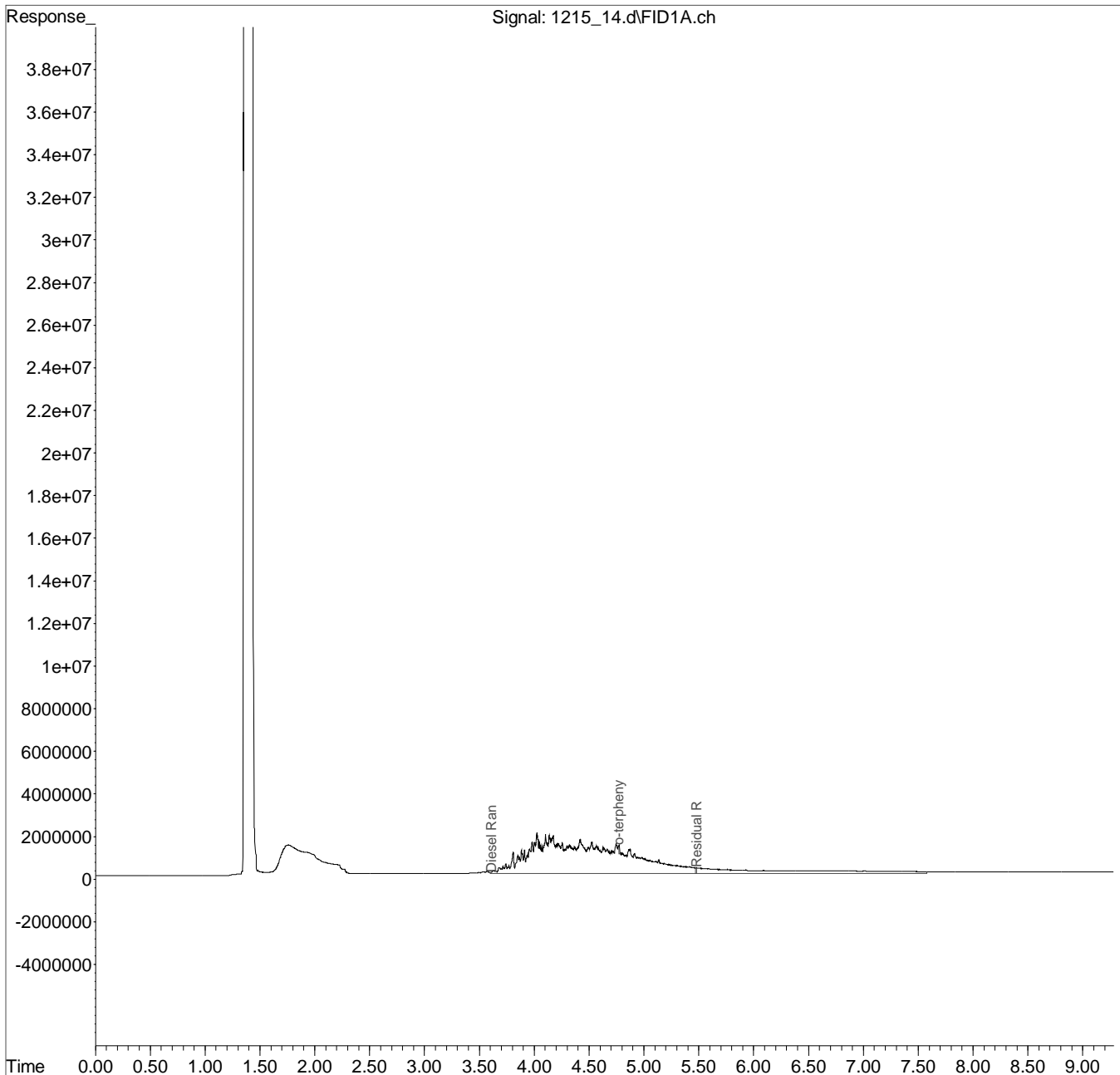
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\121517\
 Data File : 1215 14.d
 Signal(s) : FID1A.ch
 Acq On : 15 Dec 2017 1:54 pm
 Operator : 784
 Sample : L954618-03 10x WG1049374 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 12 Sample Multiplier: 0.5
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 15 15:02:36 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

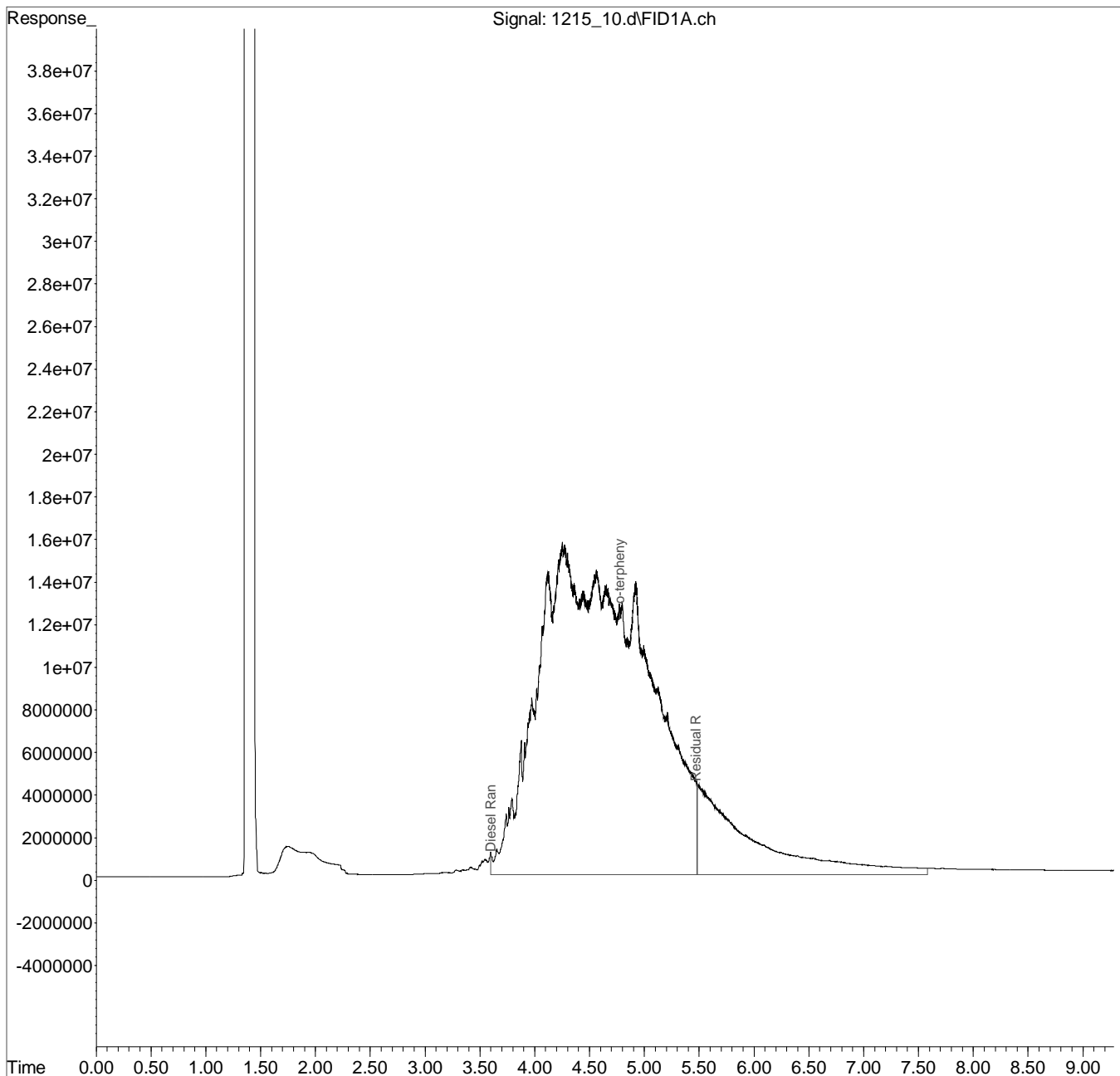
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\121517\
Data File : 1215 10.d
Signal(s) : FID1A.ch
Acq On : 15 Dec 2017 12:49 pm
Operator : 784
Sample : L954618-03 1x WG1049374 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 8 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Dec 15 14:55:53 2017
Quant Method : C:\msdchem\1\methods\EP27L06Q.M
Quant Title :
QLast Update : Thu Dec 07 10:33:22 2017
Response via : Initial Calibration
Integrator: ChemStation

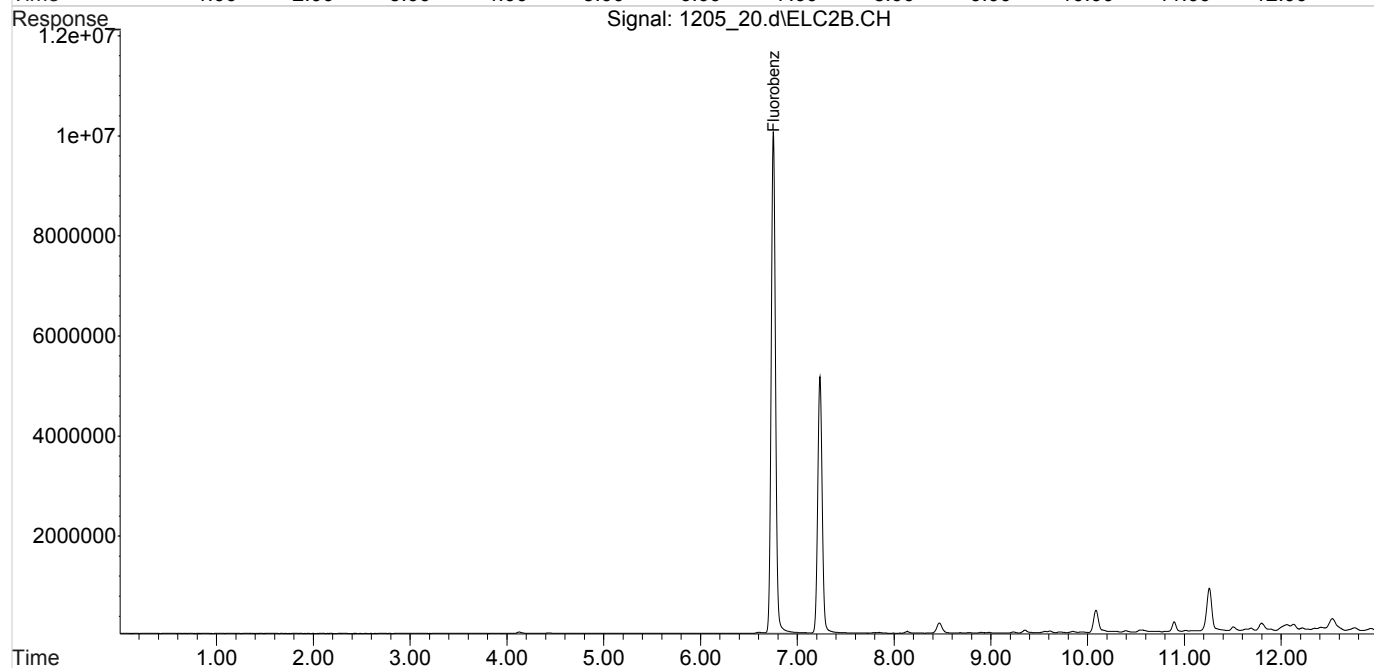
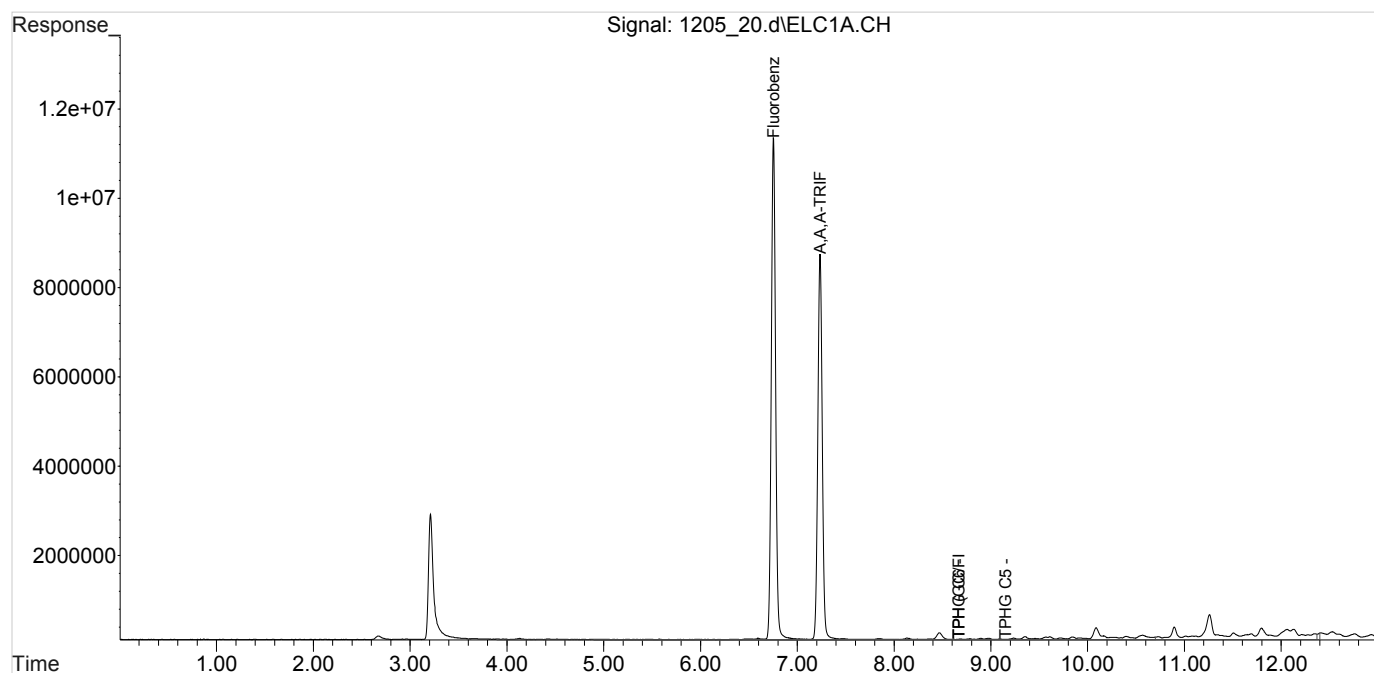
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\120517\
Data File : 1205_20.d
Signal(s) : Signal #1: ELC1A.CH Signal #2: ELC2B.CH
Acq On : 05 Dec 2017 18:34 pm
Operator :
Sample : L954618-03 1x WG1049480
Misc : water
ALS Vial : 20 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: BTEX.E
Integration File signal 2: EVENTS3.E
Quant Time: Dec 07 13:26:11 2017
Quant Method : C:\msdchem\1\methods\BG15K08Q.M
Quant Title : BTEX/GRO VOCGC15
QLast Update : Thu Nov 09 11:03:43 2017
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

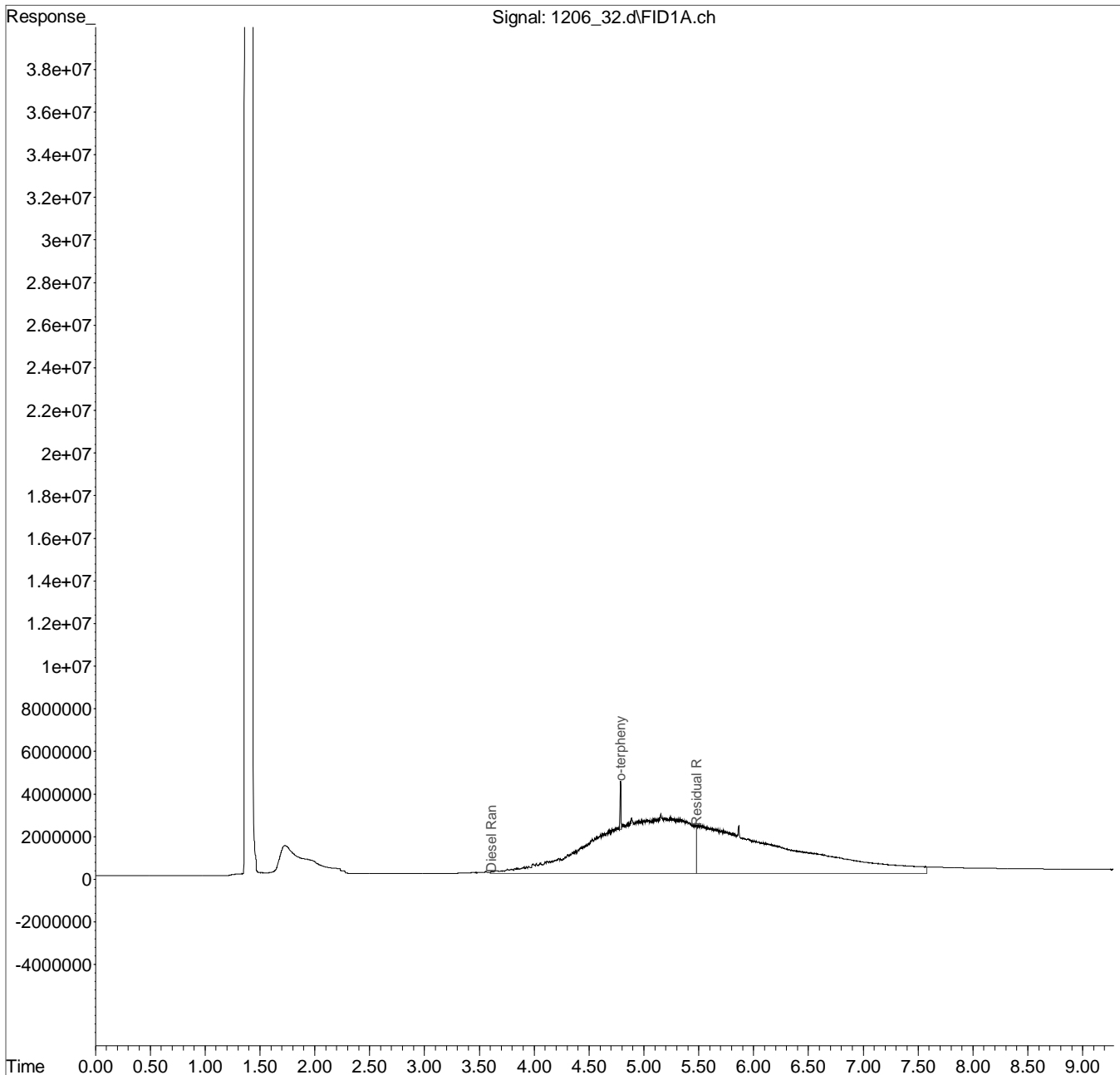
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\120617\
 Data File : 1206 32.d
 Signal(s) : FID1A.ch
 Acq On : 6 Dec 2017 9:32 pm
 Operator : 725
 Sample : L954618-04 1x WG1049006 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 62 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 07 12:20:12 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

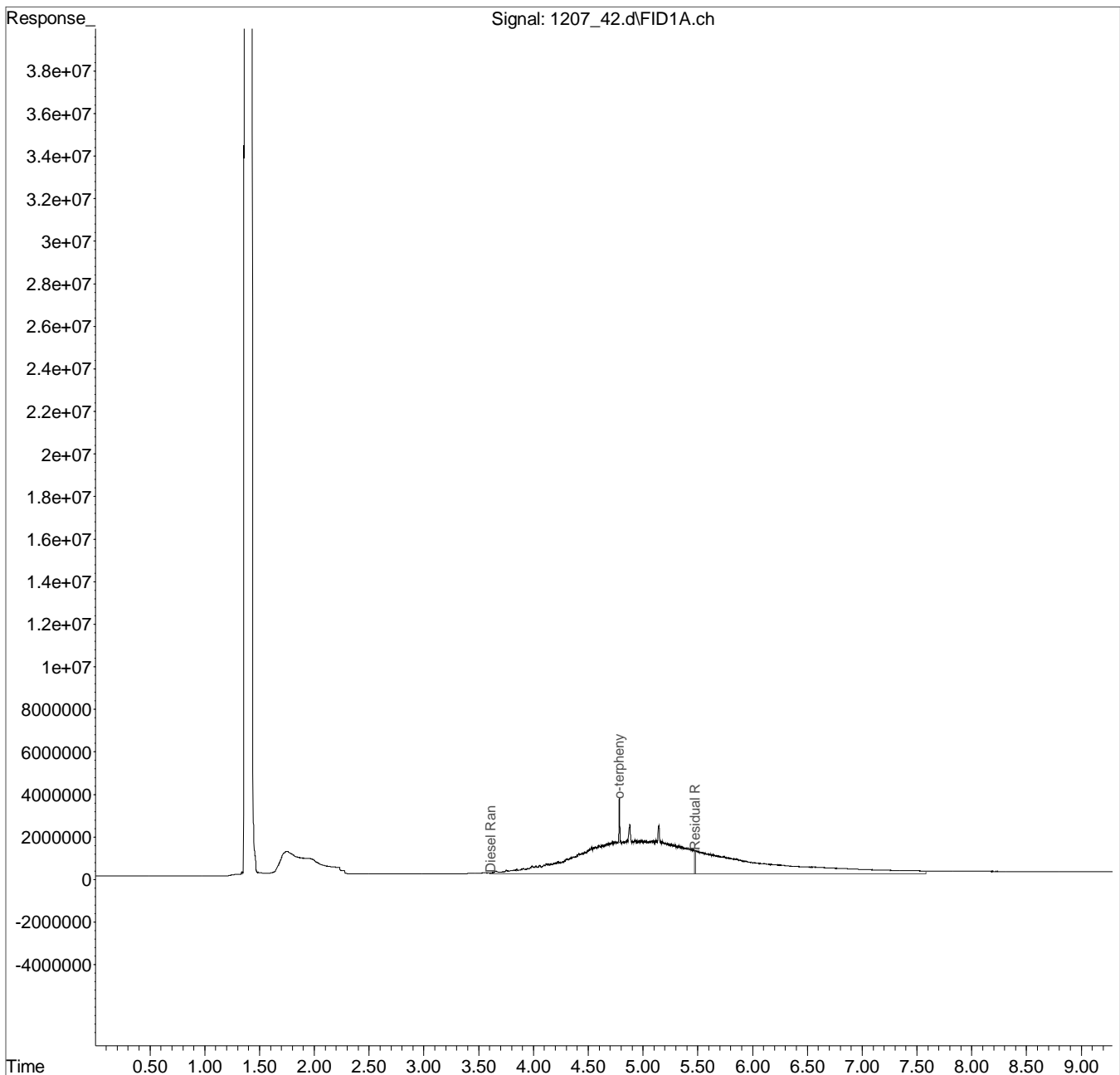
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\120717\
Data File : 1207 42.d
Signal(s) : FID1A.ch
Acq On : 7 Dec 2017 11:27 pm
Operator : 784
Sample : L954618-04 1x WG1049374 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 36 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Dec 10 11:17:07 2017
Quant Method : C:\msdchem\1\methods\EP27L06Q.M
Quant Title :
QLast Update : Thu Dec 07 10:33:22 2017
Response via : Initial Calibration
Integrator: ChemStation

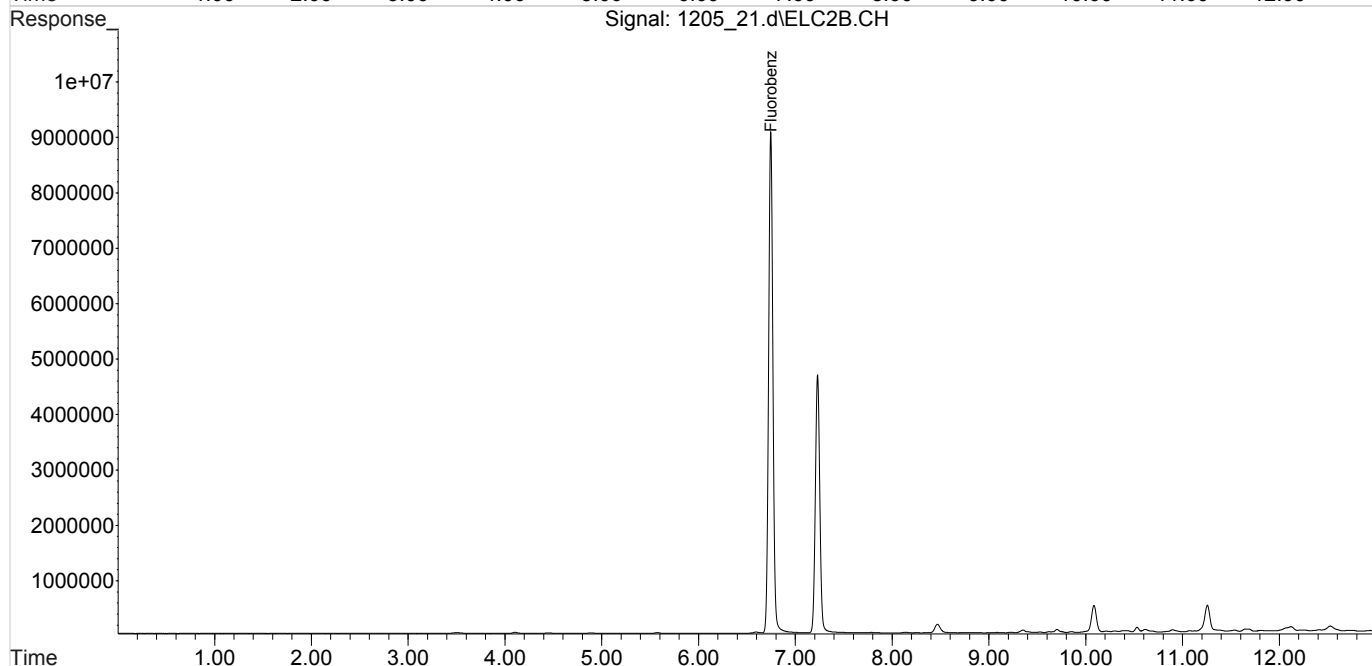
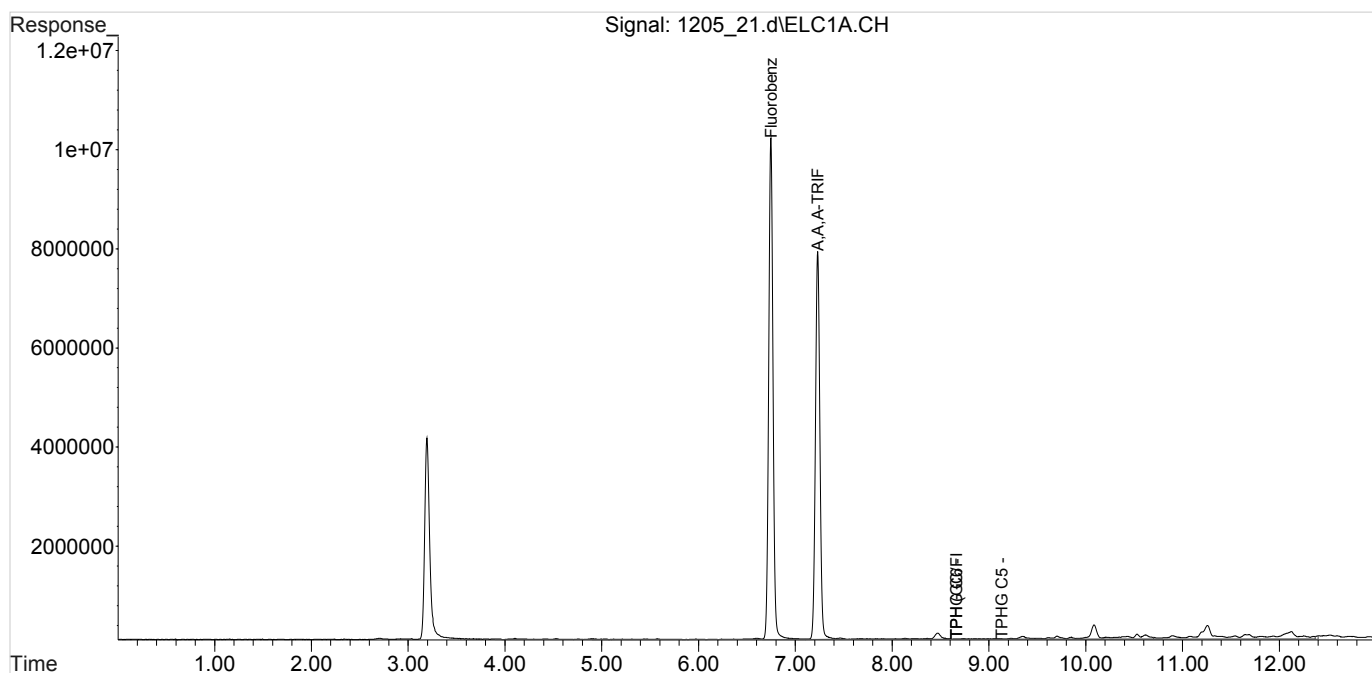
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\120517\
Data File : 1205_21.d
Signal(s) : Signal #1: ELC1A.CH Signal #2: ELC2B.CH
Acq On : 05 Dec 2017 19:33 pm
Operator :
Sample : L954618-04 1x WG1049480
Misc : water
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: BTEX.E
Integration File signal 2: EVENTS3.E
Quant Time: Dec 07 13:26:15 2017
Quant Method : C:\msdchem\1\methods\BG15K08Q.M
Quant Title : BTEX/GRO VOCGC15
QLast Update : Thu Nov 09 11:03:43 2017
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

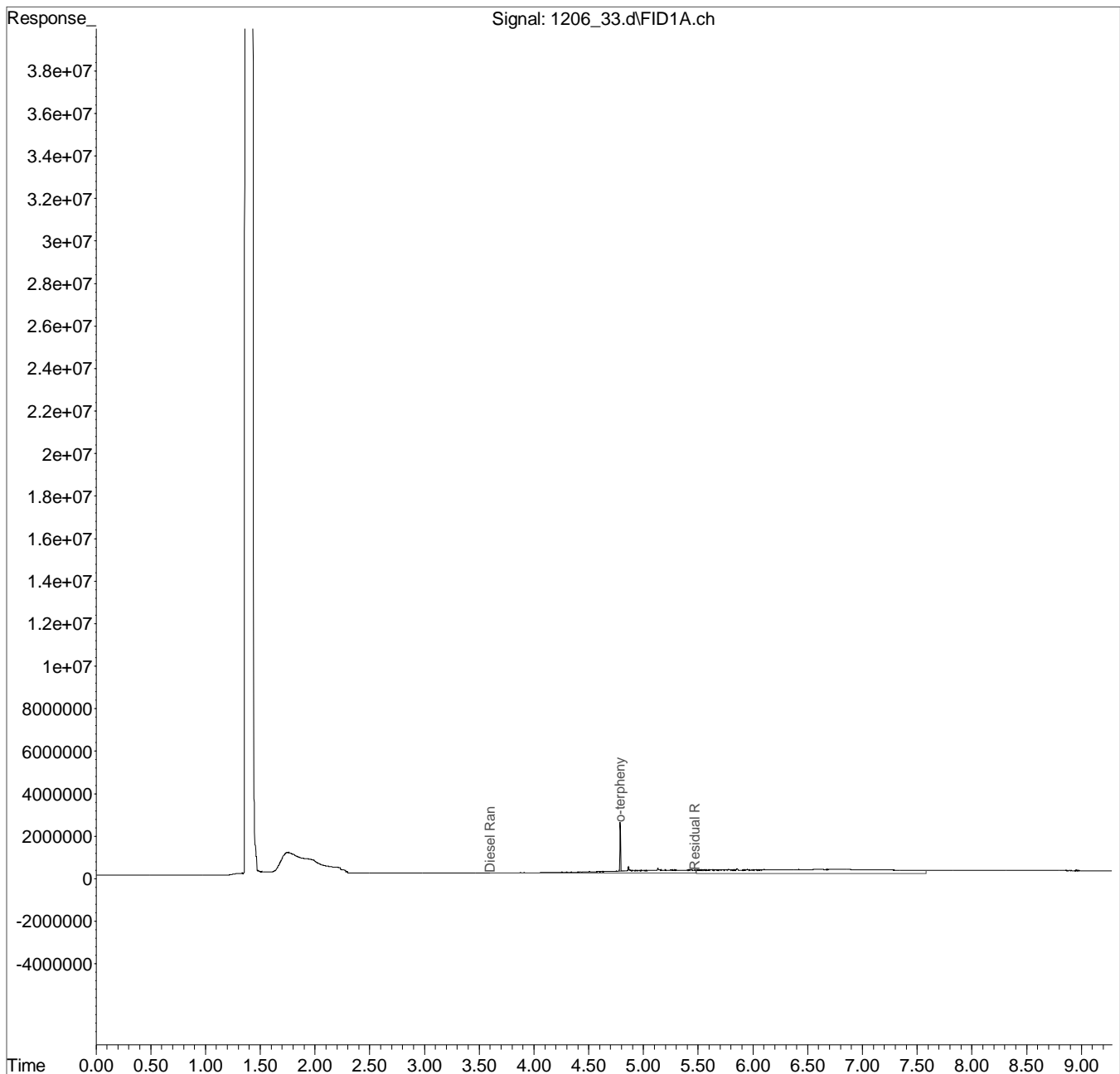
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\120617\
Data File : 1206 33.d
Signal(s) : FID1A.ch
Acq On : 6 Dec 2017 9:48 pm
Operator : 725
Sample : L954618-05 1x WG1049006 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 63 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Dec 07 13:21:14 2017
Quant Method : C:\msdchem\1\methods\EP27L06Q.M
Quant Title :
QLast Update : Thu Dec 07 10:33:22 2017
Response via : Initial Calibration
Integrator: ChemStation

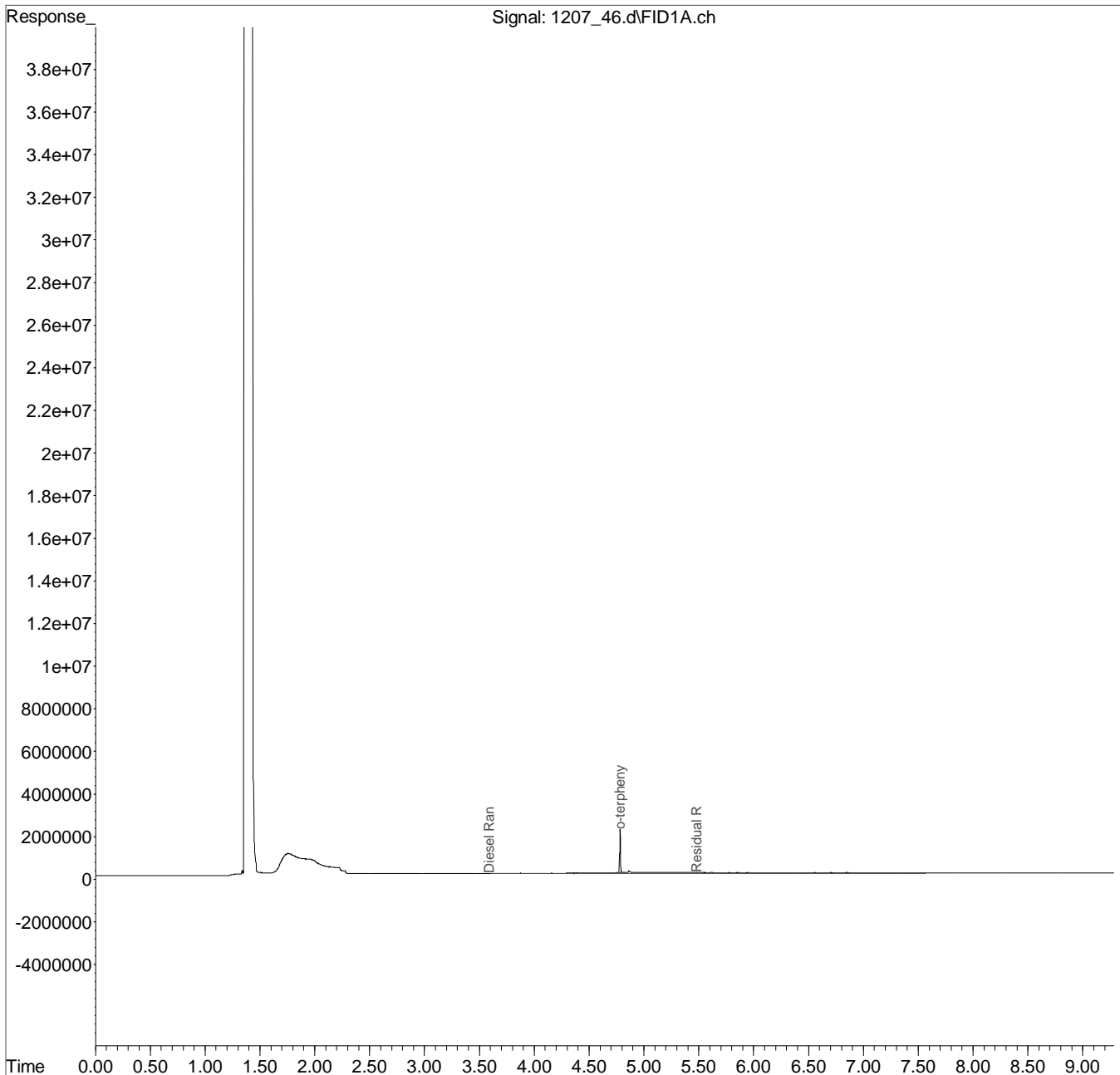
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\120717\
 Data File : 1207_46.d
 Signal(s) : FID1A.ch
 Acq On : 8 Dec 2017 12:32 am
 Operator : 784
 Sample : L954618-05 1x WG1049374 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 37 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 10 11:22:37 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

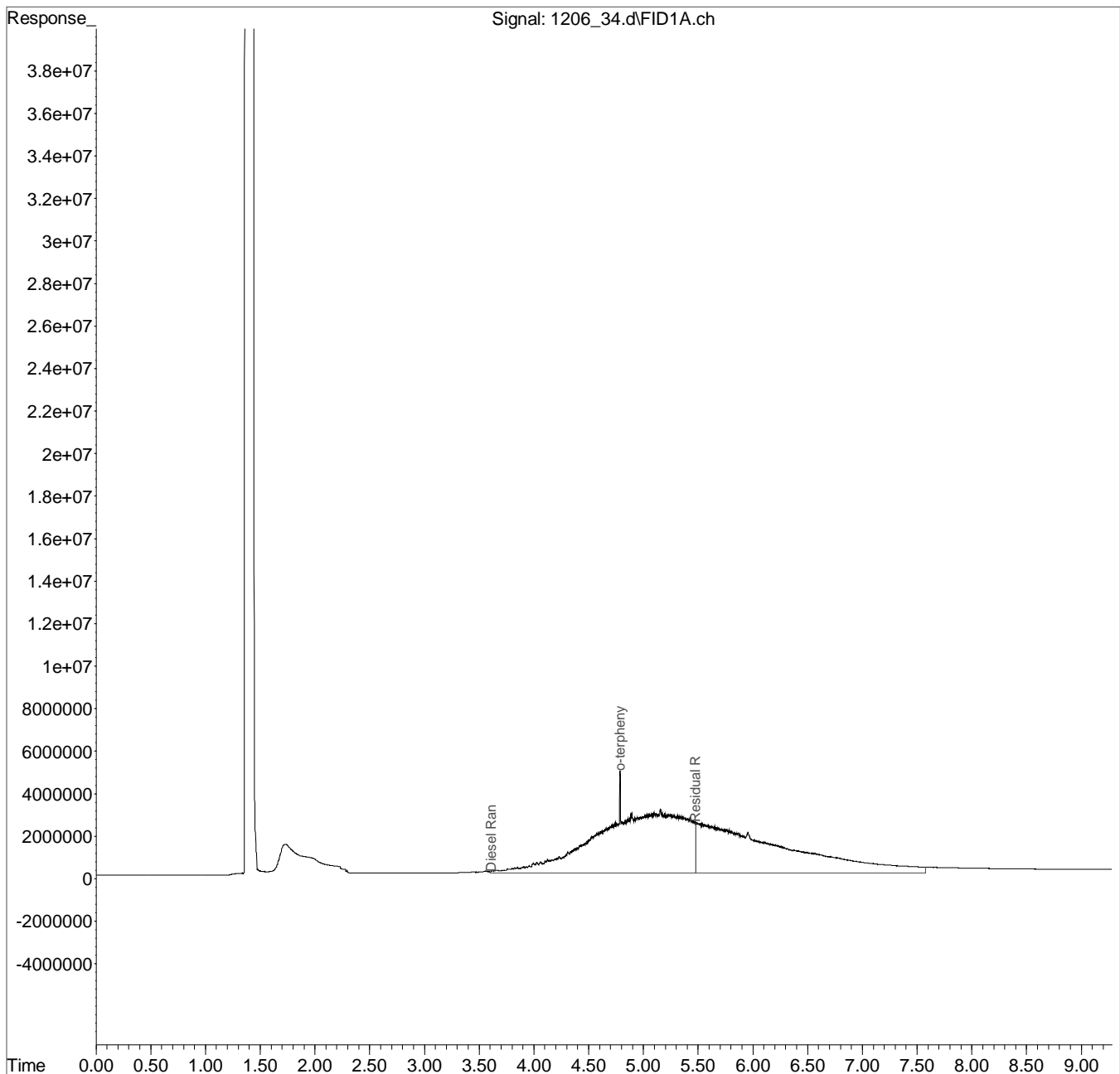
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\120617\
Data File : 1206 34.d
Signal(s) : FID1A.ch
Acq On : 6 Dec 2017 10:04 pm
Operator : 725
Sample : L954618-06 1x WG1049006 40-2
Misc : water M.I.s on ranges are corrections
ALS Vial : 64 Sample Multiplier: 0.05
InstName : SVGC27

Integration File: events.e
Quant Time: Dec 07 13:24:02 2017
Quant Method : C:\msdchem\1\methods\EP27L06Q.M
Quant Title :
QLast Update : Thu Dec 07 10:33:22 2017
Response via : Initial Calibration
Integrator: ChemStation

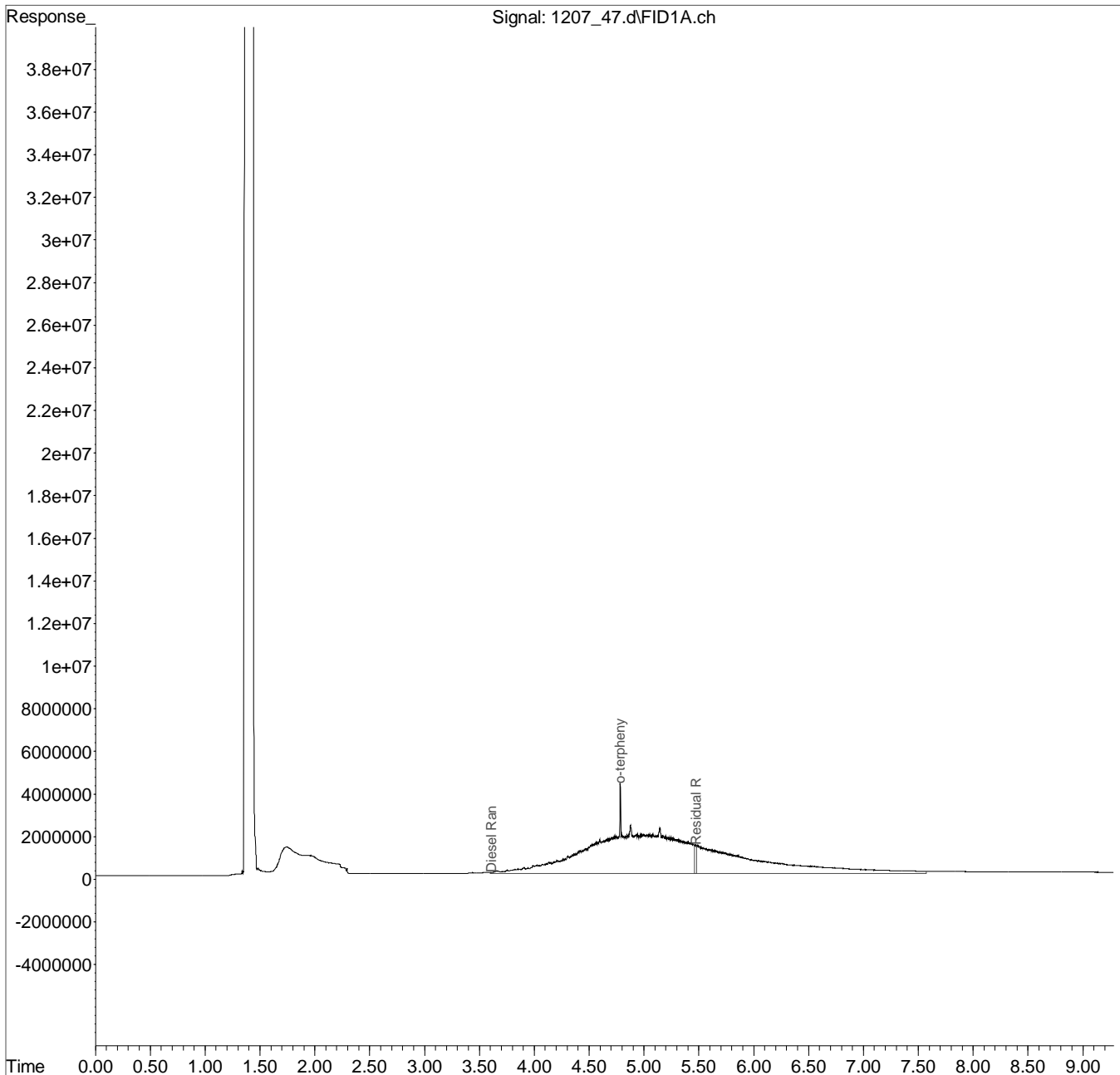
Volume Inj. :
Signal Phase :
Signal Info :
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\120717\
 Data File : 1207_47.d
 Signal(s) : FID1A.ch
 Acq On : 8 Dec 2017 12:48 am
 Operator : 784
 Sample : L954618-06 1x WG1049374 40-2
 Misc : water M.I.s on ranges are corrections
 ALS Vial : 38 Sample Multiplier: 0.05
 InstName : SVGC27

Integration File: events.e
 Quant Time: Dec 10 11:23:24 2017
 Quant Method : C:\msdchem\1\methods\EP27L06Q.M
 Quant Title :
 QLast Update : Thu Dec 07 10:33:22 2017
 Response via : Initial Calibration
 Integrator: ChemStation

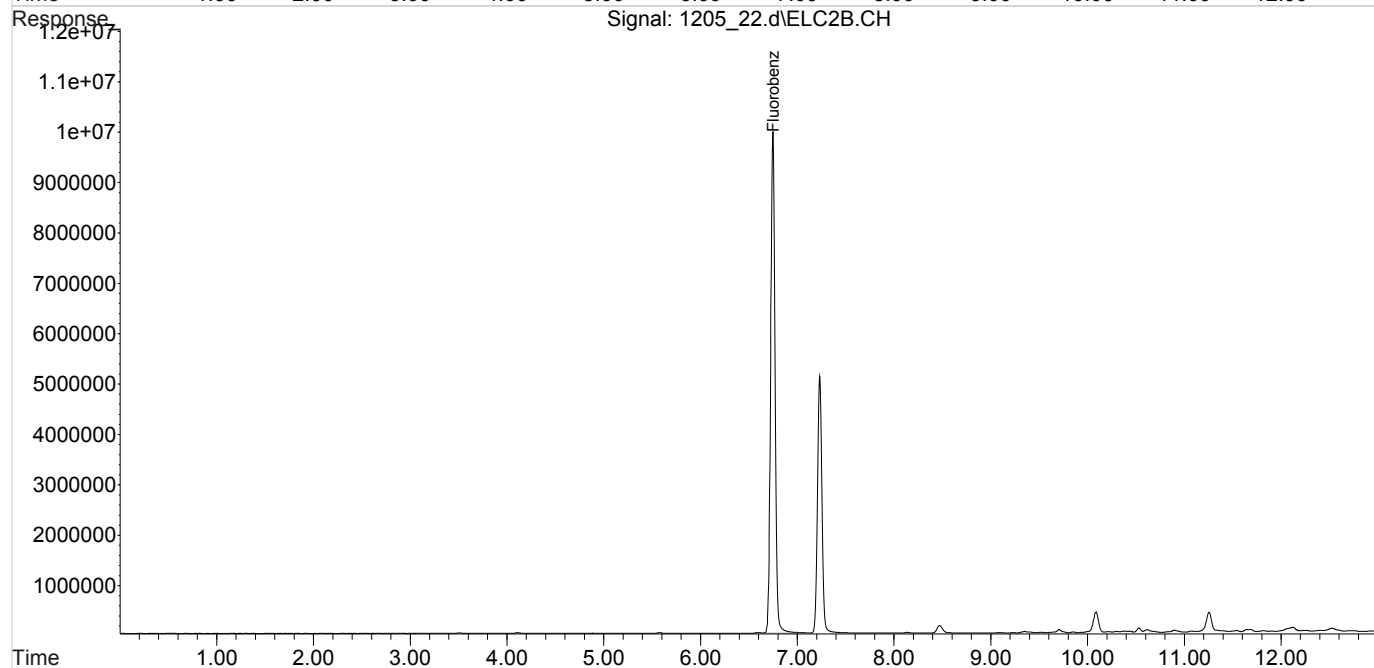
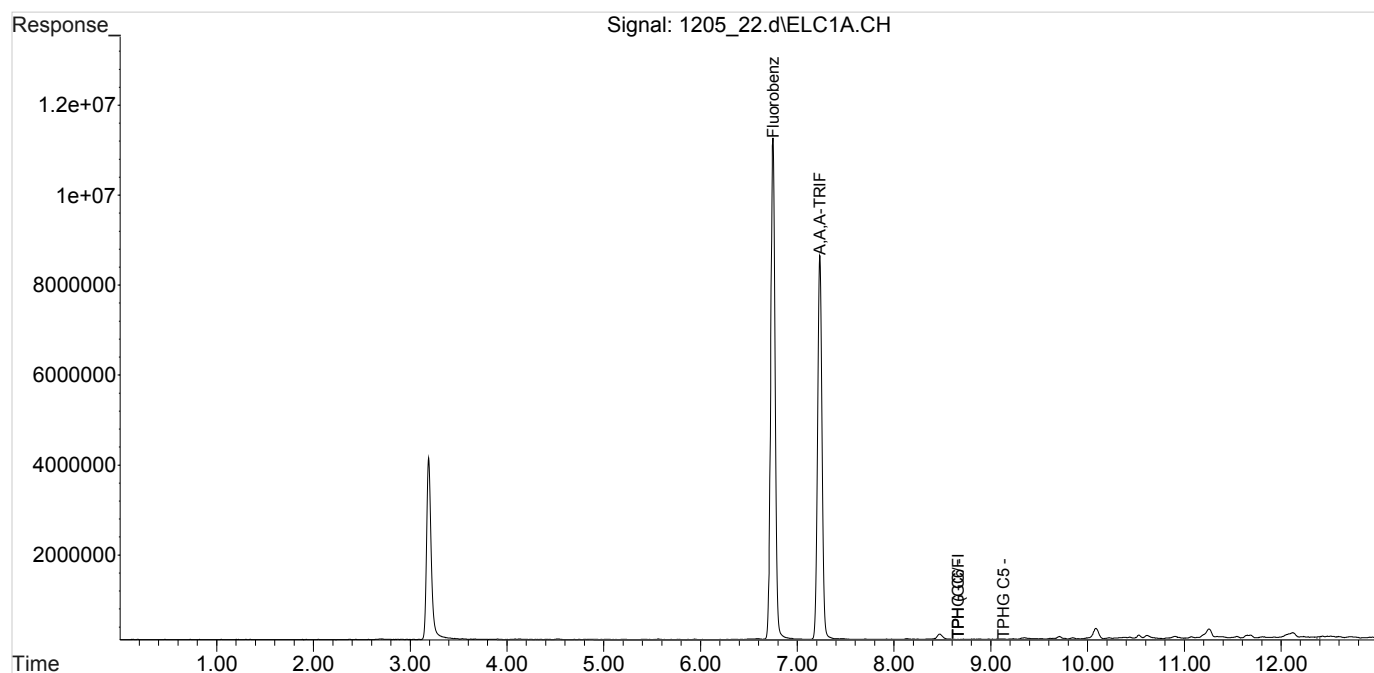
Volume Inj. :
 Signal Phase :
 Signal Info :
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\120517\
Data File : 1205_22.d
Signal(s) : Signal #1: ELC1A.CH Signal #2: ELC2B.CH
Acq On : 05 Dec 2017 19:55 pm
Operator :
Sample : L954618-06 1x WG1049480
Misc : water
ALS Vial : 22 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: BTEX.E
Integration File signal 2: EVENTS3.E
Quant Time: Dec 07 13:26:19 2017
Quant Method : C:\msdchem\1\methods\BG15K08Q.M
Quant Title : BTEX/GRO VOCGC15
QLast Update : Thu Nov 09 11:03:43 2017
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\120517\
Data File : 1205_08.d
Signal(s) : Signal #1: ELC1A.CH Signal #2: ELC2B.CH
Acq On : 05 Dec 2017 12:19 pm
Operator :
Sample : L954618-07 1x WG1049480
Misc : water
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: BTEX.E
Integration File signal 2: EVENTS3.E
Quant Time: Dec 07 13:25:22 2017
Quant Method : C:\msdchem\1\methods\BG15K08Q.M
Quant Title : BTEX/GRO VOCGC15
QLast Update : Thu Nov 09 11:03:43 2017
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

