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Groundwater Analytical Report  
27 to 28 February 2018

March 13, 2018

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L974320  
Samples Received: 03/02/2018  
Project Number: 1896120\*00  
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-18-20180227 L974320-01 GW

Collected by  
Alice Robinson  
Collected date/time  
02/27/18 14:20  
Received date/time  
03/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1080686	1	03/06/18 15:19	03/06/18 15:19	JER
Wet Chemistry by Method 353.2	WG1080684	1	03/06/18 16:17	03/06/18 16:17	JER
Wet Chemistry by Method 4500S2 D-2011	WG1080132	1	03/04/18 11:17	03/04/18 11:17	TH
Wet Chemistry by Method 9056A	WG1079887	1	03/03/18 20:08	03/03/18 20:08	DR
Metals (ICPMS) by Method 6020A	WG1080278	1	03/06/18 10:43	03/06/18 12:01	JPD
Metals (ICPMS) by Method 6020A	WG1080286	1	03/07/18 10:11	03/07/18 16:02	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1081175	1	03/07/18 11:41	03/07/18 11:41	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1080034	1	03/03/18 13:32	03/03/18 22:05	TH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

## WMW-17-20180227 L974320-02 GW

Collected by  
Alice Robinson  
Collected date/time  
02/27/18 16:20  
Received date/time  
03/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1080686	1	03/06/18 15:23	03/06/18 15:23	JER
Wet Chemistry by Method 353.2	WG1080684	1	03/06/18 16:24	03/06/18 16:24	JER
Wet Chemistry by Method 4500S2 D-2011	WG1080132	1	03/04/18 11:17	03/04/18 11:17	TH
Wet Chemistry by Method 9056A	WG1079887	1	03/03/18 20:54	03/03/18 20:54	DR
Metals (ICPMS) by Method 6020A	WG1080278	1	03/06/18 10:43	03/06/18 12:20	JPD
Metals (ICPMS) by Method 6020A	WG1080286	1	03/07/18 10:11	03/07/18 16:18	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1080521	1	03/05/18 16:56	03/05/18 16:56	BMB
Volatile Organic Compounds (GC) by Method RSK175	WG1081175	1	03/07/18 11:44	03/07/18 11:44	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1080034	1	03/03/18 13:32	03/03/18 22:21	TH

6  
Qc

7  
Gl

8  
Al

9  
Sc

## DUP-20180227 L974320-03 GW

Collected by  
Alice Robinson  
Collected date/time  
02/27/18 17:00  
Received date/time  
03/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1080686	1	03/06/18 15:25	03/06/18 15:25	JER
Wet Chemistry by Method 353.2	WG1080684	1	03/06/18 16:26	03/06/18 16:26	JER
Wet Chemistry by Method 4500S2 D-2011	WG1080132	1	03/04/18 11:18	03/04/18 11:18	TH
Wet Chemistry by Method 9056A	WG1079887	1	03/03/18 21:09	03/03/18 21:09	DR
Metals (ICPMS) by Method 6020A	WG1080278	1	03/06/18 10:43	03/06/18 12:24	JPD
Metals (ICPMS) by Method 6020A	WG1080286	1	03/07/18 10:11	03/07/18 16:23	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1080521	1	03/07/18 05:18	03/07/18 05:18	DWR
Volatile Organic Compounds (GC) by Method RSK175	WG1081175	1	03/07/18 11:48	03/07/18 11:48	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1080034	1	03/03/18 13:32	03/03/18 22:37	TH

## WMW-16-20180227 L974320-04 GW

Collected by  
Alice Robinson  
Collected date/time  
02/28/18 09:00  
Received date/time  
03/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1080686	1	03/06/18 15:27	03/06/18 15:27	JER
Wet Chemistry by Method 353.2	WG1080684	1	03/06/18 16:27	03/06/18 16:27	JER
Wet Chemistry by Method 4500S2 D-2011	WG1080132	1	03/04/18 11:18	03/04/18 11:18	TH
Wet Chemistry by Method 9056A	WG1079887	1	03/03/18 21:25	03/03/18 21:25	DR
Metals (ICPMS) by Method 6020A	WG1080286	1	03/07/18 10:11	03/07/18 16:43	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1080521	1	03/07/18 05:40	03/07/18 05:40	DWR
Volatile Organic Compounds (GC) by Method RSK175	WG1081175	1	03/07/18 11:51	03/07/18 11:51	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1080034	5	03/03/18 13:32	03/04/18 14:14	TH
Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1080437	1	03/05/18 07:19	03/05/18 20:46	KM

# SAMPLE SUMMARY



## WMW-15-20180227 L974320-05 GW

Collected by: Alice Robinson  
 Collected date/time: 02/28/18 10:25  
 Received date/time: 03/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1080686	1	03/06/18 15:28	03/06/18 15:28	JER
Wet Chemistry by Method 353.2	WG1080684	1	03/06/18 16:28	03/06/18 16:28	JER
Wet Chemistry by Method 4500S2 D-2011	WG1080132	1	03/04/18 11:18	03/04/18 11:18	TH
Wet Chemistry by Method 9056A	WG1079887	1	03/03/18 21:40	03/03/18 21:40	DR
Metals (ICPMS) by Method 6020A	WG1080286	1	03/07/18 10:11	03/07/18 16:47	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1081175	1	03/07/18 11:54	03/07/18 11:54	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1080034	5	03/03/18 13:32	03/04/18 14:30	TH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

## WMW-14-20180227 L974320-06 GW

Collected by: Alice Robinson  
 Collected date/time: 02/28/18 11:55  
 Received date/time: 03/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1080686	1	03/06/18 15:34	03/06/18 15:34	JER
Wet Chemistry by Method 353.2	WG1080684	10	03/06/18 16:29	03/06/18 16:29	JER
Wet Chemistry by Method 4500S2 D-2011	WG1080132	1	03/04/18 11:18	03/04/18 11:18	TH
Wet Chemistry by Method 9056A	WG1079887	1	03/03/18 21:55	03/03/18 21:55	DR
Metals (ICPMS) by Method 6020A	WG1080286	1	03/07/18 10:11	03/07/18 16:51	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1081175	1	03/07/18 11:57	03/07/18 11:57	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1080034	1	03/03/18 13:32	03/03/18 23:24	TH

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 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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> 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	03/06/2018 15:19	<a href="#">WG1080686</a>

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	03/06/2018 16:17	<a href="#">WG1080684</a>

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	03/04/2018 11:17	<a href="#">WG1080132</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	22600		5000	1	03/03/2018 20:08	<a href="#">WG1079887</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	12.9		2.00	1	03/06/2018 12:01	<a href="#">WG1080278</a>
Arsenic,Dissolved	14.0		2.00	1	03/07/2018 16:02	<a href="#">WG1080286</a>
Iron,Dissolved	ND		100	1	03/07/2018 16:02	<a href="#">WG1080286</a>
Manganese,Dissolved	437		5.00	1	03/07/2018 16:02	<a href="#">WG1080286</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	103		10.0	1	03/07/2018 11:41	<a href="#">WG1081175</a>
Ethane	ND		13.0	1	03/07/2018 11:41	<a href="#">WG1081175</a>
Ethene	ND		13.0	1	03/07/2018 11:41	<a href="#">WG1081175</a>

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	03/03/2018 22:05	<a href="#">WG1080034</a>
Residual Range Organics (RRO)	ND		250	1	03/03/2018 22:05	<a href="#">WG1080034</a>
(S) o-Terphenyl	107		52.0-156		03/03/2018 22:05	<a href="#">WG1080034</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	299		100	1	03/06/2018 15:23	<a href="#">WG1080686</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	03/06/2018 16:24	<a href="#">WG1080684</a>

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	03/04/2018 11:17	<a href="#">WG1080132</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	ND		5000	1	03/03/2018 20:54	<a href="#">WG1079887</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Arsenic	26.5		2.00	1	03/06/2018 12:20	<a href="#">WG1080278</a>
Arsenic,Dissolved	25.2		2.00	1	03/07/2018 16:18	<a href="#">WG1080286</a>
Iron,Dissolved	4470		100	1	03/07/2018 16:18	<a href="#">WG1080286</a>
Manganese,Dissolved	1900		5.00	1	03/07/2018 16:18	<a href="#">WG1080286</a>

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/05/2018 16:56	<a href="#">WG1080521</a>
(S) a,a,a-Trifluorotoluene(FID)	95.5		77.0-122		03/05/2018 16:56	<a href="#">WG1080521</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	3130		10.0	1	03/07/2018 11:44	<a href="#">WG1081175</a>
Ethane	ND		13.0	1	03/07/2018 11:44	<a href="#">WG1081175</a>
Ethene	ND		13.0	1	03/07/2018 11:44	<a href="#">WG1081175</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	3160		200	1	03/03/2018 22:21	<a href="#">WG1080034</a>
Residual Range Organics (RRO)	2960		250	1	03/03/2018 22:21	<a href="#">WG1080034</a>
(S) o-Terphenyl	98.3		52.0-156		03/03/2018 22:21	<a href="#">WG1080034</a>





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	292		100	1	03/06/2018 15:25	<a href="#">WG1080686</a>

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	03/06/2018 16:26	<a href="#">WG1080684</a>

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	03/04/2018 11:18	<a href="#">WG1080132</a>

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	03/03/2018 21:09	<a href="#">WG1079887</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	26.2		2.00	1	03/06/2018 12:24	<a href="#">WG1080278</a>
Arsenic,Dissolved	24.7		2.00	1	03/07/2018 16:23	<a href="#">WG1080286</a>
Iron,Dissolved	4530		100	1	03/07/2018 16:23	<a href="#">WG1080286</a>
Manganese,Dissolved	1940		5.00	1	03/07/2018 16:23	<a href="#">WG1080286</a>

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	03/07/2018 05:18	<a href="#">WG1080521</a>
(S) a,a,a-Trifluorotoluene(FID)	99.8		77.0-122		03/07/2018 05:18	<a href="#">WG1080521</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	3270		10.0	1	03/07/2018 11:48	<a href="#">WG1081175</a>
Ethane	ND		13.0	1	03/07/2018 11:48	<a href="#">WG1081175</a>
Ethene	ND		13.0	1	03/07/2018 11:48	<a href="#">WG1081175</a>

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)	3000		200	1	03/03/2018 22:37	<a href="#">WG1080034</a>
Residual Range Organics (RRO)	2960		250	1	03/03/2018 22:37	<a href="#">WG1080034</a>
(S) o-Terphenyl	104		52.0-156		03/03/2018 22:37	<a href="#">WG1080034</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ammonia Nitrogen	509		100	1	03/06/2018 15:27	<a href="#">WG1080686</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate-Nitrite	ND		100	1	03/06/2018 16:27	<a href="#">WG1080684</a>

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	03/04/2018 11:18	<a href="#">WG1080132</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfate	5010		5000	1	03/03/2018 21:25	<a href="#">WG1079887</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Iron,Dissolved	6050		100	1	03/07/2018 16:43	<a href="#">WG1080286</a>
Manganese,Dissolved	1380		5.00	1	03/07/2018 16:43	<a href="#">WG1080286</a>

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	03/07/2018 05:40	<a href="#">WG1080521</a>
(S) a, a, a-Trifluorotoluene(FID)	100		77.0-122		03/07/2018 05:40	<a href="#">WG1080521</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	2400		10.0	1	03/07/2018 11:51	<a href="#">WG1081175</a>
Ethane	ND		13.0	1	03/07/2018 11:51	<a href="#">WG1081175</a>
Ethene	ND		13.0	1	03/07/2018 11:51	<a href="#">WG1081175</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	8960		1000	5	03/04/2018 14:14	<a href="#">WG1080034</a>
Residual Range Organics (RRO)	2790		1250	5	03/04/2018 14:14	<a href="#">WG1080034</a>
(S) o-Terphenyl	96.5		52.0-156		03/04/2018 14:14	<a href="#">WG1080034</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Anthracene	ND	J4	0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Acenaphthene	0.454		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Acenaphthylene	ND	J4	0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Benzo(a)anthracene	ND		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Benzo(a)pyrene	ND		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Benzo(b)fluoranthene	ND		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>



Collected date/time: 02/28/18 09:00

L974320

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	03/05/2018 20:46	<a href="#">WG1080437</a>
Benzo(k)fluoranthene	ND		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Chrysene	ND		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Dibenz(a,h)anthracene	ND		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Fluoranthene	ND		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Fluorene	0.544		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Naphthalene	ND		0.250	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Phenanthrene	ND		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
Pyrene	ND		0.0500	1	03/05/2018 20:46	<a href="#">WG1080437</a>
1-Methylnaphthalene	0.408		0.250	1	03/05/2018 20:46	<a href="#">WG1080437</a>
2-Methylnaphthalene	ND		0.250	1	03/05/2018 20:46	<a href="#">WG1080437</a>
2-Chloronaphthalene	ND	<u>J4</u>	0.250	1	03/05/2018 20:46	<a href="#">WG1080437</a>
(S) Nitrobenzene-d5	152		31.0-160		03/05/2018 20:46	<a href="#">WG1080437</a>
(S) 2-Fluorobiphenyl	101		48.0-148		03/05/2018 20:46	<a href="#">WG1080437</a>
(S) p-Terphenyl-d14	105		37.0-146		03/05/2018 20:46	<a href="#">WG1080437</a>

- 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	305		100	1	03/06/2018 15:28	<a href="#">WG1080686</a>

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	161		100	1	03/06/2018 16:28	<a href="#">WG1080684</a>

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	03/04/2018 11:18	<a href="#">WG1080132</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	13200		5000	1	03/03/2018 21:40	<a href="#">WG1079887</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Iron,Dissolved	3120		100	1	03/07/2018 16:47	<a href="#">WG1080286</a>
Manganese,Dissolved	912		5.00	1	03/07/2018 16:47	<a href="#">WG1080286</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	441		10.0	1	03/07/2018 11:54	<a href="#">WG1081175</a>
Ethane	ND		13.0	1	03/07/2018 11:54	<a href="#">WG1081175</a>
Ethene	ND		13.0	1	03/07/2018 11:54	<a href="#">WG1081175</a>

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)	6400		1000	5	03/04/2018 14:30	<a href="#">WG1080034</a>
Residual Range Organics (RRO)	5960		1250	5	03/04/2018 14:30	<a href="#">WG1080034</a>
(S) o-Terphenyl	117		52.0-156		03/04/2018 14:30	<a href="#">WG1080034</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	03/06/2018 15:34	<a href="#">WG1080686</a>

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	17400		1000	10	03/06/2018 16:29	<a href="#">WG1080684</a>

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	03/04/2018 11:18	<a href="#">WG1080132</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	26700		5000	1	03/03/2018 21:55	<a href="#">WG1079887</a>

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	03/07/2018 16:51	<a href="#">WG1080286</a>
Manganese,Dissolved	6.09		5.00	1	03/07/2018 16:51	<a href="#">WG1080286</a>

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	03/07/2018 11:57	<a href="#">WG1081175</a>
Ethane	ND		13.0	1	03/07/2018 11:57	<a href="#">WG1081175</a>
Ethene	ND		13.0	1	03/07/2018 11:57	<a href="#">WG1081175</a>

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)	250		200	1	03/03/2018 23:24	<a href="#">WG1080034</a>
Residual Range Organics (RRO)	518		250	1	03/03/2018 23:24	<a href="#">WG1080034</a>
(S) o-Terphenyl	103		52.0-156		03/03/2018 23:24	<a href="#">WG1080034</a>



Method Blank (MB)

(MB) R3290921-1 03/06/18 14:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L974114-01 Original Sample (OS) • Duplicate (DUP)

(OS) L974114-01 03/06/18 14:58 • (DUP) R3290921-4 03/06/18 15:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	1360	1350	1	0.590		10

L974417-01 Original Sample (OS) • Duplicate (DUP)

(OS) L974417-01 03/06/18 15:41 • (DUP) R3290921-7 03/06/18 15:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

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

(LCS) R3290921-2 03/06/18 14:55 • (LCSD) R3290921-3 03/06/18 14:56

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7340	7330	97.8	97.7	90.0-110			0.0818	20

L974320-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974320-01 03/06/18 15:19 • (MS) R3290921-5 03/06/18 15:20 • (MSD) R3290921-6 03/06/18 15:22

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	173	5240	5210	101	101	1	90.0-110			0.555	20

L974417-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L974417-03 03/06/18 15:44 • (MS) R3290921-8 03/06/18 15:46

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4960	99.2	1	90.0-110	





Method Blank (MB)

(MB) R3290938-1 03/06/18 15:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

L974080-01 Original Sample (OS) • Duplicate (DUP)

(OS) L974080-01 03/06/18 15:56 • (DUP) R3290938-4 03/06/18 15:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	781	772	1	1.16		20

L974320-02 Original Sample (OS) • Duplicate (DUP)

(OS) L974320-02 03/06/18 16:24 • (DUP) R3290938-8 03/06/18 16:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	0.000		20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3290938-2 03/06/18 15:54 • (LCSD) R3290938-3 03/06/18 15:55

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	3810	4000	95.4	100	90.0-110			4.74	20

L974080-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L974080-02 03/06/18 15:58 • (MS) R3290938-5 03/06/18 15:59

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	3260	5270	80.2	1	90.0-110	E J6

L974320-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974320-01 03/06/18 16:17 • (MS) R3290938-6 03/06/18 16:22 • (MSD) R3290938-7 03/06/18 16:23

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	1160	3430	3430	90.6	90.6	1	90.0-110			0.000	20



Method Blank (MB)

(MB) R3290336-1 03/04/18 11:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L974141-05 Original Sample (OS) • Duplicate (DUP)

(OS) L974141-05 03/04/18 11:15 • (DUP) R3290336-4 03/04/18 11:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L974503-02 Original Sample (OS) • Duplicate (DUP)

(OS) L974503-02 03/04/18 11:19 • (DUP) R3290336-7 03/04/18 11:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

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

(LCS) R3290336-2 03/04/18 11:14 • (LCSD) R3290336-3 03/04/18 11:14

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	459	459	91.8	91.8	85.0-115			0.000	20

L974320-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974320-01 03/04/18 11:17 • (MS) R3290336-5 03/04/18 11:17 • (MSD) R3290336-6 03/04/18 11:17

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	756	756	75.6	75.6	1	80.0-120	J6	J6	0.000	20



Method Blank (MB)

(MB) R3290298-1 03/03/18 10:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L974320-01 Original Sample (OS) • Duplicate (DUP)

(OS) L974320-01 03/03/18 20:08 • (DUP) R3290298-7 03/03/18 20:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	22600	22000	1	2.60		15

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

(LCS) R3290298-2 03/03/18 10:31 • (LCSD) R3290298-3 03/03/18 10:46

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	40700	40300	102	101	80.0-120			1.06	15

L974320-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L974320-01 03/03/18 20:08 • (MS) R3290298-8 03/03/18 20:38

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	22600	73200	101	1	80.0-120	



Method Blank (MB)

(MB) R3290848-1 03/06/18 11:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		0.250	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3290848-2 03/06/18 11:53 • (LCSD) R3290848-3 03/06/18 11:57

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	49.0	50.1	97.9	100	80.0-120			2.32	20

L974320-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974320-01 03/06/18 12:01 • (MS) R3290848-5 03/06/18 12:08 • (MSD) R3290848-6 03/06/18 12:12

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	12.9	61.5	62.2	97.2	98.5	1	75.0-125			1.08	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3291321-1 03/07/18 15:51

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
Manganese,Dissolved	U		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) R3291321-2 03/07/18 15:55 • (LCSD) R3291321-3 03/07/18 15:58

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	51.2	52.0	102	104	80.0-120			1.61	20
Iron,Dissolved	5000	5020	5080	100	102	80.0-120			1.08	20
Manganese,Dissolved	50.0	48.3	49.4	96.6	98.7	80.0-120			2.14	20

L974320-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974320-01 03/07/18 16:02 • (MS) R3291321-5 03/07/18 16:10 • (MSD) R3291321-6 03/07/18 16:14

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	%	%		%			%	%
Arsenic,Dissolved	50.0	14.0	65.6	65.4	103	103	1	75.0-125			0.267	20
Iron,Dissolved	5000	ND	5050	5070	101	101	1	75.0-125			0.364	20
Manganese,Dissolved	50.0	437	479	481	84.2	88.0	1	75.0-125			0.395	20



Method Blank (MB)

(MB) R3290945-3 03/05/18 11:37

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)	92.7			77.0-122

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

(LCS) R3290945-1 03/05/18 10:30 • (LCSD) R3290945-2 03/05/18 10:52

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 %
Gasoline Range Organics-NWTPH	5500	5010	5010	91.1	91.2	72.0-134			0.0331	20
(S) a,a,a-Trifluorotoluene(FID)				108	109	77.0-122				

L974024-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974024-19 03/05/18 12:52 • (MS) R3290945-4 03/05/18 20:38 • (MSD) R3290945-5 03/05/18 21:00

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	352	5110	5140	86.5	87.0	1	23.0-159			0.482	20
(S) a,a,a-Trifluorotoluene(FID)					104	105		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) R3291187-1 03/07/18 11:33

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

L974146-09 Original Sample (OS) • Duplicate (DUP)

(OS) L974146-09 03/07/18 11:39 • (DUP) R3291187-2 03/07/18 13:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	U	0.000	1	0.000		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

L974503-12 Original Sample (OS) • Duplicate (DUP)

(OS) L974503-12 03/07/18 14:12 • (DUP) R3291187-3 03/07/18 14:27

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) R3291187-4 03/07/18 14:35 • (LCSD) R3291187-5 03/07/18 14:39

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	74.8	67.6	110	99.7	85.0-115			10.2	20
Ethane	129	118	116	91.6	89.8	85.0-115			1.97	20
Ethene	127	120	117	94.4	92.5	85.0-115			2.07	20



Method Blank (MB)

(MB) R3290359-1 03/03/18 18:38

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>	119			52.0-156

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

(LCS) R3290359-2 03/03/18 18:54 • (LCSD) R3290359-3 03/03/18 19:10

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	917	879	122	117	50.0-150			4.20	20
Residual Range Organics (RRO)	750	732	674	97.6	89.9	50.0-150			8.17	20
<i>(S) o-Terphenyl</i>				113	102	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) R3290829-3 03/05/18 18:14

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	0.00272	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	160			31.0-160
(S) 2-Fluorobiphenyl	137			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) R3290829-1 03/05/18 17:30 • (LCSD) R3290829-2 03/05/18 17:52

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 %
Anthracene	2.00	2.88	2.72	144	136	64.0-142	J4		5.53	20
Acenaphthene	2.00	2.59	2.31	129	116	66.0-132			11.1	20
Acenaphthylene	2.00	2.72	2.43	136	122	65.0-132	J4		11.3	20
Benzo(a)anthracene	2.00	2.55	2.21	128	111	59.0-134			14.1	20
Benzo(a)pyrene	2.00	2.50	2.21	125	111	61.0-145			12.0	20
Benzo(b)fluoranthene	2.00	2.31	2.12	115	106	57.0-136			8.55	20
Benzo(g,h,i)perylene	2.00	2.45	2.18	122	109	54.0-140			11.7	20
Benzo(k)fluoranthene	2.00	2.60	2.31	130	115	57.0-141			12.0	20
Chrysene	2.00	2.69	2.32	135	116	63.0-140			14.9	20
Dibenz(a,h)anthracene	2.00	2.47	2.22	123	111	49.0-141			10.5	20
Fluoranthene	2.00	2.82	2.57	141	128	65.0-143			9.19	20



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

(LCS) R3290829-1 03/05/18 17:30 • (LCSD) R3290829-2 03/05/18 17:52

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	2.48	2.17	124	108	64.0-129			13.5	20
Indeno(1,2,3-cd)pyrene	2.00	2.46	2.20	123	110	53.0-141			11.2	20
Naphthalene	2.00	2.49	2.21	124	110	68.0-129			11.8	20
Phenanthrene	2.00	2.50	2.34	125	117	62.0-132			6.55	20
Pyrene	2.00	2.71	2.38	135	119	58.0-156			13.1	20
1-Methylnaphthalene	2.00	2.40	2.14	120	107	68.0-137			11.6	20
2-Methylnaphthalene	2.00	2.32	2.04	116	102	68.0-134			13.1	20
2-Chloronaphthalene	2.00	2.67	2.36	133	118	65.0-129	J4		12.3	20
(S) Nitrobenzene-d5				155	140	31.0-160				
(S) 2-Fluorobiphenyl				133	121	48.0-148				
(S) p-Terphenyl-d14				120	105	37.0-146				

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

L974669-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974669-02 03/06/18 00:02 • (MS) R3290829-4 03/06/18 00:24 • (MSD) R3290829-5 03/06/18 00:46

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	0.130	2.73	2.88	130	138	1	60.0-142			5.47	20
Acenaphthene	2.00	0.328	2.48	2.65	108	116	1	46.0-149			6.39	20
Acenaphthylene	2.00	U	2.41	2.60	120	130	1	54.0-142			7.47	20
Benzo(a)anthracene	2.00	U	2.13	2.31	107	115	1	55.0-134			7.72	20
Benzo(a)pyrene	2.00	U	2.09	2.25	104	112	1	58.0-136			7.34	20
Benzo(b)fluoranthene	2.00	U	1.92	2.10	95.9	105	1	54.0-130			8.86	20
Benzo(g,h,i)perylene	2.00	U	1.97	2.12	98.4	106	1	46.0-135			7.57	20
Benzo(k)fluoranthene	2.00	U	2.18	2.26	109	113	1	52.0-131			3.76	20
Chrysene	2.00	U	2.25	2.36	112	118	1	55.0-137			4.73	20
Dibenz(a,h)anthracene	2.00	U	2.01	2.19	101	110	1	36.0-140			8.47	20
Fluoranthene	2.00	0.178	2.57	2.70	119	126	1	58.0-144			5.20	20
Fluorene	2.00	0.301	2.42	2.54	106	112	1	49.0-142			5.11	20
Indeno(1,2,3-cd)pyrene	2.00	U	1.95	2.14	97.5	107	1	46.0-134			9.26	20
Naphthalene	2.00	0.0526	2.18	2.42	106	118	1	29.0-154			10.6	20
Phenanthrene	2.00	0.378	2.64	2.77	113	120	1	44.0-145			4.78	20
Pyrene	2.00	0.0176	2.30	2.43	114	120	1	62.0-150			5.21	20
1-Methylnaphthalene	2.00	0.300	2.31	2.49	101	110	1	26.0-160			7.55	20
2-Methylnaphthalene	2.00	0.0845	1.98	2.17	94.7	104	1	51.0-150			9.27	20
2-Chloronaphthalene	2.00	U	2.17	2.39	109	119	1	57.0-136			9.29	20
(S) Nitrobenzene-d5					148	136		31.0-160				
(S) 2-Fluorobiphenyl					118	114		48.0-148				
(S) p-Terphenyl-d14					109	109		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
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.
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 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.  
 \* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

## 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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	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

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

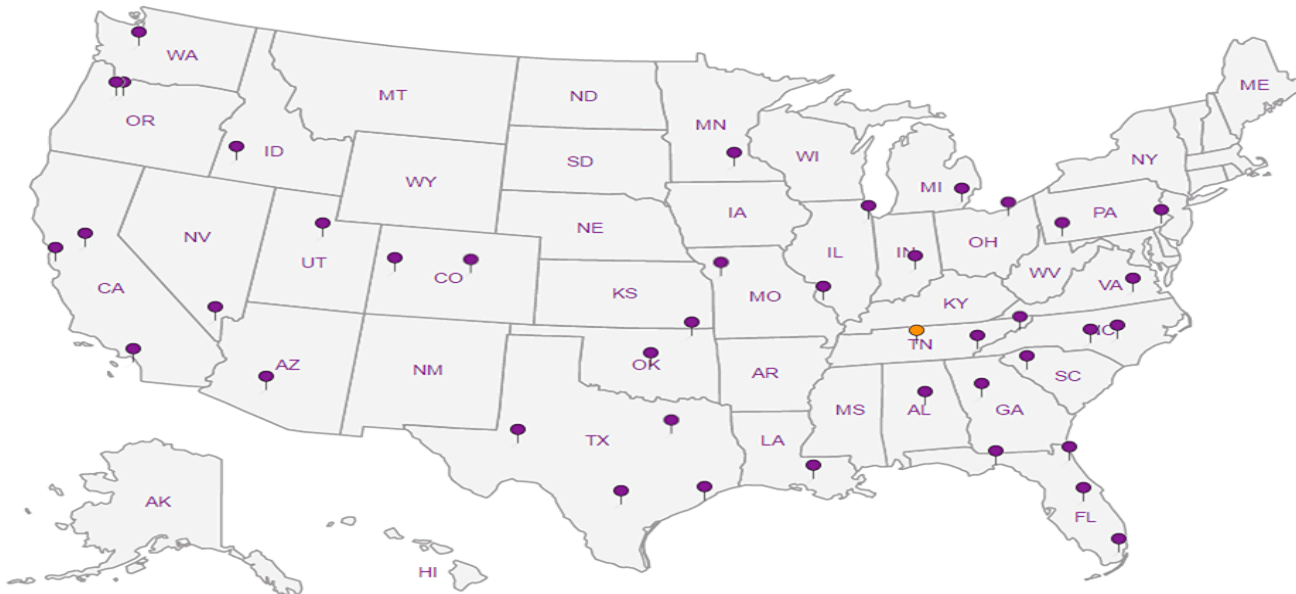
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water   <sup>2</sup> Underground Storage Tanks   <sup>3</sup> Aquatic Toxicity   <sup>4</sup> Chemical/Microbiological   <sup>5</sup> Mold   <sup>6</sup> Wastewater   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:  
 Accounts Payable  
 32001 32nd Avenue South, Ste 100  
 Federal Way, WA 98001

Report to:  
**Ryan Hultgren**

Email To: [RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com),  
[AliceRobinson@kennedyjenks.com](mailto:AliceRobinson@kennedyjenks.com)

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

City/State Collected: **Wishram, WA**

Phone: **253-835-6400** Client Project #: **1896120\*00** Lab Project #: **BNSF1KEN-WISHRAM**

Collected by (print): **Alice Robinson** Site/Facility ID # 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

Immediately Packed on Ice  N  Y

Quote # Date Results Needed No. of Cntrs

Analysis / Container / Preservative									
12	12	12							
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 \_\_\_

**ESC**  
 LABORATORIES  
 a subsidiary of *PerkinElmer*

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

QR Code

L# **L974320**

**C124**

Acctnum: **BNSF**

Template: **T130227**

Prelogin: **P640119**

TSR: **134 - Mark W. Beasley**

PB: *J. J. 1-18-18*

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	12	12	12							
WMW-18-20180227		GW	20	2-27-18	14:20	10	X	X	X		X	X	X	X	X	X
WMW-17-20180227		GW	↓	2-27-18	16:20	12	X	X	X		X	X	X	X	X	X
Pop-20180227		GW	↓	2-27-18	17:00	12	X	X	X		X	X	X	X	X	X
WMW-16-20180228		GW	↓	2-28-18	9:00	13		X	X		X	X	X	X	X	X
WMW-15-20180228		GW	↓	2-28-18	10:25	9		X	X		X	X	X	X	X	X
WMW-14-20180228		GW	↓	2-28-18	11:55	9		X	X		X	X	X	X	X	X
		GW														
		GW														
		GW														
		GW														

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

Remarks: **MS/MSD set collected from WMW-18**

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **4269 9207 9239**

Relinquished by: (Signature) *Alice Robinson* Date: **3-1-18** Time: **11:00**

Received by: (Signature) *[Signature]* Trip Blank Received: **Yes/No**  
 Yes  No  
 HCl/MeOH TBR

Temp: **1.8 m/s** °C Bottles Received: **105**

Relinquished by: (Signature) *[Signature]* Date: **3/2/18** Time: **0845**

Received for lab by: (Signature) *[Signature]* Date: **3/2/18** Time: **0845**

Hold: Condition: **NCF / OK**

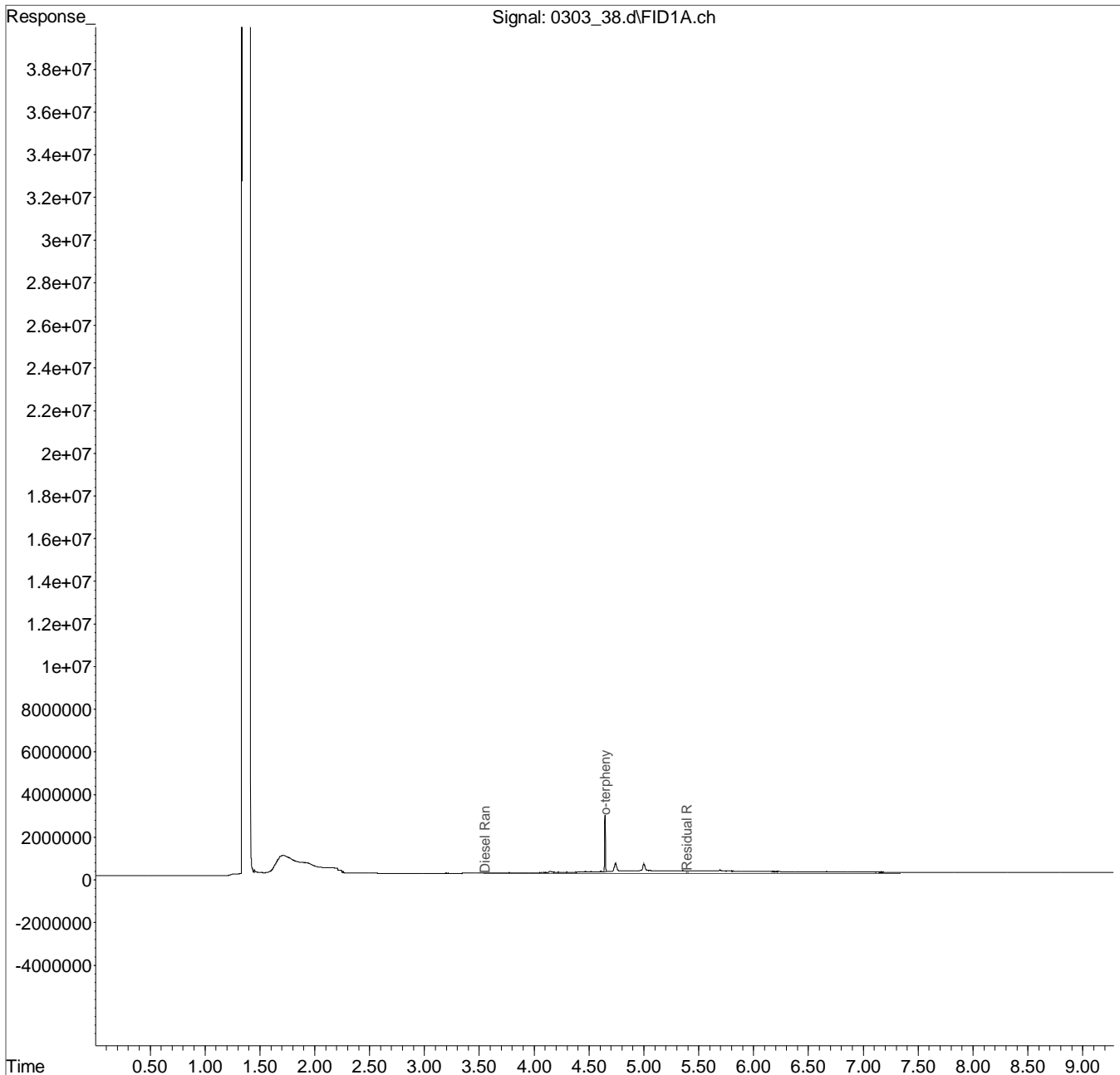
Sample Receipt Checklist:  
 COC Seal Present/Intact:  NP  N  
 COC Signed/Accurate:   N  
 Bottles arrive intact:   N  
 Correct bottles used:   N  
 Sufficient volume sent:   N  
 If Applicable  
 VOA Zero Headspace:   N  
 Preservation Correct/Checked:   N



Data Path : C:\msdchem\1\data\030318\  
 Data File : 0303 38.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 Mar 2018 10:05 pm  
 Operator : 784  
 Sample : L974320-01 1x WG1080034 40-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 30 Sample Multiplier: 0.05  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 04 11:59:28 2018  
 Quant Method : C:\msdchem\1\methods\EP27A22R.M  
 Quant Title :  
 QLast Update : Mon Jan 22 16:59:42 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

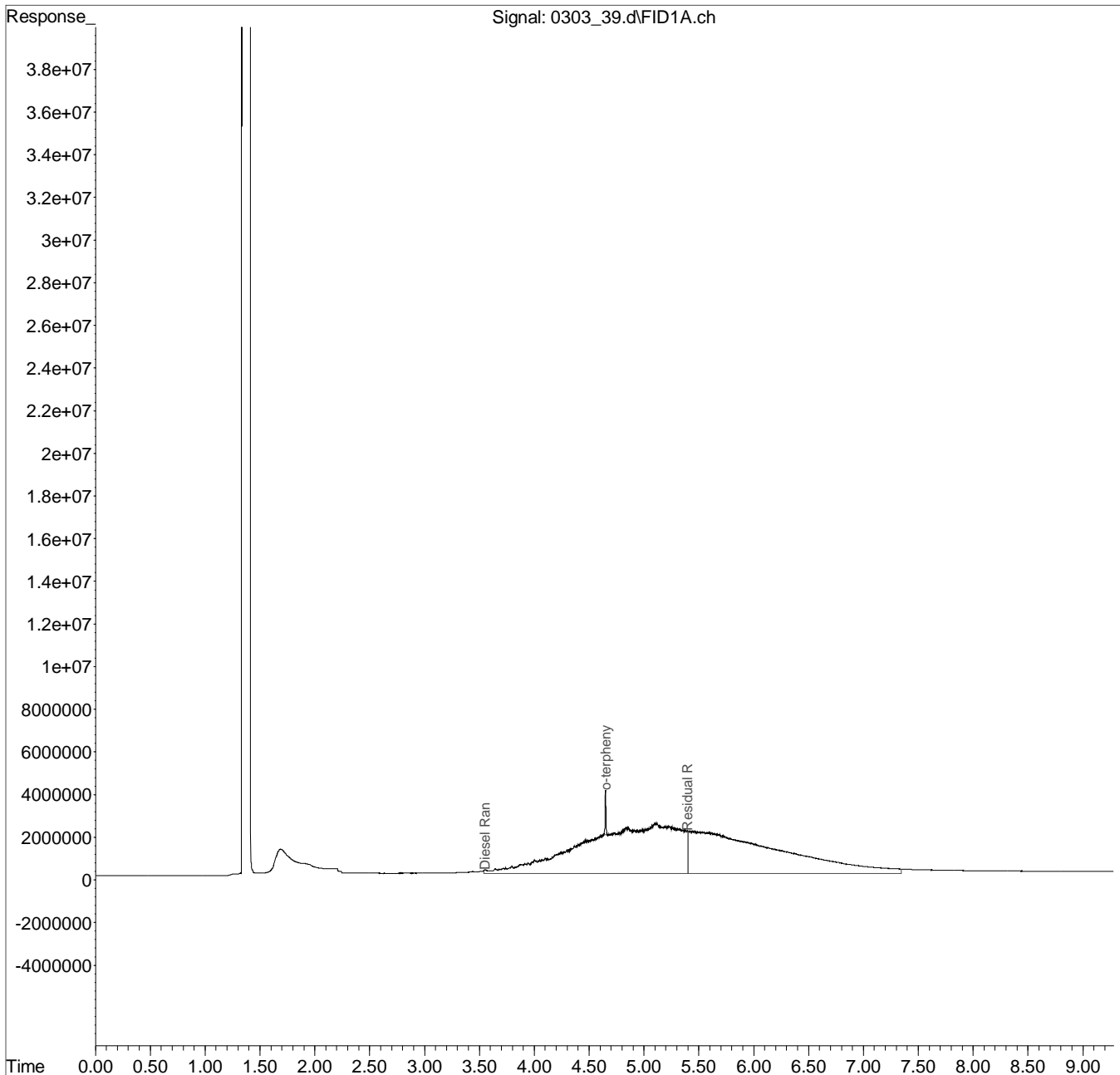
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 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



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 Data File : 0303 39.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 Mar 2018 10:21 pm  
 Operator : 784  
 Sample : L974320-02 1x WG1080034 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: Mar 04 12:00:07 2018  
 Quant Method : C:\msdchem\1\methods\EP27A22R.M  
 Quant Title :  
 QLast Update : Mon Jan 22 16:59:42 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

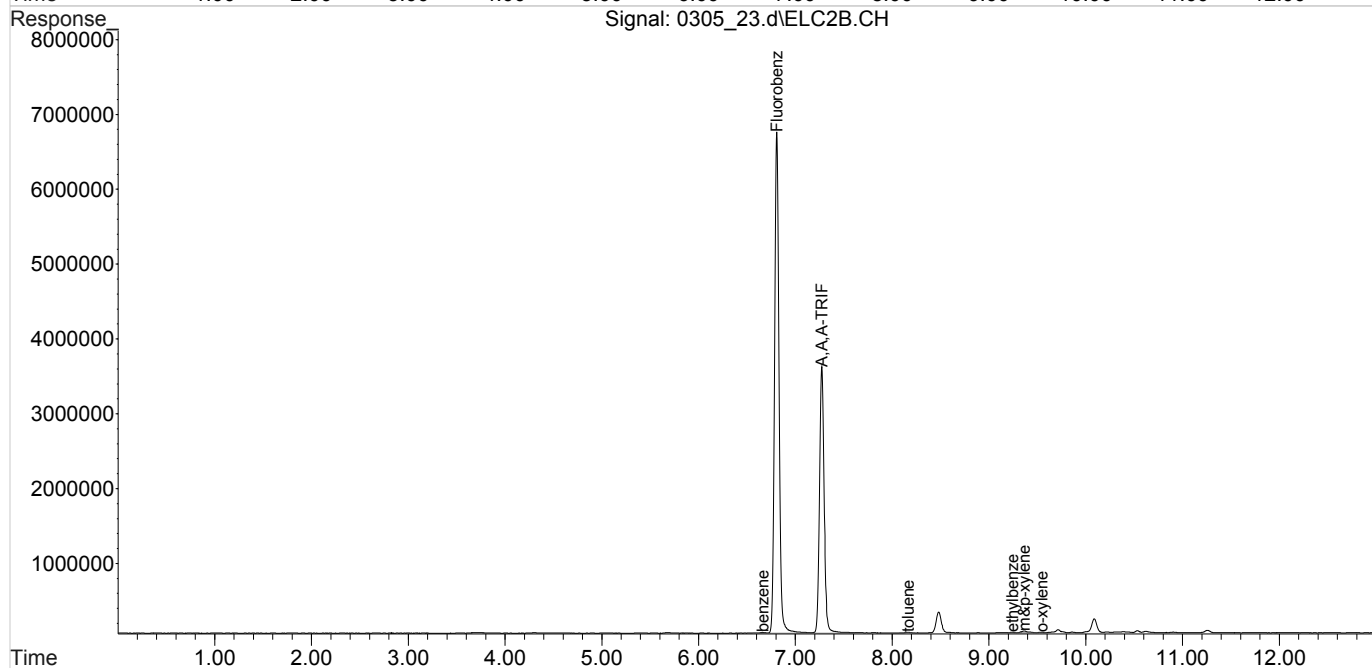
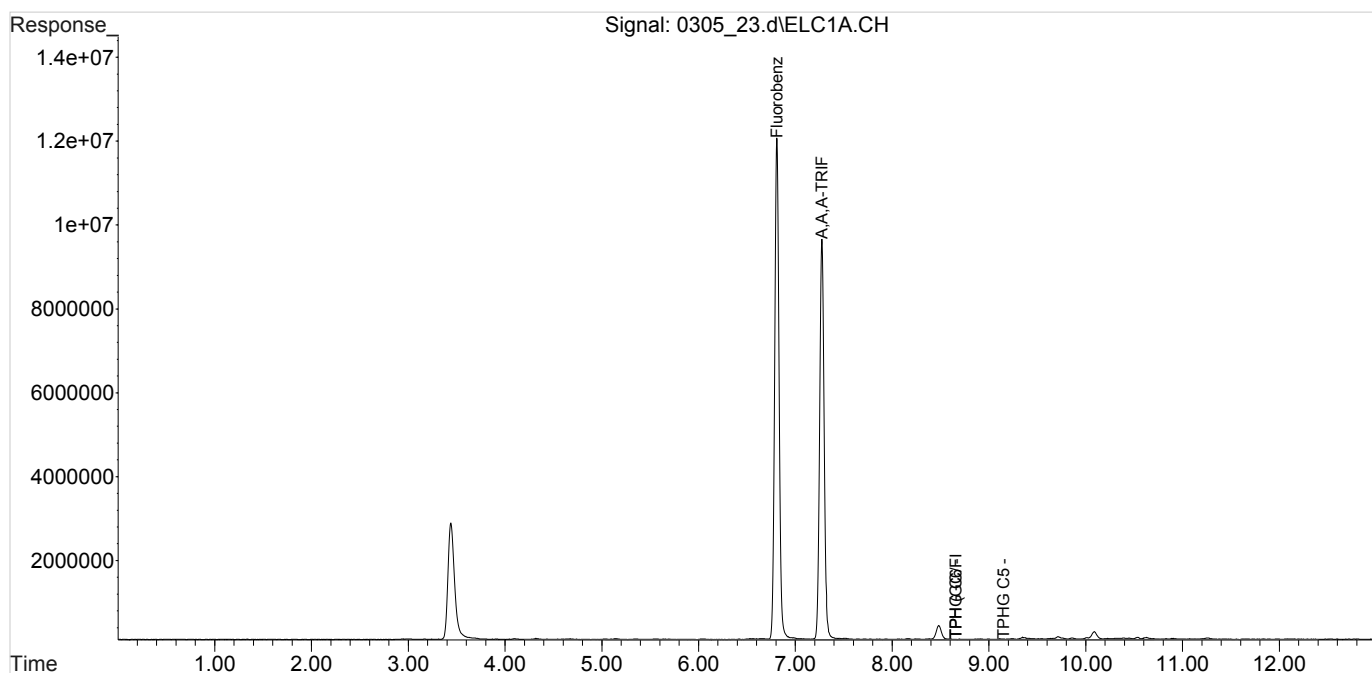
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\030518\  
Data File : 0305\_23.d  
Signal(s) : Signal #1: ELC1A.CH Signal #2: ELC2B.CH  
Acq On : 05 Mar 2018 16:56 pm  
Operator :  
Sample : L974320-02 1x WG1080521  
Misc : water  
ALS Vial : 23 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: BTEX.E  
Integration File signal 2: EVENTS3.E  
Quant Time: Mar 06 16:50:34 2018  
Quant Method : C:\msdchem\1\methods\BG15B26R.M  
Quant Title : BTEX/GRO VOCGC15  
QLast Update : Tue Feb 27 09:27:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

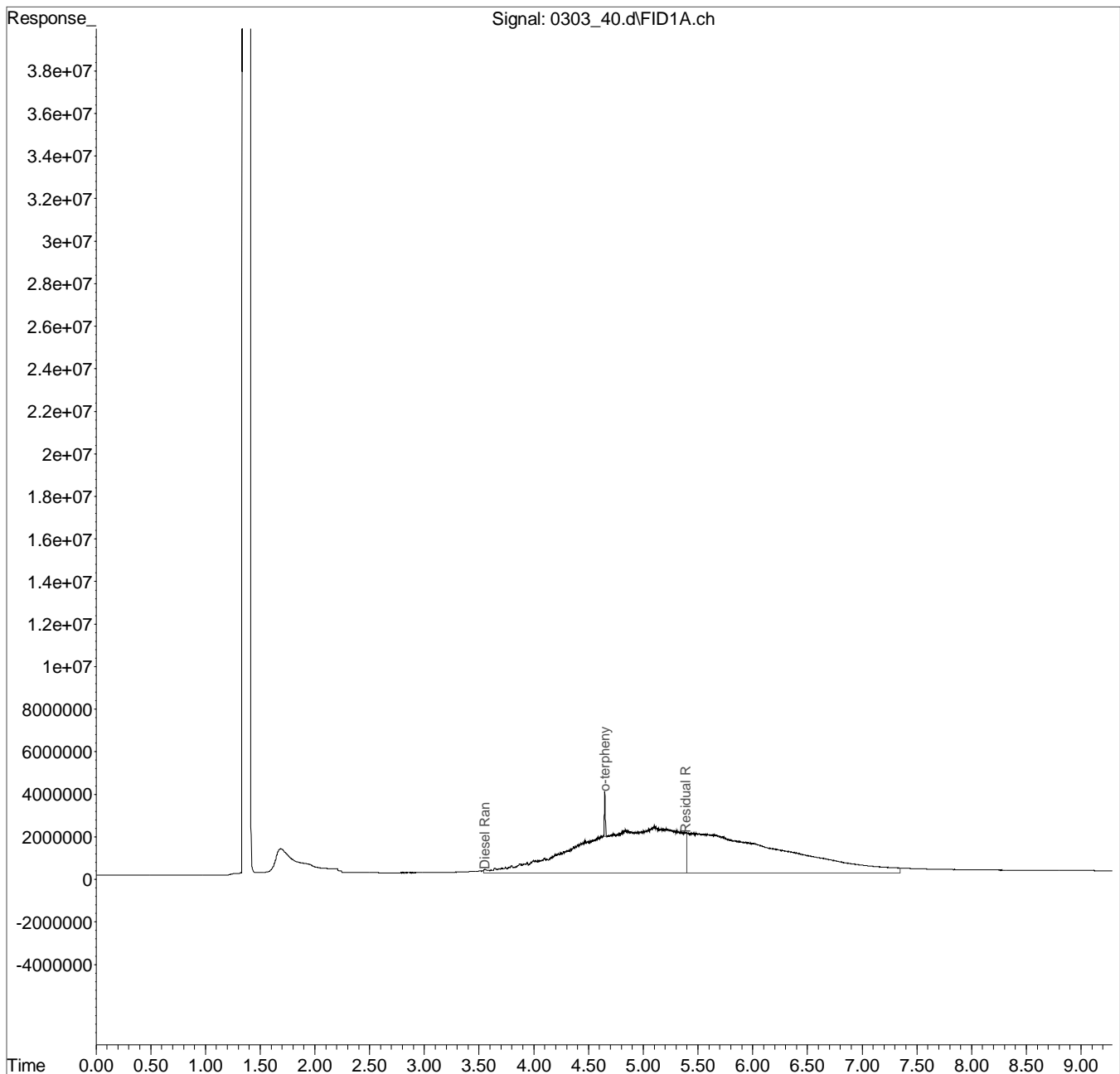
Volume Inj. :  
Signal #1 Phase : Signal #2 Phase:  
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\030318\  
Data File : 0303 40.d  
Signal(s) : FID1A.ch  
Acq On : 3 Mar 2018 10:37 pm  
Operator : 784  
Sample : L974320-03 1x WG1080034 40-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 32 Sample Multiplier: 0.05  
InstName : SVGC27

Integration File: events.e  
Quant Time: Mar 04 12:01:04 2018  
Quant Method : C:\msdchem\1\methods\EP27A22R.M  
Quant Title :  
QLast Update : Mon Jan 22 16:59:42 2018  
Response via : Initial Calibration  
Integrator: ChemStation

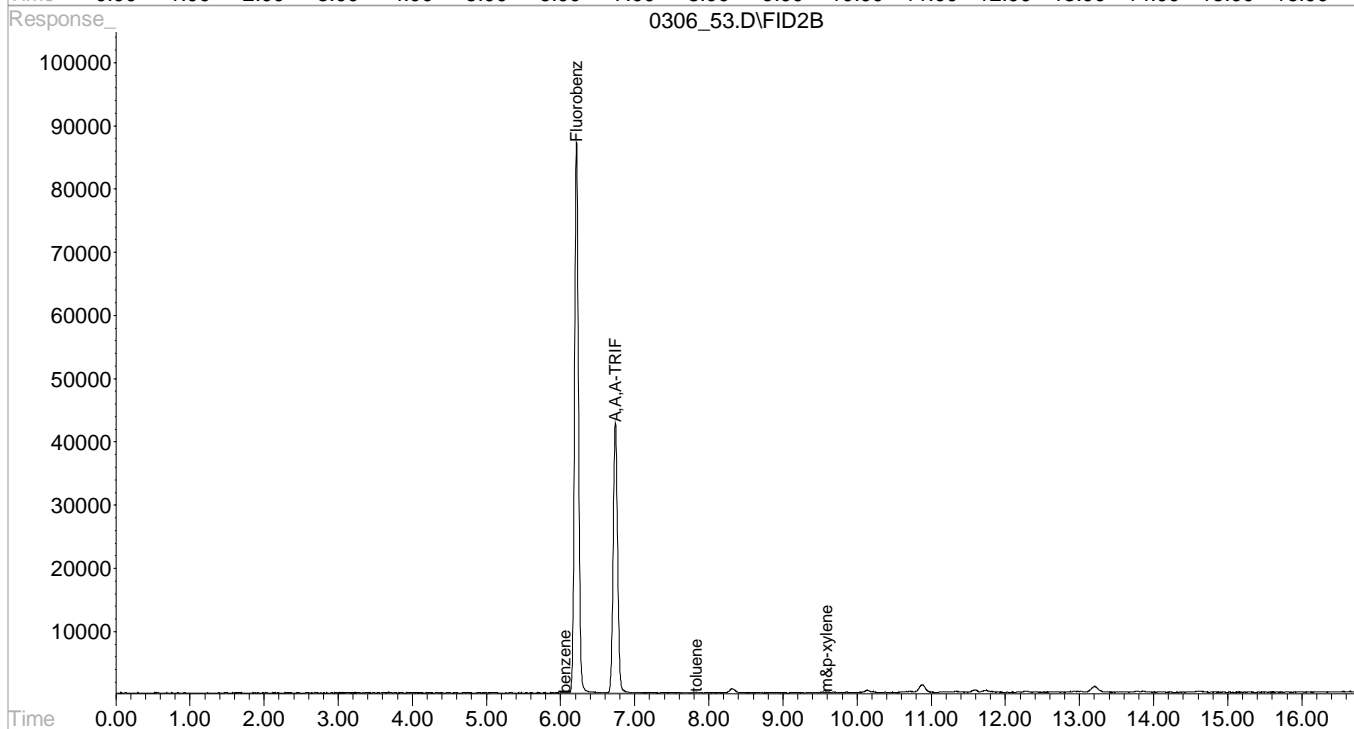
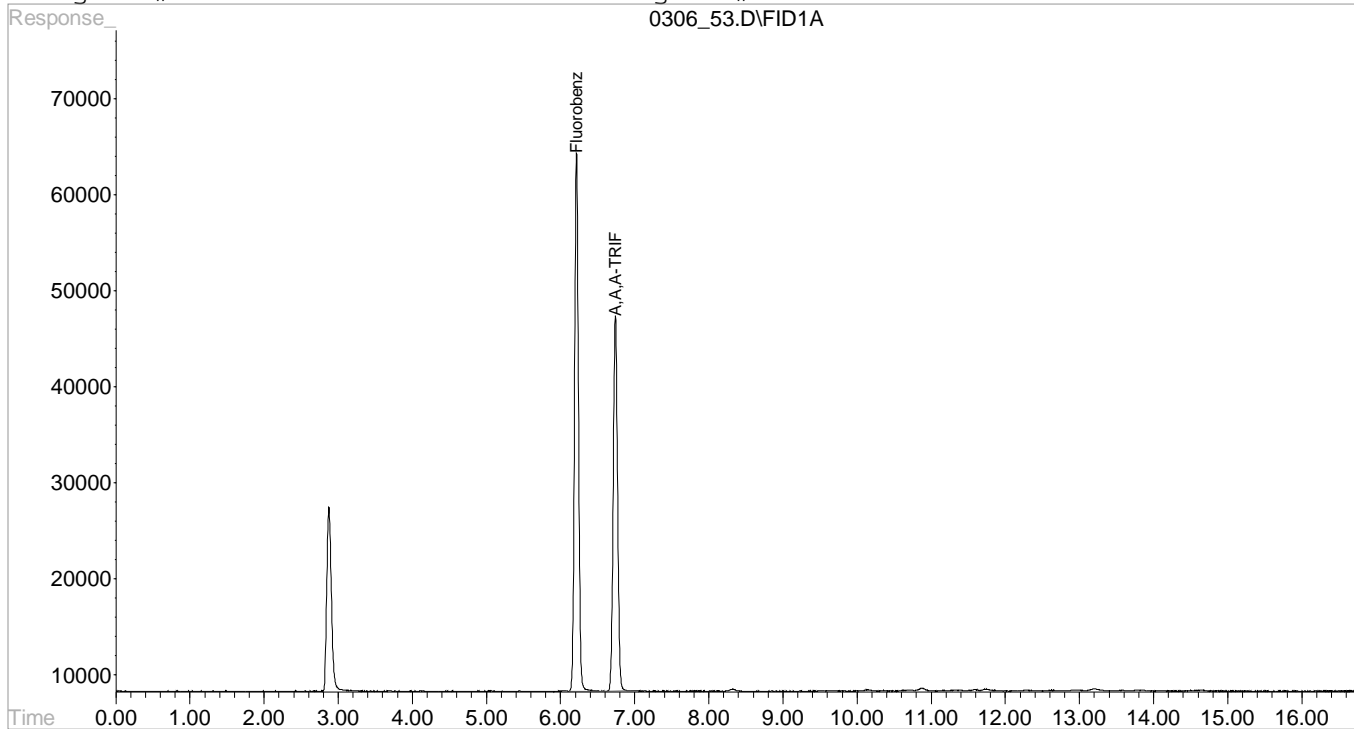
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\030618\0306 53.D\FID1A.CH Vial: 53  
Signal #2 : C:\HPCHEM\1\DATA\030618\0306 53.D\FID2B.CH  
Acq On : 7 Mar 2018 5:18 am Operator: 605  
Sample : L974320-03 1x WG1080521 RE Inst : VOCGC1  
Misc : WATER Multiplr: 1.00  
IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
Quant Time: Mar 7 13:08 2018 Quant Results File: BG01K16Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG01K16Q.M (Chemstation Integrator)  
Title : WIS GRO VOCGC01  
Last Update : Fri Nov 17 09:32:59 2017  
Response via : Single Level Calibration  
DataAcq Meth : GC1BG.M

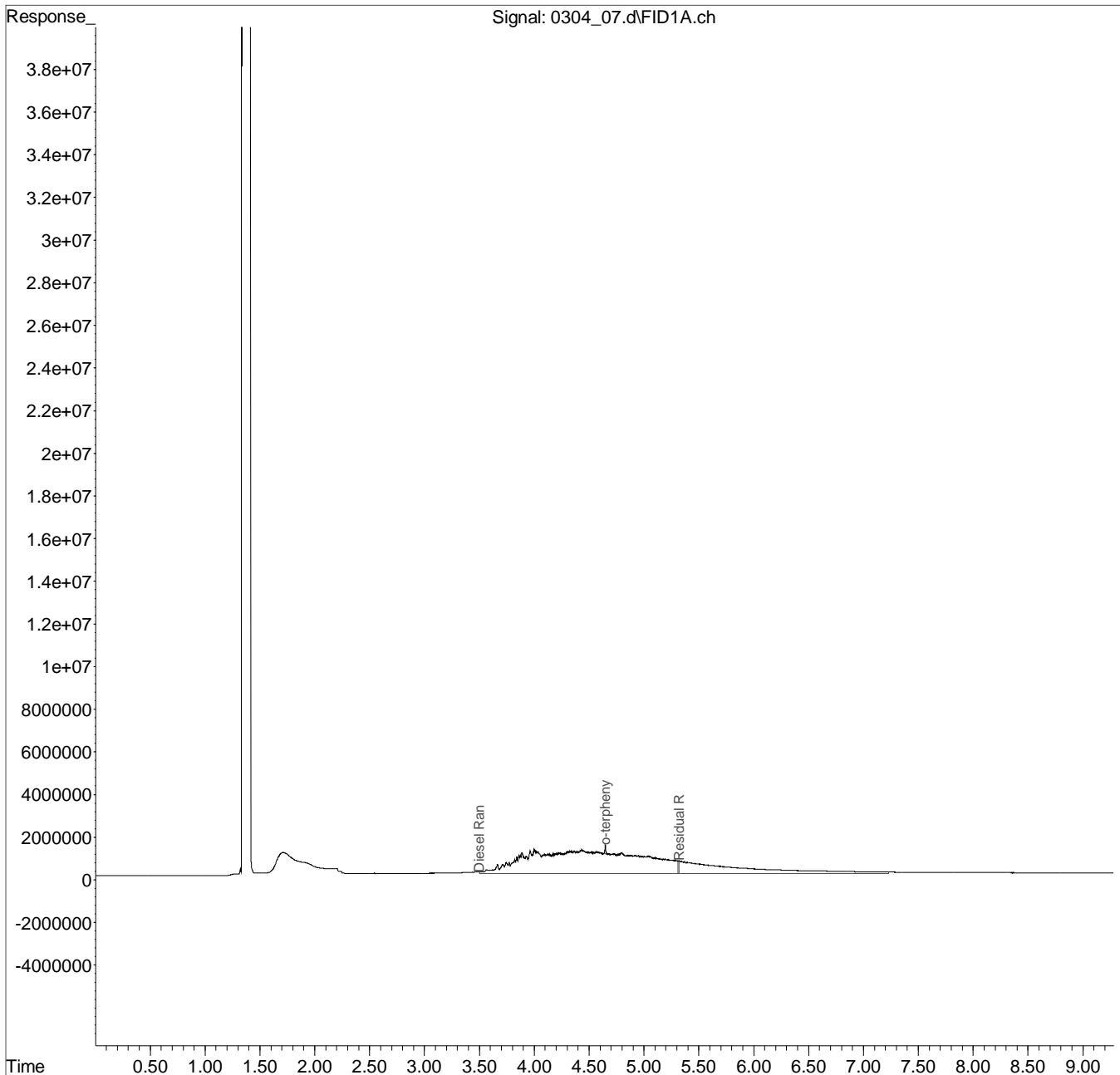
Volume Inj. :  
Signal #1 Phase : Signal #2 Phase:  
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\030418\  
 Data File : 0304\_07.d  
 Signal(s) : FID1A.ch  
 Acq On : 4 Mar 2018 2:14 pm  
 Operator : 784  
 Sample : L974320-04 5x WG1080034 40-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 5 Sample Multiplier: 0.25  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 04 15:32:50 2018  
 Quant Method : C:\msdchem\1\methods\EP27C04R.M  
 Quant Title :  
 QLast Update : Sun Mar 04 14:54:43 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M

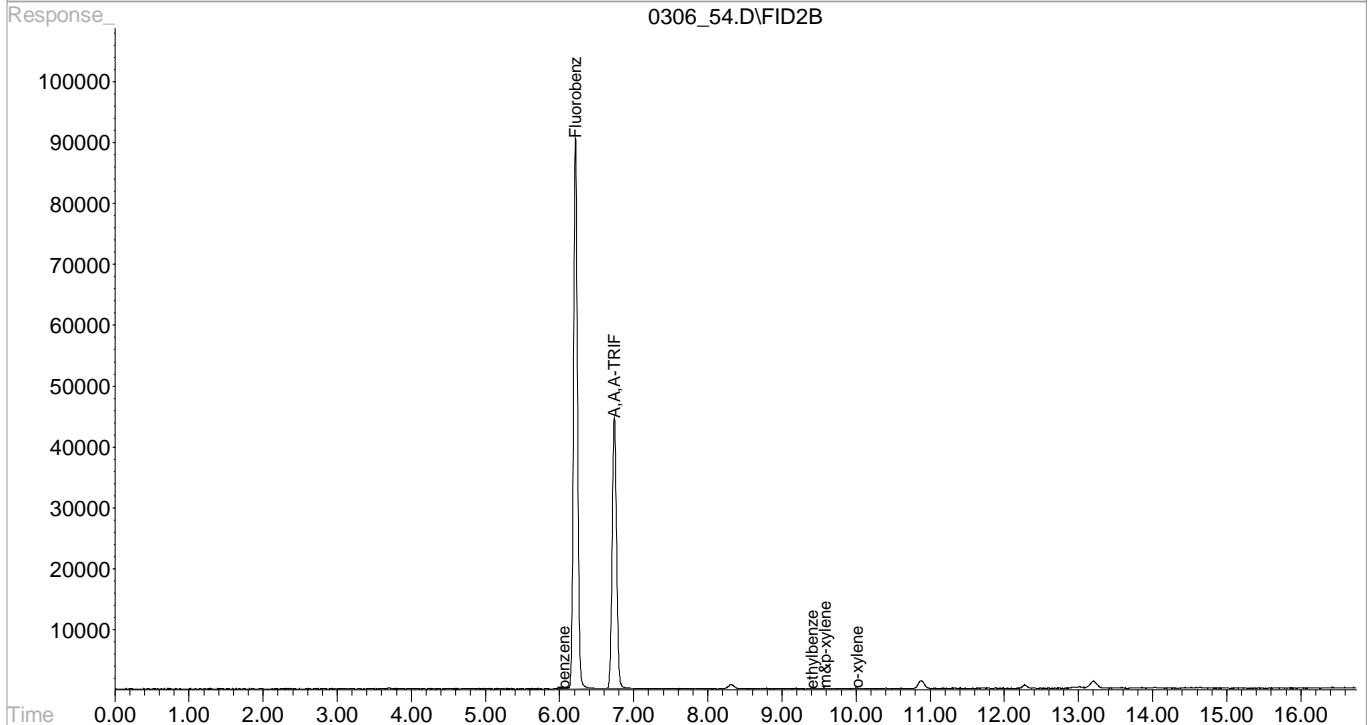
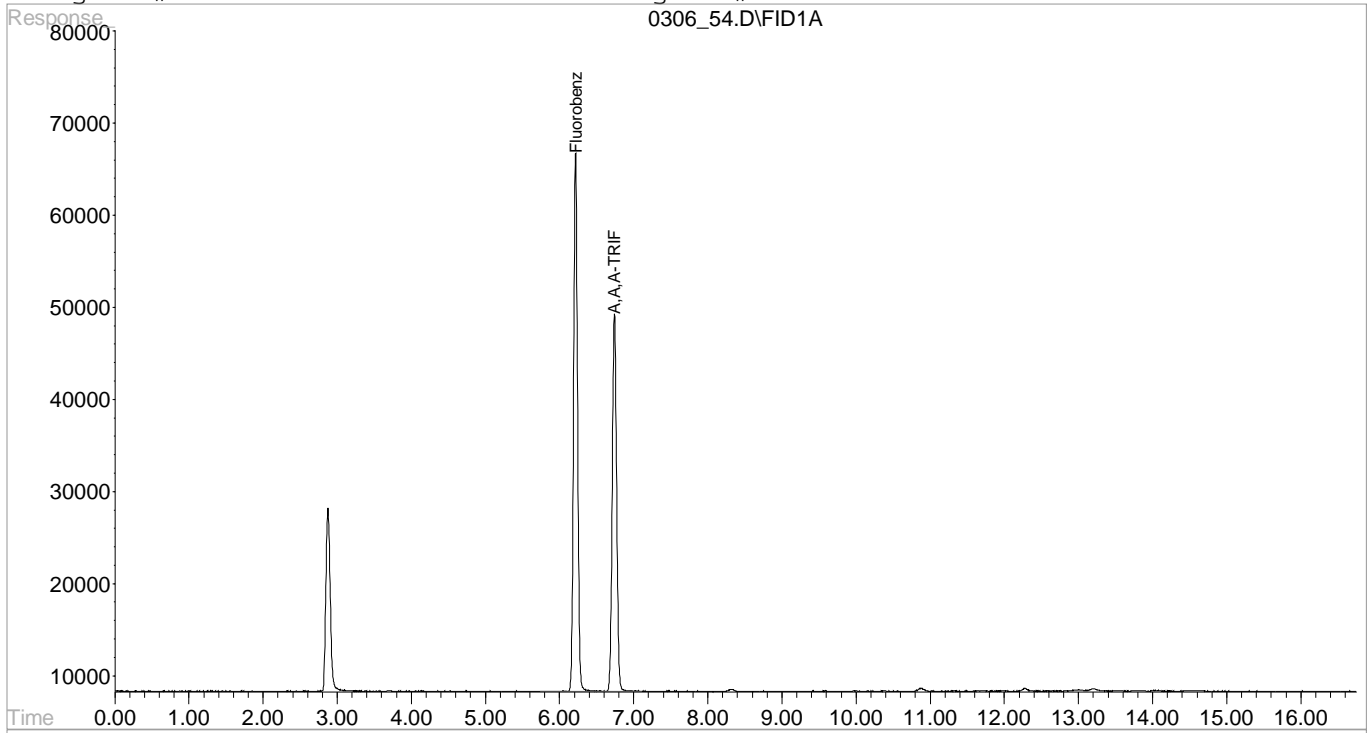




Signal #1 : C:\HPCHEM\1\DATA\030618\0306 54.D\FID1A.CH Vial: 54  
 Signal #2 : C:\HPCHEM\1\DATA\030618\0306 54.D\FID2B.CH  
 Acq On : 7 Mar 2018 5:40 am Operator: 605  
 Sample : L974320-04 1x WG1080521 RE Inst : VOCGC1  
 Misc : WATER Multiplr: 1.00  
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
 Quant Time: Mar 7 13:08 2018 Quant Results File: BG01K16Q.RES

Quant Method : C:\HPCHEM\1\METHODS\BG01K16Q.M (Chemstation Integrator)  
 Title : WIS GRO VOCGC01  
 Last Update : Fri Nov 17 09:32:59 2017  
 Response via : Single Level Calibration  
 DataAcq Meth : GC1BG.M

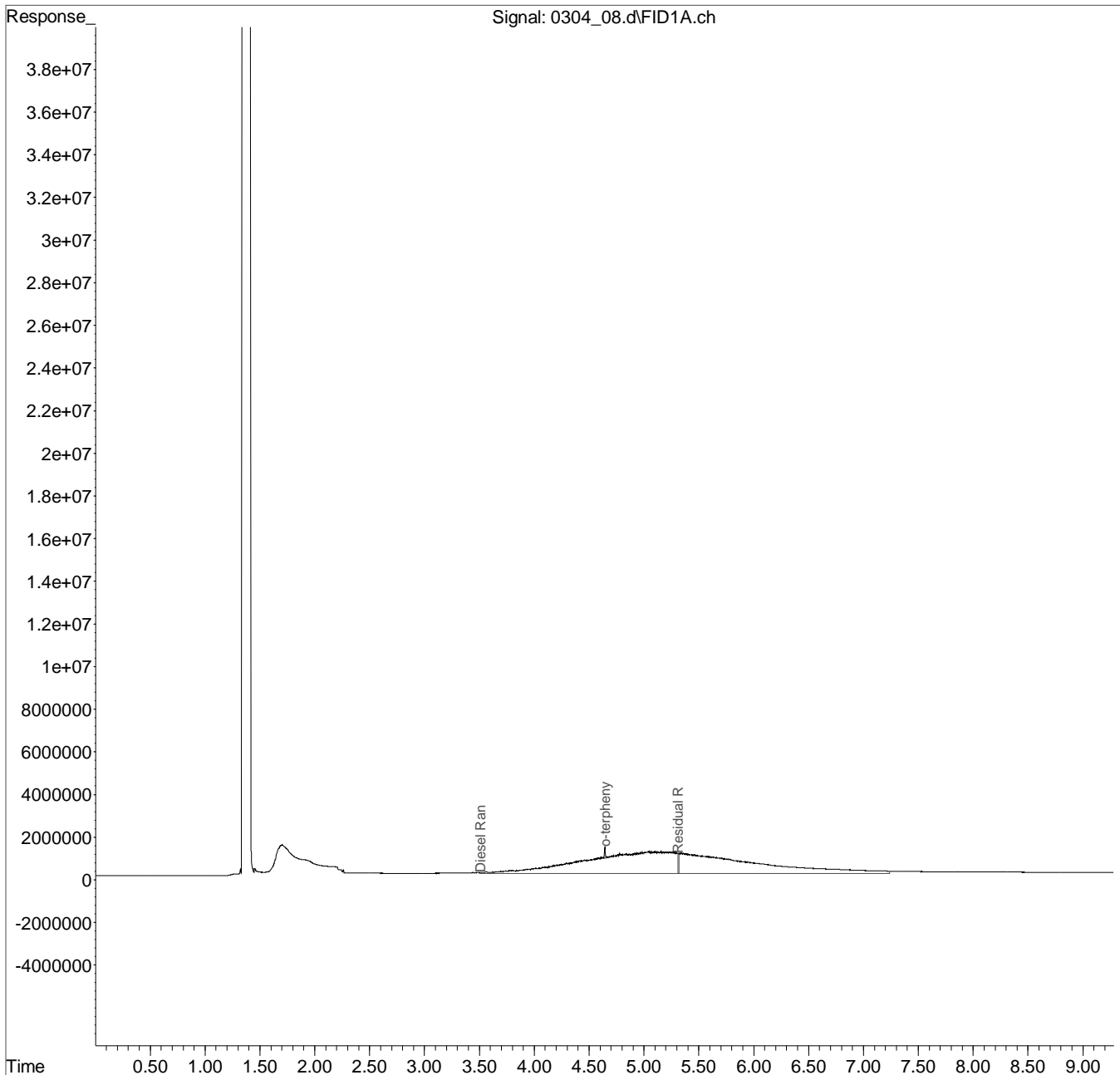
Volume Inj. :  
 Signal #1 Phase : Signal #2 Phase:  
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\030418\  
Data File : 0304 08.d  
Signal(s) : FID1A.ch  
Acq On : 4 Mar 2018 2:30 pm  
Operator : 784  
Sample : L974320-05 5x WG1080034 40-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 6 Sample Multiplier: 0.25  
InstName : SVGC27

Integration File: events.e  
Quant Time: Mar 04 15:33:34 2018  
Quant Method : C:\msdchem\1\methods\EP27C04R.M  
Quant Title :  
QLast Update : Sun Mar 04 14:54:43 2018  
Response via : Initial Calibration  
Integrator: ChemStation

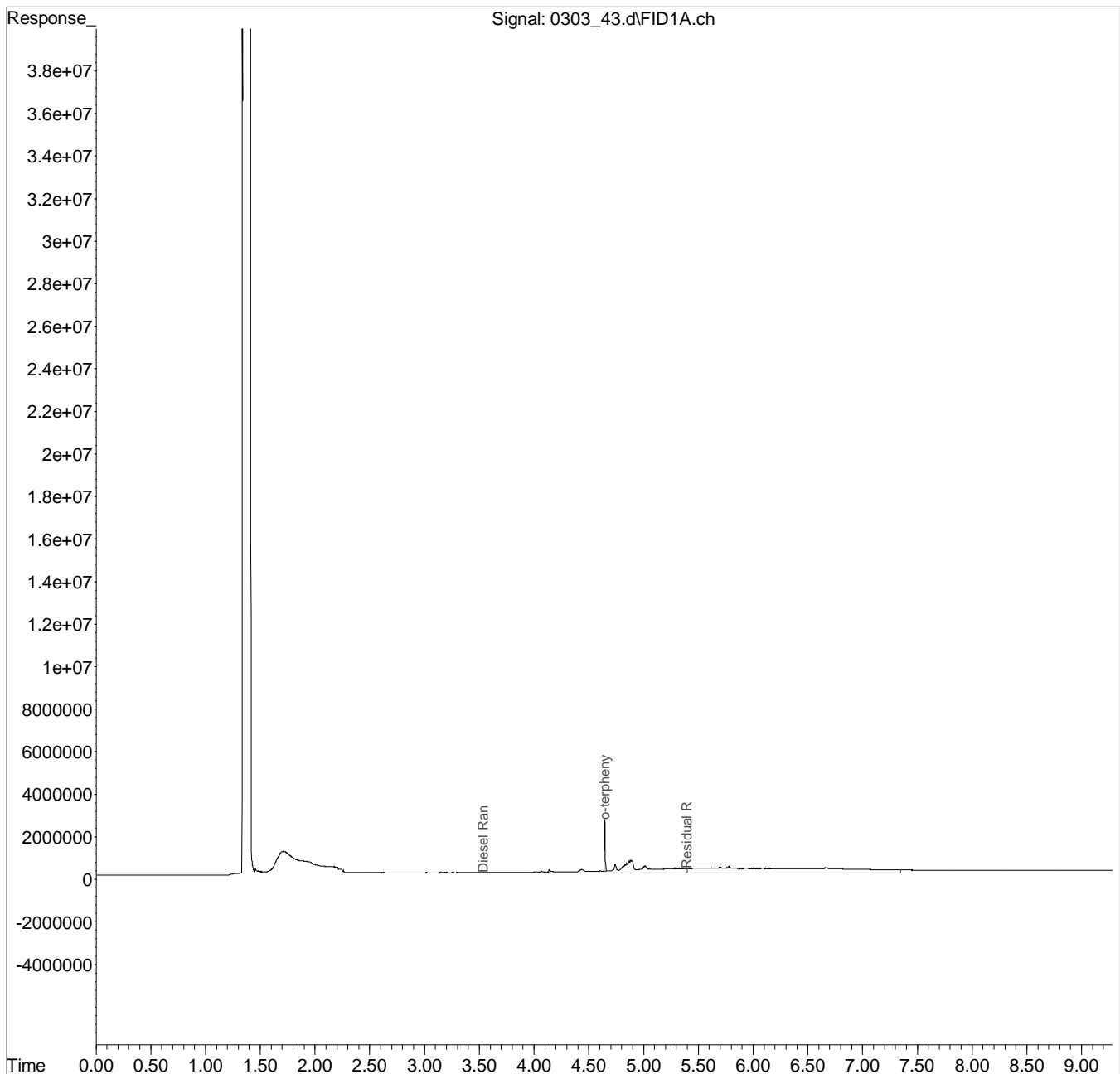
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\030318\  
Data File : 0303\_43.d  
Signal(s) : FID1A.ch  
Acq On : 3 Mar 2018 11:24 pm  
Operator : 784  
Sample : L974320-06 1x WG1080034 40-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 35 Sample Multiplier: 0.05  
InstName : SVGC27

Integration File: events.e  
Quant Time: Mar 04 13:03:41 2018  
Quant Method : C:\msdchem\1\methods\EP27A22R.M  
Quant Title :  
QLast Update : Mon Jan 22 16:59:42 2018  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



---

Groundwater Analytical Reports  
24 to 26 April 2018

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L989723  
Samples Received: 04/28/2018  
Project Number: 1896120\*00  
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.



<b>Cp: Cover Page</b>	<b>1</b>	<b><sup>1</sup>Cp</b>
<b>Tc: Table of Contents</b>	<b>2</b>	<b><sup>2</sup>Tc</b>
<b>Ss: Sample Summary</b>	<b>4</b>	<b><sup>3</sup>Ss</b>
<b>Cn: Case Narrative</b>	<b>9</b>	<b><sup>4</sup>Cn</b>
<b>Sr: Sample Results</b>	<b>10</b>	<b><sup>5</sup>Sr</b>
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WMW-03-20180425 L989723-02	11	<b><sup>7</sup>Gl</b>
WMW-05-20180425 L989723-03	12	<b><sup>8</sup>Al</b>
WMW-09-20180425 L989723-04	13	<b><sup>9</sup>Sc</b>
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Sc: Sample Chain of Custody

57

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# SAMPLE SUMMARY



## WMW-01-20180425 L989723-01 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 12:45  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 12:55	05/03/18 12:55	JER
Wet Chemistry by Method 353.2	WG1106047	1	05/07/18 16:41	05/07/18 16:41	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104611	1	04/29/18 17:52	04/29/18 17:52	MZ
Wet Chemistry by Method 9056A	WG1106224	1	05/06/18 21:06	05/06/18 21:06	CSU
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 12:13	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 10:57	05/07/18 10:57	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:05	05/03/18 01:18	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 20:42	SHG

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

## WMW-03-20180425 L989723-02 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 14:20  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 12:58	05/03/18 12:58	JER
Wet Chemistry by Method 353.2	WG1106047	1	05/07/18 16:47	05/07/18 16:47	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104611	1	04/29/18 17:52	04/29/18 17:52	MZ
Wet Chemistry by Method 9056A	WG1106224	1	05/06/18 21:52	05/06/18 21:52	CSU
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 12:18	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:01	05/07/18 11:01	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	5	05/02/18 17:06	05/03/18 06:12	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 20:58	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	5	05/02/18 22:43	05/04/18 12:48	TH

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-05-20180425 L989723-03 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 15:50  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:01	05/03/18 13:01	JER
Wet Chemistry by Method 353.2	WG1106047	5	05/07/18 16:50	05/07/18 16:50	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104611	1	04/29/18 17:52	04/29/18 17:52	MZ
Wet Chemistry by Method 9056A	WG1106224	1	05/06/18 22:08	05/06/18 22:08	CSU
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 12:35	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:05	05/07/18 11:05	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 16:19	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1107329	1	05/06/18 08:21	05/06/18 21:24	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 21:15	SHG

## WMW-09-20180425 L989723-04 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 09:40  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:03	05/03/18 13:03	JER
Wet Chemistry by Method 353.2	WG1106047	5	05/07/18 16:51	05/07/18 16:51	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104611	1	04/29/18 17:52	04/29/18 17:52	MZ
Wet Chemistry by Method 9056A	WG1106224	1	05/06/18 22:23	05/06/18 22:23	CSU
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 12:40	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:08	05/07/18 11:08	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 16:36	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1107329	1	05/06/18 08:21	05/06/18 21:41	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 21:31	SHG



# SAMPLE SUMMARY



## WMW-10-20180425 L989723-05 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 10:40  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:05	05/03/18 13:05	JER
Wet Chemistry by Method 353.2	WG1106047	5	05/07/18 16:52	05/07/18 16:52	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104611	1	04/29/18 17:53	04/29/18 17:53	MZ
Wet Chemistry by Method 9056A	WG1106224	1	05/06/18 22:39	05/06/18 22:39	CSU
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 12:45	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:10	05/07/18 11:10	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 02:23	TH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

## WMW-11-20180425 L989723-06 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 11:35  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:11	05/03/18 13:11	JER
Wet Chemistry by Method 353.2	WG1106047	1	05/07/18 16:53	05/07/18 16:53	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104611	1	04/29/18 17:53	04/29/18 17:53	MZ
Wet Chemistry by Method 9056A	WG1106224	1	05/06/18 22:54	05/06/18 22:54	CSU
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 12:49	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:13	05/07/18 11:13	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	5	05/02/18 17:06	05/03/18 17:41	SHG

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-13-20180425 L989723-07 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 08:35  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:13	05/03/18 13:13	JER
Wet Chemistry by Method 353.2	WG1106047	5	05/07/18 16:54	05/07/18 16:54	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104611	1	04/29/18 17:53	04/29/18 17:53	MZ
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 13:28	05/05/18 13:28	DR
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 12:54	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:27	05/07/18 11:27	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 16:52	SHG

## WMW-14-20180426 L989723-08 GW

Collected by  
Katie Teague  
Collected date/time  
04/26/18 12:10  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:14	05/03/18 13:14	JER
Wet Chemistry by Method 353.2	WG1106047	5	05/07/18 16:55	05/07/18 16:55	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104611	1	04/29/18 17:53	04/29/18 17:53	MZ
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 13:43	05/05/18 13:43	DR
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 12:59	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:35	05/07/18 11:35	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 03:12	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 21:48	SHG

## WMW-15-20180426 L989723-09 GW

Collected by  
Katie Teague  
Collected date/time  
04/26/18 11:20  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:16	05/03/18 13:16	JER
Wet Chemistry by Method 353.2	WG1106047	1	05/07/18 16:56	05/07/18 16:56	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104611	1	04/29/18 17:54	04/29/18 17:54	MZ

# SAMPLE SUMMARY



## WMW-15-20180426 L989723-09 GW

Collected by  
Katie Teague  
Collected date/time  
04/26/18 11:20  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 13:59	05/05/18 13:59	DR
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 13:03	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:38	05/07/18 11:38	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1107762	1	05/07/18 14:26	05/07/18 14:26	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	5	05/02/18 17:06	05/03/18 17:58	SHG

1  
Cp

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Tc

3  
Ss

4  
Cn

## WMW-17-20180425 L989723-10 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 14:40  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:17	05/03/18 13:17	JER
Wet Chemistry by Method 353.2	WG1106047	1	05/07/18 17:01	05/07/18 17:01	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104612	1	04/29/18 18:03	04/29/18 18:03	MZ
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 14:14	05/05/18 14:14	DR
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 13:08	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1105159	1	05/01/18 19:22	05/01/18 19:22	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:40	05/07/18 11:40	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1107762	1	05/07/18 14:29	05/07/18 14:29	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 03:45	TH

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-18-20180425 L989723-11 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 10:45  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:19	05/03/18 13:19	JER
Wet Chemistry by Method 353.2	WG1106047	1	05/07/18 17:03	05/07/18 17:03	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104612	1	04/29/18 18:03	04/29/18 18:03	MZ
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 14:29	05/05/18 14:29	DR
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 11:50	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:43	05/07/18 11:43	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1107762	1	05/07/18 14:34	05/07/18 14:34	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 00:29	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 22:04	SHG

## RMD-2-20180425 L989723-12 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 16:05  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:24	05/03/18 13:24	JER
Wet Chemistry by Method 353.2	WG1106047	1	05/07/18 17:06	05/07/18 17:06	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104612	1	04/29/18 18:05	04/29/18 18:05	MZ
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 16:02	05/05/18 16:02	DR
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 13:28	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:48	05/07/18 11:48	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1107762	10	05/07/18 14:48	05/07/18 14:48	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 04:01	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 22:53	SHG
Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1105080	1	05/01/18 03:04	05/01/18 14:41	KM

# SAMPLE SUMMARY



## RMD-3-20180425 L989723-13 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 12:50  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:25	05/03/18 13:25	JER
Wet Chemistry by Method 353.2	WG1106047	1	05/07/18 17:07	05/07/18 17:07	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104612	1	04/29/18 18:05	04/29/18 18:05	MZ
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 16:17	05/05/18 16:17	DR
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 13:33	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:53	05/07/18 11:53	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1107762	1	05/07/18 14:52	05/07/18 14:52	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 17:08	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1105080	1	05/01/18 03:04	05/01/18 15:03	KM

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## D-1-20180425 L989723-14 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 15:00  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:32	05/03/18 13:32	JER
Wet Chemistry by Method 353.2	WG1106047	1	05/07/18 17:08	05/07/18 17:08	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104612	1	04/29/18 18:06	04/29/18 18:06	MZ
Wet Chemistry by Method 9056A	WG1108845	1	05/09/18 12:50	05/09/18 12:50	MAJ
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 13:38	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1105159	1	05/01/18 19:46	05/01/18 19:46	ACG
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 11:57	05/07/18 11:57	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1107762	1	05/07/18 14:56	05/07/18 14:56	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 04:34	TH

## D-2-20180425 L989723-15 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 16:10  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:33	05/03/18 13:33	JER
Wet Chemistry by Method 353.2	WG1107936	1	05/08/18 14:03	05/08/18 14:03	JER
Wet Chemistry by Method 4500S2 D-2011	WG1104612	1	04/29/18 18:06	04/29/18 18:06	MZ
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 16:33	05/05/18 16:33	DR
Metals (ICPMS) by Method 6020A	WG1105097	1	05/02/18 09:17	05/02/18 13:42	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 12:24	05/07/18 12:24	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1107762	1	05/07/18 14:58	05/07/18 14:58	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 04:50	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 23:09	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1105080	1	05/01/18 03:04	05/01/18 15:25	KM

## TRIP BLANK L989723-16 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 00:00  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1105159	1	05/02/18 16:03	05/02/18 16:03	ACG

## WMW-17-20180425 T L989723-17 GW

Collected by  
Katie Teague  
Collected date/time  
04/25/18 14:40  
Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020A	WG1104647	1	05/02/18 17:12	05/02/18 21:59	LD

# SAMPLE SUMMARY



## WMW-18-20180425 T L989723-18 GW

Collected by  
Katie Teague

Collected date/time  
04/25/18 10:45

Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020A	WG1104647	1	05/02/18 17:12	05/02/18 21:08	LD

1  
Cp

2  
Tc

3  
Ss

## D-1-20180425 T L989723-19 GW

Collected by  
Katie Teague

Collected date/time  
04/25/18 15:00

Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020A	WG1104647	1	05/02/18 17:12	05/02/18 22:03	LD

4  
Cn

5  
Sr

6  
Qc

## WMW-16-20180426 L989723-20 GW

Collected by  
Katie Teague

Collected date/time  
04/26/18 08:50

Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:35	05/03/18 13:35	JER
Wet Chemistry by Method 353.2	WG1107936	1	05/08/18 14:04	05/08/18 14:04	JER
Wet Chemistry by Method 4500S2 D-2011	WG1105792	1	05/02/18 14:27	05/02/18 14:27	MA
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 16:48	05/05/18 16:48	DR
Metals (ICPMS) by Method 6020A	WG1106090	1	05/03/18 13:02	05/03/18 19:56	LD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1106198	1	05/03/18 14:10	05/03/18 14:10	RAS
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 13:23	05/07/18 13:23	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1107762	1	05/07/18 15:02	05/07/18 15:02	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 05:06	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 23:26	SHG

7  
Gl

8  
Al

9  
Sc

## RMD-1-20180426 L989723-21 GW

Collected by  
Katie Teague

Collected date/time  
04/26/18 10:00

Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:36	05/03/18 13:36	JER
Wet Chemistry by Method 353.2	WG1107936	1	05/08/18 14:10	05/08/18 14:10	JER
Wet Chemistry by Method 4500S2 D-2011	WG1105792	1	05/02/18 14:29	05/02/18 14:29	MA
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 17:04	05/05/18 17:04	DR
Metals (ICPMS) by Method 6020A	WG1106090	1	05/03/18 13:02	05/03/18 20:01	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1107156	1	05/07/18 13:28	05/07/18 13:28	BG
Volatile Organic Compounds (GC) by Method RSK175	WG1107762	20	05/07/18 15:04	05/07/18 15:04	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 05:23	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	5	05/02/18 17:06	05/03/18 18:14	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 23:42	SHG

## RMD-4-20180425 L989723-22 GW

Collected by  
Katie Teague

Collected date/time  
04/25/18 09:05

Received date/time  
04/28/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106037	1	05/03/18 13:40	05/03/18 13:40	JER
Wet Chemistry by Method 353.2	WG1107936	5	05/08/18 14:11	05/08/18 14:11	JER
Wet Chemistry by Method 4500S2 D-2011	WG1105792	1	05/02/18 14:29	05/02/18 14:29	MA
Wet Chemistry by Method 9056A	WG1106225	1	05/05/18 17:19	05/05/18 17:19	DR
Metals (ICPMS) by Method 6020A	WG1106090	1	05/03/18 13:02	05/03/18 20:06	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1107762	1	05/07/18 15:07	05/07/18 15:07	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1104931	1	05/02/18 17:06	05/03/18 05:39	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1104932	1	05/02/18 22:43	05/03/18 23:59	SHG



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 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

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 12:55	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1750		100	1	05/07/2018 16:41	<a href="#">WG1106047</a>

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	04/29/2018 17:52	<a href="#">WG1104611</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	05/06/2018 21:06	<a href="#">WG1106224</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	9080		100	1	05/02/2018 12:13	<a href="#">WG1105097</a>
Manganese,Dissolved	940		5.00	1	05/02/2018 12:13	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	4490		10.0	1	05/07/2018 10:57	<a href="#">WG1107156</a>
Ethane	ND		13.0	1	05/07/2018 10:57	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 10:57	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3470		200	1	05/03/2018 01:18	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	2580		250	1	05/03/2018 01:18	<a href="#">WG1104931</a>
(S) o-Terphenyl	103		52.0-156		05/03/2018 01:18	<a href="#">WG1104931</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1940		200	1	05/03/2018 20:42	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	457		250	1	05/03/2018 20:42	<a href="#">WG1104932</a>
(S) o-Terphenyl	88.4		52.0-156		05/03/2018 20:42	<a href="#">WG1104932</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	365		100	1	05/03/2018 12:58	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1800	J6	100	1	05/07/2018 16:47	<a href="#">WG1106047</a>

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	04/29/2018 17:52	<a href="#">WG1104611</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	9060		5000	1	05/06/2018 21:52	<a href="#">WG1106224</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	7680		100	1	05/02/2018 12:18	<a href="#">WG1105097</a>
Manganese,Dissolved	5950		5.00	1	05/02/2018 12:18	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	2000		10.0	1	05/07/2018 11:01	<a href="#">WG1107156</a>
Ethane	ND		13.0	1	05/07/2018 11:01	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:01	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	14400		1000	5	05/03/2018 06:12	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	6870		1250	5	05/03/2018 06:12	<a href="#">WG1104931</a>
(S) o-Terphenyl	19.9	J2	52.0-156		05/03/2018 06:12	<a href="#">WG1104931</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4300		1000	5	05/04/2018 12:48	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	3280		250	1	05/03/2018 20:58	<a href="#">WG1104932</a>
(S) o-Terphenyl	101		52.0-156		05/04/2018 12:48	<a href="#">WG1104932</a>
(S) o-Terphenyl	108		52.0-156		05/03/2018 20:58	<a href="#">WG1104932</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:01	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5150		500	5	05/07/2018 16:50	<a href="#">WG1106047</a>

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	04/29/2018 17:52	<a href="#">WG1104611</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	15500		5000	1	05/06/2018 22:08	<a href="#">WG1106224</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	183		100	1	05/02/2018 12:35	<a href="#">WG1105097</a>
Manganese,Dissolved	10.5		5.00	1	05/02/2018 12:35	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/07/2018 11:05	<a href="#">WG1107156</a>
Ethane	ND		13.0	1	05/07/2018 11:05	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:05	<a href="#">WG1107156</a>

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	05/03/2018 16:19	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	362		250	1	05/03/2018 16:19	<a href="#">WG1104931</a>
(S) o-Terphenyl	89.7		52.0-156		05/03/2018 16:19	<a href="#">WG1104931</a>
(S) o-Terphenyl	92.6		52.0-156		05/06/2018 21:24	WG1107329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	05/03/2018 21:15	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	ND		250	1	05/03/2018 21:15	<a href="#">WG1104932</a>
(S) o-Terphenyl	64.6		52.0-156		05/03/2018 21:15	<a href="#">WG1104932</a>





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:03	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	6020		500	5	05/07/2018 16:51	<a href="#">WG1106047</a>

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	04/29/2018 17:52	<a href="#">WG1104611</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	41200		5000	1	05/06/2018 22:23	<a href="#">WG1106224</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/02/2018 12:40	<a href="#">WG1105097</a>
Manganese,Dissolved	361		5.00	1	05/02/2018 12:40	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/07/2018 11:08	<a href="#">WG1107156</a>
Ethane	ND		13.0	1	05/07/2018 11:08	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:08	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	746		200	1	05/03/2018 16:36	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	1090		250	1	05/03/2018 16:36	<a href="#">WG1104931</a>
(S) o-Terphenyl	85.5		52.0-156		05/03/2018 16:36	<a href="#">WG1104931</a>
(S) o-Terphenyl	91.3		52.0-156		05/06/2018 21:41	WG1107329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	402		200	1	05/03/2018 21:31	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	353		250	1	05/03/2018 21:31	<a href="#">WG1104932</a>
(S) o-Terphenyl	74.0		52.0-156		05/03/2018 21:31	<a href="#">WG1104932</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:05	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	8870		500	5	05/07/2018 16:52	<a href="#">WG1106047</a>

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	04/29/2018 17:53	<a href="#">WG1104611</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	75200		5000	1	05/06/2018 22:39	<a href="#">WG1106224</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	135		100	1	05/02/2018 12:45	<a href="#">WG1105097</a>
Manganese,Dissolved	30.9		5.00	1	05/02/2018 12:45	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/07/2018 11:10	<a href="#">WG1107156</a>
Ethane	ND		13.0	1	05/07/2018 11:10	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:10	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	635		200	1	05/03/2018 02:23	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	1390		250	1	05/03/2018 02:23	<a href="#">WG1104931</a>
(S) o-Terphenyl	82.5		52.0-156		05/03/2018 02:23	<a href="#">WG1104931</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	223		100	1	05/03/2018 13:11	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2370		100	1	05/07/2018 16:53	<a href="#">WG1106047</a>

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	04/29/2018 17:53	<a href="#">WG1104611</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	20700		5000	1	05/06/2018 22:54	<a href="#">WG1106224</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	228		100	1	05/02/2018 12:49	<a href="#">WG1105097</a>
Manganese,Dissolved	1670		5.00	1	05/02/2018 12:49	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	524		10.0	1	05/07/2018 11:13	<a href="#">WG1107156</a>
Ethane	ND		13.0	1	05/07/2018 11:13	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:13	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5040		1000	5	05/03/2018 17:41	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	4140		1250	5	05/03/2018 17:41	<a href="#">WG1104931</a>
(S) o-Terphenyl	93.0		52.0-156		05/03/2018 17:41	<a href="#">WG1104931</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:13	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	7420		500	5	05/07/2018 16:54	<a href="#">WG1106047</a>

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	04/29/2018 17:53	<a href="#">WG1104611</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	27700		5000	1	05/05/2018 13:28	<a href="#">WG1106225</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/02/2018 12:54	<a href="#">WG1105097</a>
Manganese,Dissolved	6.15		5.00	1	05/02/2018 12:54	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/07/2018 11:27	<a href="#">WG1107156</a>
Ethane	ND		13.0	1	05/07/2018 11:27	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:27	<a href="#">WG1107156</a>

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	05/03/2018 16:52	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	ND		250	1	05/03/2018 16:52	<a href="#">WG1104931</a>
(S) o-Terphenyl	84.8		52.0-156		05/03/2018 16:52	<a href="#">WG1104931</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:14	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	16600		500	5	05/07/2018 16:55	<a href="#">WG1106047</a>

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	04/29/2018 17:53	<a href="#">WG1104611</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	21900		5000	1	05/05/2018 13:43	<a href="#">WG1106225</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/02/2018 12:59	<a href="#">WG1105097</a>
Manganese,Dissolved	ND		5.00	1	05/02/2018 12:59	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/07/2018 11:35	<a href="#">WG1107156</a>
Ethane	ND		13.0	1	05/07/2018 11:35	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:35	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	230		200	1	05/03/2018 03:12	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	531		250	1	05/03/2018 03:12	<a href="#">WG1104931</a>
(S) o-Terphenyl	80.0		52.0-156		05/03/2018 03:12	<a href="#">WG1104931</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	05/03/2018 21:48	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	ND		250	1	05/03/2018 21:48	<a href="#">WG1104932</a>
(S) o-Terphenyl	66.5		52.0-156		05/03/2018 21:48	<a href="#">WG1104932</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:16	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1890		100	1	05/07/2018 16:56	<a href="#">WG1106047</a>

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	04/29/2018 17:54	<a href="#">WG1104611</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	13800		5000	1	05/05/2018 13:59	<a href="#">WG1106225</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	899		100	1	05/02/2018 13:03	<a href="#">WG1105097</a>
Manganese,Dissolved	738		5.00	1	05/02/2018 13:03	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	999		10.0	1	05/07/2018 14:26	<a href="#">WG1107762</a>
Ethane	ND		13.0	1	05/07/2018 11:38	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:38	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5850		1000	5	05/03/2018 17:58	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	4810		1250	5	05/03/2018 17:58	<a href="#">WG1104931</a>
(S) o-Terphenyl	96.0		52.0-156		05/03/2018 17:58	<a href="#">WG1104931</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	232		100	1	05/03/2018 13:17	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1750		100	1	05/07/2018 17:01	<a href="#">WG1106047</a>

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	04/29/2018 18:03	<a href="#">WG1104612</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	05/05/2018 14:14	<a href="#">WG1106225</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	22.6		2.00	1	05/02/2018 13:08	<a href="#">WG1105097</a>
Iron,Dissolved	4270		100	1	05/02/2018 13:08	<a href="#">WG1105097</a>
Manganese,Dissolved	1820		5.00	1	05/02/2018 13:08	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	155	B	100	1	05/01/2018 19:22	<a href="#">WG1105159</a>
(S) a,a,a-Trifluorotoluene(FID)	107		77.0-122		05/01/2018 19:22	<a href="#">WG1105159</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	3890		10.0	1	05/07/2018 14:29	<a href="#">WG1107762</a>
Ethane	ND		13.0	1	05/07/2018 11:40	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:40	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2960		200	1	05/03/2018 03:45	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	2910		250	1	05/03/2018 03:45	<a href="#">WG1104931</a>
(S) o-Terphenyl	97.0		52.0-156		05/03/2018 03:45	<a href="#">WG1104931</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:19	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2740	J6	100	1	05/07/2018 17:03	<a href="#">WG1106047</a>

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	04/29/2018 18:03	<a href="#">WG1104612</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	23700		5000	1	05/05/2018 14:29	<a href="#">WG1106225</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	13.9		2.00	1	05/02/2018 11:50	<a href="#">WG1105097</a>
Iron,Dissolved	ND		100	1	05/02/2018 11:50	<a href="#">WG1105097</a>
Manganese,Dissolved	269		5.00	1	05/02/2018 11:50	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	67.4		10.0	1	05/07/2018 14:34	<a href="#">WG1107762</a>
Ethane	ND		13.0	1	05/07/2018 11:43	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:43	<a href="#">WG1107156</a>

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	05/03/2018 00:29	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	ND		250	1	05/03/2018 00:29	<a href="#">WG1104931</a>
(S) o-Terphenyl	79.1		52.0-156		05/03/2018 00:29	<a href="#">WG1104931</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	05/03/2018 22:04	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	ND		250	1	05/03/2018 22:04	<a href="#">WG1104932</a>
(S) o-Terphenyl	67.9		52.0-156		05/03/2018 22:04	<a href="#">WG1104932</a>





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:24	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1840		100	1	05/07/2018 17:06	<a href="#">WG1106047</a>

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	04/29/2018 18:05	<a href="#">WG1104612</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	05/05/2018 16:02	<a href="#">WG1106225</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	5850		100	1	05/02/2018 13:28	<a href="#">WG1105097</a>
Manganese,Dissolved	3080		5.00	1	05/02/2018 13:28	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	6830		100	10	05/07/2018 14:48	<a href="#">WG1107762</a>
Ethane	ND		13.0	1	05/07/2018 11:48	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:48	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4420		200	1	05/03/2018 04:01	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	2540		250	1	05/03/2018 04:01	<a href="#">WG1104931</a>
(S) o-Terphenyl	84.1		52.0-156		05/03/2018 04:01	<a href="#">WG1104931</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2260		200	1	05/03/2018 22:53	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	596		250	1	05/03/2018 22:53	<a href="#">WG1104932</a>
(S) o-Terphenyl	74.1		52.0-156		05/03/2018 22:53	<a href="#">WG1104932</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Acenaphthene	0.187		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Acenaphthylene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Benzo(a)anthracene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Benzo(a)pyrene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Chrysene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Fluoranthene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Fluorene	0.452		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Naphthalene	ND		0.250	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Phenanthrene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
Pyrene	ND		0.0500	1	05/01/2018 14:41	<a href="#">WG1105080</a>
1-Methylnaphthalene	ND		0.250	1	05/01/2018 14:41	<a href="#">WG1105080</a>
2-Methylnaphthalene	ND		0.250	1	05/01/2018 14:41	<a href="#">WG1105080</a>
2-Chloronaphthalene	ND		0.250	1	05/01/2018 14:41	<a href="#">WG1105080</a>
(S) Nitrobenzene-d5	93.5		31.0-160		05/01/2018 14:41	<a href="#">WG1105080</a>
(S) 2-Fluorobiphenyl	104		48.0-148		05/01/2018 14:41	<a href="#">WG1105080</a>
(S) p-Terphenyl-d14	99.0		37.0-146		05/01/2018 14:41	<a href="#">WG1105080</a>

- 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	05/03/2018 13:25	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1740		100	1	05/07/2018 17:07	<a href="#">WG1106047</a>

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	04/29/2018 18:05	<a href="#">WG1104612</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	24500		5000	1	05/05/2018 16:17	<a href="#">WG1106225</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	1260		100	1	05/02/2018 13:33	<a href="#">WG1105097</a>
Manganese,Dissolved	559		5.00	1	05/02/2018 13:33	<a href="#">WG1105097</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	98.4		10.0	1	05/07/2018 14:52	<a href="#">WG1107762</a>
Ethane	ND		13.0	1	05/07/2018 11:53	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:53	<a href="#">WG1107156</a>

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	05/03/2018 17:08	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	ND		250	1	05/03/2018 17:08	<a href="#">WG1104931</a>
(S) o-Terphenyl	90.2		52.0-156		05/03/2018 17:08	<a href="#">WG1104931</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Acenaphthene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Acenaphthylene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Benzo(a)anthracene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Benzo(a)pyrene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Chrysene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Fluoranthene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Fluorene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Naphthalene	ND		0.250	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Phenanthrene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
Pyrene	ND		0.0500	1	05/01/2018 15:03	<a href="#">WG1105080</a>
1-Methylnaphthalene	ND		0.250	1	05/01/2018 15:03	<a href="#">WG1105080</a>
2-Methylnaphthalene	ND		0.250	1	05/01/2018 15:03	<a href="#">WG1105080</a>
2-Chloronaphthalene	ND		0.250	1	05/01/2018 15:03	<a href="#">WG1105080</a>
(S) Nitrobenzene-d5	92.6		31.0-160		05/01/2018 15:03	<a href="#">WG1105080</a>
(S) 2-Fluorobiphenyl	108		48.0-148		05/01/2018 15:03	<a href="#">WG1105080</a>
(S) p-Terphenyl-d14	95.5		37.0-146		05/01/2018 15:03	<a href="#">WG1105080</a>

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	232		100	1	05/03/2018 13:32	<a href="#">WG1106037</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1740		100	1	05/07/2018 17:08	<a href="#">WG1106047</a>

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	04/29/2018 18:06	<a href="#">WG1104612</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	05/09/2018 12:50	<a href="#">WG1108845</a>

7 Gl

8 Al

9 Sc

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	22.9		2.00	1	05/02/2018 13:38	<a href="#">WG1105097</a>
Iron,Dissolved	4320		100	1	05/02/2018 13:38	<a href="#">WG1105097</a>
Manganese,Dissolved	1820		5.00	1	05/02/2018 13:38	<a href="#">WG1105097</a>

## Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	05/01/2018 19:46	<a href="#">WG1105159</a>
(S) a,a,a-Trifluorotoluene(FID)	107		77.0-122		05/01/2018 19:46	<a href="#">WG1105159</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	4210		10.0	1	05/07/2018 14:56	<a href="#">WG1107762</a>
Ethane	ND		13.0	1	05/07/2018 11:57	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 11:57	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2910		200	1	05/03/2018 04:34	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	2720		250	1	05/03/2018 04:34	<a href="#">WG1104931</a>
(S) o-Terphenyl	93.8		52.0-156		05/03/2018 04:34	<a href="#">WG1104931</a>



## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:33	<a href="#">WG1106037</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1890		100	1	05/08/2018 14:03	<a href="#">WG1107936</a>

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	04/29/2018 18:06	<a href="#">WG1104612</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	05/05/2018 16:33	<a href="#">WG1106225</a>

7 Gl

8 Al

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	5800		100	1	05/02/2018 13:42	<a href="#">WG1105097</a>
Manganese,Dissolved	3040		5.00	1	05/02/2018 13:42	<a href="#">WG1105097</a>

9 Sc

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	672		10.0	1	05/07/2018 14:58	<a href="#">WG1107762</a>
Ethane	ND		13.0	1	05/07/2018 12:24	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 12:24	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3850		200	1	05/03/2018 04:50	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	2200		250	1	05/03/2018 04:50	<a href="#">WG1104931</a>
(S) o-Terphenyl	83.2		52.0-156		05/03/2018 04:50	<a href="#">WG1104931</a>

## Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2520		200	1	05/03/2018 23:09	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	763		250	1	05/03/2018 23:09	<a href="#">WG1104932</a>
(S) o-Terphenyl	78.7		52.0-156		05/03/2018 23:09	<a href="#">WG1104932</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Acenaphthene	0.179		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Acenaphthylene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Benzo(a)anthracene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Benzo(a)pyrene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Chrysene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Fluoranthene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Fluorene	0.428		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Naphthalene	ND		0.250	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Phenanthrene	ND		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
Pyrene	0.0507		0.0500	1	05/01/2018 15:25	<a href="#">WG1105080</a>
1-Methylnaphthalene	ND		0.250	1	05/01/2018 15:25	<a href="#">WG1105080</a>
2-Methylnaphthalene	ND		0.250	1	05/01/2018 15:25	<a href="#">WG1105080</a>
2-Chloronaphthalene	ND		0.250	1	05/01/2018 15:25	<a href="#">WG1105080</a>
<i>(S)</i> Nitrobenzene-d5	94.9		31.0-160		05/01/2018 15:25	<a href="#">WG1105080</a>
<i>(S)</i> 2-Fluorobiphenyl	107		48.0-148		05/01/2018 15:25	<a href="#">WG1105080</a>
<i>(S)</i> p-Terphenyl-d14	102		37.0-146		05/01/2018 15:25	<a href="#">WG1105080</a>

- 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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	05/02/2018 16:03	<a href="#">WG1105159</a>
(S) a,a,a-Trifluorotoluene(FID)	106		77.0-122		05/02/2018 16:03	<a href="#">WG1105159</a>

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 date / time	Batch
Arsenic	25.4		2.00	1	05/02/2018 21:59	<a href="#">WG1104647</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	15.8		2.00	1	05/02/2018 21:08	<a href="#">WG1104647</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	25.1		2.00	1	05/02/2018 22:03	<a href="#">WG1104647</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:35	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1730		100	1	05/08/2018 14:04	<a href="#">WG1107936</a>

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND	J5	50.0	1	05/02/2018 14:27	<a href="#">WG1105792</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	9670		5000	1	05/05/2018 16:48	<a href="#">WG1106225</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	517		100	1	05/03/2018 19:56	<a href="#">WG1106090</a>
Manganese,Dissolved	400		5.00	1	05/03/2018 19:56	<a href="#">WG1106090</a>

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	05/03/2018 14:10	<a href="#">WG1106198</a>
(S) a,a,a-Trifluorotoluene(FID)	106		77.0-122		05/03/2018 14:10	<a href="#">WG1106198</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	1230		10.0	1	05/07/2018 15:02	<a href="#">WG1107762</a>
Ethane	ND		13.0	1	05/07/2018 13:23	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 13:23	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3210		200	1	05/03/2018 05:06	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	2670		250	1	05/03/2018 05:06	<a href="#">WG1104931</a>
(S) o-Terphenyl	89.9		52.0-156		05/03/2018 05:06	<a href="#">WG1104931</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1490		200	1	05/03/2018 23:26	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	454		250	1	05/03/2018 23:26	<a href="#">WG1104932</a>
(S) o-Terphenyl	79.2		52.0-156		05/03/2018 23:26	<a href="#">WG1104932</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	146		100	1	05/03/2018 13:36	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1820		100	1	05/08/2018 14:10	<a href="#">WG1107936</a>

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	05/02/2018 14:29	<a href="#">WG1105792</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	05/05/2018 17:04	<a href="#">WG1106225</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	3630		100	1	05/03/2018 20:01	<a href="#">WG1106090</a>
Manganese,Dissolved	2310		5.00	1	05/03/2018 20:01	<a href="#">WG1106090</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	13200		200	20	05/07/2018 15:04	<a href="#">WG1107762</a>
Ethane	ND		13.0	1	05/07/2018 13:28	<a href="#">WG1107156</a>
Ethene	ND		13.0	1	05/07/2018 13:28	<a href="#">WG1107156</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4660		1000	5	05/03/2018 18:14	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	2920		250	1	05/03/2018 05:23	<a href="#">WG1104931</a>
(S) o-Terphenyl	96.6		52.0-156		05/03/2018 05:23	<a href="#">WG1104931</a>
(S) o-Terphenyl	100		52.0-156		05/03/2018 18:14	<a href="#">WG1104931</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3290		200	1	05/03/2018 23:42	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	1050		250	1	05/03/2018 23:42	<a href="#">WG1104932</a>
(S) o-Terphenyl	84.6		52.0-156		05/03/2018 23:42	<a href="#">WG1104932</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/03/2018 13:40	<a href="#">WG1106037</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	8140		500	5	05/08/2018 14:11	<a href="#">WG1107936</a>

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	05/02/2018 14:29	<a href="#">WG1105792</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	72400		5000	1	05/05/2018 17:19	<a href="#">WG1106225</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/03/2018 20:06	<a href="#">WG1106090</a>
Manganese,Dissolved	16.2		5.00	1	05/03/2018 20:06	<a href="#">WG1106090</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/07/2018 15:07	<a href="#">WG1107762</a>
Ethane	ND		13.0	1	05/07/2018 15:07	<a href="#">WG1107762</a>
Ethene	ND		13.0	1	05/07/2018 15:07	<a href="#">WG1107762</a>

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	05/03/2018 05:39	<a href="#">WG1104931</a>
Residual Range Organics (RRO)	364		250	1	05/03/2018 05:39	<a href="#">WG1104931</a>
(S) o-Terphenyl	88.0		52.0-156		05/03/2018 05:39	<a href="#">WG1104931</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	05/03/2018 23:59	<a href="#">WG1104932</a>
Residual Range Organics (RRO)	ND		250	1	05/03/2018 23:59	<a href="#">WG1104932</a>
(S) o-Terphenyl	83.6		52.0-156		05/03/2018 23:59	<a href="#">WG1104932</a>



Method Blank (MB)

(MB) R3307017-1 05/03/18 12:50

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L989723-01 Original Sample (OS) • Duplicate (DUP)

(OS) L989723-01 05/03/18 12:55 • (DUP) R3307017-4 05/03/18 12:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	88.0	1	4.44	J	10

L989723-21 Original Sample (OS) • Duplicate (DUP)

(OS) L989723-21 05/03/18 13:36 • (DUP) R3307017-8 05/03/18 13:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	146	144	1	1.38		10

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

(LCS) R3307017-2 05/03/18 12:52 • (LCSD) R3307017-3 05/03/18 12:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7540	7330	101	97.7	90.0-110			2.85	10

L989723-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L989723-02 05/03/18 12:58 • (MS) R3307017-5 05/03/18 13:00

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	365	5350	99.8	1	90.0-110	

L989723-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989723-11 05/03/18 13:19 • (MS) R3307017-6 05/03/18 13:21 • (MSD) R3307017-7 05/03/18 13:22

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	5340	4890	107	97.8	1	90.0-110			8.80	10



Method Blank (MB)

(MB) R3307647-1 05/07/18 16:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L989723-01 Original Sample (OS) • Duplicate (DUP)

(OS) L989723-01 05/07/18 16:41 • (DUP) R3307647-4 05/07/18 16:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1750	1740	1	0.802		20

L989723-10 Original Sample (OS) • Duplicate (DUP)

(OS) L989723-10 05/07/18 17:01 • (DUP) R3307647-6 05/07/18 17:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1750	1840	1	4.91		20

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

(LCS) R3307647-2 05/07/18 16:33 • (LCSD) R3307647-3 05/07/18 16:34

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	3890	3920	97.2	97.9	90.0-110			0.717	20

L989723-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L989723-02 05/07/18 16:47 • (MS) R3307647-5 05/07/18 16:48

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	1800	3520	69.1	1	90.0-110	J6

L989723-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989723-11 05/07/18 17:03 • (MS) R3307647-7 05/07/18 17:04 • (MSD) R3307647-8 05/07/18 17:05

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	2740	4230	4240	59.7	60.2	1	90.0-110	J6	J6	0.283	20





Method Blank (MB)

(MB) R3307926-1 05/08/18 13:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L989176-01 Original Sample (OS) • Duplicate (DUP)

(OS) L989176-01 05/08/18 13:58 • (DUP) R3307926-4 05/08/18 13:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1080	1070	1	0.559		20

L990089-01 Original Sample (OS) • Duplicate (DUP)

(OS) L990089-01 05/08/18 14:28 • (DUP) R3307926-6 05/08/18 14:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	2540	2550	1	0.510		20

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

(LCS) R3307926-2 05/08/18 13:56 • (LCSD) R3307926-3 05/08/18 13:57

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	3740	3840	93.6	96.0	90.0-110			2.51	20

L989912-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L989912-01 05/08/18 14:12 • (MS) R3307926-5 05/08/18 14:13

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	ND	1870	74.7	1	90.0-110	J6

L990089-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L990089-02 05/08/18 14:30 • (MS) R3307926-7 05/08/18 14:31 • (MSD) R3307926-8 05/08/18 14:32

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	2930	4490	4580	62.1	65.8	1	90.0-110	J6	J6	2.05	20



Method Blank (MB)

(MB) R3305672-1 04/29/18 17:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L988766-01 Original Sample (OS) • Duplicate (DUP)

(OS) L988766-01 04/29/18 17:45 • (DUP) R3305672-4 04/29/18 17:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

L989723-09 Original Sample (OS) • Duplicate (DUP)

(OS) L989723-09 04/29/18 17:54 • (DUP) R3305672-7 04/29/18 17:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

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

(LCS) R3305672-2 04/29/18 17:43 • (LCSD) R3305672-3 04/29/18 17:43

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	499	497	99.8	99.4	85.0-115			0.402	20

L989187-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989187-01 04/29/18 17:49 • (MS) R3305672-5 04/29/18 17:50 • (MSD) R3305672-6 04/29/18 17:50

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	U	961	946	96.1	94.6	1	80.0-120			1.57	20



Method Blank (MB)

(MB) R3305673-1 04/29/18 18:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	ug/l		ug/l	ug/l
	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L988079-01 Original Sample (OS) • Duplicate (DUP)

(OS) L988079-01 04/29/18 18:02 • (DUP) R3305673-4 04/29/18 18:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ug/l	ug/l	%	%		%
	U	0.000	1	0.000		20

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

(LCS) R3305673-2 04/29/18 18:00 • (LCSD) R3305673-3 04/29/18 18:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	ug/l	ug/l	ug/l	%	%	%			%	%
	500	474	472	94.8	94.4	85.0-115			0.423	20

L989723-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989723-11 04/29/18 18:03 • (MS) R3305673-5 04/29/18 18:04 • (MSD) R3305673-6 04/29/18 18:05

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfide	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
	1000	ND	1050	1060	105	106	1	80.0-120			0.853	20



Method Blank (MB)

(MB) R3306458-1 05/02/18 14:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L989723-21 Original Sample (OS) • Duplicate (DUP)

(OS) L989723-21 05/02/18 14:29 • (DUP) R3306458-6 05/02/18 14:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L990272-12 Original Sample (OS) • Duplicate (DUP)

(OS) L990272-12 05/02/18 14:37 • (DUP) R3306458-7 05/02/18 14:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

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

(LCS) R3306458-2 05/02/18 14:25 • (LCSD) R3306458-3 05/02/18 14:25

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	486	486	97.2	97.2	85.0-115			0.000	20

L989723-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989723-20 05/02/18 14:27 • (MS) R3306458-4 05/02/18 14:28 • (MSD) R3306458-5 05/02/18 14:28

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	1370	1370	137	137	1	80.0-120	J5	J5	0.0732	20



Method Blank (MB)

(MB) R3307561-1 05/06/18 11:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	184	↓	77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L989695-09 Original Sample (OS) • Duplicate (DUP)

(OS) L989695-09 05/06/18 15:58 • (DUP) R3307561-4 05/06/18 16:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	49200	49000	1	0.367		15

L989696-01 Original Sample (OS) • Duplicate (DUP)

(OS) L989696-01 05/06/18 19:34 • (DUP) R3307561-7 05/06/18 19:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	ND	0.000	1	0.000		15

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

(LCS) R3307561-2 05/06/18 11:24 • (LCSD) R3307561-3 05/06/18 11:40

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	39800	39700	99.5	99.3	80.0-120			0.161	15

L989695-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989695-09 05/06/18 15:58 • (MS) R3307561-5 05/06/18 16:29 • (MSD) R3307561-6 05/06/18 16:44

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	49200	92900	98100	87.4	97.9	1	80.0-120			5.52	15

L989696-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L989696-01 05/06/18 19:34 • (MS) R3307561-8 05/06/18 20:05

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	ND	48000	96.0	1	80.0-120	



Method Blank (MB)

(MB) R3307357-1 05/05/18 11:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L989723-11 Original Sample (OS) • Duplicate (DUP)

(OS) L989723-11 05/05/18 14:29 • (DUP) R3307357-4 05/05/18 14:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	23700	24000	1	1.55		15

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

(LCS) R3307357-2 05/05/18 11:27 • (LCSD) R3307357-3 05/05/18 11:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	39900	39800	99.7	99.6	80.0-120			0.112	15

L989723-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989723-11 05/05/18 14:29 • (MS) R3307357-5 05/05/18 15:00 • (MSD) R3307357-6 05/05/18 15:47

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	23700	69700	75600	92.1	104	1	80.0-120			8.05	15



Method Blank (MB)

(MB) R3308302-1 05/09/18 10:32

Analyte	MB Result ug/l	<u>MB Qualifier</u>	MB MDL ug/l	MB RDL ug/l
Sulfate	U		77.4	5000

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

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

(LCS) R3308302-2 05/09/18 10:48 • (LCSD) R3308302-3 05/09/18 11:03

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 %
Sulfate	40000	40200	40200	101	100	80.0-120			0.151	15



Method Blank (MB)

(MB) R3306582-1 05/02/18 20:54

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		0.250	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3306582-2 05/02/18 20:59 • (LCSD) R3306582-3 05/02/18 21:03

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 %
Arsenic	50.0	49.9	49.2	99.9	98.3	80.0-120			1.56	20

L989723-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989723-18 05/02/18 21:08 • (MS) R3306582-5 05/02/18 21:17 • (MSD) R3306582-6 05/02/18 21:22

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	15.8	63.3	64.3	95.0	97.1	1	75.0-125			1.61	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Method Blank (MB)

(MB) R3306439-1 05/02/18 11:36

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
Manganese,Dissolved	U		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) R3306439-2 05/02/18 11:41 • (LCSD) R3306439-3 05/02/18 11:45

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	%	%	%			%	%
Arsenic,Dissolved	50.0	45.7	47.1	91.4	94.1	80.0-120			3.01	20
Iron,Dissolved	5000	4930	5000	98.5	99.9	80.0-120			1.43	20
Manganese,Dissolved	50.0	47.1	48.9	94.3	97.8	80.0-120			3.64	20

L989723-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989723-11 05/02/18 11:50 • (MS) R3306439-5 05/02/18 11:59 • (MSD) R3306439-6 05/02/18 12:04

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	13.9	59.7	60.8	91.5	93.8	1	75.0-125			1.85	20
Iron,Dissolved	5000	ND	4880	4960	96.9	98.5	1	75.0-125			1.69	20
Manganese,Dissolved	50.0	269	315	318	91.3	96.6	1	75.0-125			0.842	20



Method Blank (MB)

(MB) R3306961-1 05/03/18 19:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron,Dissolved	U		15.0	100
Manganese,Dissolved	U		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) R3306961-2 05/03/18 19:29 • (LCSD) R3306961-3 05/03/18 19:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	4920	5010	98.3	100	80.0-120			1.97	20
Manganese,Dissolved	50.0	48.2	49.1	96.4	98.2	80.0-120			1.90	20

L990475-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L990475-01 05/03/18 19:38 • (MS) R3306961-5 05/03/18 19:47 • (MSD) R3306961-6 05/03/18 19:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	46.1	5020	4940	99.4	97.8	1	75.0-125			1.58	20
Manganese,Dissolved	50.0	9.69	57.7	57.0	96.1	94.7	1	75.0-125			1.18	20



Method Blank (MB)

(MB) R3306336-3 05/01/18 10:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	41.2	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	107			77.0-122

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

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

(LCS) R3306336-1 05/01/18 08:57 • (LCSD) R3306336-2 05/01/18 09:39

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	4730	4810	86.0	87.4	72.0-134			1.64	20
(S) a,a,a-Trifluorotoluene(FID)				93.8	93.3	77.0-122				

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3306916-3 05/03/18 10:46

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	34.7	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	107			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) R3306916-1 05/03/18 09:15 • (LCSD) R3306916-2 05/03/18 09:58

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	4720	4580	85.7	83.3	72.0-134			2.92	20
(S) a,a,a-Trifluorotoluene(FID)				96.2	94.0	77.0-122				



Method Blank (MB)

(MB) R3307514-1 05/07/18 10:32

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

L989723-03 Original Sample (OS) • Duplicate (DUP)

(OS) L989723-03 05/07/18 11:05 • (DUP) R3307514-2 05/07/18 11:30

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

L989723-08 Original Sample (OS) • Duplicate (DUP)

(OS) L989723-08 05/07/18 11:35 • (DUP) R3307514-3 05/07/18 13:33

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) R3307514-4 05/07/18 13:36 • (LCSD) R3307514-5 05/07/18 13:40

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	71.0	73.7	105	109	85.0-115			3.80	20
Ethane	129	116	115	89.8	89.5	85.0-115			0.357	20
Ethene	127	118	117	93.0	92.0	85.0-115			1.00	20



Method Blank (MB)

(MB) R3307585-1 05/07/18 13:58

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

L989562-05 Original Sample (OS) • Duplicate (DUP)

(OS) L989562-05 05/07/18 14:23 • (DUP) R3307585-2 05/07/18 14:37

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

L989884-01 Original Sample (OS) • Duplicate (DUP)

(OS) L989884-01 05/07/18 15:17 • (DUP) R3307585-3 05/07/18 15:23

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

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

(LCS) R3307585-4 05/07/18 15:29 • (LCSD) R3307585-5 05/07/18 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	%	%	%			%	%
Methane	67.8	68.5	68.9	101	102	85.0-115			0.614	20
Ethane	129	117	119	90.5	92.3	85.0-115			2.04	20
Ethene	127	119	120	93.5	94.8	85.0-115			1.40	20



Method Blank (MB)

(MB) R3306699-1 05/02/18 23:40

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	90.1			52.0-156

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

(LCS) R3306699-2 05/02/18 23:56 • (LCSD) R3306699-3 05/03/18 00:12

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	755	876	101	117	50.0-150			14.8	20
Residual Range Organics (RRO)	750	649	737	86.5	98.2	50.0-150			12.7	20
(S) o-Terphenyl				90.0	98.5	52.0-156				

L989723-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989723-11 05/03/18 00:29 • (MS) R3306699-4 05/03/18 00:45 • (MSD) R3306699-5 05/03/18 01:01

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	887	955	101	110	1	50.0-150			7.33	20
Residual Range Organics (RRO)	750	ND	991	1200	106	134	1	50.0-150			18.9	20
(S) o-Terphenyl					87.7	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) R3307058-1 05/03/18 15:30

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>	87.0			52.0-156

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

(LCS) R3307058-2 05/03/18 15:46 • (LCSD) R3307058-3 05/03/18 16:03

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	598	609	79.8	81.2	50.0-150			1.80	20
Residual Range Organics (RRO)	750	592	592	78.9	79.0	50.0-150			0.0996	20
<i>(S) o-Terphenyl</i>				73.4	73.2	52.0-156				

L989723-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L989723-11 05/03/18 22:04 • (MS) R3307058-4 05/03/18 22:20 • (MSD) R3307058-5 05/03/18 22:37

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	%	%		%			%	%
Diesel Range Organics (DRO)	750	ND	772	765	82.6	81.6	1	50.0-150			0.925	20
Residual Range Organics (RRO)	750	ND	813	809	76.1	75.7	1	50.0-150			0.424	20
<i>(S) o-Terphenyl</i>					83.9	83.1		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) R3306399-3 05/01/18 08:32

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	0.00309	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	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	92.1			31.0-160
(S) 2-Fluorobiphenyl	108			48.0-148
(S) p-Terphenyl-d14	102			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) R3306399-1 05/01/18 07:48 • (LCSD) R3306399-2 05/01/18 08:10

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	2.12	2.13	106	106	64.0-142			0.215	20
Acenaphthene	2.00	2.09	2.06	105	103	66.0-132			1.59	20
Acenaphthylene	2.00	2.15	2.15	107	108	65.0-132			0.249	20
Benzo(a)anthracene	2.00	1.98	1.96	98.8	98.0	59.0-134			0.886	20
Benzo(a)pyrene	2.00	2.03	2.00	102	100	61.0-145			1.30	20
Benzo(b)fluoranthene	2.00	2.07	1.99	103	99.3	57.0-136			4.06	20
Benzo(g,h,i)perylene	2.00	2.01	1.99	101	99.4	54.0-140			1.13	20
Benzo(k)fluoranthene	2.00	1.95	1.99	97.3	99.6	57.0-141			2.38	20
Chrysene	2.00	2.02	2.00	101	99.9	63.0-140			0.997	20
Dibenz(a,h)anthracene	2.00	2.03	2.01	101	101	49.0-141			0.590	20
Fluoranthene	2.00	2.14	2.14	107	107	65.0-143			0.103	20



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

(LCS) R3306399-1 05/01/18 07:48 • (LCSD) R3306399-2 05/01/18 08:10

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	2.09	2.04	104	102	64.0-129			2.08	20
Indeno(1,2,3-cd)pyrene	2.00	2.05	2.02	102	101	53.0-141			1.57	20
Naphthalene	2.00	2.10	2.07	105	104	68.0-129			1.14	20
Phenanthrene	2.00	2.04	2.04	102	102	62.0-132			0.121	20
Pyrene	2.00	2.03	1.99	101	99.4	58.0-156			1.88	20
1-Methylnaphthalene	2.00	2.14	2.11	107	105	68.0-137			1.22	20
2-Methylnaphthalene	2.00	2.03	2.02	102	101	68.0-134			0.467	20
2-Chloronaphthalene	2.00	2.10	2.09	105	105	65.0-129			0.256	20
<i>(S) Nitrobenzene-d5</i>				93.7	93.8	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				108	107	48.0-148				
<i>(S) p-Terphenyl-d14</i>				100	99.5	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, 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.
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.



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.  
 \* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

## 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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	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

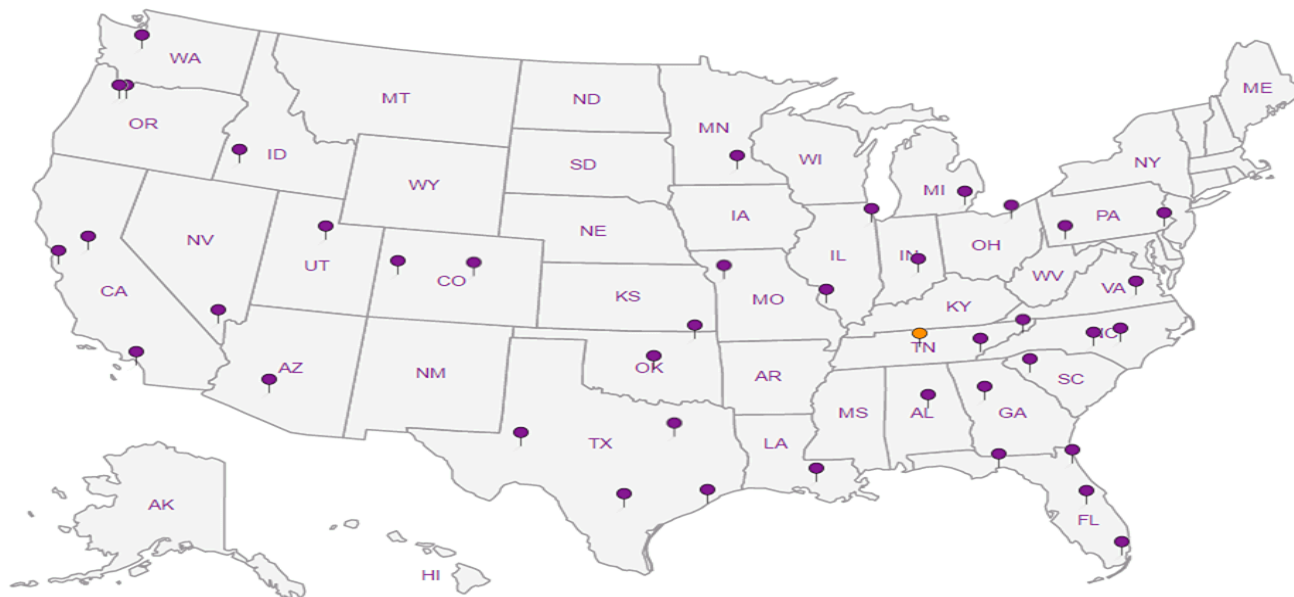
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water   <sup>2</sup> Underground Storage Tanks   <sup>3</sup> Aquatic Toxicity   <sup>4</sup> Chemical/Microbiological   <sup>5</sup> Mold   <sup>6</sup> Wastewater   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:  
Accounts Payable  
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

Report to:  
**Ryan Hultgren**

Email To: RyanHultgren@kennedyjenks.com,  
AliceRobinson@kennedyjenks.com,

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

City/State Collected: **Wishram, WA**

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

Client Project #  
**1896120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Collected by (print):  
**Katie 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	Analysis / Container / Preservative	Remarks	Sample # (lab only)
WMW-01-20180425	Grab	GW		4/25/18	1245	8	Dissolved As 250mlHDPE-HNO3		-01
WMW-03-20180425		GW			1420	10	Dissolved Fe, Mn 250mlHDPE-HNO3		-02
WMW-05-20180425		GW			1550	10	NH3, NO2NO3 250mlHDPE-H2SO4		-03
WMW-09-20180425		GW			0940	10	NWTPHDXLVI-w/SGT 40mlAmb-HCl-BT		-04
WMW-10-20180425		GW			1040	8	NWTPHDXLVI-w/o SGT 40mlAmb-HCl-BT		-05
WMW-11-20180425		GW			1135	8	NWTPHGX 40mlAmb HCl		-06
WMW-12-20180426		GW		4/26/18	1010	8 <i>OKM</i>	PAHSIMLVID 40mlAmb-NoPres-WT		-07
WMW-13-20180425		GW		4/25/18	0835	8	RSK175 40mlAmb HCl		-08
WMW-14-20180426		GW		4/26/18	1210	10	Sulfate 125mlHDPE-NoPres		-09
WMW-15-20180426		GW		4/26/18	1120	8	Sulfide 125mlAmb-S-NaOH+ZnAc		-09

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: All diss. metals samples have been field filtered.

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  
QA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature) *Aliid B...*  
Date: **4-27-18** Time: **11:30**  
Relinquished by: (Signature)  
Date: Time:  
Relinquished by: (Signature)  
Date: Time:

Received by: (Signature) *...*  
Trip Blank Received: (Yes/No)  Yes  No  
Temp: **25.14/3.5** °C  
Bottles Received: **201**  
Received by: (Signature) *...*  
Date: **4/28/18** Time: **0845**

If preservation required by Login: Date/Time  
Hold:  
Condition:  OK /  N

Chain of Custody Page \_\_\_ of \_\_\_



12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5850

L# **1989723**  
C019

Acctnum: **BNSF1KEN**  
Template: **T130227**  
Prelogin: **P648861**  
TSR: **134 - Mark W. Beasley**  
PB: **4-17-18**  
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

**Report to:**  
 Ryan Hultgren

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

**City/State Collected:**  
 Wishram, WA

**Lab Project #:**  
 BNSF1KEN-WISHRAM

**Client Project #:**  
 1896120\*00

**Site/Facility ID #:**

**Collected by (print):**  
 Alice Robinson

**Collected by (signature):**  
 Alii Polun

**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

**Date Results Needed**

**Pres Chk**  
 U2 U2 U2

**Analysis / Container / Preservative**

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
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**Chain of Custody Page \_\_\_ of \_\_\_**

**ESC**  
 A subsidiary of *PerkinElmer*

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

**L#**  
 1989723

**Table #**

**Acctnum:** BNSF1KEN  
**Template:** T130227  
**Prelogin:** P648861  
**TSR:** 134 - Mark W. Beasley  
**PB:** 4-17-18  
**Shipped Via:** FedEx Ground

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	Remarks	Sample # (lab only)
WMW-16-20180426	Grab	GW		4-26-18	0850	14	X	X	X	X	X	X	X	X	X	X	HOLD	-20
WMW-17-20180425		GW		4-25-18	1440	11	X					X						-10
WMW-18-20180425		GW		4-25-18	1045	11	X			X								-11
BMD-1-20180426		GW		4-26-18	1000	12	X			X			X				HOLD	-21
BMD-2-20180425		GW		4-25-18	1605	12				X			X					-12
BMD-3-20180425		GW		4-25-18	1250	10				X			X					-13
BMD-4-20180425		GW		4-25-18	0905	12				X			X				HOLD	-22
D-1-20180425		GW		4-25-18	1500	11	X			X			X					-14
D-2-20180425		GW		4-25-18	1610	12				X			X					-15
Trip Blank		GW				1						X						-16

**Matrix:**  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - Waste Water  
 DW - Drinking Water  
 OT - Other

**Remarks:** All diss. metals samples have been field filtered  
 MS/MSD set collected from WMW-18

**Sample returned via:**  
 UPS \_\_\_ FedEx \_\_\_ Courier \_\_\_

**Tracking #:** 4380 6863 5079/5068/5090/5080

**Relinquished by: (Signature)**  
 Alii Polun

**Date:** 4-27-18  
**Time:** 11:30

**Received by: (Signature)**  
 Kelly New SP

**Date:** 4/28/18  
**Time:** 0845

**Temp:** 3.7°C  
**Bottle Received:** 20

**Trip Blank Received:** Yes/No  
 HCL/Mech  
 TBR

**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  
 VOA Zero Headspace:  Y  N  
 Preservation Correct/Checked:  Y  N

**Condition:**  
 C/P / OK

**4-208**



# 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,  
AliceRobinson@kennedyjenks.com,

Project  
Description: BNSF - Wishram Railyard, WA

City/State  
Collected:

Phone: 253-835-6400  
Fax:

Client Project #  
1896120\*00

Lab Project #  
BNSF1KEN-WISHRAM

Collected by (print):  
Alice Robinson

Site/Facility ID #

P.O. #

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Analysis	Container	Preservative
WMW-17-20180425	Grab	GW		4-25-18	1440	1			
WMW-18-20180425		GW		1	1045	3			
D-1-20180425		GW		1	1500	1			
		GW							
		GW							
		GW							
		GW							
		GW							
		GW							
		GW							

Total As 250mlHDPE-HNO3

\* 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 # 4380 68635079/5068/5090/5080

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: 4-27-18	Time: 11:30	Received by: (Signature)	Trip/Blank Received: Yes/No HCL / MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.7 KM °C Bottles Received: 101
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) Kelly...	Date: 4/28/18 Time: 0845

If preservation required by Login: Date/Time

Hold: Condition:  OK /  NOK

Troy Dunlap

**ESC Lab Sciences**  
**Non-Conformance Form**

Login #: L989723	Client: BNSF1KEN	Date: 4/28/18	Evaluated by: Troy Dunlap
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**Non-Conformance (check applicable items)**

Sample Integrity	Chain of Custody Clarification	If Broken Container:
Parameter(s) past holding time	X Login Clarification Needed	
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.	<b>If no Chain of Custody:</b>
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: Did not receive WMW-12-20180426.**

Client informed by:	Call	Email	Voice Mail	Date: 4/30/18	Time: 1840
TSR Initials: MB	Client Contact: Ryan H				

**Login Instructions:**

**Client notified**

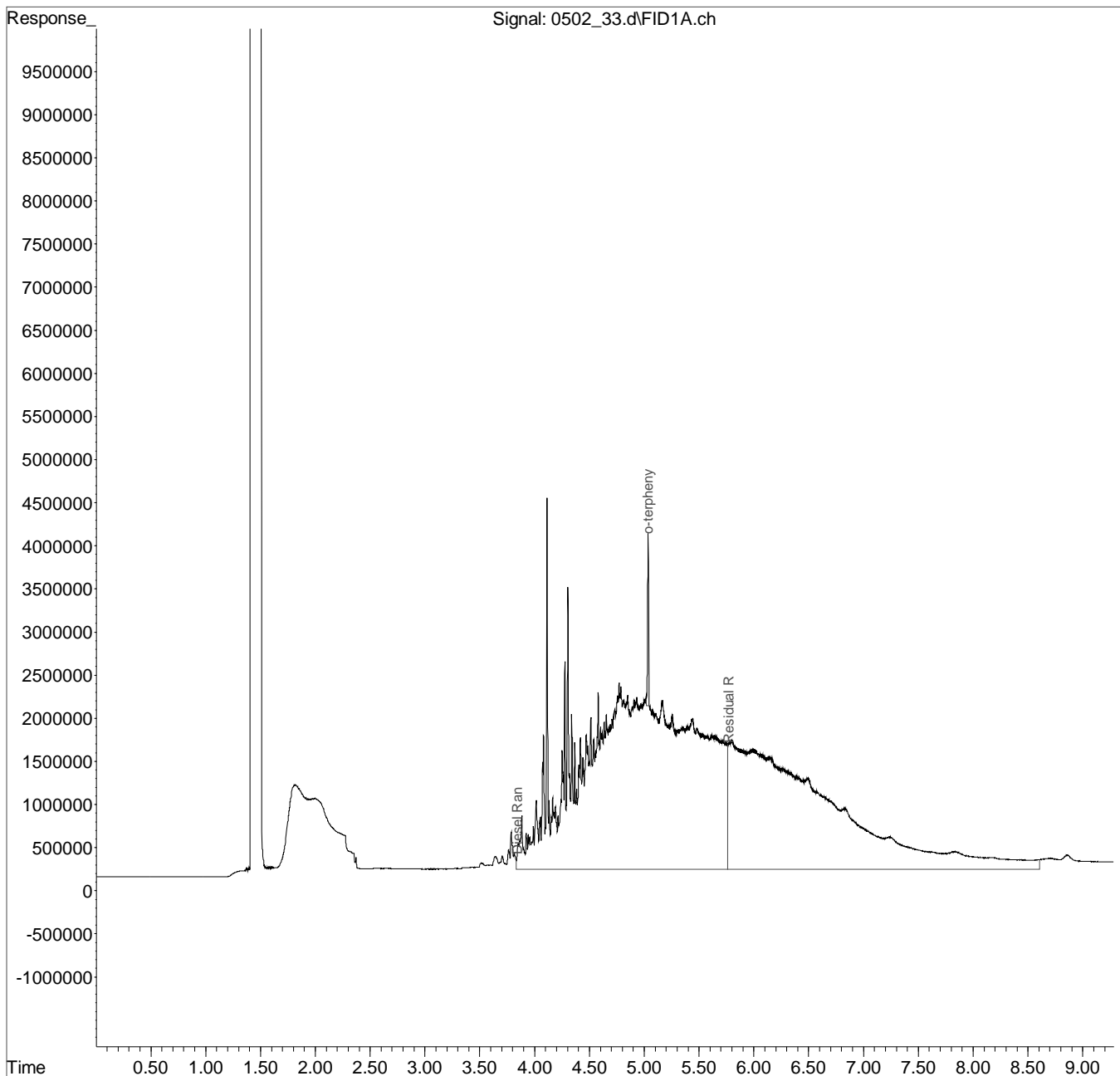
This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.



Data Path : C:\msdchem\1\data\050218\  
Data File : 0502 33.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 1:18 am  
Operator : 647  
Sample : L989723-01 1x WG1104931 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 16 Sample Multiplier: 0.0476  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 03 01:45:27 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

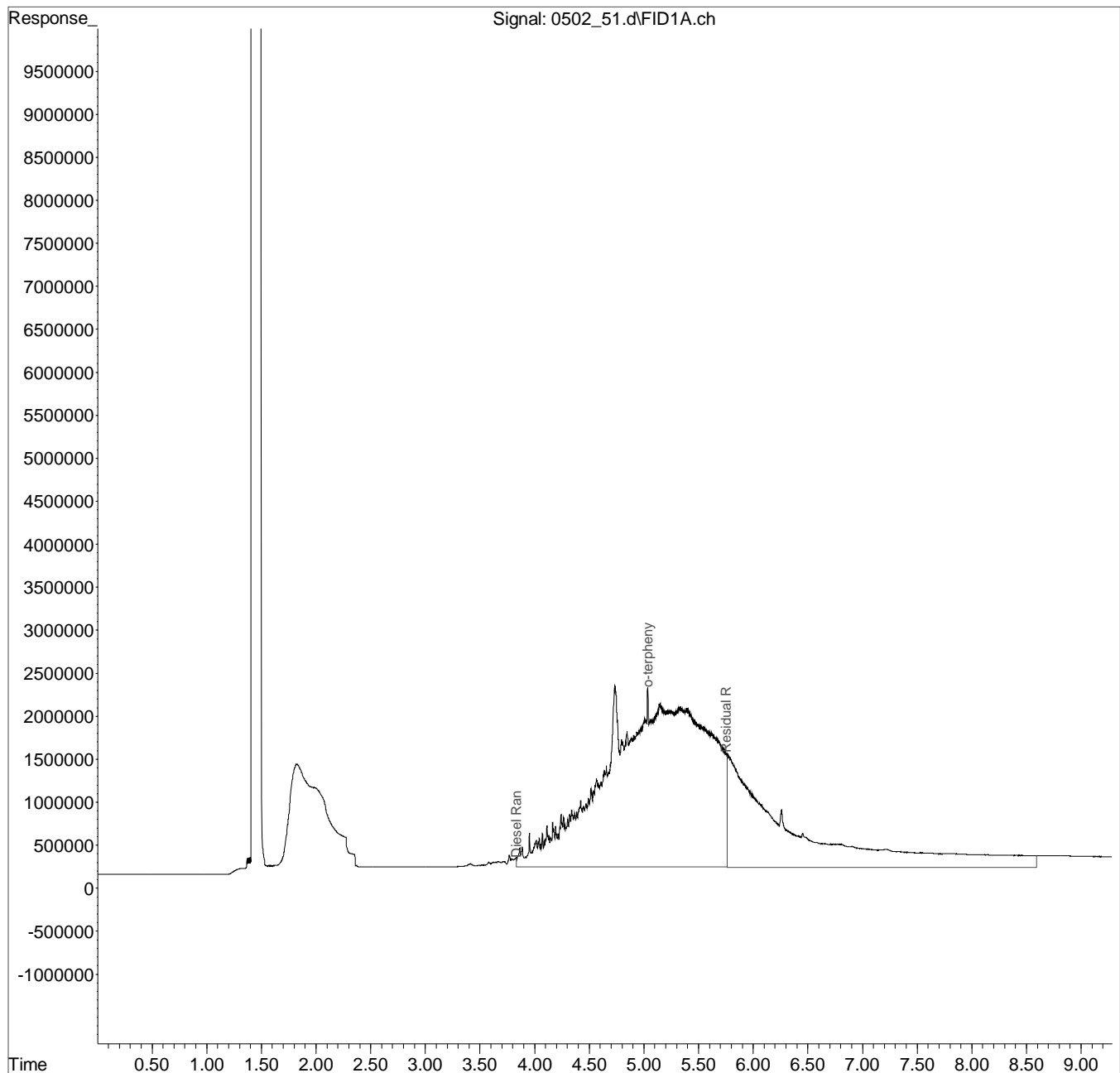
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050218\  
Data File : 0502 51.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 6:12 am  
Operator : 647  
Sample : L989723-02 5x WG1104931 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 17 Sample Multiplier: 0.238  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 03 09:21:08 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

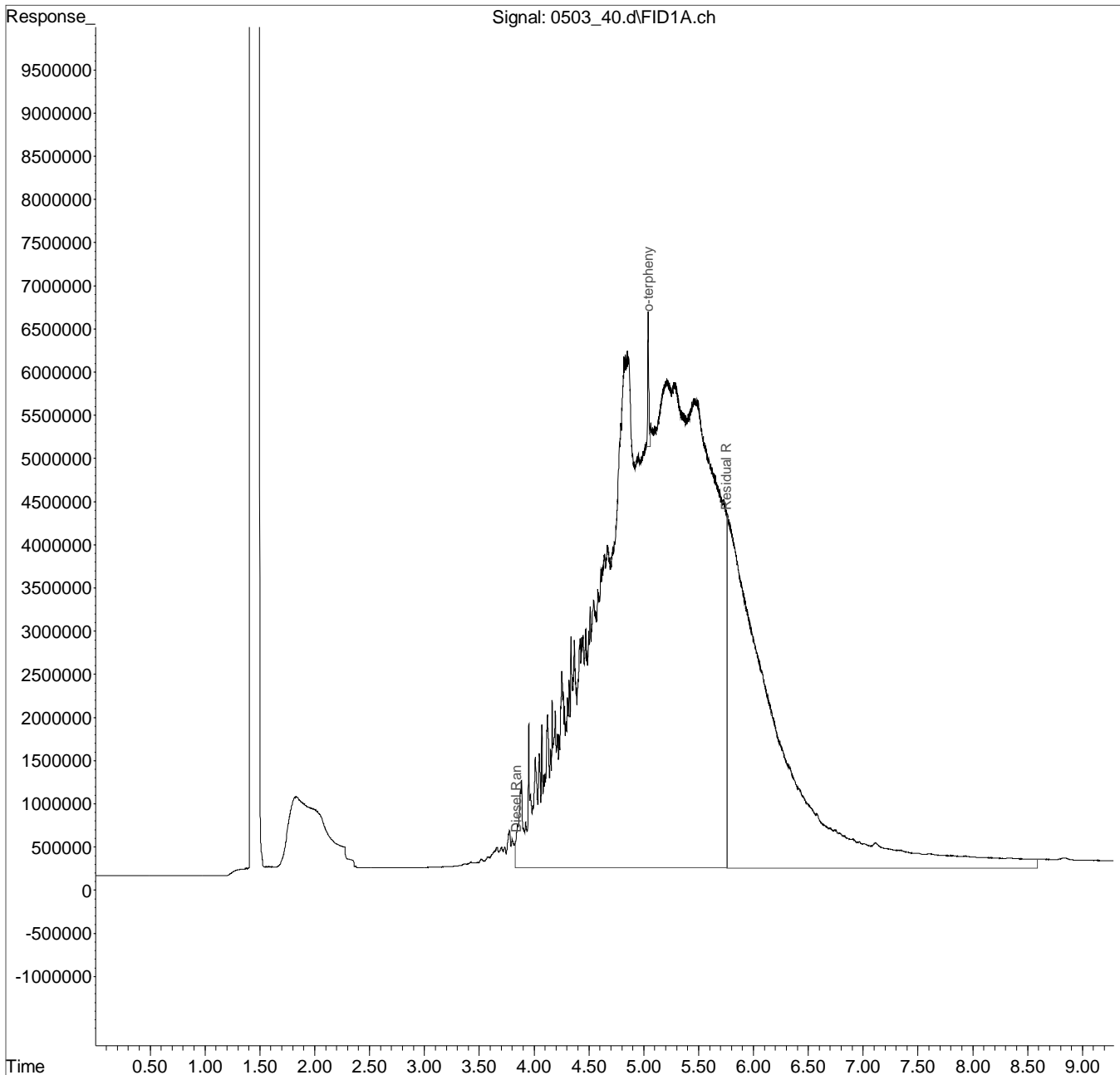
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
 Data File : 0503 40.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 8:58 pm  
 Operator : 784  
 Sample : L989723-02 1x WG1104932 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 27 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 04 08:32:03 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

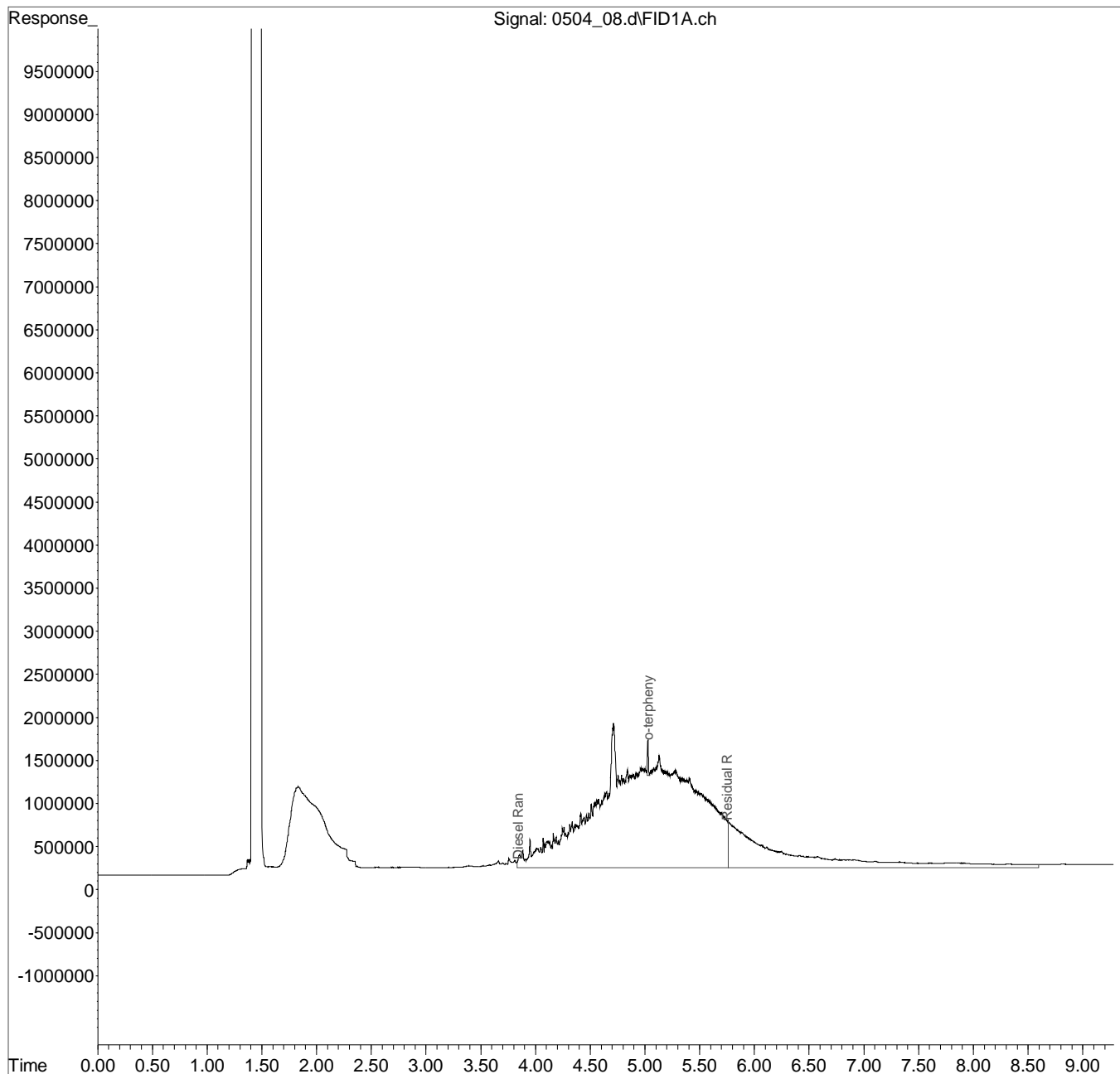
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050418\  
Data File : 0504 08.d  
Signal(s) : FID1A.ch  
Acq On : 4 May 2018 12:48 pm  
Operator : 773  
Sample : L989723-02 5x WG1104932 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 31 Sample Multiplier: 0.111  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 04 15:05:05 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

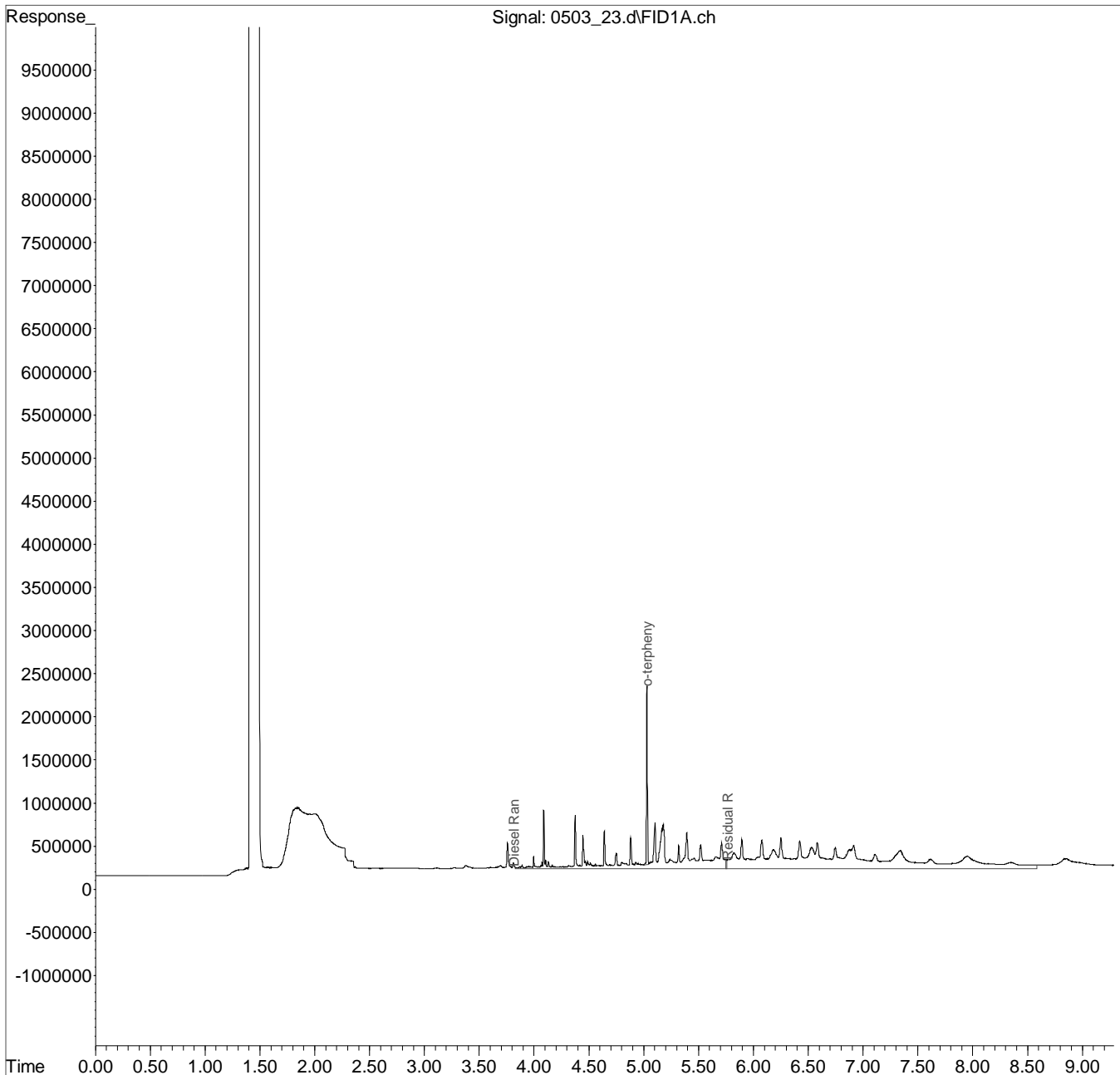
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
 Data File : 0503 23.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 4:19 pm  
 Operator : 784  
 Sample : L989723-03 1x WG1104931 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 7 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 03 17:06:19 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

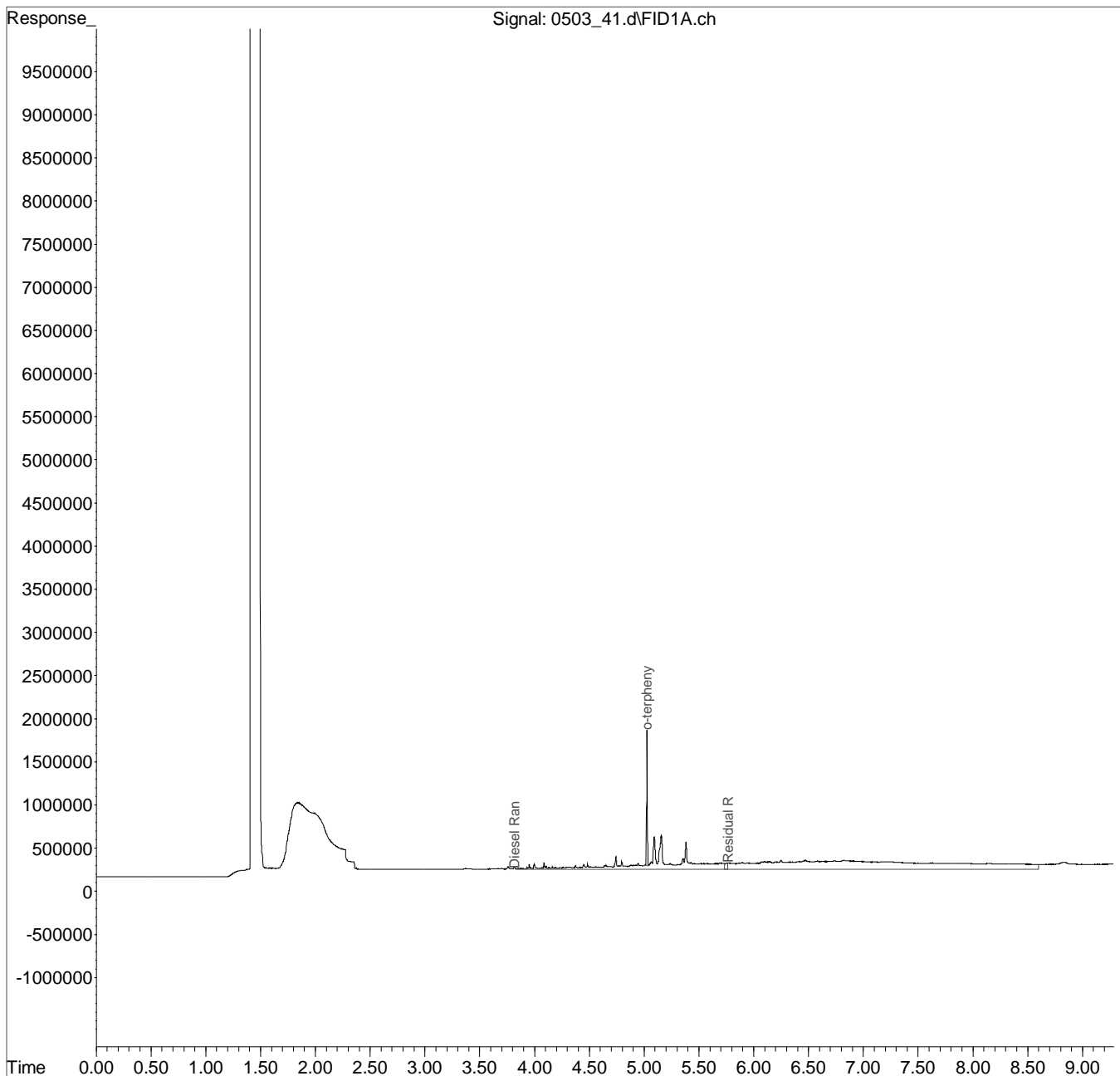
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
 Data File : 0503 41.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 9:15 pm  
 Operator : 784  
 Sample : L989723-03 1x WG1104932 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 28 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 04 08:32:29 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

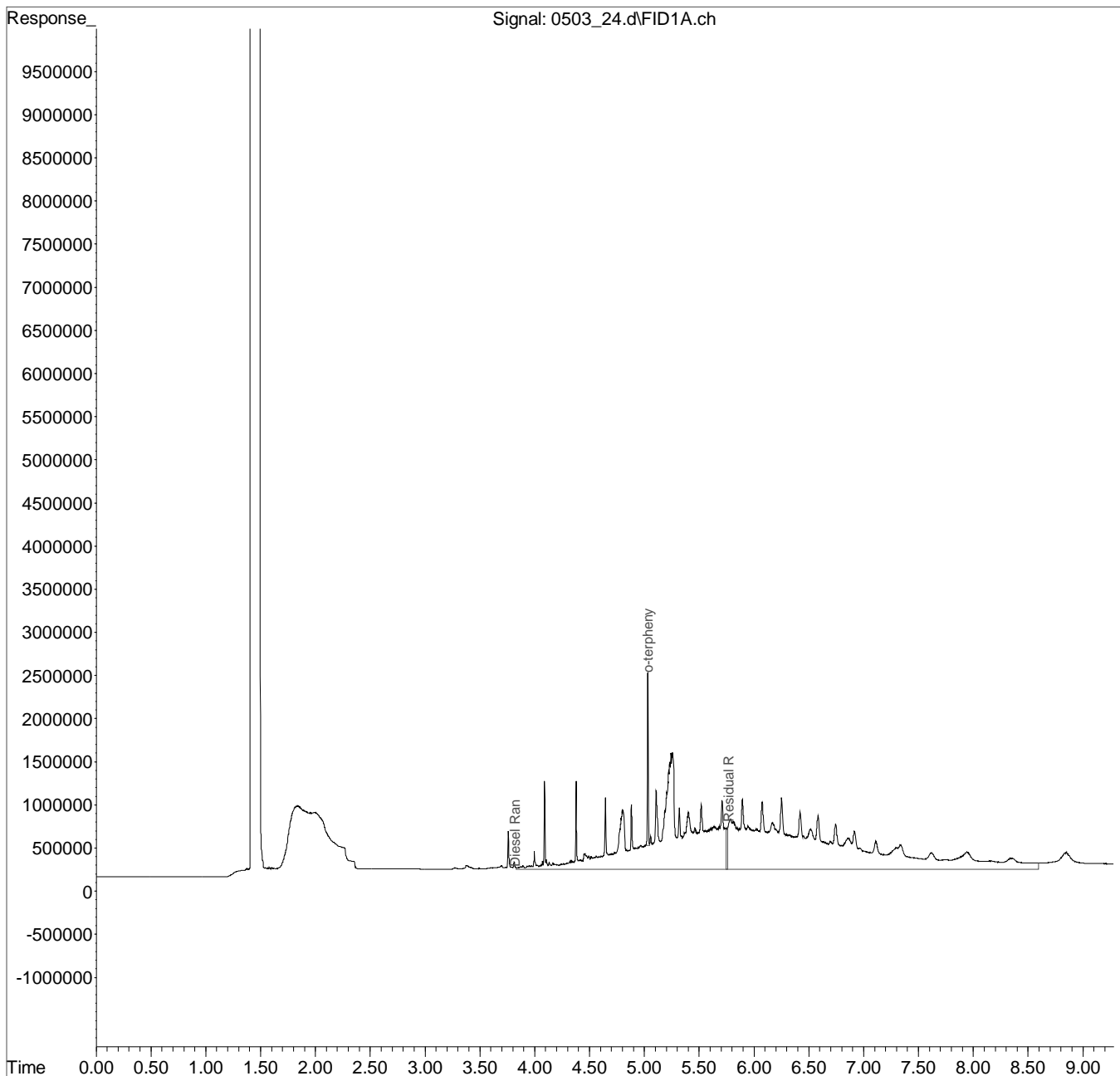
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
 Data File : 0503 24.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 4:36 pm  
 Operator : 784  
 Sample : L989723-04 1x WG1104931 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 8 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 03 17:06:54 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

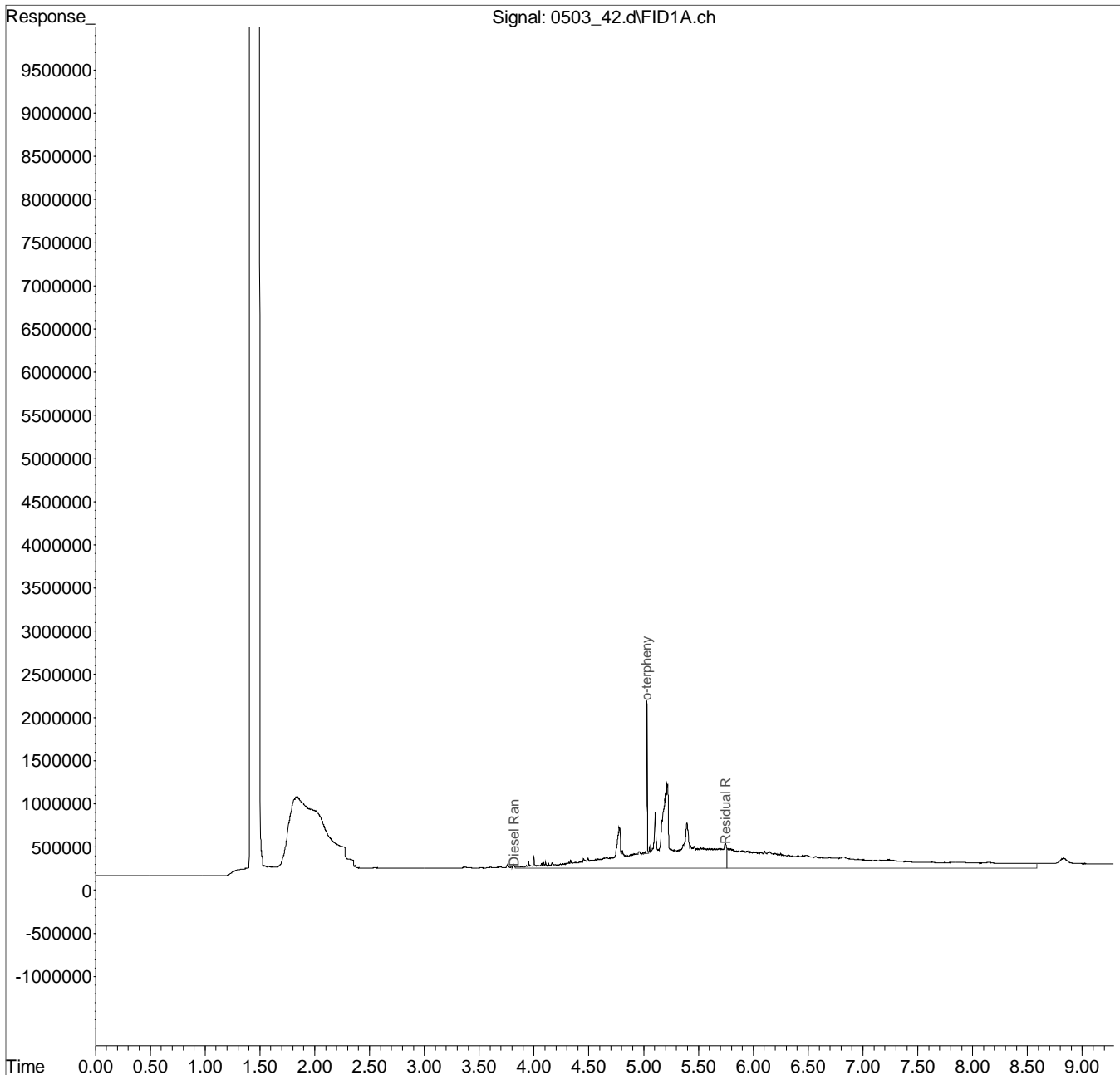
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
 Data File : 0503\_42.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 9:31 pm  
 Operator : 784  
 Sample : L989723-04 1x WG1104932 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 29 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 04 08:33:00 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M

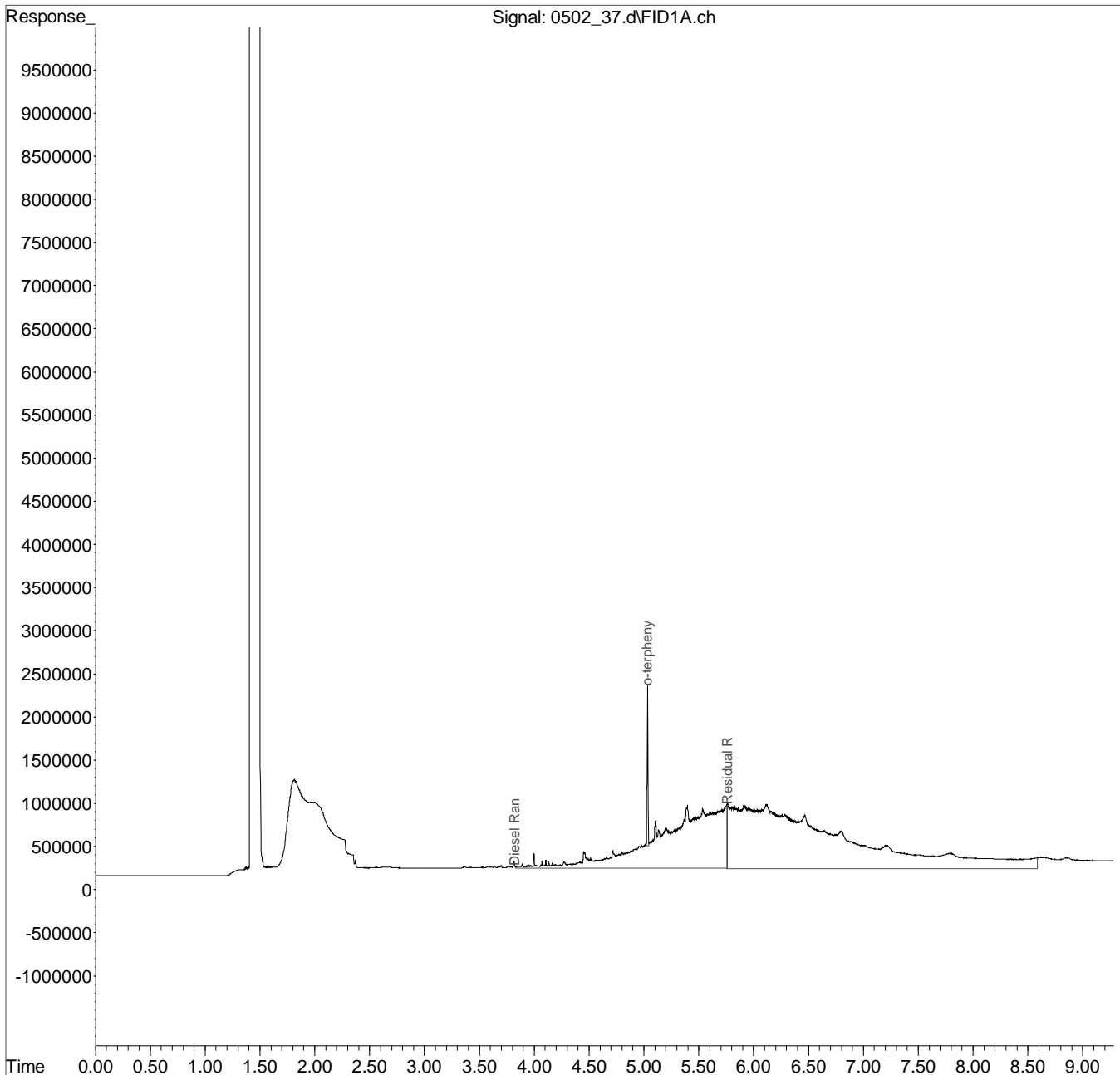




Data Path : C:\msdchem\1\data\050218\  
 Data File : 0502 37.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 2:23 am  
 Operator : 647  
 Sample : L989723-05 1x WG1104931 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 20 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 03 08:50:20 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
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 Response via : Initial Calibration  
 Integrator: ChemStation

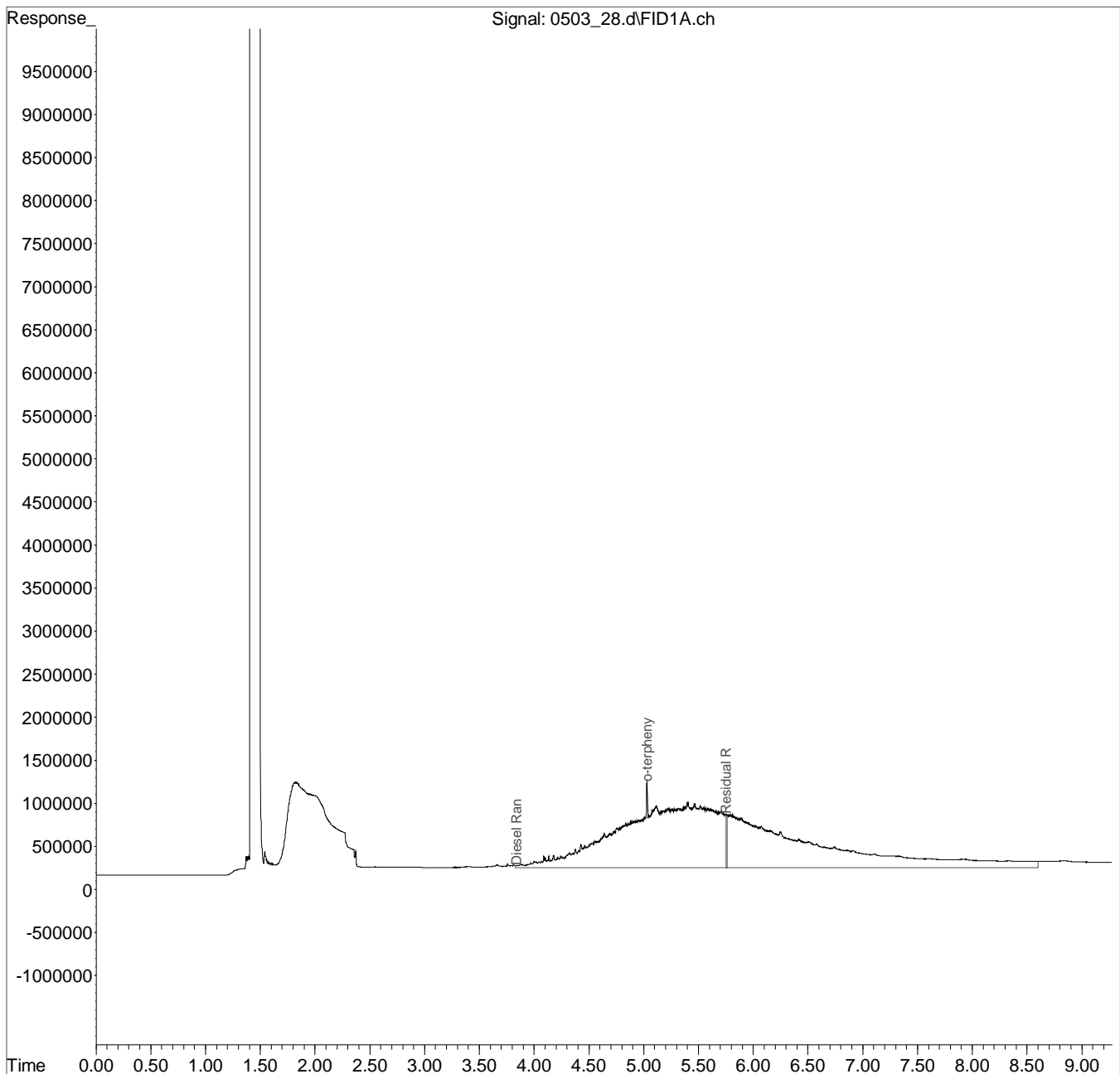
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
Data File : 0503 28.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 5:41 pm  
Operator : 784  
Sample : L989723-06 5x WG1104931 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 11 Sample Multiplier: 0.238  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 04 08:19:28 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

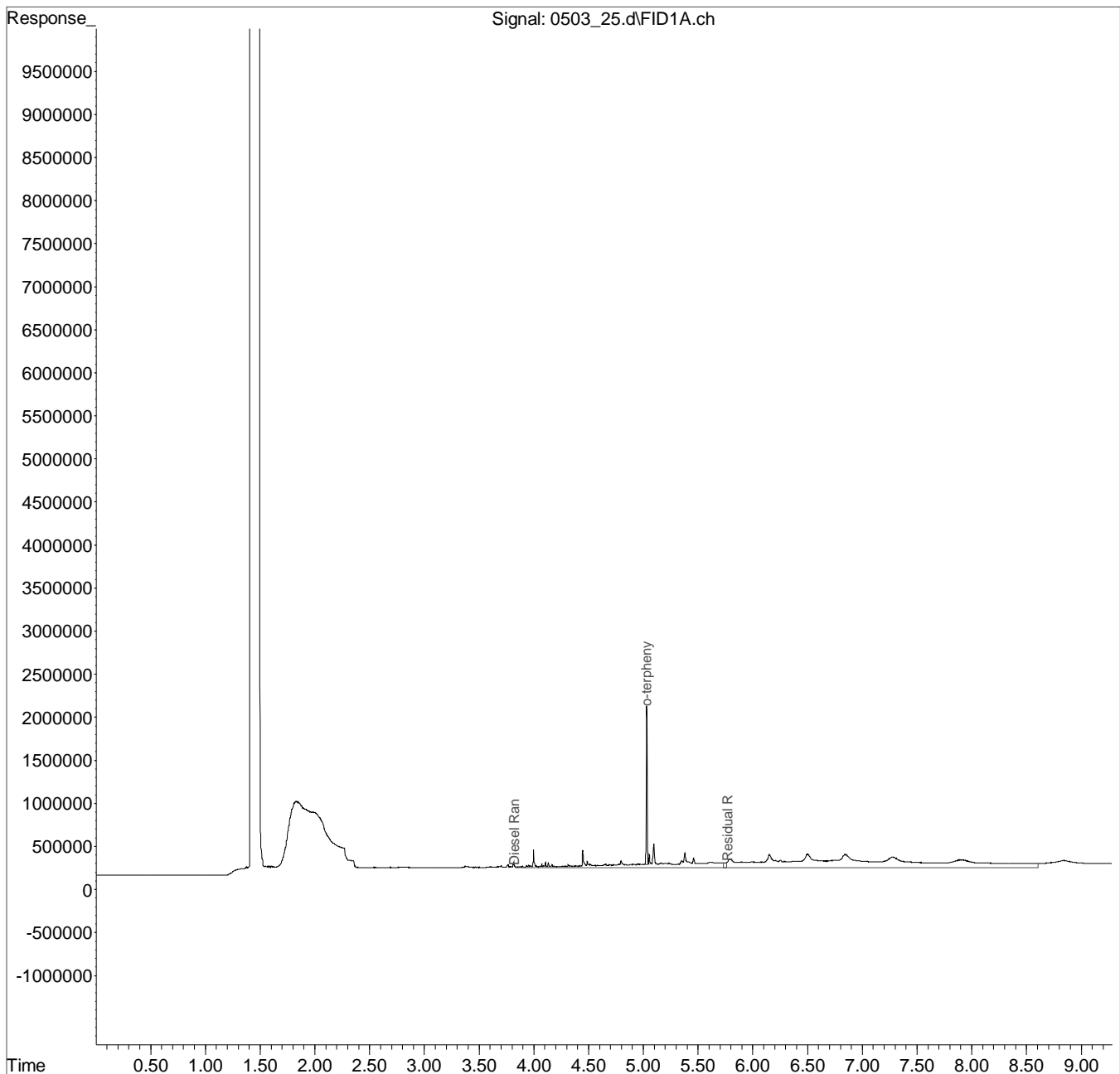
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
Data File : 0503 25.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 4:52 pm  
Operator : 784  
Sample : L989723-07 1x WG1104931 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 9 Sample Multiplier: 0.0476  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 03 17:07:50 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

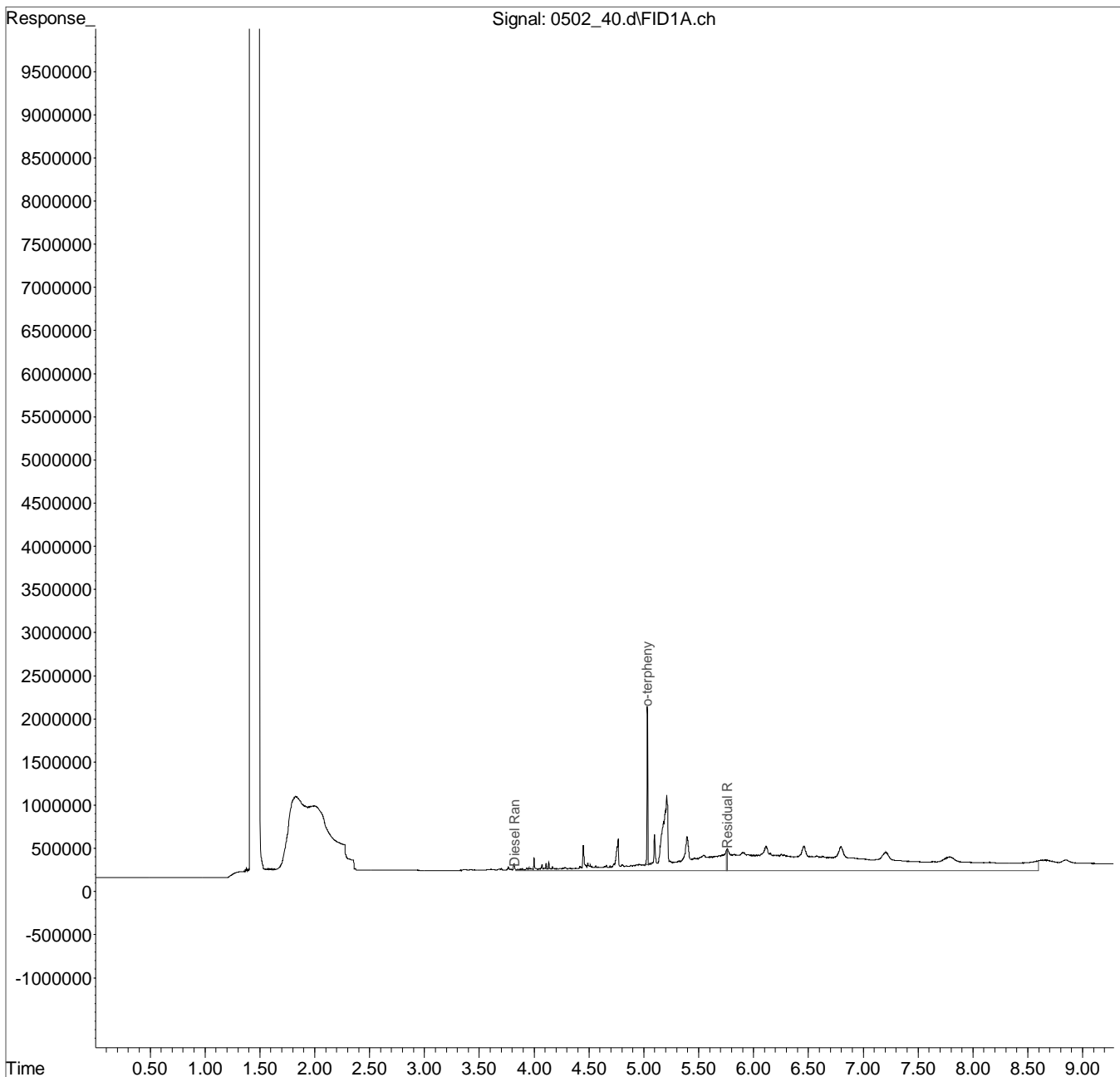
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050218\  
 Data File : 0502 40.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 3:12 am  
 Operator : 647  
 Sample : L989723-08 1x WG1104931 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 23 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 03 08:53:34 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
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 Response via : Initial Calibration  
 Integrator: ChemStation

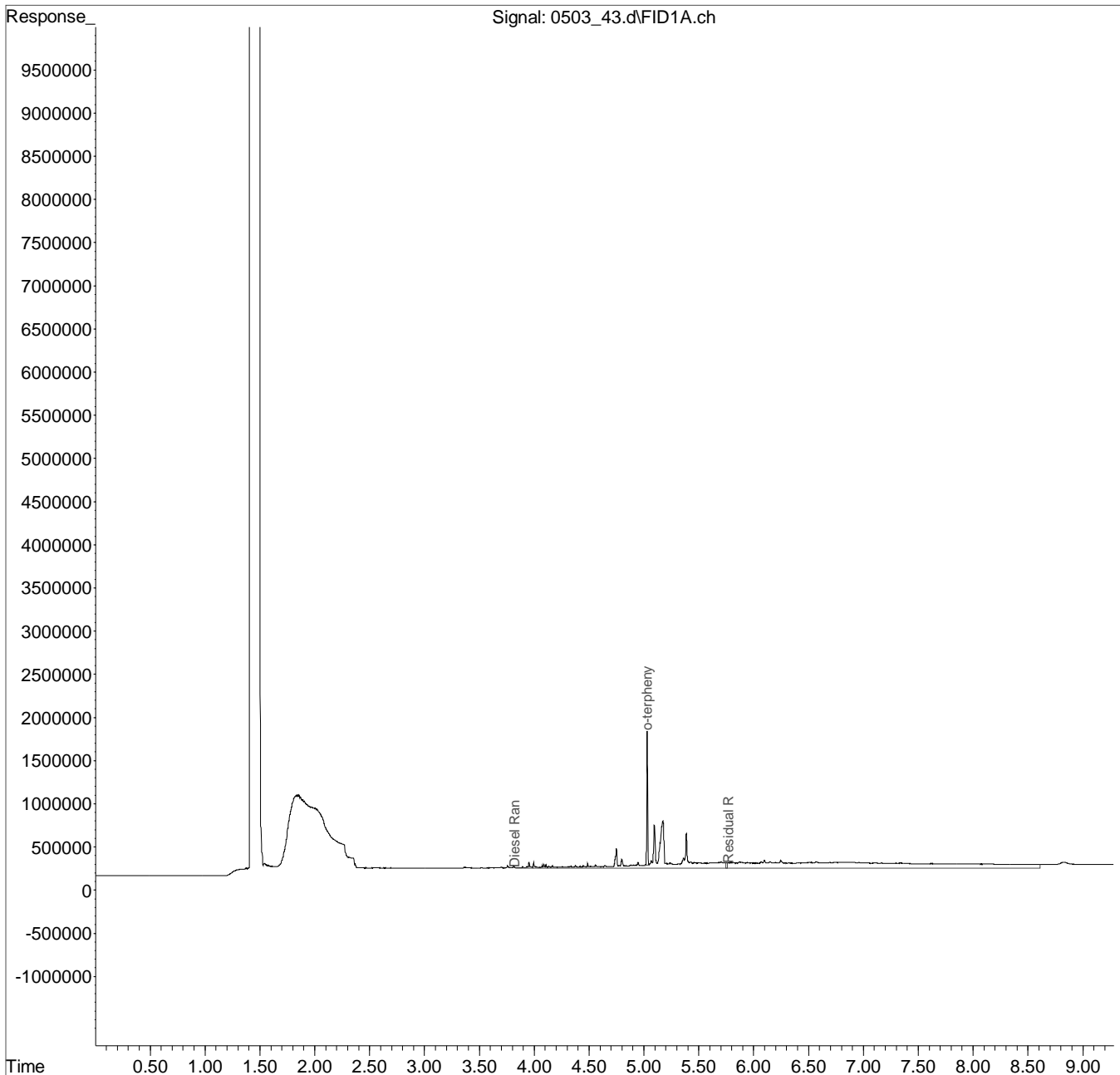
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
 Data File : 0503\_43.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 9:48 pm  
 Operator : 784  
 Sample : L989723-08 1x WG1104932 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 30 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 04 08:33:29 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

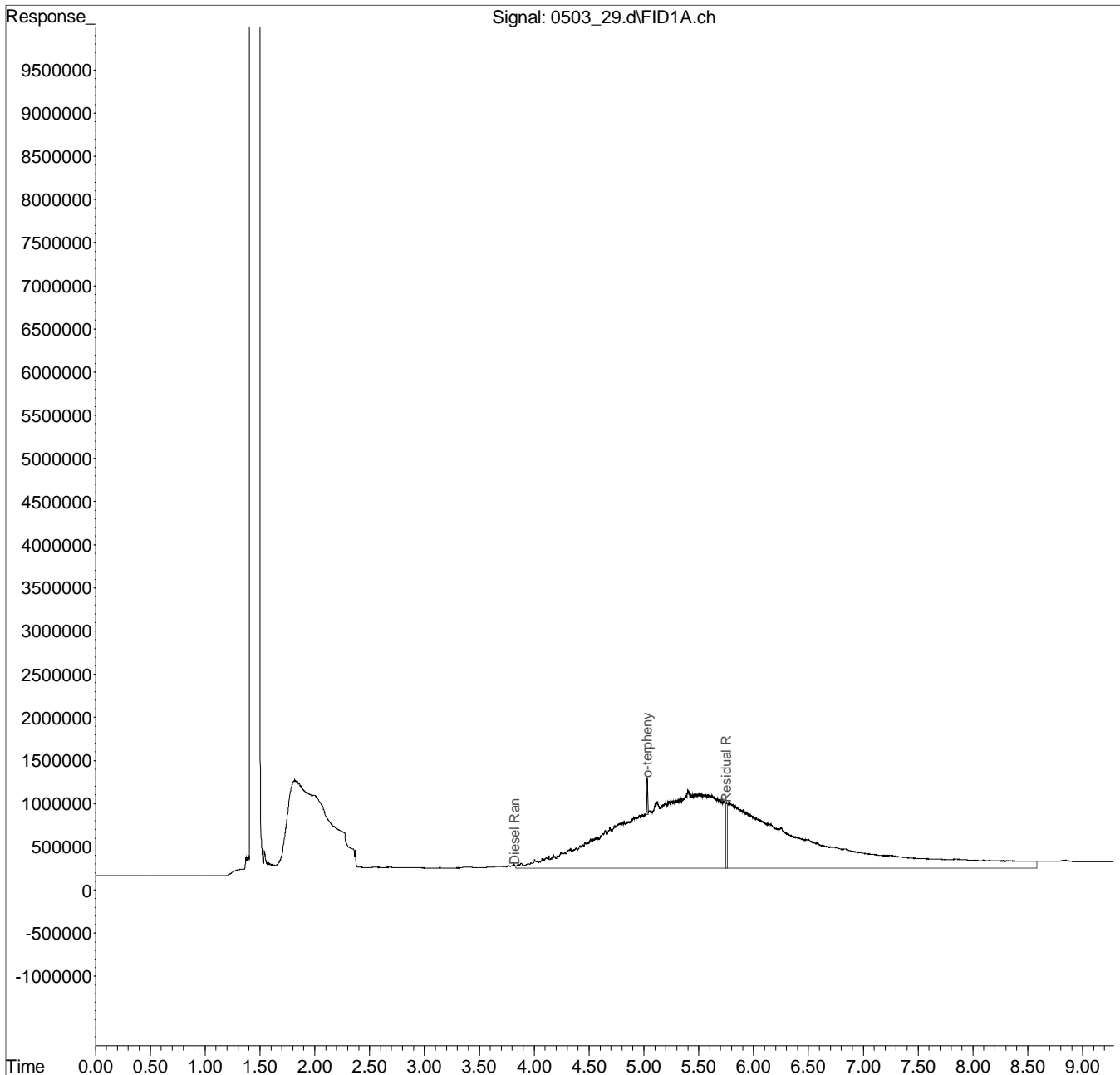
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
 Data File : 0503 29.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 5:58 pm  
 Operator : 784  
 Sample : L989723-09 5x WG1104931 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 12 Sample Multiplier: 0.238  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 04 08:20:08 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

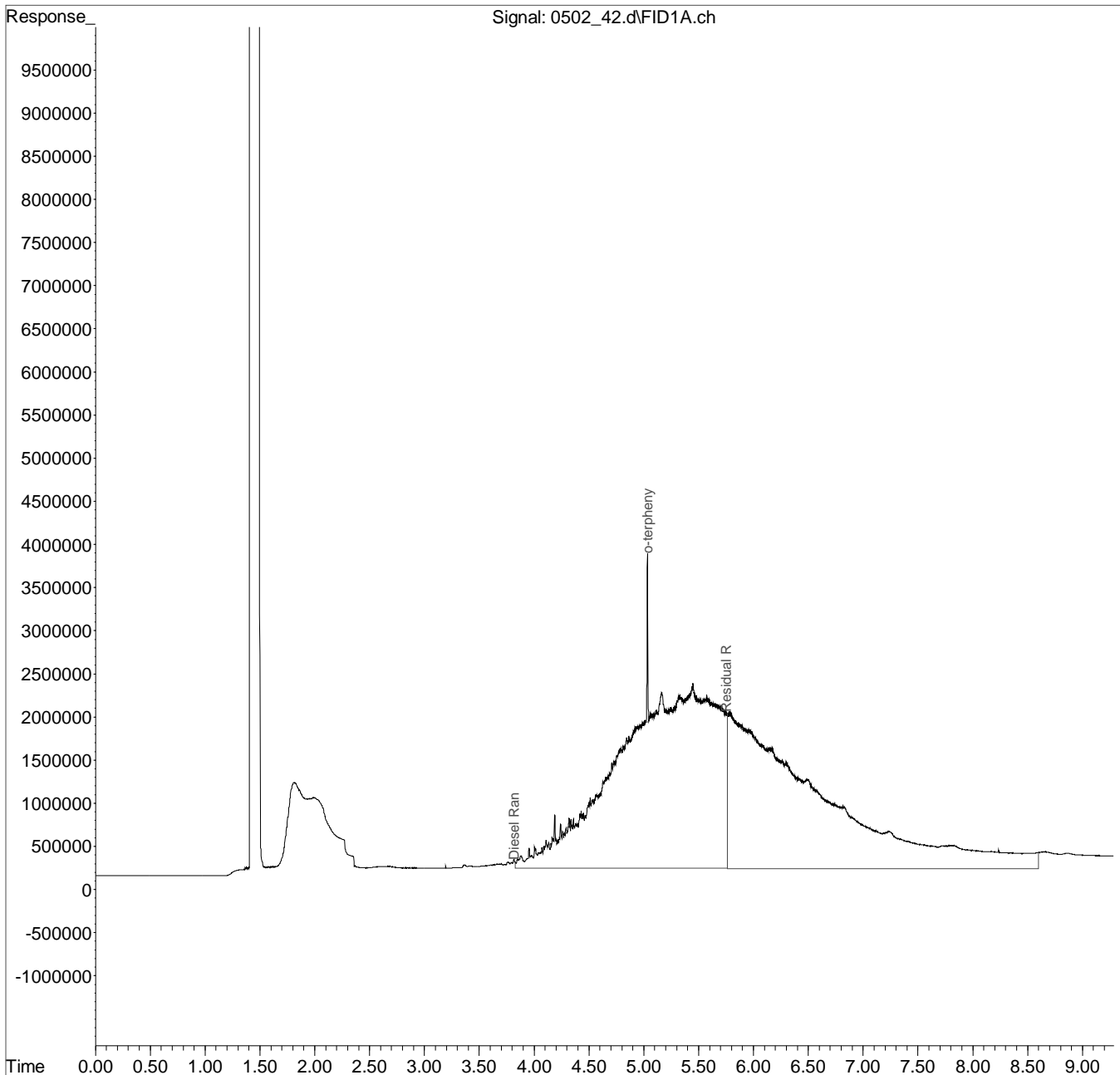
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050218\  
 Data File : 0502 42.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 3:45 am  
 Operator : 647  
 Sample : L989723-10 1x WG1104931 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 25 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 03 08:55:30 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

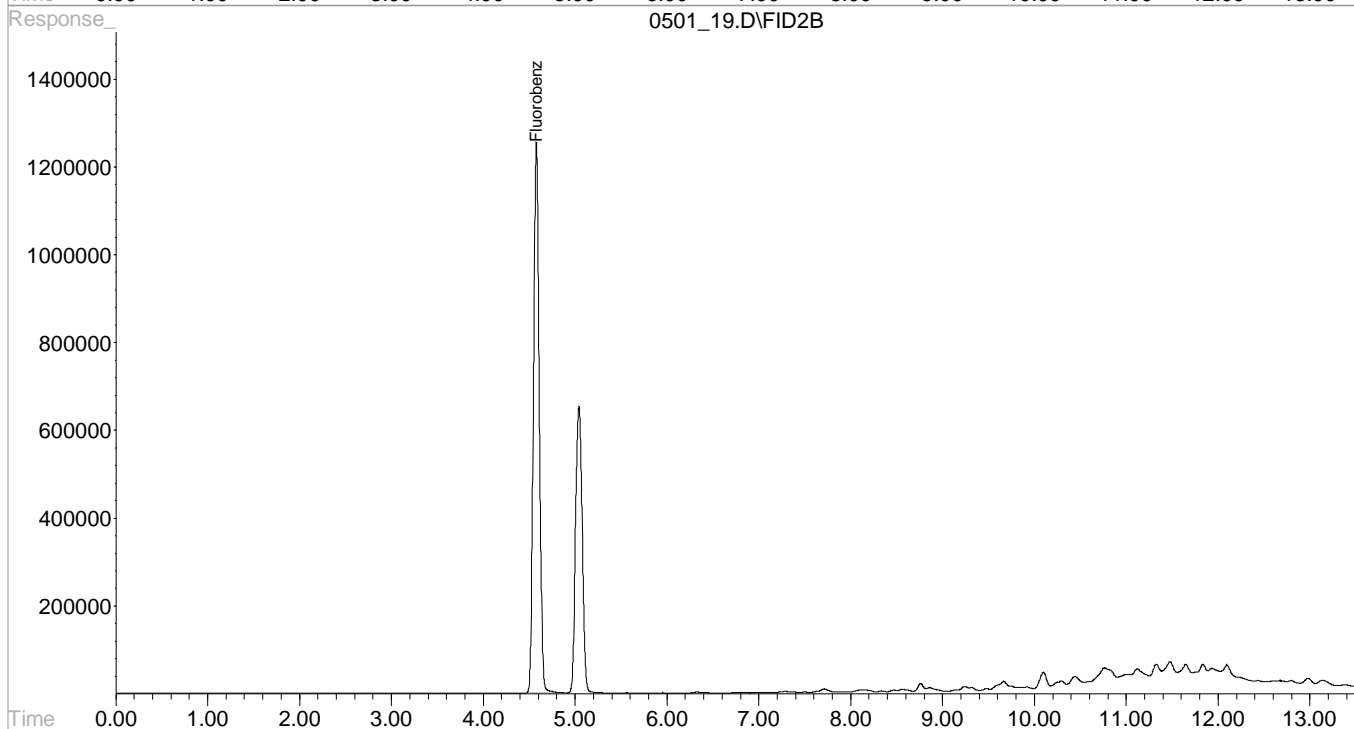
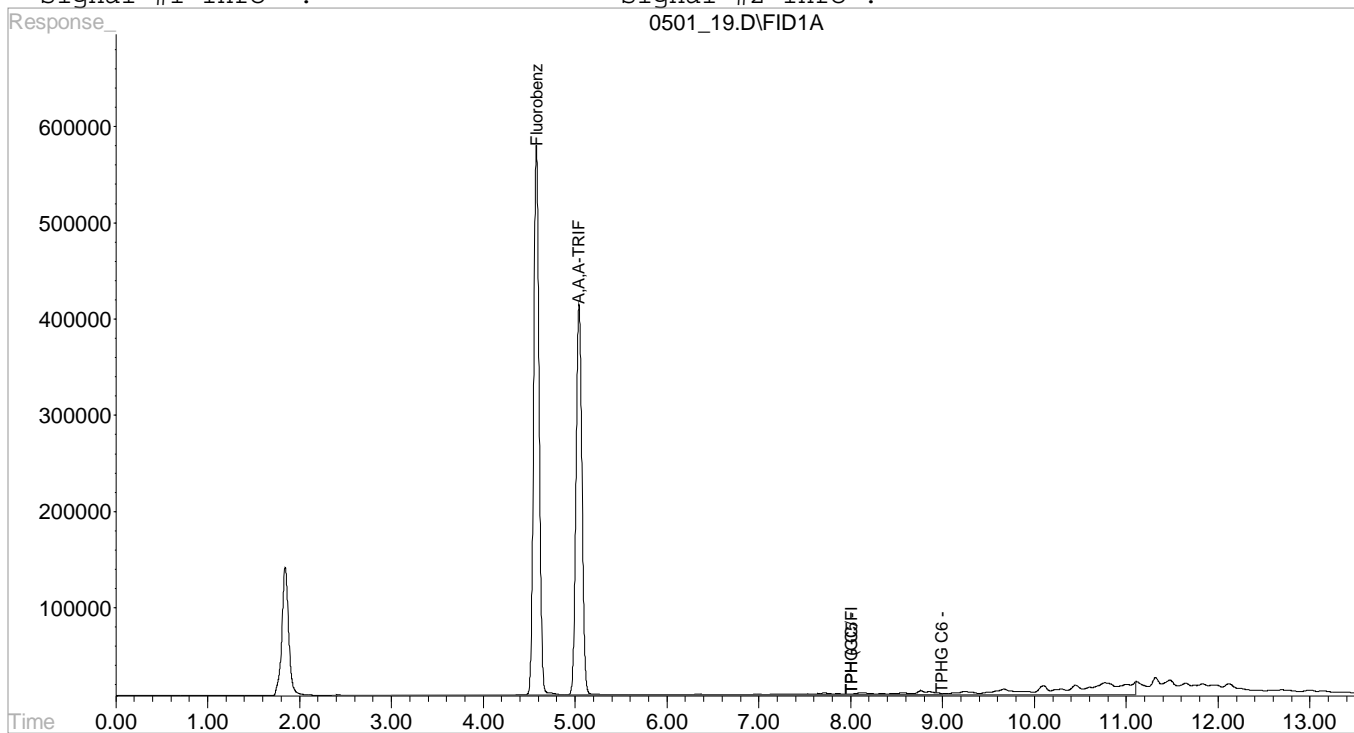
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\050118\0501 19.D\FID1A.CH Vial: 18  
Signal #2 : C:\HPCHEM\1\DATA\050118\0501 19.D\FID2B.CH  
Acq On : 1 May 2018 7:22 pm Operator: 605  
Sample : L989723-10 1x WG1105159 Inst : VOCGC6  
Misc : water Multiplr: 1.00  
IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
Quant Time: May 2 10:37 2018 Quant Results File: BG06C29R.RES

Quant Method : C:\HPCHEM\1\METHODS\BG06C29R.M (Chemstation Integrator)  
Title : BTEX/GRO VOCGC06  
Last Update : Fri Mar 30 08:35:28 2018  
Response via : Single Level Calibration  
DataAcq Meth : PVOCW.M

Volume Inj. :  
Signal #1 Phase : Signal #2 Phase:  
Signal #1 Info : Signal #2 Info :

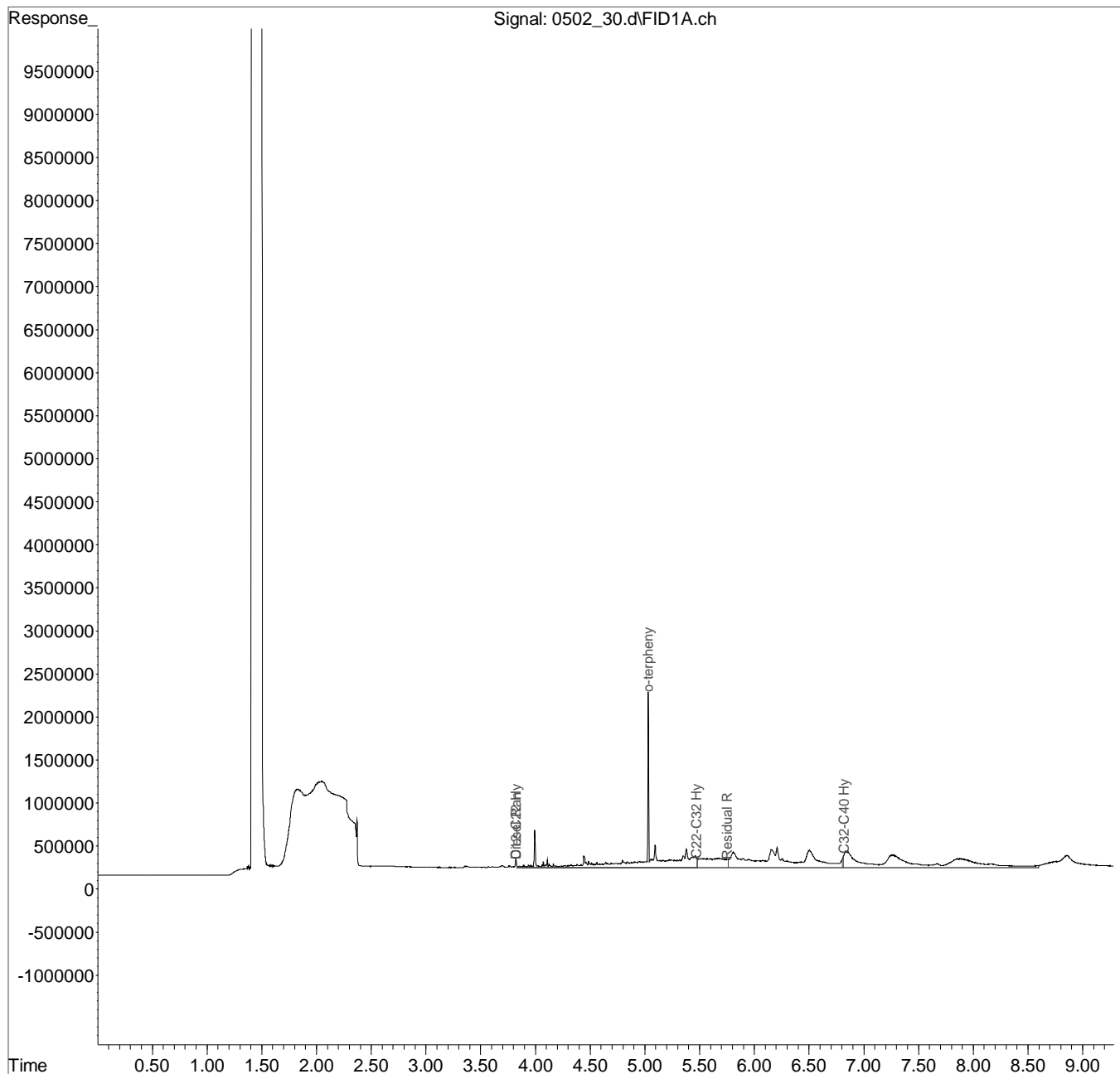




Data Path : C:\msdchem\1\data\050218\  
Data File : 0502 30.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 12:29 am  
Operator : 647  
Sample : L989723-11 1x WG1104931 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 13 Sample Multiplier: 0.0476  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 03 01:13:59 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

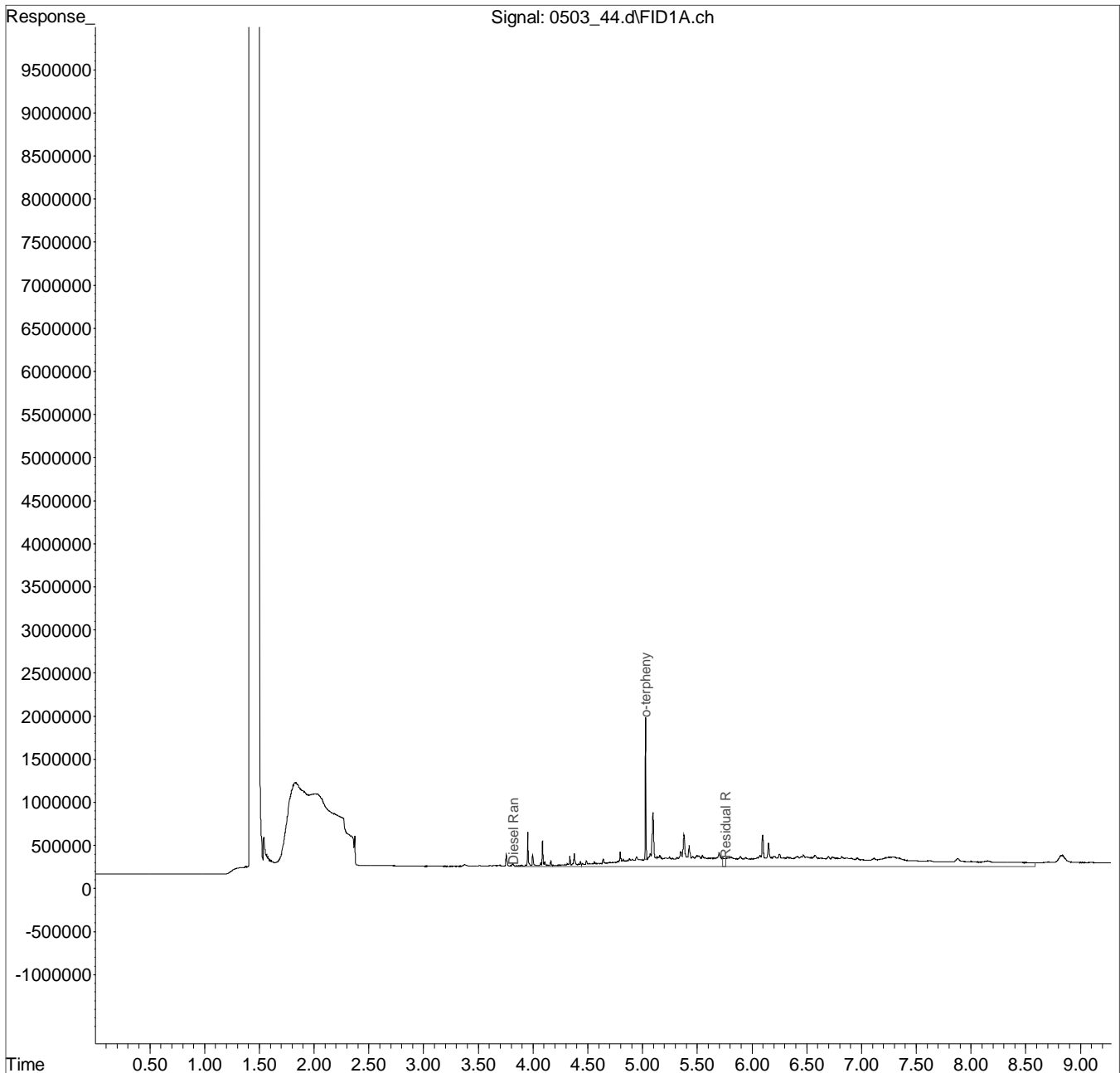
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
 Data File : 0503 44.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 10:04 pm  
 Operator : 784  
 Sample : L989723-11 1x WG1104932 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 31 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 04 08:33:55 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

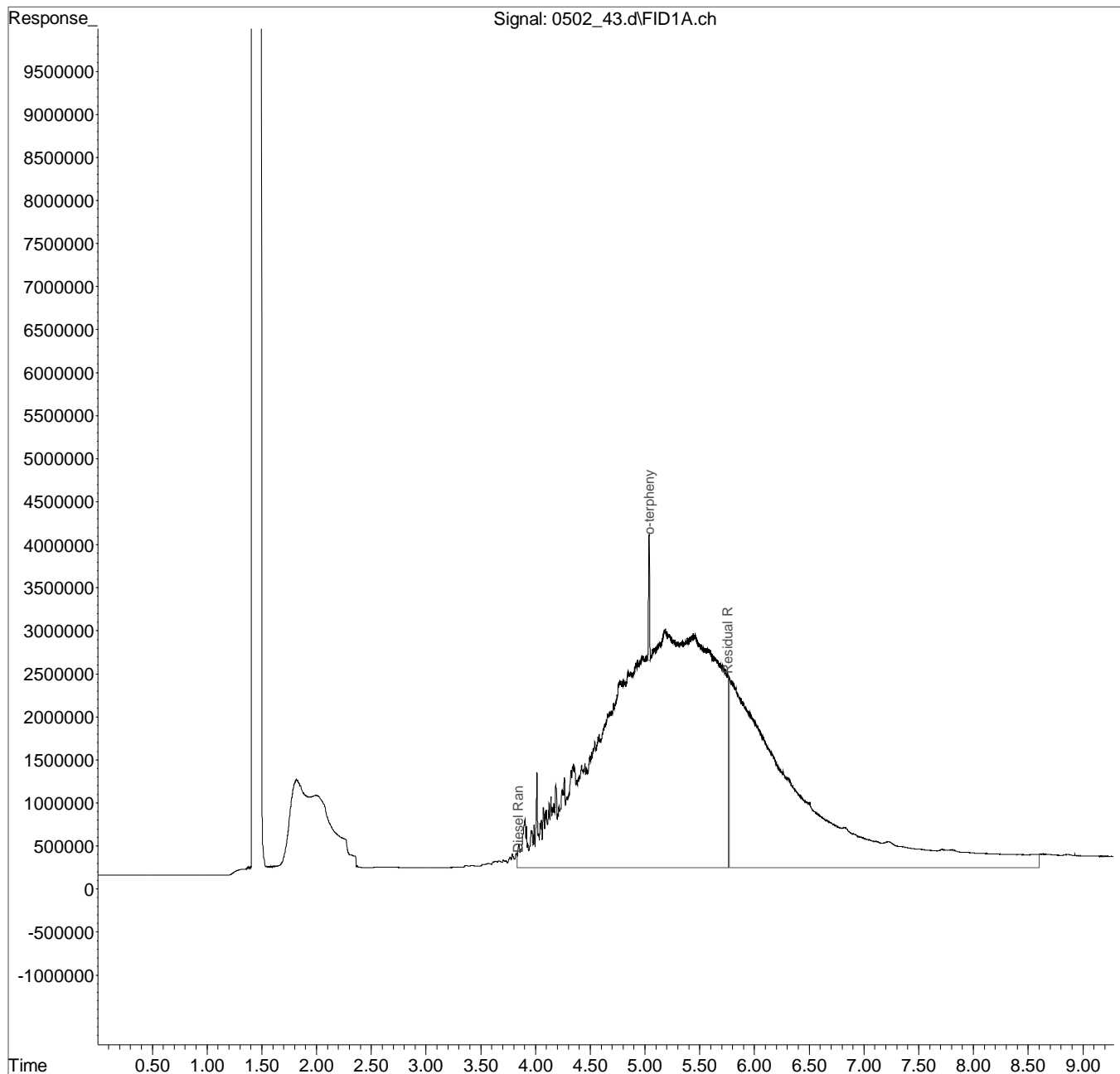
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050218\  
Data File : 0502\_43.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 4:01 am  
Operator : 647  
Sample : L989723-12 1x WG1104931 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 26 Sample Multiplier: 0.0476  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 03 09:07:59 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

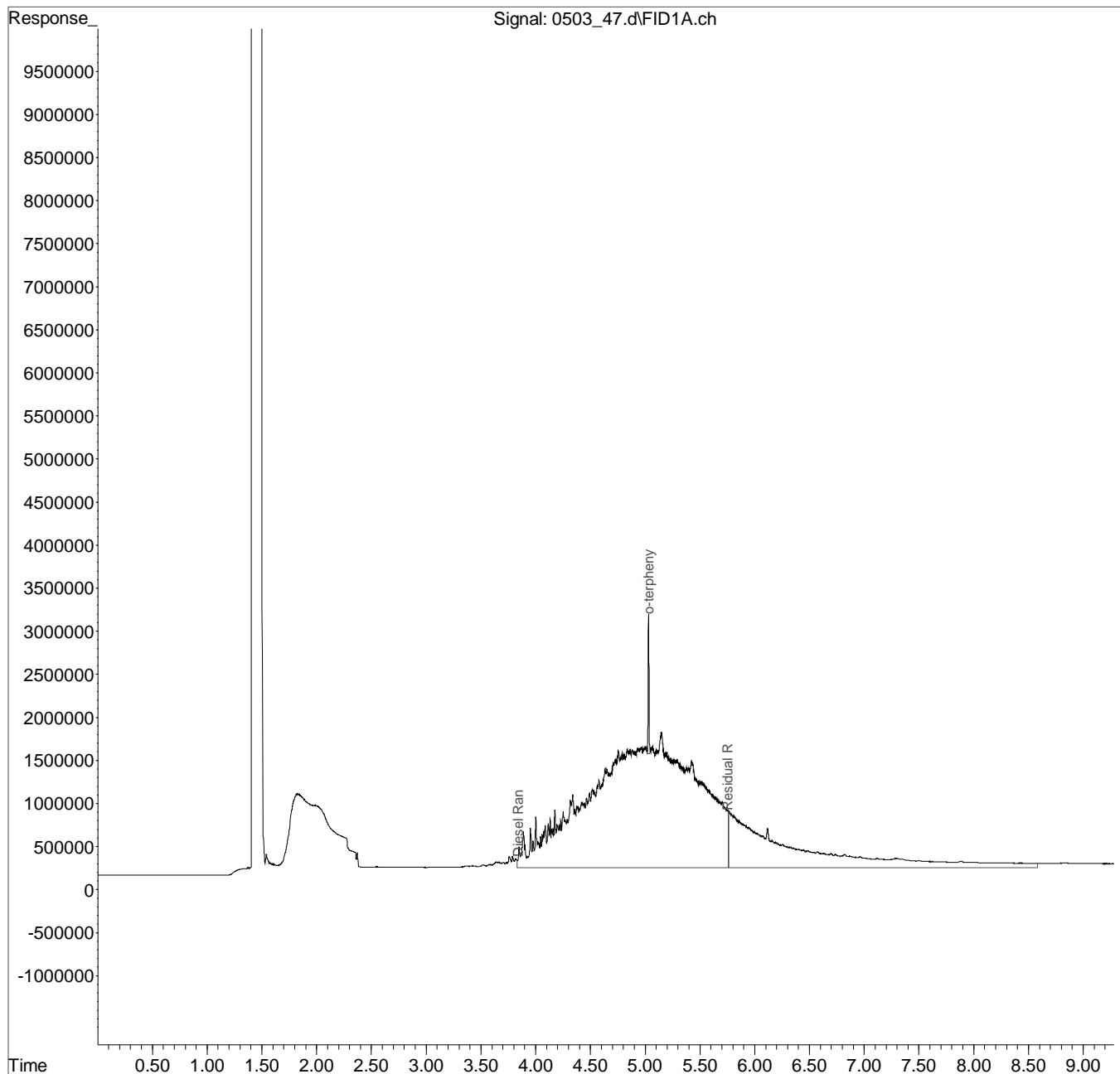
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
Data File : 0503\_47.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 10:53 pm  
Operator : 784  
Sample : L989723-12 1x WG1104932 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 34 Sample Multiplier: 0.0476  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 04 08:35:52 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

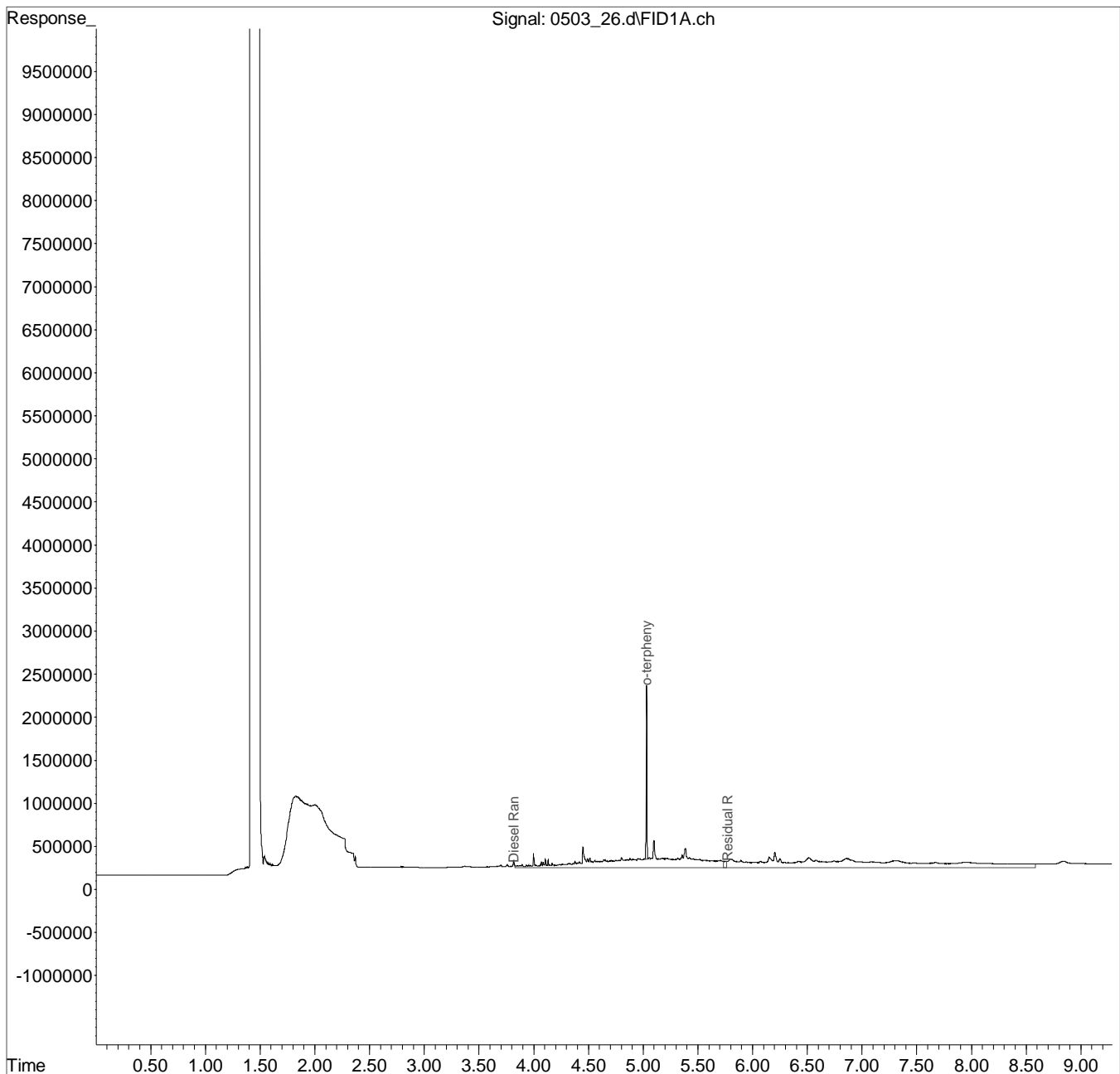
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
Data File : 0503 26.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 5:08 pm  
Operator : 784  
Sample : L989723-13 1x WG1104931 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 10 Sample Multiplier: 0.0476  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 04 08:17:50 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

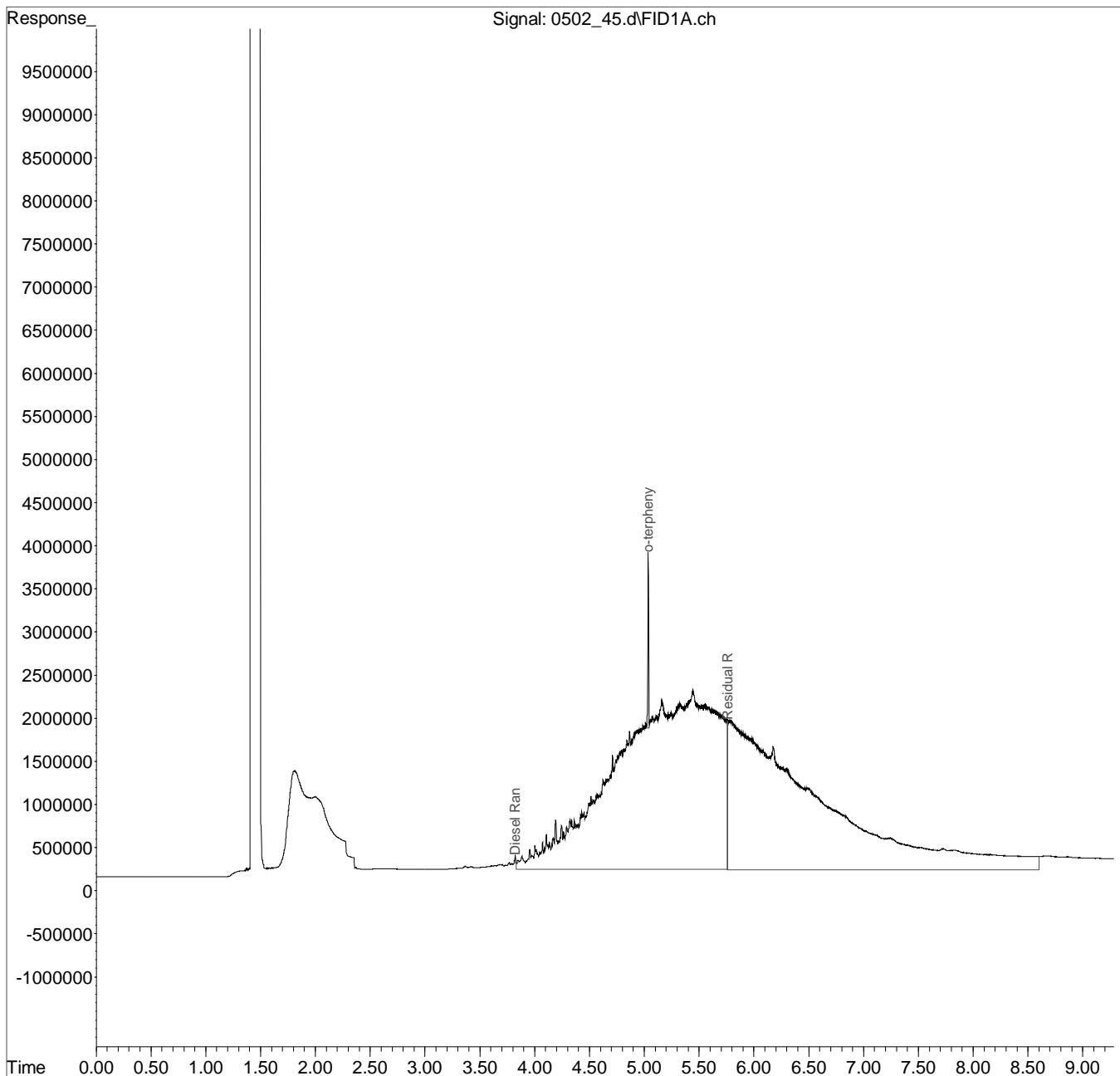
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050218\  
 Data File : 0502 45.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 4:34 am  
 Operator : 647  
 Sample : L989723-14 1x WG1104931 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 28 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 03 09:10:17 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

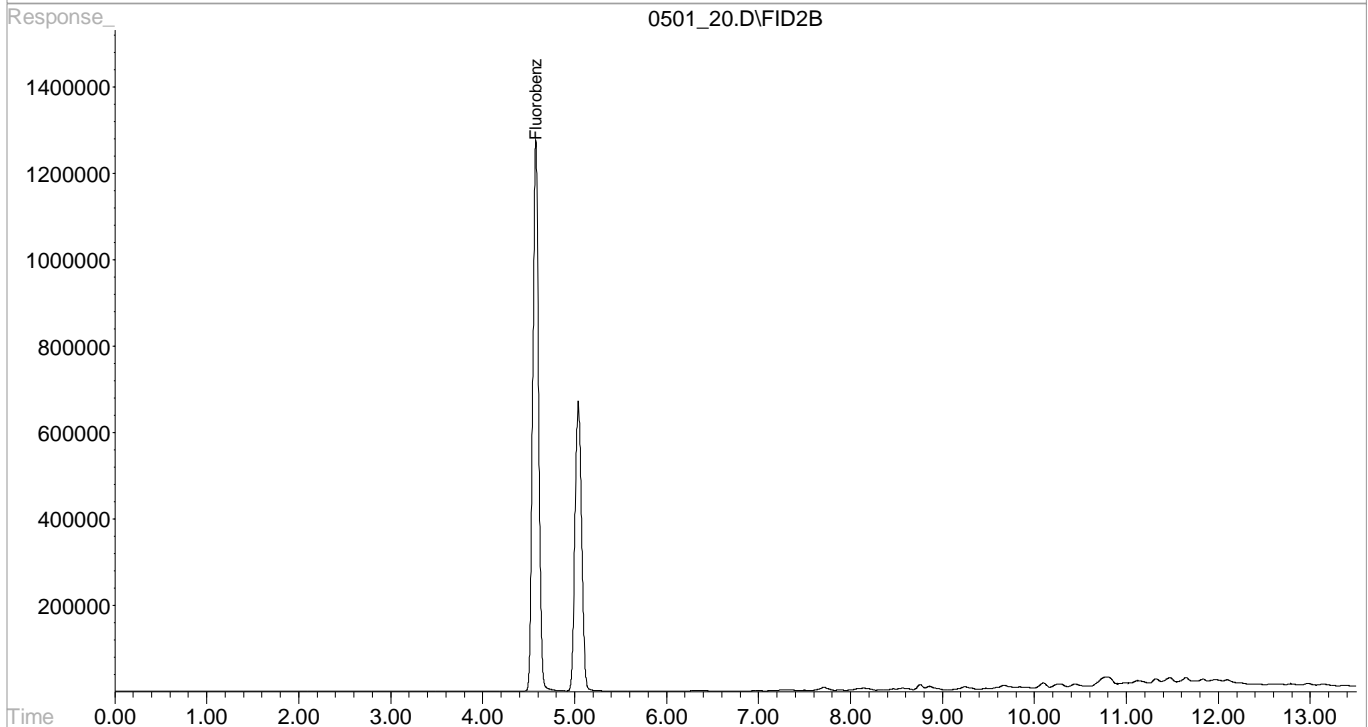
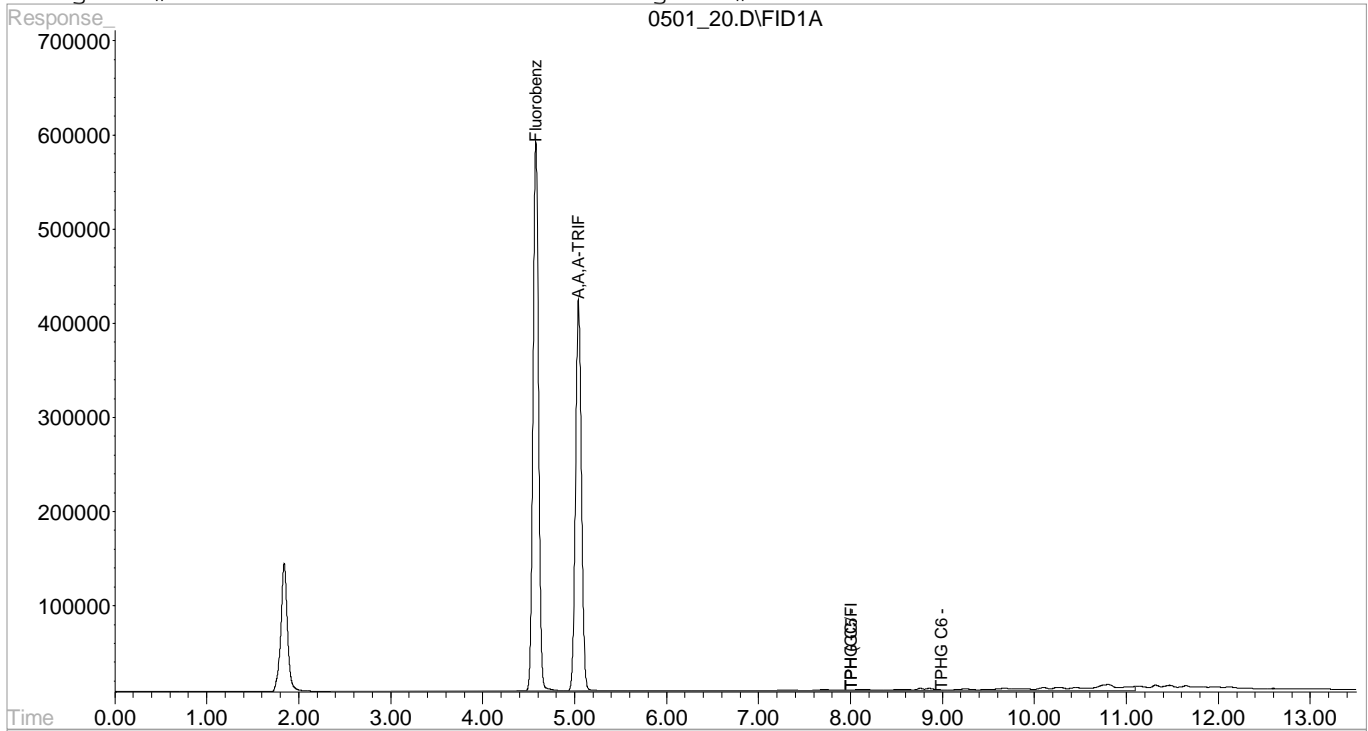
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\050118\0501 20.D\FID1A.CH Vial: 19  
Signal #2 : C:\HPCHEM\1\DATA\050118\0501 20.D\FID2B.CH  
Acq On : 1 May 2018 7:46 pm Operator: 605  
Sample : L989723-14 1x WG1105159 Inst : VOCGC6  
Misc : water Multiplr: 1.00  
IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
Quant Time: May 2 10:37 2018 Quant Results File: BG06C29R.RES

Quant Method : C:\HPCHEM\1\METHODS\BG06C29R.M (Chemstation Integrator)  
Title : BTEX/GRO VOCGC06  
Last Update : Fri Mar 30 08:35:28 2018  
Response via : Single Level Calibration  
DataAcq Meth : PVOCW.M

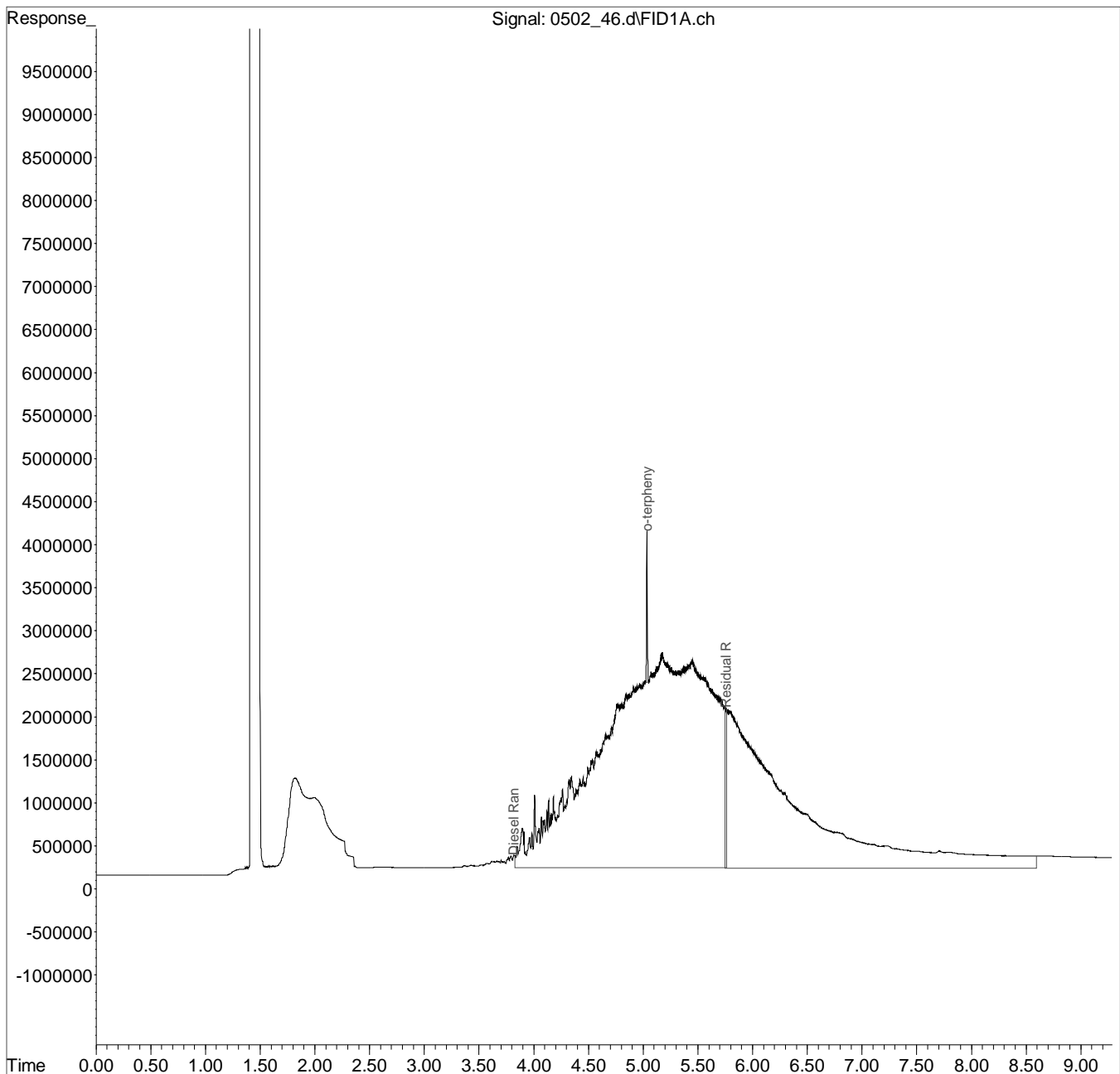
Volume Inj. :  
Signal #1 Phase : Signal #2 Phase:  
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\050218\  
Data File : 0502\_46.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 4:50 am  
Operator : 647  
Sample : L989723-15 1x WG1104931 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 29 Sample Multiplier: 0.0476  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 03 09:10:55 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M

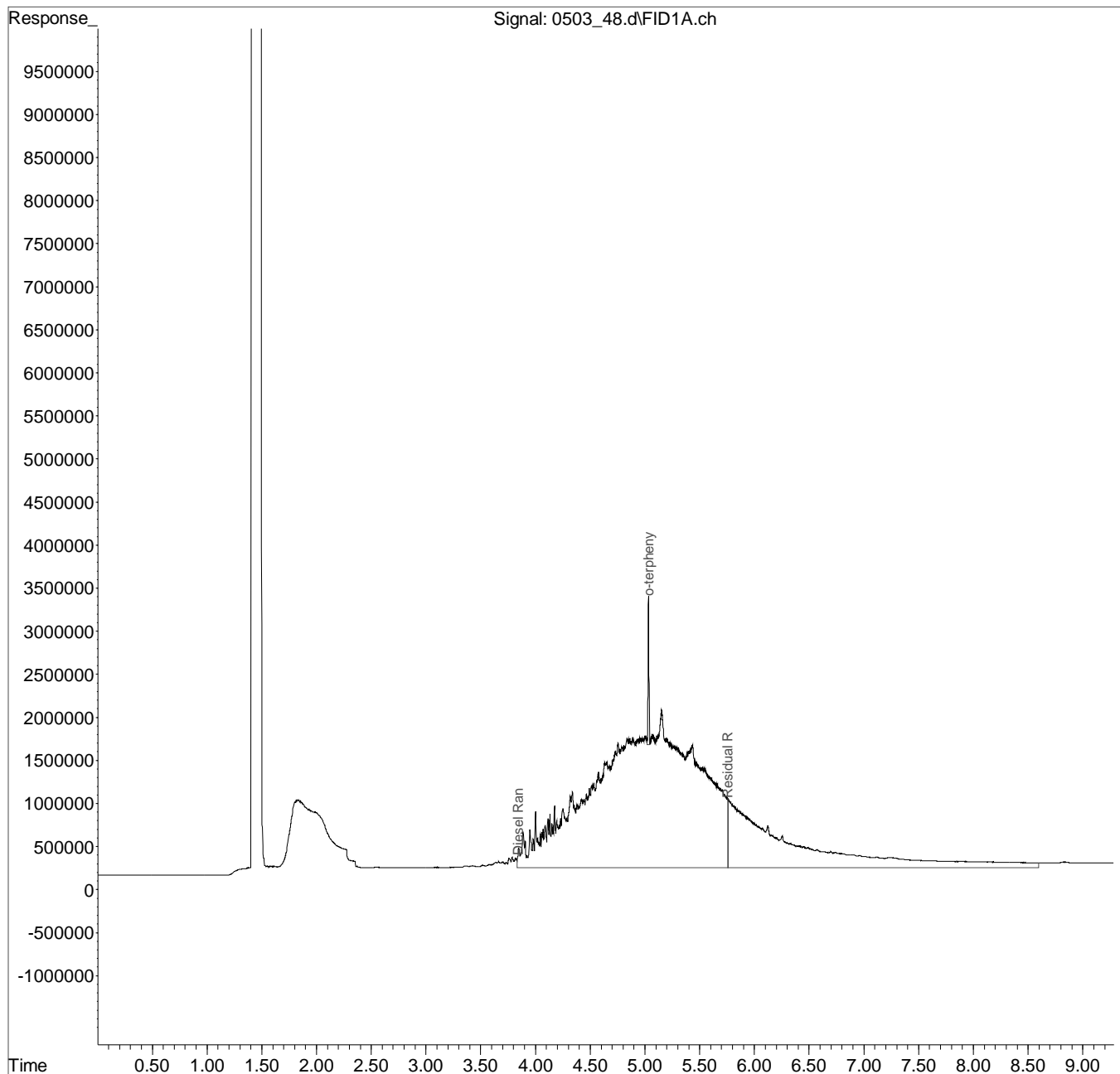




Data Path : C:\msdchem\1\data\050318\  
Data File : 0503\_48.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 11:09 pm  
Operator : 784  
Sample : L989723-15 1x WG1104932 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 35 Sample Multiplier: 0.0476  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 04 08:36:29 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

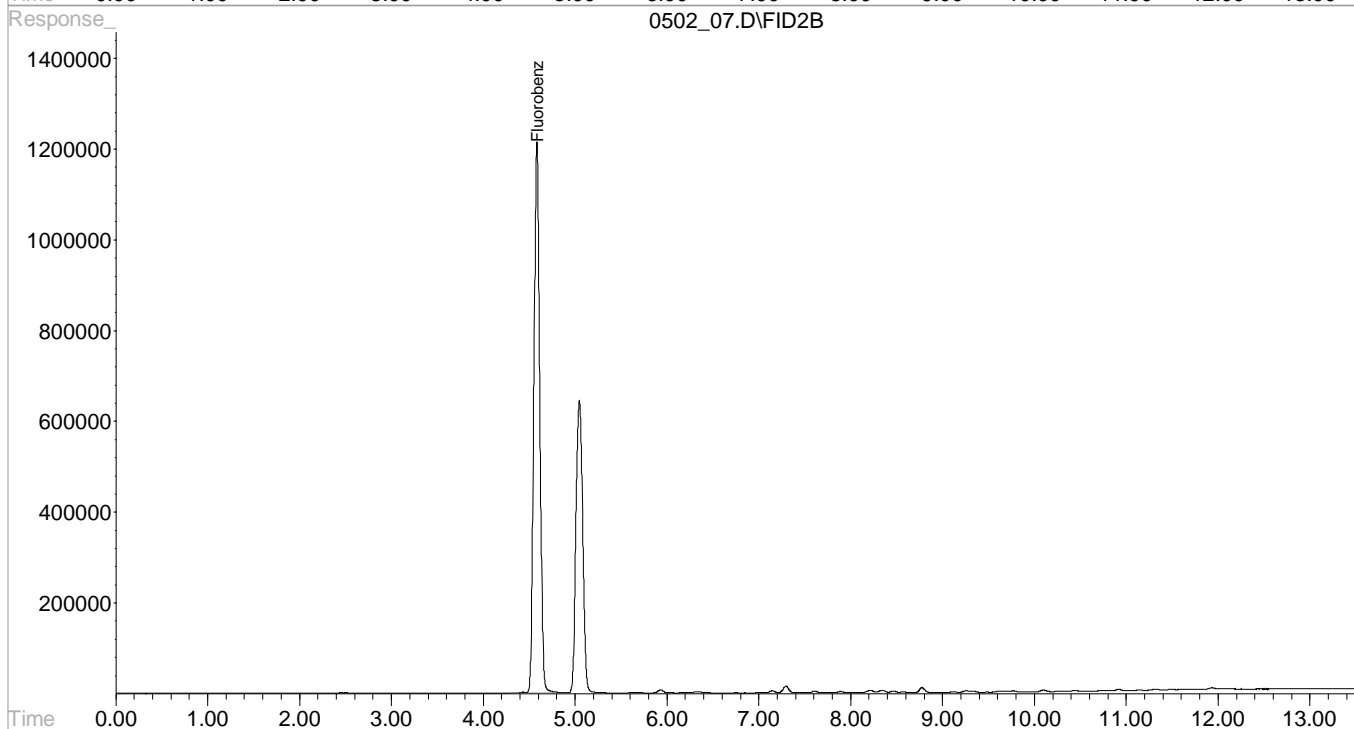
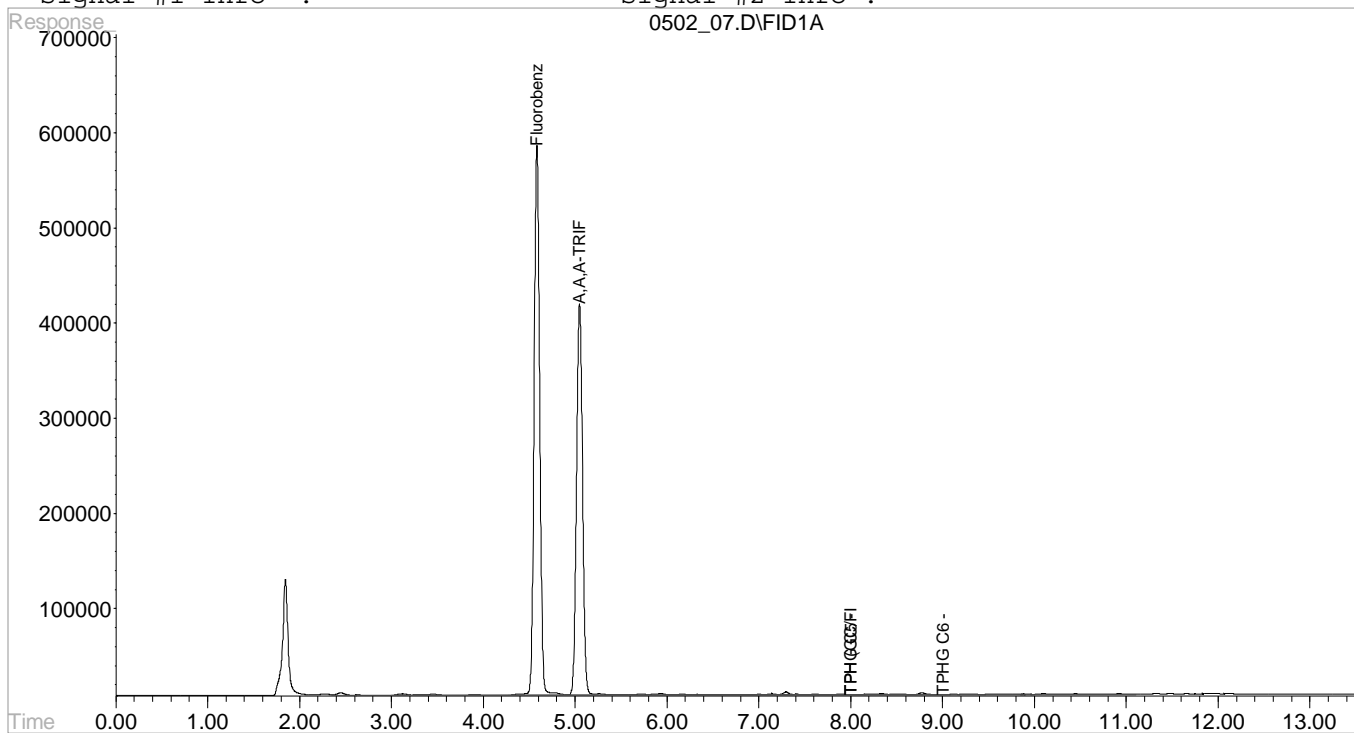
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\050218\0502 07.D\FID1A.CH Vial: 7  
 Signal #2 : C:\HPCHEM\1\DATA\050218\0502 07.D\FID2B.CH  
 Acq On : 2 May 2018 4:03 pm Operator: 605  
 Sample : L989723-16 1x WG1105159 RE Inst : VOCGC6  
 Misc : water Multiplr: 1.00  
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
 Quant Time: May 3 15:02 2018 Quant Results File: BG06C29R.RES

Quant Method : C:\HPCHEM\1\METHODS\BG06C29R.M (Chemstation Integrator)  
 Title : BTEX/GRO VOCGC06  
 Last Update : Fri Mar 30 08:35:28 2018  
 Response via : Single Level Calibration  
 DataAcq Meth : PVOCW.M

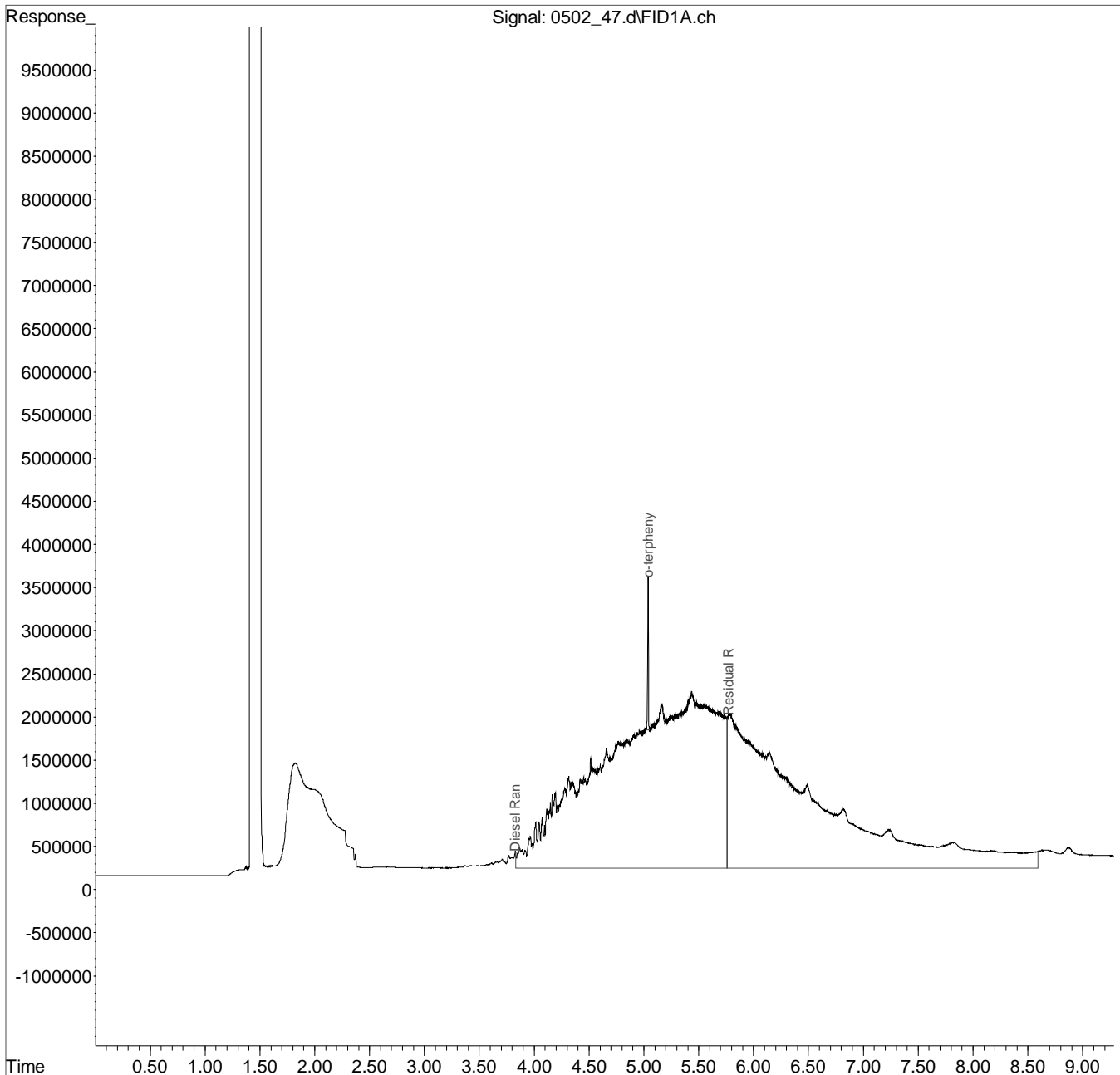
Volume Inj. :  
 Signal #1 Phase : Signal #2 Phase:  
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\050218\  
 Data File : 0502\_47.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 5:06 am  
 Operator : 647  
 Sample : L989723-20 1x WG1104931 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 30 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 03 09:15:48 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

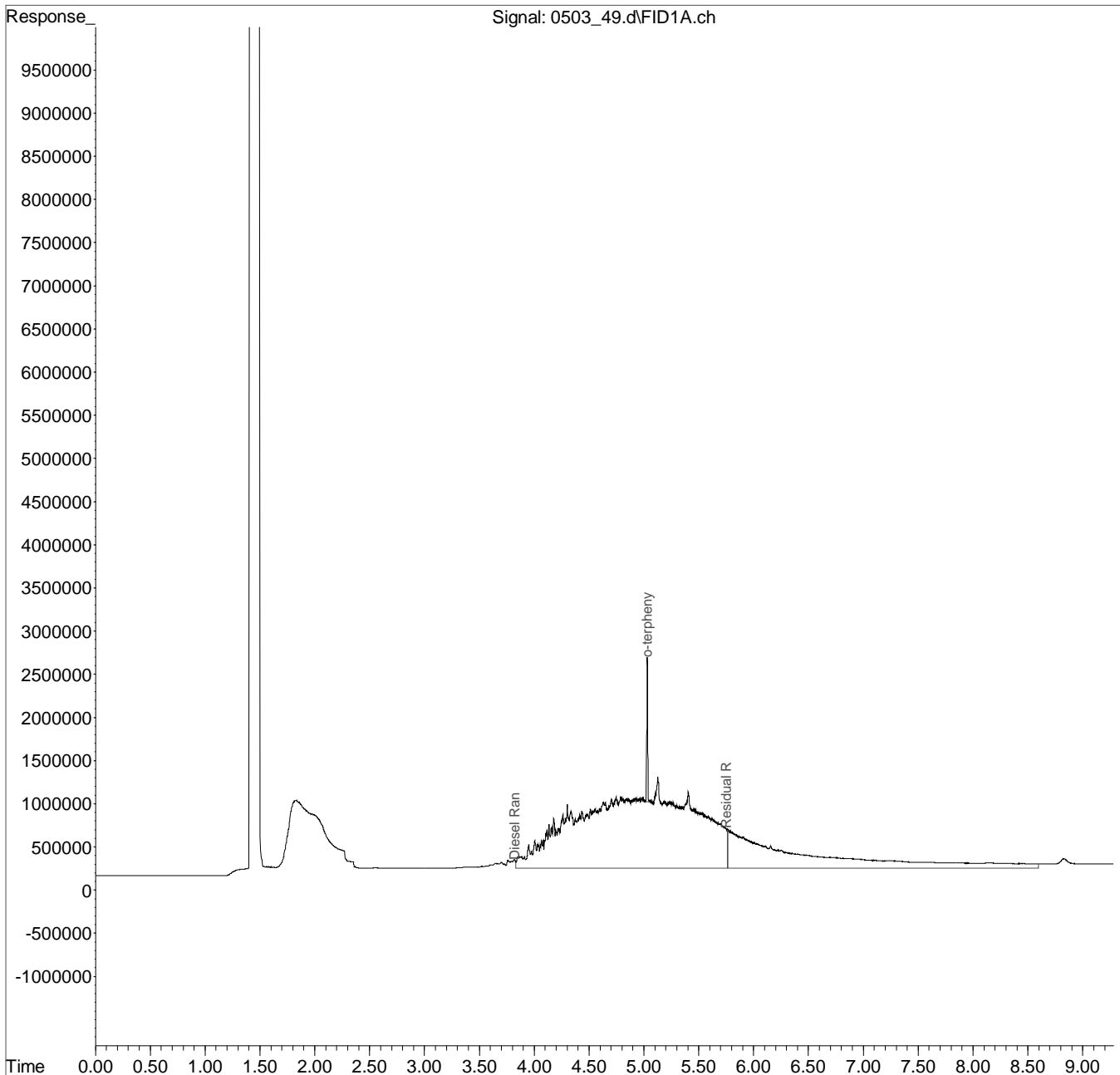
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
 Data File : 0503 49.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 11:26 pm  
 Operator : 784  
 Sample : L989723-20 1x WG1104932 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 36 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 04 08:37:04 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

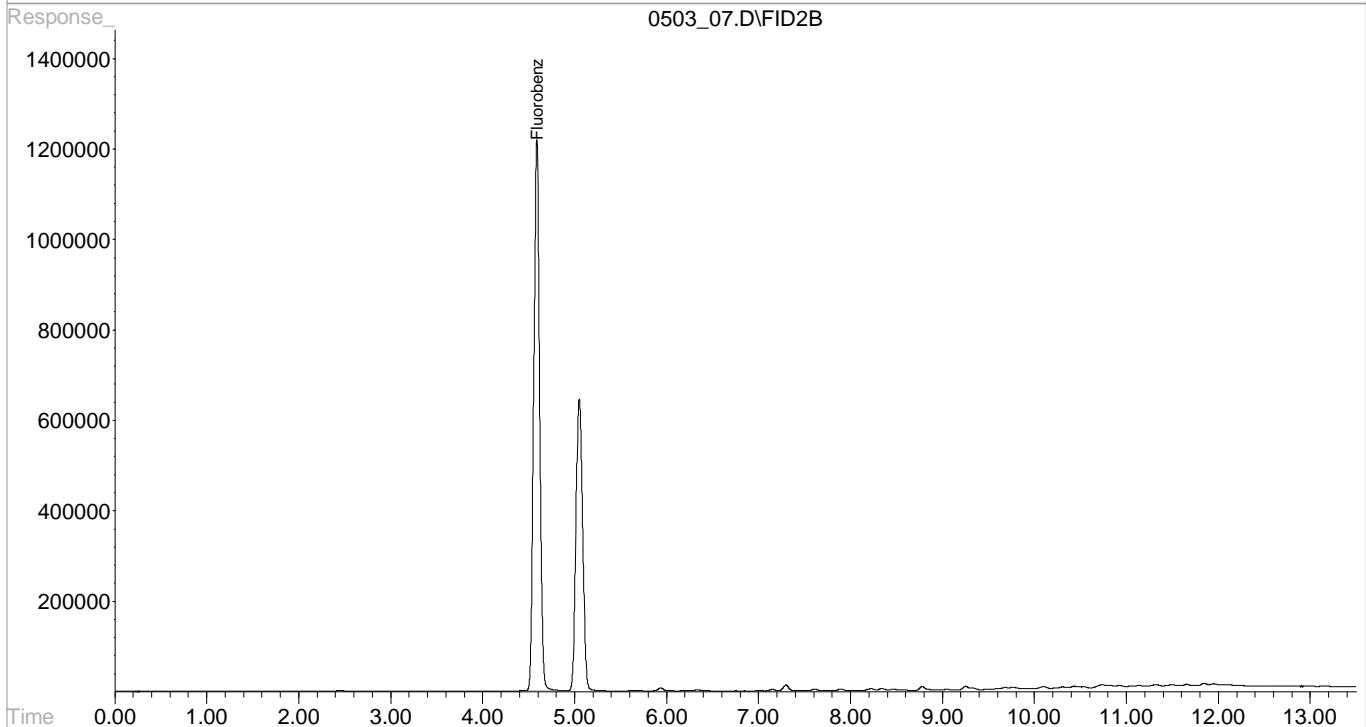
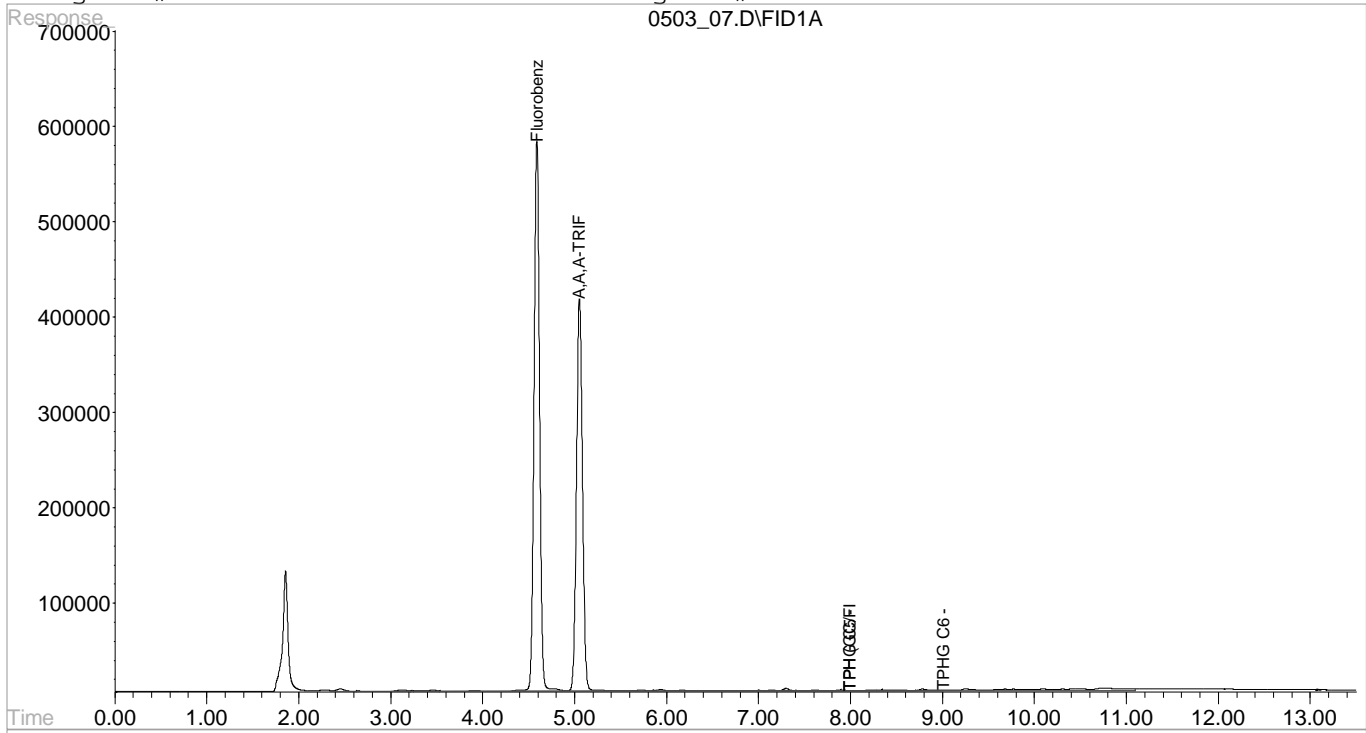
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M

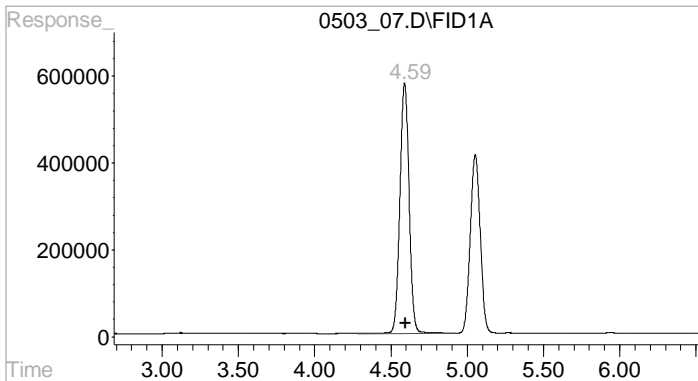


Signal #1 : C:\HPCHEM\1\DATA\050318\0503 07.D\FID1A.CH Vial: 7  
 Signal #2 : C:\HPCHEM\1\DATA\050318\0503 07.D\FID2B.CH  
 Acq On : 3 May 2018 2:10 pm Operator: 605  
 Sample : L989723-20 1x WG1106198 Inst : VOCGC6  
 Misc : water Multiplr: 1.00  
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
 Quant Time: May 3 17:17 2018 Quant Results File: BG06C29R.RES

Quant Method : C:\HPCHEM\1\METHODS\BG06C29R.M (Chemstation Integrator)  
 Title : BTEX/GRO VOCGC06  
 Last Update : Fri Mar 30 08:35:28 2018  
 Response via : Single Level Calibration  
 DataAcq Meth : PVOCW.M

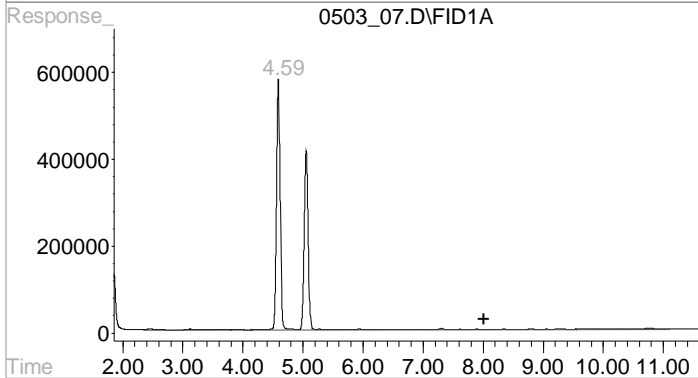
Volume Inj. :  
 Signal #1 Phase : Signal #2 Phase:  
 Signal #1 Info : Signal #2 Info :





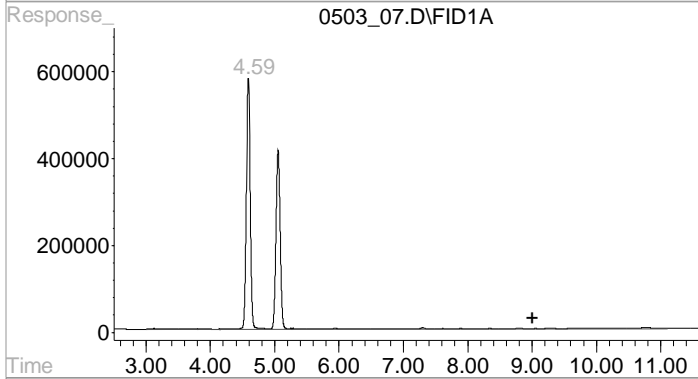
#1 Fluorobenzene (FID)

R.T.: 4.589 min  
 Delta R.T.: -0.006 min  
 Response: 24299447  
 Conc: 200.00 ppb



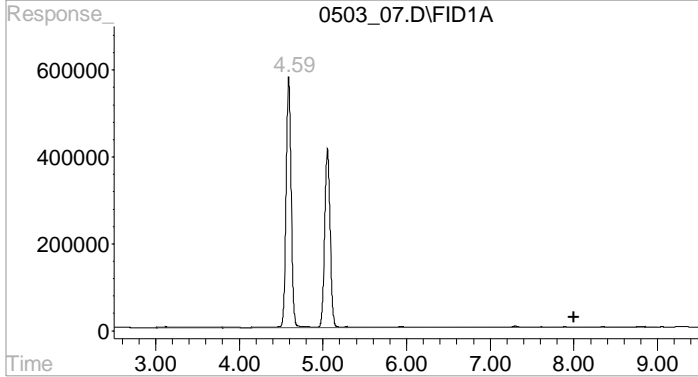
#2 TPHG C5 - C12

R.T.: 8.000 min  
 Delta R.T.: 0.000 min  
 Response: 4832199  
 Conc: 0.07 ppm m



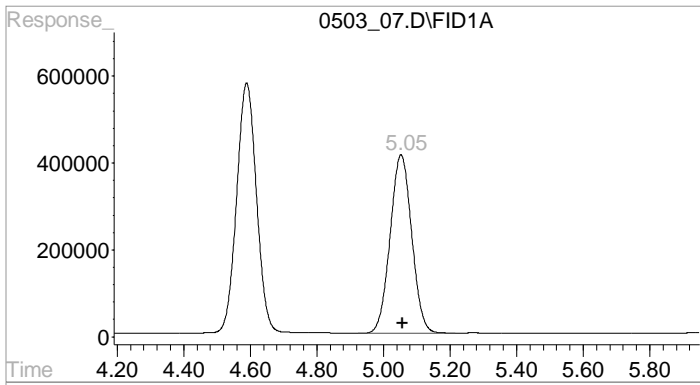
#3 TPHG C6 - C12

R.T.: 9.000 min  
 Delta R.T.: 0.000 min  
 Response: 4309500  
 Conc: 0.07 ppm m



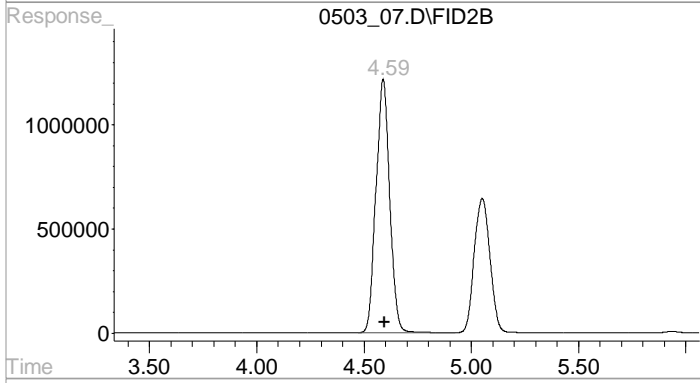
#4 TPH (GC/FID) Low Fraction

R.T.: 8.000 min  
 Delta R.T.: 0.000 min  
 Response: 2177968  
 Conc: 0.04 ppm m



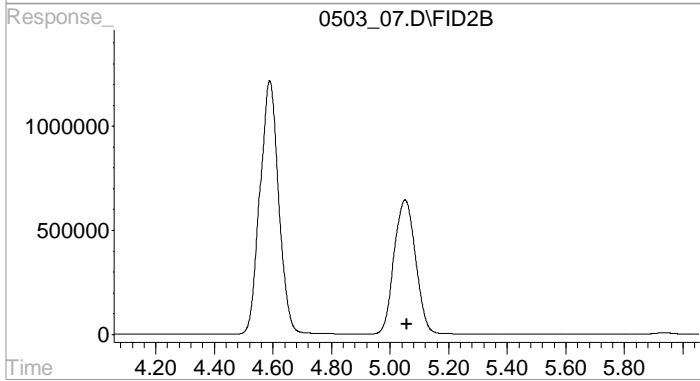
#5 A,A,A-TRIFLUOROTOLUENE (FID)

R.T.: 5.053 min  
 Delta R.T.: -0.004 min  
 Response: 18643684  
 Conc: 212.47 ppb



#7 Fluorobenzene (PID)

R.T.: 4.589 min  
 Delta R.T.: -0.006 min  
 Response: 54500024  
 Conc: 200.00 ppb



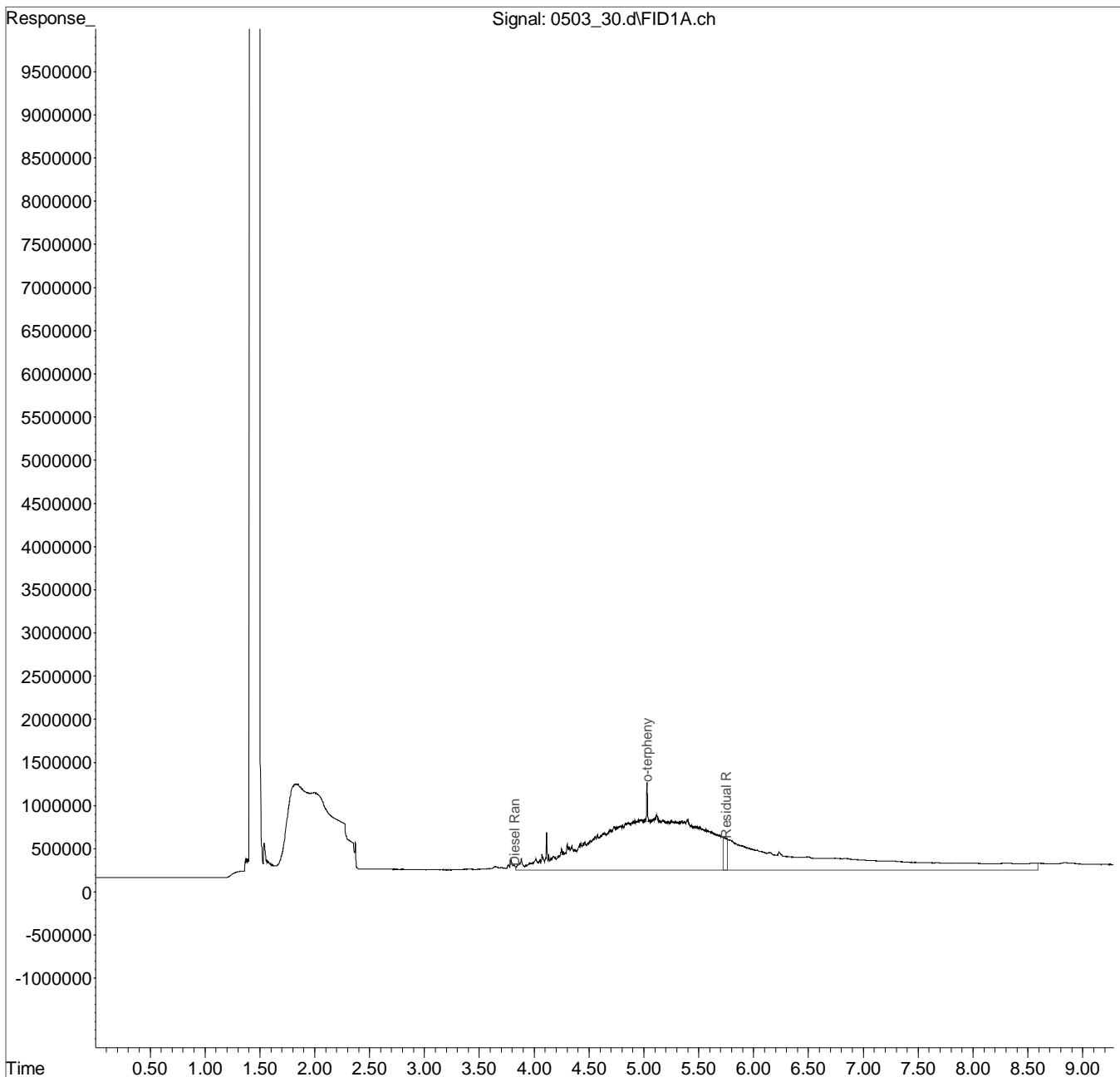
#8 A,A,A-TRIFLUOROTOLUENE (PID)

R.T.: 5.051 min  
 Delta R.T.: -0.005 min  
 Response: 33287900  
 Conc: N.D.

Data Path : C:\msdchem\1\data\050318\  
Data File : 0503\_30.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 6:14 pm  
Operator : 784  
Sample : L989723-21 5x WG1104931 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 13 Sample Multiplier: 0.238  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 04 08:20:50 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M

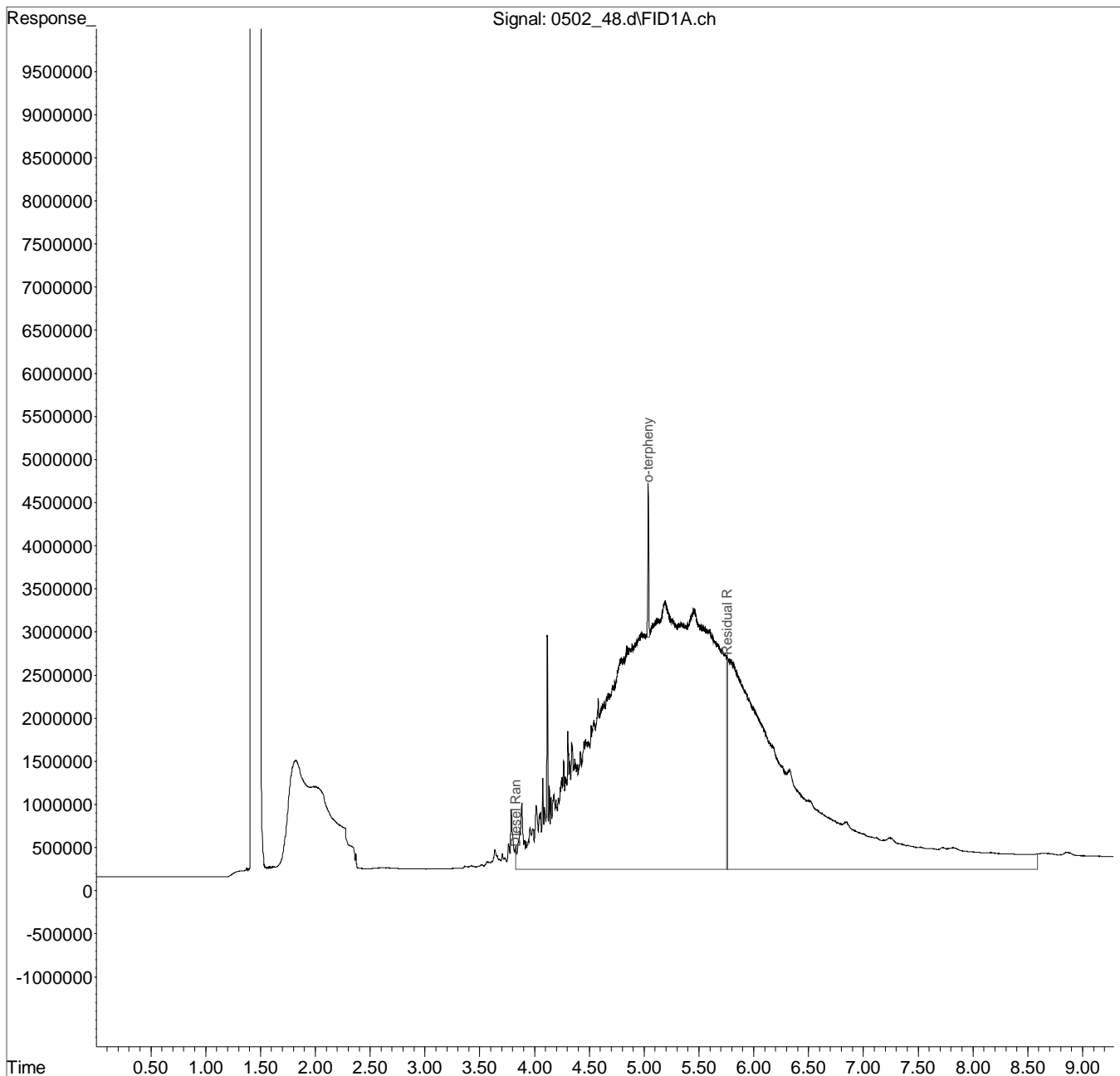




Data Path : C:\msdchem\1\data\050218\  
Data File : 0502\_48.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 5:23 am  
Operator : 647  
Sample : L989723-21 1x WG1104931 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 31 Sample Multiplier: 0.0476  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 03 09:17:35 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

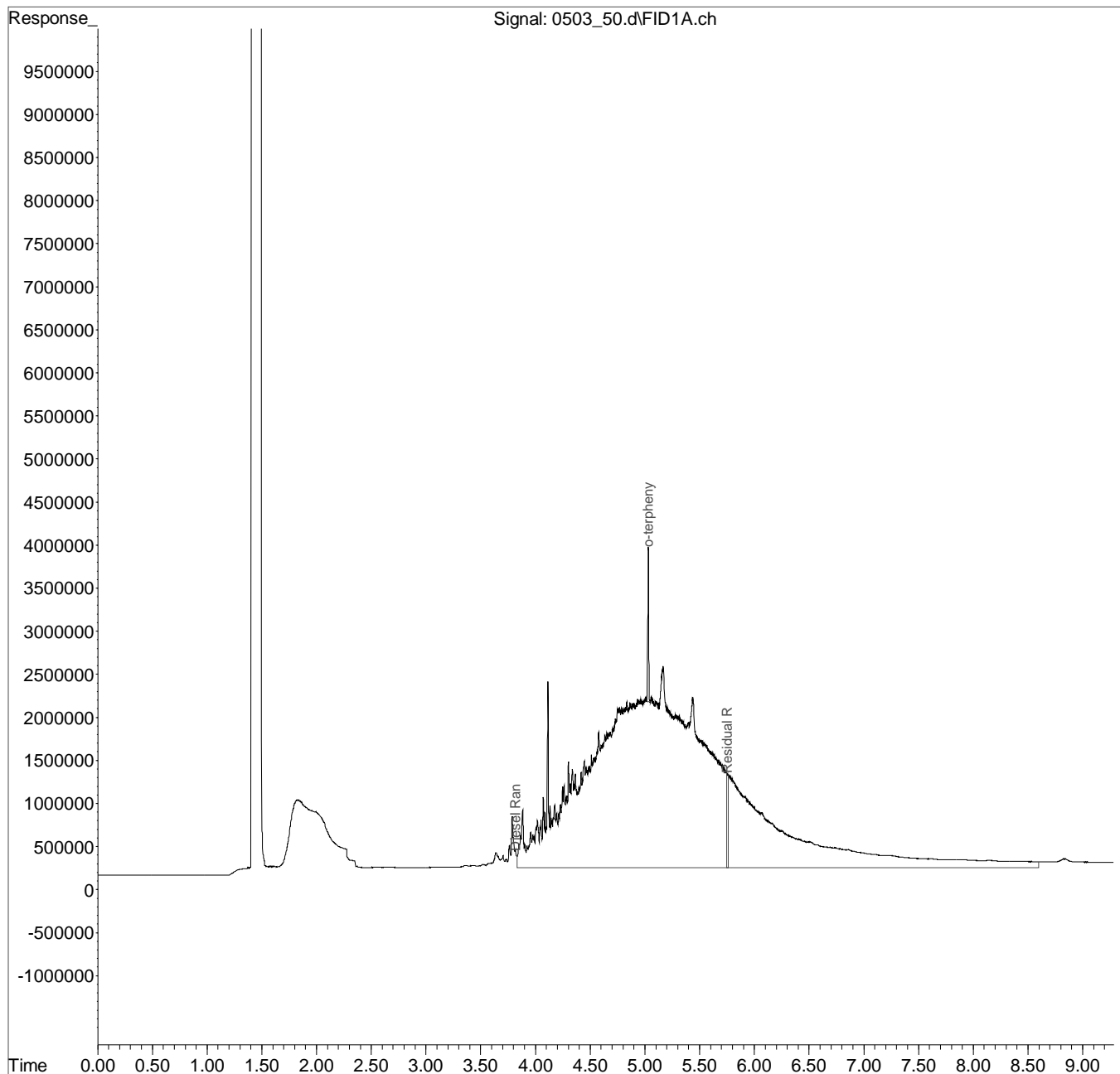
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
Data File : 0503 50.d  
Signal(s) : FID1A.ch  
Acq On : 3 May 2018 11:42 pm  
Operator : 784  
Sample : L989723-21 1x WG1104932 42-2  
Misc : water M.I.s on ranges are corrections  
ALS Vial : 37 Sample Multiplier: 0.0476  
InstName : SVGC27

Integration File: events.e  
Quant Time: May 04 08:37:38 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

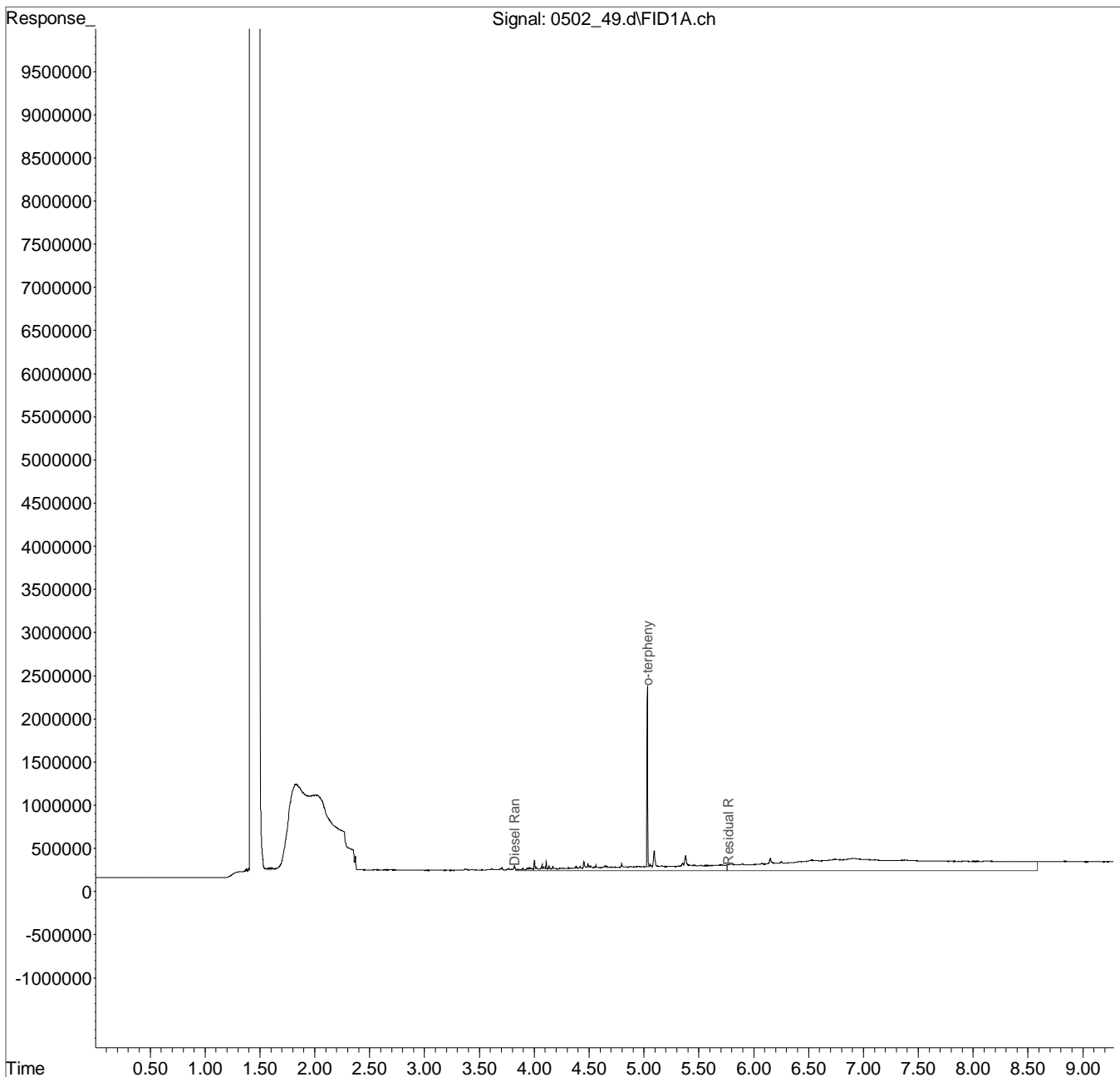
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050218\  
 Data File : 0502 49.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 5:39 am  
 Operator : 647  
 Sample : L989723-22 1x WG1104931 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 32 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 03 09:18:49 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

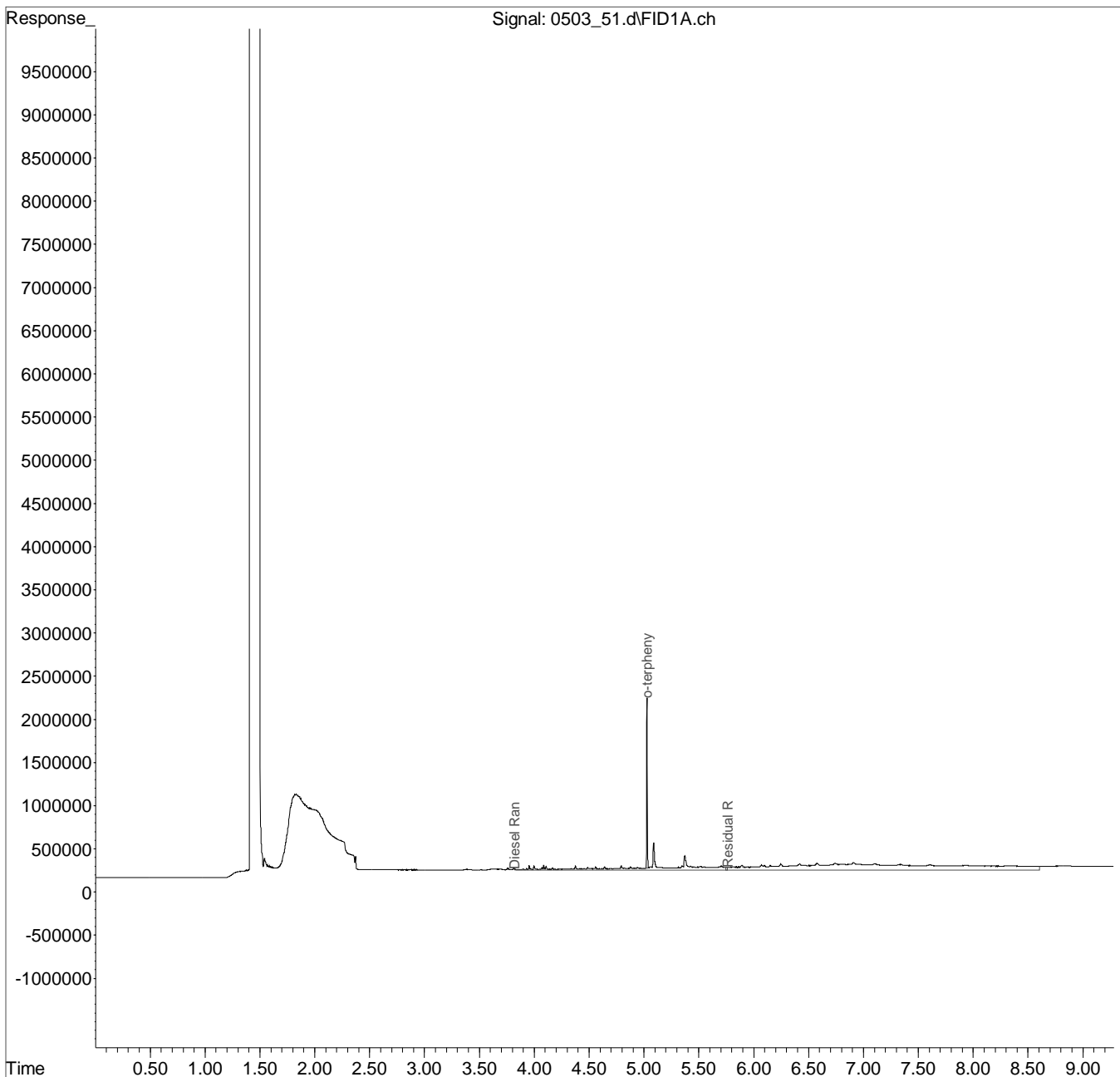
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\050318\  
 Data File : 0503 51.d  
 Signal(s) : FID1A.ch  
 Acq On : 3 May 2018 11:59 pm  
 Operator : 784  
 Sample : L989723-22 1x WG1104932 42-2  
 Misc : water M.I.s on ranges are corrections  
 ALS Vial : 38 Sample Multiplier: 0.0476  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: May 04 08:38:04 2018  
 Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
 Quant Title :  
 QLast Update : Mon Apr 16 18:37:28 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: L990329  
Samples Received: 05/02/2018  
Project Number: 1896120\*00  
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.



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>4</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>5</b>	<b>5</b> Sr
WMW-12-20180430 L990329-01	<b>5</b>	
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Wet Chemistry by Method 350.1	<b>9</b>	
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<b>Al: Accreditations &amp; Locations</b>	<b>19</b>	
<b>Sc: Sample Chain of Custody</b>	<b>20</b>	

# SAMPLE SUMMARY



## WMW-12-20180430 L990329-01 GW

Collected by  
Alice Robinson  
Collected date/time  
04/30/18 17:15  
Received date/time  
05/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1106531	1	05/08/18 13:21	05/08/18 13:21	JER
Wet Chemistry by Method 353.2	WG1107937	10	05/08/18 15:47	05/08/18 15:47	JER
Wet Chemistry by Method 4500S2 D-2011	WG1106484	1	05/03/18 15:03	05/03/18 15:03	MA
Wet Chemistry by Method 9056A	WG1107647	1	05/07/18 23:43	05/07/18 23:43	MAJ
Metals (ICPMS) by Method 6020A	WG1106090	1	05/03/18 13:02	05/03/18 20:26	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1107969	1	05/08/18 14:00	05/08/18 14:00	BG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1106581	1	05/04/18 10:51	05/05/18 05:06	TH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## RMD-4-20180430 L990329-02 GW

Collected by  
Alice Robinson  
Collected date/time  
04/30/18 14:30  
Received date/time  
05/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1106612	1	05/04/18 08:31	05/04/18 16:55	DMG

## WMW-16-20180430 L990329-03 GW

Collected by  
Alice Robinson  
Collected date/time  
04/30/18 15:55  
Received date/time  
05/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1106612	1	05/04/18 08:31	05/04/18 17:17	DMG

## RMD-1-20180430 L990329-04 GW

Collected by  
Alice Robinson  
Collected date/time  
04/30/18 16:35  
Received date/time  
05/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1106612	1	05/04/18 08:31	05/04/18 17:39	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 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

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





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/08/2018 13:21	<a href="#">WG1106531</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	23200		1000	10	05/08/2018 15:47	<a href="#">WG1107937</a>

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	05/03/2018 15:03	<a href="#">WG1106484</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	38400	J6	5000	1	05/07/2018 23:43	<a href="#">WG1107647</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/03/2018 20:26	<a href="#">WG1106090</a>
Manganese,Dissolved	ND		5.00	1	05/03/2018 20:26	<a href="#">WG1106090</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/08/2018 14:00	<a href="#">WG1107969</a>
Ethane	ND		13.0	1	05/08/2018 14:00	<a href="#">WG1107969</a>
Ethene	ND		13.0	1	05/08/2018 14:00	<a href="#">WG1107969</a>

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	05/05/2018 05:06	<a href="#">WG1106581</a>
Residual Range Organics (RRO)	ND		250	1	05/05/2018 05:06	<a href="#">WG1106581</a>
(S) o-Terphenyl	88.2		52.0-156		05/05/2018 05:06	<a href="#">WG1106581</a>



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	05/04/2018 16:55	<a href="#">WG1106612</a>
Acenaphthene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Acenaphthylene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Benzo(a)anthracene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Benzo(a)pyrene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Chrysene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Fluoranthene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Fluorene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Naphthalene	ND		0.250	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Phenanthrene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
Pyrene	ND		0.0500	1	05/04/2018 16:55	<a href="#">WG1106612</a>
1-Methylnaphthalene	ND		0.250	1	05/04/2018 16:55	<a href="#">WG1106612</a>
2-Methylnaphthalene	ND		0.250	1	05/04/2018 16:55	<a href="#">WG1106612</a>
2-Chloronaphthalene	ND		0.250	1	05/04/2018 16:55	<a href="#">WG1106612</a>
(S) Nitrobenzene-d5	111		31.0-160		05/04/2018 16:55	<a href="#">WG1106612</a>
(S) 2-Fluorobiphenyl	95.7		48.0-148		05/04/2018 16:55	<a href="#">WG1106612</a>
(S) p-Terphenyl-d14	110		37.0-146		05/04/2018 16:55	<a href="#">WG1106612</a>

- 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	05/04/2018 17:17	<a href="#">WG1106612</a>
Acenaphthene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Acenaphthylene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Benzo(a)anthracene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Benzo(a)pyrene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Chrysene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Fluoranthene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Fluorene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Naphthalene	ND		0.250	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Phenanthrene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
Pyrene	ND		0.0500	1	05/04/2018 17:17	<a href="#">WG1106612</a>
1-Methylnaphthalene	ND		0.250	1	05/04/2018 17:17	<a href="#">WG1106612</a>
2-Methylnaphthalene	ND		0.250	1	05/04/2018 17:17	<a href="#">WG1106612</a>
2-Chloronaphthalene	ND		0.250	1	05/04/2018 17:17	<a href="#">WG1106612</a>
(S) Nitrobenzene-d5	112		31.0-160		05/04/2018 17:17	<a href="#">WG1106612</a>
(S) 2-Fluorobiphenyl	94.5		48.0-148		05/04/2018 17:17	<a href="#">WG1106612</a>
(S) p-Terphenyl-d14	112		37.0-146		05/04/2018 17:17	<a href="#">WG1106612</a>

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	05/04/2018 17:39	<a href="#">WG1106612</a>
Acenaphthene	0.629		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Acenaphthylene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Benzo(a)anthracene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Benzo(a)pyrene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Chrysene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Fluoranthene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Fluorene	0.695		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Naphthalene	0.886		0.250	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Phenanthrene	0.175		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
Pyrene	ND		0.0500	1	05/04/2018 17:39	<a href="#">WG1106612</a>
1-Methylnaphthalene	7.01		0.250	1	05/04/2018 17:39	<a href="#">WG1106612</a>
2-Methylnaphthalene	ND		0.250	1	05/04/2018 17:39	<a href="#">WG1106612</a>
2-Chloronaphthalene	ND		0.250	1	05/04/2018 17:39	<a href="#">WG1106612</a>
(S) Nitrobenzene-d5	110		31.0-160		05/04/2018 17:39	<a href="#">WG1106612</a>
(S) 2-Fluorobiphenyl	87.6		48.0-148		05/04/2018 17:39	<a href="#">WG1106612</a>
(S) p-Terphenyl-d14	107		37.0-146		05/04/2018 17:39	<a href="#">WG1106612</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3307918-1 05/08/18 12:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L990403-01 Original Sample (OS) • Duplicate (DUP)

(OS) L990403-01 05/08/18 13:30 • (DUP) R3307918-4 05/08/18 13:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	630	628	1	0.318		10

L990229-01 Original Sample (OS) • Duplicate (DUP)

(OS) L990229-01 05/08/18 13:50 • (DUP) R3307918-7 05/08/18 13:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	135000	134000	50	0.494		10

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

(LCS) R3307918-2 05/08/18 12:47 • (LCSD) R3307918-3 05/08/18 12:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7450	7290	99.3	97.2	90.0-110			2.13	10

L990414-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L990414-01 05/08/18 13:33 • (MS) R3307918-5 05/08/18 13:35 • (MSD) R3307918-6 05/08/18 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
Ammonia Nitrogen	5000	ND	4790	4800	95.8	96.1	1	90.0-110			0.292	10

L990229-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L990229-02 05/08/18 13:53 • (MS) R3307918-8 05/08/18 13:54

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	100	128000	133000	97.4	50	90.0-110	



Method Blank (MB)

(MB) R3307980-1 05/08/18 14:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L990118-01 Original Sample (OS) • Duplicate (DUP)

(OS) L990118-01 05/08/18 14:42 • (DUP) R3307980-4 05/08/18 14:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1710	1690	1	0.706		20

L990326-01 Original Sample (OS) • Duplicate (DUP)

(OS) L990326-01 05/08/18 15:40 • (DUP) R3307980-7 05/08/18 15:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	810	808	1	0.247		20

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

(LCS) R3307980-2 05/08/18 14:40 • (LCSD) R3307980-3 05/08/18 14:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	5000	3750	3890	93.7	97.2	90.0-110			3.69	20

L990128-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L990128-01 05/08/18 14:44 • (MS) R3307980-5 05/08/18 14:46

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	183	2000	72.6	1	90.0-110	<u>J6</u>

L990414-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L990414-01 05/08/18 15:49 • (MS) R3307980-8 05/08/18 15:50 • (MSD) R3307980-9 05/08/18 15:51

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	2150	3750	3740	64.0	63.7	1	90.0-110	<u>J6</u>	<u>J6</u>	0.187	20



Method Blank (MB)

(MB) R3306859-1 05/03/18 15:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L990549-01 Original Sample (OS) • Duplicate (DUP)

(OS) L990549-01 05/03/18 15:05 • (DUP) R3306859-6 05/03/18 15:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	13.0	13.0	1	0.000	↓	20

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

(LCS) R3306859-2 05/03/18 15:01 • (LCSD) R3306859-3 05/03/18 15:01

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	472	472	94.4	94.4	85.0-115			0.000	20

L990329-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L990329-01 05/03/18 15:03 • (MS) R3306859-4 05/03/18 15:03 • (MSD) R3306859-5 05/03/18 15:03

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	966	967	96.6	96.7	1	80.0-120			0.103	20



Method Blank (MB)

(MB) R3307894-1 05/07/18 22:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	190	J	77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L990329-01 Original Sample (OS) • Duplicate (DUP)

(OS) L990329-01 05/07/18 23:43 • (DUP) R3307894-4 05/07/18 23:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	38400	38400	1	0.201		15

L990458-06 Original Sample (OS) • Duplicate (DUP)

(OS) L990458-06 05/08/18 03:03 • (DUP) R3307894-7 05/08/18 03:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	11500	11600	1	0.495		15

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

(LCS) R3307894-2 05/07/18 22:41 • (LCSD) R3307894-3 05/07/18 22:56

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	39200	39000	97.9	97.5	80.0-120			0.444	15

L990329-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L990329-01 05/07/18 23:43 • (MS) R3307894-5 05/08/18 00:13 • (MSD) R3307894-6 05/08/18 00:29

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	38400	61900	64200	46.8	51.5	1	80.0-120	J6	J6	3.70	15

L990458-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L990458-06 05/08/18 03:03 • (MS) R3307894-8 05/08/18 03:34

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	11500	57000	90.9	1	80.0-120	





Method Blank (MB)

(MB) R3306961-1 05/03/18 19:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron,Dissolved	U		15.0	100
Manganese,Dissolved	U		0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3306961-2 05/03/18 19:29 • (LCSD) R3306961-3 05/03/18 19:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	4920	5010	98.3	100	80.0-120			1.97	20
Manganese,Dissolved	50.0	48.2	49.1	96.4	98.2	80.0-120			1.90	20

5 Sr

6 Qc

L990475-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L990475-01 05/03/18 19:38 • (MS) R3306961-5 05/03/18 19:47 • (MSD) R3306961-6 05/03/18 19:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	46.1	5020	4940	99.4	97.8	1	75.0-125			1.58	20
Manganese,Dissolved	50.0	9.69	57.7	57.0	96.1	94.7	1	75.0-125			1.18	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3307876-1 05/08/18 13:20

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L990272-03 Original Sample (OS) • Duplicate (DUP)

(OS) L990272-03 05/08/18 13:35 • (DUP) R3307876-2 05/08/18 13:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	U	0.000	1	0.000		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

L990458-06 Original Sample (OS) • Duplicate (DUP)

(OS) L990458-06 05/08/18 14:25 • (DUP) R3307876-3 05/08/18 14:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	U	0.000	1	0.000		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3307876-4 05/08/18 14:45 • (LCSD) R3307876-5 05/08/18 14:48

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	72.2	71.3	107	105	85.0-115			1.28	20
Ethane	129	115	116	88.8	90.3	85.0-115			1.70	20
Ethene	127	117	118	91.8	93.2	85.0-115			1.44	20



Method Blank (MB)

(MB) R3307340-1 05/05/18 00:47

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>	89.7			52.0-156

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

(LCS) R3307340-2 05/05/18 01:03 • (LCSD) R3307340-3 05/05/18 01:19

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	888	852	118	114	50.0-150			4.21	20
Residual Range Organics (RRO)	750	871	827	116	110	50.0-150			5.18	20
<i>(S) o-Terphenyl</i>				99.0	94.3	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) R3307267-3 05/04/18 13:39

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	0.00446	U	0.00212	0.0500
Benzo(g,h,i)perylene	0.00521	U	0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	0.00462	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	0.0241	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	94.7			48.0-148
(S) p-Terphenyl-d14	108			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) R3307267-1 05/04/18 12:56 • (LCSD) R3307267-2 05/04/18 13:17

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 %
Anthracene	2.00	1.98	2.19	99.2	109	64.0-142			9.83	20
Acenaphthene	2.00	1.88	2.11	94.2	106	66.0-132			11.4	20
Acenaphthylene	2.00	1.95	2.18	97.5	109	65.0-132			10.9	20
Benzo(a)anthracene	2.00	1.98	2.21	98.8	110	59.0-134			11.0	20
Benzo(a)pyrene	2.00	1.99	2.24	99.5	112	61.0-145			12.1	20
Benzo(b)fluoranthene	2.00	1.93	2.23	96.5	111	57.0-136			14.3	20
Benzo(g,h,i)perylene	2.00	2.05	2.29	103	115	54.0-140			11.0	20
Benzo(k)fluoranthene	2.00	2.02	2.21	101	110	57.0-141			8.84	20
Chrysene	2.00	2.01	2.24	101	112	63.0-140			10.8	20
Dibenz(a,h)anthracene	2.00	2.01	2.28	101	114	49.0-141			12.6	20
Fluoranthene	2.00	2.06	2.28	103	114	65.0-143			10.3	20



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

(LCS) R3307267-1 05/04/18 12:56 • (LCSD) R3307267-2 05/04/18 13:17

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	1.84	2.07	91.9	104	64.0-129			11.9	20
Indeno(1,2,3-cd)pyrene	2.00	2.05	2.30	102	115	53.0-141			11.6	20
Naphthalene	2.00	1.76	1.90	88.2	95.0	68.0-129			7.50	20
Phenanthrene	2.00	1.94	2.16	97.0	108	62.0-132			10.8	20
Pyrene	2.00	2.06	2.29	103	115	58.0-156			10.5	20
1-Methylnaphthalene	2.00	1.76	1.99	87.9	99.7	68.0-137			12.6	20
2-Methylnaphthalene	2.00	1.67	1.89	83.6	94.6	68.0-134			12.4	20
2-Chloronaphthalene	2.00	1.77	1.99	88.4	99.3	65.0-129			11.5	20
<i>(S) Nitrobenzene-d5</i>				101	110	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				91.7	98.0	48.0-148				
<i>(S) p-Terphenyl-d14</i>				105	114	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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.



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.  
 \* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

## 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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

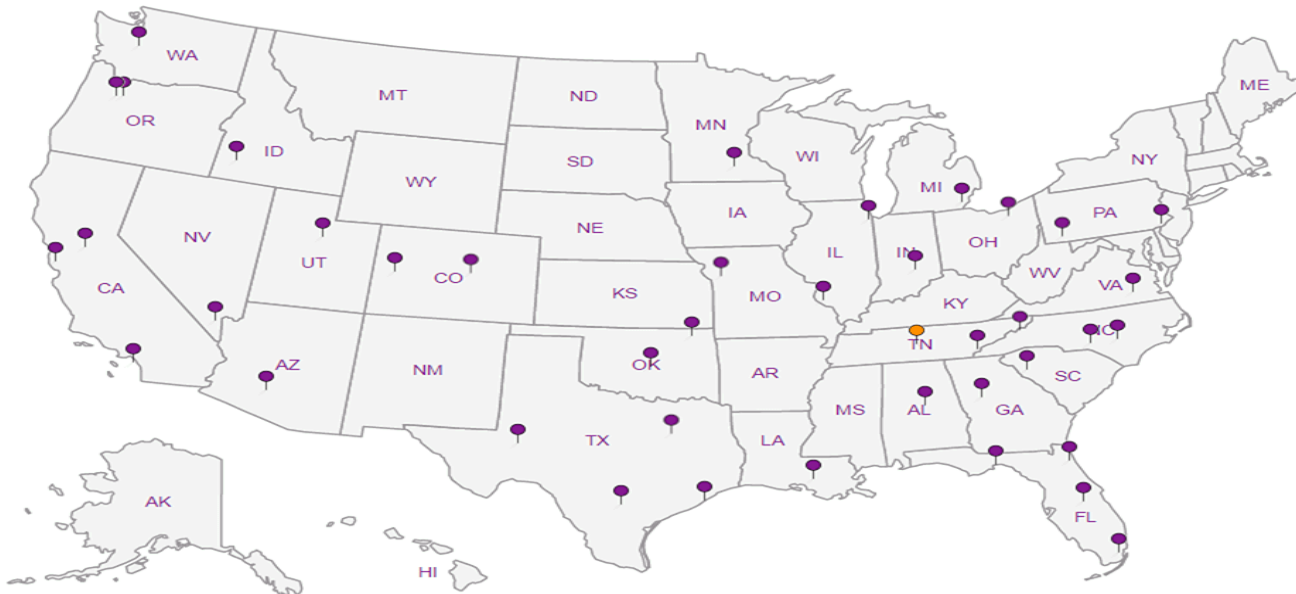
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater 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:  
 Accounts Payable  
 32001 32nd Avenue South, Ste 100  
 Federal Way, WA 98001

Report to:  
**Ryan Hultgren**

Email To: [RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com),  
[AliceRobinson@kennedyjenks.com](mailto:AliceRobinson@kennedyjenks.com)

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

City/State Collected: **Wishram, WA**

Client Project # **1896120\*00**

Lab Project # **BNSF1KEN-WISHRAM**

Phone: **253-835-6400**

Fax:

Collected by (print): **Alice Robinson**

Site/Facility ID #

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 Cntrs

Analysis / Container / Preservative												
Pres Chk												
	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		

Chain of Custody Page    of   



LAB SIGNATURES  
 a subsidiary of *Prochem*

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



L # **L990329**

**D042**

Acctnum: **BNSF1KEN**

Template: **T130227**

Prelogin: **P648861**

TSR: **134 - Mark W. Beasley**

PB: **4-17-18**

Shipped Via: **FedEX Ground**

Remarks

Sample # (lab only)

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/o SGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Sulfide 125mlAmb-S-NaOH+ZnAc	Remarks	Sample # (lab only)	
WMW-12-20180430	Grab	GW		4-30-18	17:15	8		X	X		X			X	X	X			-01
RMD-4-20180430		GW			14:30	2							X						-02
WMW-16-20180430		GW			15:55	2							X						-03
RMD-1-20180430		GW			17:15 AR 16:35	2							X						-04
		GW																	
TRIP BLANK		GW																	
		GW																	
		GW																	
		GW																	

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

Remarks:  
**Dissolved metals sample was field filtered**

pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **7466 1466 0521**

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**

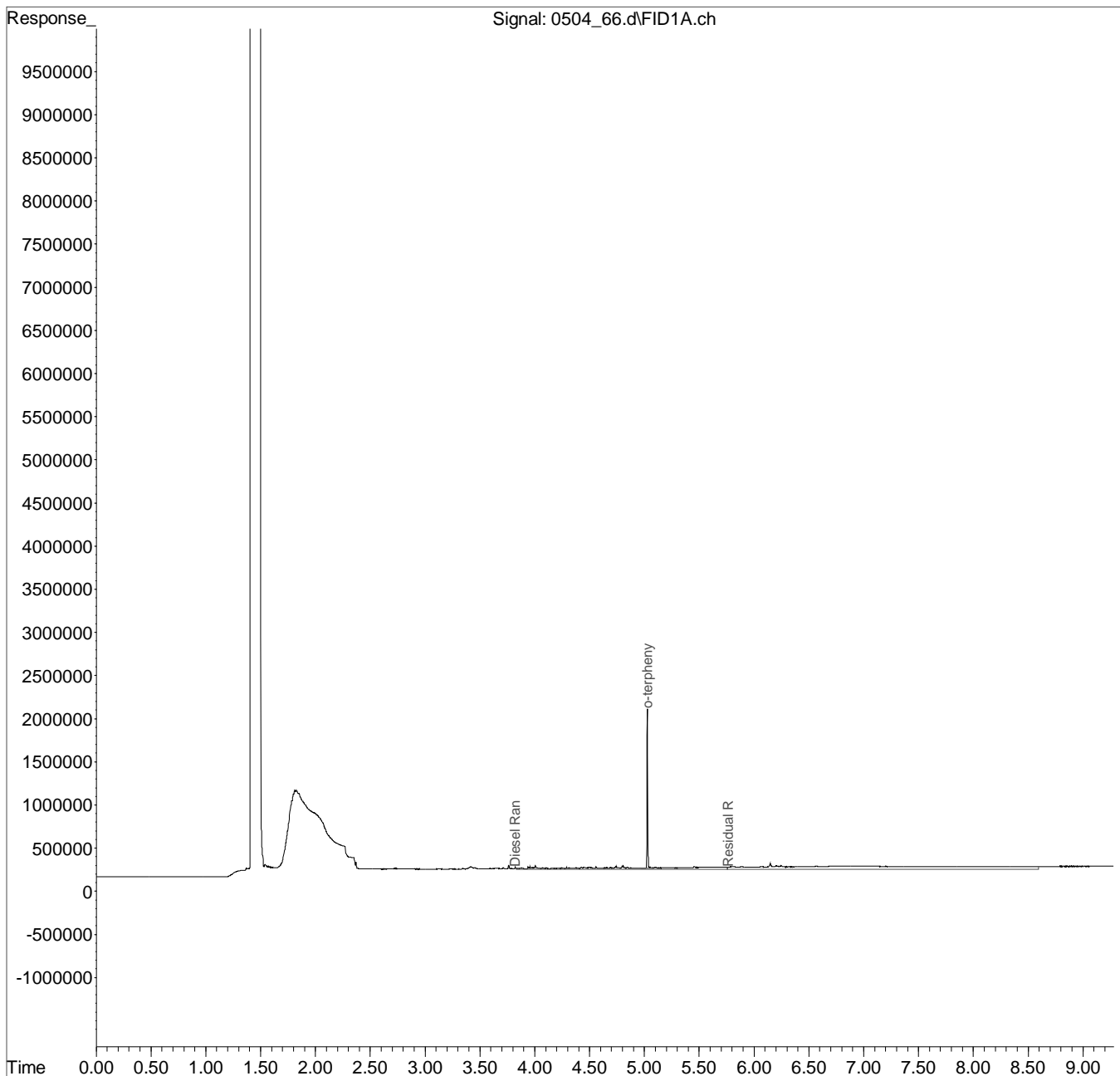
Relinquished by: (Signature) <i>Alice Robinson</i>	Date: <b>5-1-18</b>	Time: <b>9:50</b>	Received by: (Signature)	Trip Blank Received: Yes/No HCL/MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <b>14°C</b> Bottles Received: <b>14</b>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>SG</i>	Date: <b>5/2/18</b> Time: <b>8:45</b> Hold: Condition: <b>NCF 100</b>



Data Path : C:\msdchem\1\data\050418\  
Data File : 0504 66.d  
Signal(s) : FID1A.ch  
Acq On : 5 May 2018 5:06 am  
Operator : 647  
Sample : L990329-01 1x WG1106581 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: May 05 14:01:12 2018  
Quant Method : C:\msdchem\1\methods\EP27D13AR.M  
Quant Title :  
QLast Update : Mon Apr 16 18:37:28 2018  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



---

Groundwater Analytical Reports  
21 to 31 August 2018

September 06, 2018

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1020953  
Samples Received: 08/25/2018  
Project Number: 1896120\*00  
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.



<b>Cp: Cover Page</b>	<b>1</b>
<b>Tc: Table of Contents</b>	<b>2</b>
<b>Ss: Sample Summary</b>	<b>3</b>
<b>Cn: Case Narrative</b>	<b>8</b>
<b>Sr: Sample Results</b>	<b>9</b>
RMD-4-20180822 L1020953-01	9
WMW-18-20180822 L1020953-02	11
WMW-14-20180822 L1020953-03	12
WMW-15-20180822 L1020953-04	13
RMD-3-20180822 L1020953-05	14
WMW-17-20180822 L1020953-06	16
RMD-1-20180822 L1020953-07	17
WMW-16-20180822 L1020953-08	19
RMD-2-20180822 L1020953-09	21
D-1-20180822 L1020953-10	23
WMW-13-20180823 L1020953-11	25
WMW-09-20180823 L1020953-12	26
WMW-12-20180823 L1020953-13	27
WMW-10-20180823 L1020953-14	28
WMW-11-20180823 L1020953-15	29
WMW-05-20180823 L1020953-16	30
WMW-01-20180823 L1020953-17	31
WMW-03-20180823 L1020953-18	32
D-2-20180823 L1020953-19	33
<b>Qc: Quality Control Summary</b>	<b>34</b>
Wet Chemistry by Method 350.1	34
Wet Chemistry by Method 353.2	35
Wet Chemistry by Method 4500S2 D-2011	36
Wet Chemistry by Method 9056A	38
Metals (ICPMS) by Method 6020A	40
Volatile Organic Compounds (GC) by Method NWTPHGX	43
Volatile Organic Compounds (GC) by Method RSK175	44
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	46
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	48
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	51
<b>Gl: Glossary of Terms</b>	<b>53</b>
<b>Al: Accreditations &amp; Locations</b>	<b>54</b>
<b>Sc: Sample Chain of Custody</b>	<b>55</b>

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

# SAMPLE SUMMARY



## RMD-4-20180822 L1020953-01 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/22/18 09:40  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 10:19	08/31/18 10:19	JER
Wet Chemistry by Method 353.2	WG1158584	2	08/30/18 13:48	08/30/18 13:48	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:04	08/26/18 19:04	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 01:53	08/30/18 01:53	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 01:27	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 10:22	08/30/18 10:22	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/30/18 04:20	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157625	1	08/26/18 17:10	08/28/18 17:47	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1158563	1	08/28/18 21:58	08/29/18 08:26	KM

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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

## WMW-18-20180822 L1020953-02 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/22/18 10:50  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:28	08/31/18 09:28	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 13:50	08/30/18 13:50	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:05	08/26/18 19:05	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 02:07	08/30/18 02:07	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 00:16	LAT
Metals (ICPMS) by Method 6020A	WG1158403	1	08/29/18 17:22	08/29/18 22:34	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 10:25	08/30/18 10:25	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/30/18 04:39	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157625	1	08/26/18 17:10	08/28/18 18:07	SHG

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Gl

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Sc

## WMW-14-20180822 L1020953-03 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/22/18 11:15  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:33	08/31/18 09:33	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 13:54	08/30/18 13:54	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:05	08/26/18 19:05	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 03:31	08/30/18 03:31	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 01:32	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 10:27	08/30/18 10:27	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/30/18 05:37	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157625	1	08/26/18 17:10	08/28/18 19:06	MTJ

## WMW-15-20180822 L1020953-04 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/22/18 12:40  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:34	08/31/18 09:34	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 13:57	08/30/18 13:57	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:05	08/26/18 19:05	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 03:45	08/30/18 03:45	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 01:36	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 10:29	08/30/18 10:29	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	5	08/28/18 10:58	08/31/18 06:08	TH

# SAMPLE SUMMARY



## RMD-3-20180822 L1020953-05 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/22/18 13:00  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:40	08/31/18 09:40	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:05	08/30/18 14:05	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:05	08/26/18 19:05	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 03:59	08/30/18 03:59	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 01:41	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 10:32	08/30/18 10:32	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/30/18 06:15	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1158563	1	08/28/18 21:58	08/29/18 08:49	KM

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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

## WMW-17-20180822 L1020953-06 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/22/18 15:10  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:42	08/31/18 09:42	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:06	08/30/18 14:06	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:06	08/26/18 19:06	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 04:13	08/30/18 04:13	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 01:46	LAT
Metals (ICPMS) by Method 6020A	WG1158403	1	08/29/18 17:22	08/29/18 23:27	LD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1159472	1	08/30/18 17:37	08/30/18 17:37	LRL
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 10:34	08/30/18 10:34	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/31/18 04:31	TH

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Gl

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Sc

## RMD-1-20180822 L1020953-07 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/22/18 15:15  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:44	08/31/18 09:44	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:08	08/30/18 14:08	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:06	08/26/18 19:06	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 04:26	08/30/18 04:26	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 01:50	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 10:37	08/30/18 10:37	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/31/18 04:50	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157969	1	08/28/18 16:38	08/31/18 00:20	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1158563	1	08/28/18 21:58	08/29/18 09:13	KM

## WMW-16-20180822 L1020953-08 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/22/18 17:05  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:45	08/31/18 09:45	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:09	08/30/18 14:09	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:06	08/26/18 19:06	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 04:40	08/30/18 04:40	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 01:55	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1159472	1	08/30/18 17:59	08/30/18 17:59	LRL
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 10:40	08/30/18 10:40	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/31/18 05:10	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157969	1	08/28/18 16:38	08/31/18 01:37	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1158563	1	08/28/18 21:58	08/29/18 09:36	KM

# SAMPLE SUMMARY



## RMD-2-20180822 L1020953-09 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/22/18 17:05  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:47	08/31/18 09:47	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:11	08/30/18 14:11	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:07	08/26/18 19:07	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 04:54	08/30/18 04:54	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 02:22	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 10:43	08/30/18 10:43	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/31/18 05:29	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1161750	1	08/28/18 10:58	09/05/18 21:09	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1158563	1	08/28/18 21:58	08/29/18 10:00	KM

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

## D-1-20180822 L1020953-10 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/22/18 17:20  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:48	08/31/18 09:48	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:12	08/30/18 14:12	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:08	08/26/18 19:08	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 05:08	08/30/18 05:08	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 02:27	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 11:01	08/30/18 11:01	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	5	08/28/18 10:58	08/31/18 06:27	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157969	1	08/28/18 16:38	08/31/18 02:16	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1158563	1	08/28/18 21:58	08/29/18 10:23	KM

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Gl

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Sc

## WMW-13-20180823 L1020953-11 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/23/18 08:35  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:50	08/31/18 09:50	JER
Wet Chemistry by Method 353.2	WG1158584	2	08/30/18 14:45	08/30/18 14:45	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:08	08/26/18 19:08	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 05:50	08/30/18 05:50	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 02:32	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 11:08	08/30/18 11:08	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/30/18 09:28	SHG

## WMW-09-20180823 L1020953-12 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/23/18 09:40  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:52	08/31/18 09:52	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:15	08/30/18 14:15	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:08	08/26/18 19:08	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 06:32	08/30/18 06:32	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 02:36	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 11:11	08/30/18 11:11	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/31/18 05:48	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157969	1	08/28/18 16:38	08/31/18 02:35	TH



# SAMPLE SUMMARY



## WMW-12-20180823 L1020953-13 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/23/18 10:02  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:53	08/31/18 09:53	JER
Wet Chemistry by Method 353.2	WG1158584	10	08/30/18 14:47	08/30/18 14:47	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:08	08/26/18 19:08	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 06:46	08/30/18 06:46	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 02:41	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 11:15	08/30/18 11:15	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/30/18 10:07	SHG

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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

## WMW-10-20180823 L1020953-14 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/23/18 11:05  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 09:55	08/31/18 09:55	JER
Wet Chemistry by Method 353.2	WG1158584	5	08/30/18 14:48	08/30/18 14:48	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:08	08/26/18 19:08	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 07:00	08/30/18 07:00	ELN
Metals (ICPMS) by Method 6020A	WG1158279	1	08/29/18 12:11	08/30/18 02:45	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 11:17	08/30/18 11:17	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/30/18 12:04	TH

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Qc

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Gl

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Sc

## WMW-11-20180823 L1020953-15 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/23/18 12:30  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 10:01	08/31/18 10:01	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:26	08/30/18 14:26	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:09	08/26/18 19:09	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 07:14	08/30/18 07:14	ELN
Metals (ICPMS) by Method 6020A	WG1159305	1	08/30/18 10:27	08/30/18 19:37	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 11:20	08/30/18 11:20	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/30/18 12:23	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	5	08/28/18 10:58	08/30/18 17:34	TH

## WMW-05-20180823 L1020953-16 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/23/18 13:10  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 10:03	08/31/18 10:03	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:27	08/30/18 14:27	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157213	1	08/26/18 19:09	08/26/18 19:09	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 07:27	08/30/18 07:27	ELN
Metals (ICPMS) by Method 6020A	WG1159305	1	08/30/18 10:27	08/30/18 19:19	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 11:24	08/30/18 11:24	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/30/18 16:55	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1161750	1	08/28/18 10:58	09/05/18 21:29	MTJ



# SAMPLE SUMMARY



## WMW-01-20180823 L1020953-17 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/23/18 13:45  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 10:04	08/31/18 10:04	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:29	08/30/18 14:29	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157729	1	08/29/18 21:08	08/29/18 21:08	MZ
Wet Chemistry by Method 9056A	WG1158234	1	08/30/18 07:41	08/30/18 07:41	ELN
Metals (ICPMS) by Method 6020A	WG1159305	1	08/30/18 10:27	08/30/18 19:53	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 11:26	08/30/18 11:26	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1157961	1	08/28/18 10:58	08/30/18 13:02	TH

1  
Cp

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Tc

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Ss

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Cn

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Sr

## WMW-03-20180823 L1020953-18 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/23/18 11:45  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 10:06	08/31/18 10:06	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:30	08/30/18 14:30	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157729	1	08/29/18 21:11	08/29/18 21:11	MZ
Wet Chemistry by Method 9056A	WG1158681	20	08/29/18 03:00	08/29/18 03:00	MAJ
Metals (ICPMS) by Method 6020A	WG1159305	1	08/30/18 10:27	08/30/18 19:57	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 11:29	08/30/18 11:29	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158540	5	08/29/18 10:22	08/31/18 00:34	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1157969	5	08/28/18 16:38	08/31/18 20:36	TH

6  
Qc

7  
Gl

8  
Al

9  
Sc

## D-2-20180823 L1020953-19 GW

Collected by  
Julia Schwarz  
Collected date/time  
08/23/18 11:50  
Received date/time  
08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1159177	1	08/31/18 10:07	08/31/18 10:07	JER
Wet Chemistry by Method 353.2	WG1158584	1	08/30/18 14:33	08/30/18 14:33	JER
Wet Chemistry by Method 4500S2 D-2011	WG1157729	1	08/29/18 21:11	08/29/18 21:11	MZ
Wet Chemistry by Method 9056A	WG1158681	20	08/29/18 03:18	08/29/18 03:18	MAJ
Metals (ICPMS) by Method 6020A	WG1159305	1	08/30/18 10:27	08/30/18 20:02	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1158190	1	08/30/18 11:36	08/30/18 11:36	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1158540	5	08/29/18 10:22	08/31/18 00:52	TH



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

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/31/2018 10:19	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5820		200	2	08/30/2018 13:48	<a href="#">WG1158584</a>

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	08/26/2018 19:04	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	76500		5000	1	08/30/2018 01:53	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/30/2018 01:27	<a href="#">WG1158279</a>
Manganese,Dissolved	22.1		5.00	1	08/30/2018 01:27	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/30/2018 10:22	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 10:22	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 10:22	<a href="#">WG1158190</a>

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	08/30/2018 04:20	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2018 04:20	<a href="#">WG1157961</a>
(S) o-Terphenyl	95.8		52.0-156		08/30/2018 04:20	<a href="#">WG1157961</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/28/2018 17:47	<a href="#">WG1157625</a>
Residual Range Organics (RRO)	ND		250	1	08/28/2018 17:47	<a href="#">WG1157625</a>
(S) o-Terphenyl	82.1		52.0-156		08/28/2018 17:47	<a href="#">WG1157625</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Acenaphthene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Acenaphthylene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Chrysene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Fluoranthene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Fluorene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Naphthalene	ND		0.250	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Phenanthrene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
Pyrene	ND		0.0500	1	08/29/2018 08:26	<a href="#">WG1158563</a>
1-Methylnaphthalene	ND		0.250	1	08/29/2018 08:26	<a href="#">WG1158563</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2018 08:26	<a href="#">WG1158563</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2018 08:26	<a href="#">WG1158563</a>
(S) Nitrobenzene-d5	93.5		31.0-160		08/29/2018 08:26	<a href="#">WG1158563</a>
(S) 2-Fluorobiphenyl	95.5		48.0-148		08/29/2018 08:26	<a href="#">WG1158563</a>
(S) p-Terphenyl-d14	90.5		37.0-146		08/29/2018 08:26	<a href="#">WG1158563</a>

- 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	08/31/2018 09:28	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	999		100	1	08/30/2018 13:50	<a href="#">WG1158584</a>

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	08/26/2018 19:05	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	16100		5000	1	08/30/2018 02:07	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	6.81		2.00	1	08/29/2018 22:34	<a href="#">WG1158403</a>
Arsenic,Dissolved	7.14		2.00	1	08/30/2018 00:16	<a href="#">WG1158279</a>
Iron,Dissolved	ND		100	1	08/30/2018 00:16	<a href="#">WG1158279</a>
Manganese,Dissolved	187		5.00	1	08/30/2018 00:16	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/30/2018 10:25	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 10:25	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 10:25	<a href="#">WG1158190</a>

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	08/30/2018 04:39	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2018 04:39	<a href="#">WG1157961</a>
(S) o-Terphenyl	94.7		52.0-156		08/30/2018 04:39	<a href="#">WG1157961</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/28/2018 18:07	<a href="#">WG1157625</a>
Residual Range Organics (RRO)	ND		250	1	08/28/2018 18:07	<a href="#">WG1157625</a>
(S) o-Terphenyl	82.6		52.0-156		08/28/2018 18:07	<a href="#">WG1157625</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/31/2018 09:33	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1400		100	1	08/30/2018 13:54	<a href="#">WG1158584</a>

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	08/26/2018 19:05	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	10800		5000	1	08/30/2018 03:31	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/30/2018 01:32	<a href="#">WG1158279</a>
Manganese,Dissolved	ND		5.00	1	08/30/2018 01:32	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/30/2018 10:27	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 10:27	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 10:27	<a href="#">WG1158190</a>

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	08/30/2018 05:37	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2018 05:37	<a href="#">WG1157961</a>
(S) o-Terphenyl	96.3		52.0-156		08/30/2018 05:37	<a href="#">WG1157961</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/28/2018 19:06	<a href="#">WG1157625</a>
Residual Range Organics (RRO)	ND		250	1	08/28/2018 19:06	<a href="#">WG1157625</a>
(S) o-Terphenyl	76.8		52.0-156		08/28/2018 19:06	<a href="#">WG1157625</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	161		100	1	08/31/2018 09:34	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	386		100	1	08/30/2018 13:57	<a href="#">WG1158584</a>

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	08/26/2018 19:05	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	13000		5000	1	08/30/2018 03:45	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/30/2018 01:36	<a href="#">WG1158279</a>
Manganese,Dissolved	757		5.00	1	08/30/2018 01:36	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	272		10.0	1	08/30/2018 10:29	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 10:29	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 10:29	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5280		1000	5	08/31/2018 06:08	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	4380		1250	5	08/31/2018 06:08	<a href="#">WG1157961</a>
(S) o-Terphenyl	97.4		52.0-156		08/31/2018 06:08	<a href="#">WG1157961</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/31/2018 09:40	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/30/2018 14:05	<a href="#">WG1158584</a>

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	08/26/2018 19:05	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	32300		5000	1	08/30/2018 03:59	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	2160		100	1	08/30/2018 01:41	<a href="#">WG1158279</a>
Manganese,Dissolved	458		5.00	1	08/30/2018 01:41	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	76.9		10.0	1	08/30/2018 10:32	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 10:32	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 10:32	<a href="#">WG1158190</a>

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	08/30/2018 06:15	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2018 06:15	<a href="#">WG1157961</a>
(S) o-Terphenyl	102		52.0-156		08/30/2018 06:15	<a href="#">WG1157961</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Acenaphthene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Acenaphthylene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Chrysene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Fluoranthene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Fluorene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>





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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Naphthalene	ND		0.250	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Phenanthrene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
Pyrene	ND		0.0500	1	08/29/2018 08:49	<a href="#">WG1158563</a>
1-Methylnaphthalene	ND		0.250	1	08/29/2018 08:49	<a href="#">WG1158563</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2018 08:49	<a href="#">WG1158563</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2018 08:49	<a href="#">WG1158563</a>
(S) Nitrobenzene-d5	91.5		31.0-160		08/29/2018 08:49	<a href="#">WG1158563</a>
(S) 2-Fluorobiphenyl	91.5		48.0-148		08/29/2018 08:49	<a href="#">WG1158563</a>
(S) p-Terphenyl-d14	86.5		37.0-146		08/29/2018 08:49	<a href="#">WG1158563</a>

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	08/31/2018 09:42	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/30/2018 14:06	<a href="#">WG1158584</a>

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	08/26/2018 19:06	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	08/30/2018 04:13	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	6.05		2.00	1	08/29/2018 23:27	<a href="#">WG1158403</a>
Arsenic,Dissolved	5.76		2.00	1	08/30/2018 01:46	<a href="#">WG1158279</a>
Iron,Dissolved	2240		100	1	08/30/2018 01:46	<a href="#">WG1158279</a>
Manganese,Dissolved	471		5.00	1	08/30/2018 01:46	<a href="#">WG1158279</a>

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	08/30/2018 17:37	<a href="#">WG1159472</a>
(S) a,a,a-Trifluorotoluene(FID)	98.2		78.0-120		08/30/2018 17:37	<a href="#">WG1159472</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	127		10.0	1	08/30/2018 10:34	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 10:34	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 10:34	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	614		200	1	08/31/2018 04:31	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	541		250	1	08/31/2018 04:31	<a href="#">WG1157961</a>
(S) o-Terphenyl	112		52.0-156		08/31/2018 04:31	<a href="#">WG1157961</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	330		100	1	08/31/2018 09:44	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/30/2018 14:08	<a href="#">WG1158584</a>

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	08/26/2018 19:06	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	08/30/2018 04:26	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	5430		100	1	08/30/2018 01:50	<a href="#">WG1158279</a>
Manganese,Dissolved	2380		5.00	1	08/30/2018 01:50	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	6440		10.0	1	08/30/2018 10:37	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 10:37	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 10:37	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4540		200	1	08/31/2018 04:50	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	2460		250	1	08/31/2018 04:50	<a href="#">WG1157961</a>
(S) o-Terphenyl	113		52.0-156		08/31/2018 04:50	<a href="#">WG1157961</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3230		200	1	08/31/2018 00:20	<a href="#">WG1157969</a>
Residual Range Organics (RRO)	894		250	1	08/31/2018 00:20	<a href="#">WG1157969</a>
(S) o-Terphenyl	114		52.0-156		08/31/2018 00:20	<a href="#">WG1157969</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Acenaphthene	0.661		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Acenaphthylene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Chrysene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Fluoranthene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Fluorene	0.876		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Naphthalene	ND		0.250	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Phenanthrene	0.121		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
Pyrene	ND		0.0500	1	08/29/2018 09:13	<a href="#">WG1158563</a>
1-Methylnaphthalene	8.72		0.250	1	08/29/2018 09:13	<a href="#">WG1158563</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2018 09:13	<a href="#">WG1158563</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2018 09:13	<a href="#">WG1158563</a>
(S) Nitrobenzene-d5	88.0		31.0-160		08/29/2018 09:13	<a href="#">WG1158563</a>
(S) 2-Fluorobiphenyl	86.0		48.0-148		08/29/2018 09:13	<a href="#">WG1158563</a>
(S) p-Terphenyl-d14	81.5		37.0-146		08/29/2018 09:13	<a href="#">WG1158563</a>

- 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	226		100	1	08/31/2018 09:45	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/30/2018 14:09	<a href="#">WG1158584</a>

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	08/26/2018 19:06	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	5480		5000	1	08/30/2018 04:40	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	541		100	1	08/30/2018 01:55	<a href="#">WG1158279</a>
Manganese,Dissolved	287		5.00	1	08/30/2018 01:55	<a href="#">WG1158279</a>

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	08/30/2018 17:59	<a href="#">WG1159472</a>
(S) a,a,a-Trifluorotoluene(FID)	98.3		78.0-120		08/30/2018 17:59	<a href="#">WG1159472</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	787		10.0	1	08/30/2018 10:40	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 10:40	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 10:40	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2500		200	1	08/31/2018 05:10	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	1690		250	1	08/31/2018 05:10	<a href="#">WG1157961</a>
(S) o-Terphenyl	114		52.0-156		08/31/2018 05:10	<a href="#">WG1157961</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1640		200	1	08/31/2018 01:37	<a href="#">WG1157969</a>
Residual Range Organics (RRO)	612		250	1	08/31/2018 01:37	<a href="#">WG1157969</a>
(S) o-Terphenyl	101		52.0-156		08/31/2018 01:37	<a href="#">WG1157969</a>



Collected date/time: 08/22/18 17:05

L1020953

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	08/29/2018 09:36	<a href="#">WG1158563</a>
Acenaphthene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Acenaphthylene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Chrysene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Fluoranthene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Fluorene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Naphthalene	ND		0.250	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Phenanthrene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
Pyrene	ND		0.0500	1	08/29/2018 09:36	<a href="#">WG1158563</a>
1-Methylnaphthalene	ND		0.250	1	08/29/2018 09:36	<a href="#">WG1158563</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2018 09:36	<a href="#">WG1158563</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2018 09:36	<a href="#">WG1158563</a>
(S) Nitrobenzene-d5	89.0		31.0-160		08/29/2018 09:36	<a href="#">WG1158563</a>
(S) 2-Fluorobiphenyl	84.0		48.0-148		08/29/2018 09:36	<a href="#">WG1158563</a>
(S) p-Terphenyl-d14	80.5		37.0-146		08/29/2018 09:36	<a href="#">WG1158563</a>

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	165		100	1	08/31/2018 09:47	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/30/2018 14:11	<a href="#">WG1158584</a>

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	08/26/2018 19:07	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	08/30/2018 04:54	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	6080		100	1	08/30/2018 02:22	<a href="#">WG1158279</a>
Manganese,Dissolved	3320		5.00	1	08/30/2018 02:22	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	2550		10.0	1	08/30/2018 10:43	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 10:43	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 10:43	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4630		200	1	08/31/2018 05:29	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	2530		250	1	08/31/2018 05:29	<a href="#">WG1157961</a>
(S) o-Terphenyl	123		52.0-156		08/31/2018 05:29	<a href="#">WG1157961</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	213		200	1	09/05/2018 21:09	<a href="#">WG1161750</a>
Residual Range Organics (RRO)	ND		250	1	09/05/2018 21:09	<a href="#">WG1161750</a>
(S) o-Terphenyl	83.2		52.0-156		09/05/2018 21:09	<a href="#">WG1161750</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Acenaphthene	0.0656		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Acenaphthylene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Chrysene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Fluoranthene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Fluorene	0.183		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Naphthalene	ND		0.250	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Phenanthrene	ND		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
Pyrene	0.0581		0.0500	1	08/29/2018 10:00	<a href="#">WG1158563</a>
1-Methylnaphthalene	ND		0.250	1	08/29/2018 10:00	<a href="#">WG1158563</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2018 10:00	<a href="#">WG1158563</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2018 10:00	<a href="#">WG1158563</a>
(S) Nitrobenzene-d5	87.5		31.0-160		08/29/2018 10:00	<a href="#">WG1158563</a>
(S) 2-Fluorobiphenyl	86.5		48.0-148		08/29/2018 10:00	<a href="#">WG1158563</a>
(S) p-Terphenyl-d14	85.5		37.0-146		08/29/2018 10:00	<a href="#">WG1158563</a>

- 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	166		100	1	08/31/2018 09:48	<a href="#">WG1159177</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/30/2018 14:12	<a href="#">WG1158584</a>

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	08/26/2018 19:08	<a href="#">WG1157213</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	08/30/2018 05:08	<a href="#">WG1158234</a>

7 Gl

8 Al

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	6070		100	1	08/30/2018 02:27	<a href="#">WG1158279</a>
Manganese,Dissolved	3300		5.00	1	08/30/2018 02:27	<a href="#">WG1158279</a>

9 Sc

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	2740		10.0	1	08/30/2018 11:01	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 11:01	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 11:01	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6980		1000	5	08/31/2018 06:27	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	4110		1250	5	08/31/2018 06:27	<a href="#">WG1157961</a>
(S) o-Terphenyl	104		52.0-156		08/31/2018 06:27	<a href="#">WG1157961</a>

## Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4640		200	1	08/31/2018 02:16	<a href="#">WG1157969</a>
Residual Range Organics (RRO)	2590		250	1	08/31/2018 02:16	<a href="#">WG1157969</a>
(S) o-Terphenyl	106		52.0-156		08/31/2018 02:16	<a href="#">WG1157969</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Acenaphthene	0.0701		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Acenaphthylene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Chrysene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Fluoranthene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Fluorene	0.187		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Naphthalene	ND		0.250	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Phenanthrene	0.0560		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
Pyrene	0.0565		0.0500	1	08/29/2018 10:23	<a href="#">WG1158563</a>
1-Methylnaphthalene	ND		0.250	1	08/29/2018 10:23	<a href="#">WG1158563</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2018 10:23	<a href="#">WG1158563</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2018 10:23	<a href="#">WG1158563</a>
(S) Nitrobenzene-d5	83.0		31.0-160		08/29/2018 10:23	<a href="#">WG1158563</a>
(S) 2-Fluorobiphenyl	82.5		48.0-148		08/29/2018 10:23	<a href="#">WG1158563</a>
(S) p-Terphenyl-d14	82.0		37.0-146		08/29/2018 10:23	<a href="#">WG1158563</a>

- 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	08/31/2018 09:50	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	6610		200	2	08/30/2018 14:45	<a href="#">WG1158584</a>

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	08/26/2018 19:08	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	26500		5000	1	08/30/2018 05:50	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/30/2018 02:32	<a href="#">WG1158279</a>
Manganese,Dissolved	7.17		5.00	1	08/30/2018 02:32	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/30/2018 11:08	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 11:08	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 11:08	<a href="#">WG1158190</a>

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	08/30/2018 09:28	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2018 09:28	<a href="#">WG1157961</a>
(S) o-Terphenyl	95.8		52.0-156		08/30/2018 09:28	<a href="#">WG1157961</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/31/2018 09:52	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4550		100	1	08/30/2018 14:15	<a href="#">WG1158584</a>

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	08/26/2018 19:08	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	61800		5000	1	08/30/2018 06:32	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/30/2018 02:36	<a href="#">WG1158279</a>
Manganese,Dissolved	424		5.00	1	08/30/2018 02:36	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/30/2018 11:11	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 11:11	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 11:11	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	729		200	1	08/31/2018 05:48	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	1200		250	1	08/31/2018 05:48	<a href="#">WG1157961</a>
(S) o-Terphenyl	112		52.0-156		08/31/2018 05:48	<a href="#">WG1157961</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	458		200	1	08/31/2018 02:35	<a href="#">WG1157969</a>
Residual Range Organics (RRO)	630		250	1	08/31/2018 02:35	<a href="#">WG1157969</a>
(S) o-Terphenyl	104		52.0-156		08/31/2018 02:35	<a href="#">WG1157969</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/31/2018 09:53	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	29000		1000	10	08/30/2018 14:47	<a href="#">WG1158584</a>

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	08/26/2018 19:08	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	39400		5000	1	08/30/2018 06:46	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/30/2018 02:41	<a href="#">WG1158279</a>
Manganese,Dissolved	ND		5.00	1	08/30/2018 02:41	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/30/2018 11:15	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 11:15	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 11:15	<a href="#">WG1158190</a>

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	08/30/2018 10:07	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2018 10:07	<a href="#">WG1157961</a>
(S) o-Terphenyl	96.8		52.0-156		08/30/2018 10:07	<a href="#">WG1157961</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/31/2018 09:55	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1100		500	5	08/30/2018 14:48	<a href="#">WG1158584</a>

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	08/26/2018 19:08	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	68000		5000	1	08/30/2018 07:00	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/30/2018 02:45	<a href="#">WG1158279</a>
Manganese,Dissolved	ND		5.00	1	08/30/2018 02:45	<a href="#">WG1158279</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/30/2018 11:17	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 11:17	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 11:17	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	389		200	1	08/30/2018 12:04	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	806		250	1	08/30/2018 12:04	<a href="#">WG1157961</a>
(S) o-Terphenyl	96.8		52.0-156		08/30/2018 12:04	<a href="#">WG1157961</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	292		100	1	08/31/2018 10:01	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	136		100	1	08/30/2018 14:26	<a href="#">WG1158584</a>

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	08/26/2018 19:09	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	22300		5000	1	08/30/2018 07:14	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	660		100	1	08/30/2018 19:37	<a href="#">WG1159305</a>
Manganese,Dissolved	1770		5.00	1	08/30/2018 19:37	<a href="#">WG1159305</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	238		10.0	1	08/30/2018 11:20	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 11:20	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 11:20	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4420		200	1	08/30/2018 12:23	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	3540		1250	5	08/30/2018 17:34	<a href="#">WG1157961</a>
(S) o-Terphenyl	103		52.0-156		08/30/2018 17:34	<a href="#">WG1157961</a>
(S) o-Terphenyl	118		52.0-156		08/30/2018 12:23	<a href="#">WG1157961</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/31/2018 10:03	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3470		100	1	08/30/2018 14:27	<a href="#">WG1158584</a>

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	08/26/2018 19:09	<a href="#">WG1157213</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	20900		5000	1	08/30/2018 07:27	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/30/2018 19:19	<a href="#">WG1159305</a>
Manganese,Dissolved	22.5	<u>O1</u>	5.00	1	08/30/2018 19:19	<a href="#">WG1159305</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/30/2018 11:24	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 11:24	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 11:24	<a href="#">WG1158190</a>

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	08/30/2018 16:55	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2018 16:55	<a href="#">WG1157961</a>
(S) o-Terphenyl	99.5		52.0-156		08/30/2018 16:55	<a href="#">WG1157961</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	09/05/2018 21:29	<a href="#">WG1161750</a>
Residual Range Organics (RRO)	ND		250	1	09/05/2018 21:29	<a href="#">WG1161750</a>
(S) o-Terphenyl	70.0		52.0-156		09/05/2018 21:29	<a href="#">WG1161750</a>





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	287		100	1	08/31/2018 10:04	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/30/2018 14:29	<a href="#">WG1158584</a>

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	08/29/2018 21:08	<a href="#">WG1157729</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	08/30/2018 07:41	<a href="#">WG1158234</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	11700		100	1	08/30/2018 19:53	<a href="#">WG1159305</a>
Manganese,Dissolved	1270		5.00	1	08/30/2018 19:53	<a href="#">WG1159305</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	2180		10.0	1	08/30/2018 11:26	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 11:26	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 11:26	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4050		200	1	08/30/2018 13:02	<a href="#">WG1157961</a>
Residual Range Organics (RRO)	3180		250	1	08/30/2018 13:02	<a href="#">WG1157961</a>
(S) o-Terphenyl	127		52.0-156		08/30/2018 13:02	<a href="#">WG1157961</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	559		100	1	08/31/2018 10:06	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	200		100	1	08/30/2018 14:30	<a href="#">WG1158584</a>

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	08/29/2018 21:11	<a href="#">WG1157729</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		100000	20	08/29/2018 03:00	<a href="#">WG1158681</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	11700		100	1	08/30/2018 19:57	<a href="#">WG1159305</a>
Manganese,Dissolved	6750		5.00	1	08/30/2018 19:57	<a href="#">WG1159305</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	909		10.0	1	08/30/2018 11:29	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 11:29	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 11:29	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	19700		1000	5	08/31/2018 00:34	<a href="#">WG1158540</a>
Residual Range Organics (RRO)	12600		1250	5	08/31/2018 00:34	<a href="#">WG1158540</a>
(S) o-Terphenyl	118		52.0-156		08/31/2018 00:34	<a href="#">WG1158540</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	14600		1000	5	08/31/2018 20:36	<a href="#">WG1157969</a>
Residual Range Organics (RRO)	6080		1250	5	08/31/2018 20:36	<a href="#">WG1157969</a>
(S) o-Terphenyl	119		52.0-156		08/31/2018 20:36	<a href="#">WG1157969</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	514		100	1	08/31/2018 10:07	<a href="#">WG1159177</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	233		100	1	08/30/2018 14:33	<a href="#">WG1158584</a>

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	08/29/2018 21:11	<a href="#">WG1157729</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		100000	20	08/29/2018 03:18	<a href="#">WG1158681</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	10800		100	1	08/30/2018 20:02	<a href="#">WG1159305</a>
Manganese,Dissolved	6700		5.00	1	08/30/2018 20:02	<a href="#">WG1159305</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	898		10.0	1	08/30/2018 11:36	<a href="#">WG1158190</a>
Ethane	ND		13.0	1	08/30/2018 11:36	<a href="#">WG1158190</a>
Ethene	ND		13.0	1	08/30/2018 11:36	<a href="#">WG1158190</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	18600		1000	5	08/31/2018 00:52	<a href="#">WG1158540</a>
Residual Range Organics (RRO)	12000		1250	5	08/31/2018 00:52	<a href="#">WG1158540</a>
(S) o-Terphenyl	103		52.0-156		08/31/2018 00:52	<a href="#">WG1158540</a>



Method Blank (MB)

(MB) R3338423-1 08/31/18 09:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1020953-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1020953-19 08/31/18 10:07 • (DUP) R3338423-7 08/31/18 10:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	514	567	1	9.81		10

L1020953-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1020953-01 08/31/18 10:19 • (DUP) R3338423-9 08/31/18 10:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

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

(LCS) R3338423-2 08/31/18 09:21 • (LCSD) R3338423-3 08/31/18 09:23

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7560	7530	101	100	90.0-110			0.451	10

L1020953-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020953-02 08/31/18 09:28 • (MS) R3338423-5 08/31/18 09:29 • (MSD) R3338423-6 08/31/18 09:31

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	5370	4970	107	99.5	1	90.0-110			7.68	10

L1021602-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1021602-02 08/31/18 10:11 • (MS) R3338423-8 08/31/18 10:12

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	955	6290	107	1	90.0-110	



Method Blank (MB)

(MB) R3338084-1 08/30/18 13:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1020953-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1020953-03 08/30/18 13:54 • (DUP) R3338084-6 08/30/18 13:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1400	1390	1	1.15		20

L1020953-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1020953-18 08/30/18 14:30 • (DUP) R3338084-7 08/30/18 14:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	200	200	1	0.000		20

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

(LCS) R3338084-2 08/30/18 13:45 • (LCSD) R3338084-3 08/30/18 13:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	4000	3890	3890	97.1	97.1	90.0-110			0.000	20

L1020953-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020953-02 08/30/18 13:50 • (MS) R3338084-4 08/30/18 13:51 • (MSD) R3338084-5 08/30/18 13:53

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	999	3300	3340	92.2	93.4	1	90.0-110			0.964	20

L1020953-19 Original Sample (OS) • Matrix Spike (MS)

(OS) L1020953-19 08/30/18 14:33 • (MS) R3338084-8 08/30/18 14:35

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	233	2560	93.2	1	90.0-110	



Method Blank (MB)

(MB) R3336767-1 08/26/18 18:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1020340-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1020340-01 08/26/18 18:59 • (DUP) R3336767-4 08/26/18 18:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

L1020953-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1020953-16 08/26/18 19:09 • (DUP) R3336767-7 08/26/18 19:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

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

(LCS) R3336767-2 08/26/18 18:57 • (LCSD) R3336767-3 08/26/18 18:58

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	492	493	98.4	98.6	85.0-115			0.203	20

L1020953-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020953-06 08/26/18 19:06 • (MS) R3336767-5 08/26/18 19:06 • (MSD) R3336767-6 08/26/18 19:06

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	970	975	97.0	97.5	1	80.0-120			0.514	20



Method Blank (MB)

(MB) R3337794-1 08/29/18 21:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1020953-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1020953-17 08/29/18 21:08 • (DUP) R3337794-4 08/29/18 21:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1021426-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1021426-06 08/29/18 21:15 • (DUP) R3337794-7 08/29/18 21:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

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

(LCS) R3337794-2 08/29/18 21:04 • (LCSD) R3337794-3 08/29/18 21:04

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	495	497	99.0	99.4	85.0-115			0.403	20

L1021426-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021426-01 08/29/18 21:13 • (MS) R3337794-5 08/29/18 21:13 • (MSD) R3337794-6 08/29/18 21:13

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	976	964	97.6	96.4	1	80.0-120			1.24	20



Method Blank (MB)

(MB) R3338015-1 08/29/18 23:55

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

L1020953-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1020953-02 08/30/18 02:07 • (DUP) R3338015-4 08/30/18 02:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	16100	16500	1	2.67		15

L1020953-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1020953-11 08/30/18 05:50 • (DUP) R3338015-7 08/30/18 06:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	26500	26500	1	0.300		15

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

(LCS) R3338015-2 08/30/18 00:09 • (LCSD) R3338015-3 08/30/18 00:23

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	39700	39900	99.4	99.8	80.0-120			0.436	15

L1020953-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020953-02 08/30/18 02:07 • (MS) R3338015-5 08/30/18 03:03 • (MSD) R3338015-6 08/30/18 03:17

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	16100	70500	70800	109	109	1	80.0-120			0.418	15

L1020953-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L1020953-11 08/30/18 05:50 • (MS) R3338015-8 08/30/18 06:18

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	26500	78800	105	1	80.0-120	





Method Blank (MB)

(MB) R3337653-1 08/28/18 21:57

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

L1020723-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1020723-01 08/29/18 00:52 • (DUP) R3337653-4 08/29/18 01:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	11500	8130	1	34.7	P1	15

<sup>6</sup> Qc

L1021076-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1021076-01 08/29/18 05:25 • (DUP) R3337653-7 08/29/18 06:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	24100	24600	1	1.82		15

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3337653-2 08/28/18 22:15 • (LCSD) R3337653-3 08/28/18 22:34

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	39900	39900	99.7	99.7	80.0-120			0.0694	15

L1020723-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020723-01 08/29/18 00:52 • (MS) R3337653-5 08/29/18 01:29 • (MSD) R3337653-6 08/29/18 01:47

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	11500	58100	59200	93.0	95.4	1	80.0-120			2.01	15

L1021076-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1021076-01 08/29/18 05:25 • (MS) R3337653-8 08/29/18 06:38

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	24100	73500	98.8	1	80.0-120	



Method Blank (MB)

(MB) R3337858-1 08/30/18 00:03

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
Manganese,Dissolved	U		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) R3337858-2 08/30/18 00:07 • (LCSD) R3337858-3 08/30/18 00:12

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	%	%	%			%	%
Arsenic,Dissolved	50.0	51.0	50.3	102	101	80.0-120			1.45	20
Iron,Dissolved	5000	4990	5030	99.9	101	80.0-120			0.664	20
Manganese,Dissolved	50.0	49.4	47.9	98.7	95.9	80.0-120			2.95	20

L1020953-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020953-02 08/30/18 00:16 • (MS) R3337858-5 08/30/18 00:26 • (MSD) R3337858-6 08/30/18 00:30

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	%	%		%			%	%
Arsenic,Dissolved	50.0	7.14	54.1	56.1	93.9	97.9	1	75.0-125			3.65	20
Iron,Dissolved	5000	ND	4720	4850	94.4	96.9	1	75.0-125			2.57	20
Manganese,Dissolved	50.0	187	246	243	119	113	1	75.0-125			1.28	20



Method Blank (MB)

(MB) R3337815-1 08/29/18 22:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Arsenic	U		0.250	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3337815-2 08/29/18 22:25 • (LCSD) R3337815-3 08/29/18 22:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Arsenic	50.0	47.2	46.7	94.3	93.4	80.0-120			0.940	20

L1020953-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020953-02 08/29/18 22:34 • (MS) R3337815-5 08/29/18 22:43 • (MSD) R3337815-6 08/29/18 22:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Arsenic	50.0	6.81	53.3	52.7	93.0	91.7	1	75.0-125			1.22	20

<sup>7</sup> Gl

<sup>8</sup> Al

L1021009-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021009-08 08/29/18 22:52 • (MS) R3337815-7 08/29/18 22:57 • (MSD) R3337815-8 08/29/18 23:01

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Arsenic	50.0	73.0	117	120	88.6	93.2	1	75.0-125			1.97	20

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3338169-1 08/30/18 19:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron,Dissolved	U		15.0	100
Manganese,Dissolved	U		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) R3338169-2 08/30/18 19:10 • (LCSD) R3338169-3 08/30/18 19:14

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	5070	5160	101	103	80.0-120			1.92	20
Manganese,Dissolved	50.0	51.1	51.7	102	103	80.0-120			1.17	20

L1020953-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020953-16 08/30/18 19:19 • (MS) R3338169-4 08/30/18 19:28 • (MSD) R3338169-5 08/30/18 19:33

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	ND	4890	4870	97.9	97.4	1	75.0-125			0.518	20
Manganese,Dissolved	50.0	22.5	70.0	70.4	95.1	95.9	1	75.0-125			0.568	20



Method Blank (MB)

(MB) R3338205-3 08/30/18 10:22

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	39.5	↓	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	98.3			78.0-120

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3338205-1 08/30/18 09:13 • (LCSD) R3338205-2 08/30/18 09:36

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 %
Gasoline Range Organics-NWTPH	5500	5230	5440	95.1	98.8	70.0-124			3.86	20
(S) a,a,a-Trifluorotoluene(FID)				105	105	78.0-120				

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3337964-1 08/30/18 10:20

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

L1020953-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1020953-01 08/30/18 10:22 • (DUP) R3337964-2 08/30/18 11:05

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

L1020953-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1020953-19 08/30/18 11:36 • (DUP) R3337964-3 08/30/18 11:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	898	887	1	1.30		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) R3337964-6 08/30/18 11:52 • (LCSD) R3337964-7 08/30/18 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	71.8	72.1	106	106	85.0-115			0.361	20
Ethane	129	119	118	92.4	91.8	85.0-115			0.655	20
Ethene	127	118	119	93.3	93.3	85.0-115			0.0527	20



L1020953-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020953-02 08/30/18 10:25 • (MS) R3337964-4 08/30/18 11:45 • (MSD) R3337964-5 08/30/18 11:48

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	70.3	67.7	104	99.8	1	85.0-115			3.74	20
Ethane	129	ND	118	113	91.3	87.5	1	85.0-115			4.23	20
Ethene	127	ND	117	112	92.4	87.8	1	85.0-115			5.04	20

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



Method Blank (MB)

(MB) R3337875-1 08/29/18 15:16

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>	78.0			52.0-156

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

(LCS) R3337875-2 08/29/18 15:37 • (LCSD) R3337875-3 08/29/18 15:57

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	824	832	110	111	50.0-150			0.966	20
Residual Range Organics (RRO)	750	777	813	104	108	50.0-150			4.53	20
<i>(S) o-Terphenyl</i>				102	103	52.0-156				

L1020953-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020953-02 08/30/18 04:39 • (MS) R3337875-4 08/30/18 04:59 • (MSD) R3337875-5 08/30/18 05:18

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	887	867	124	121	1	50.0-150			2.28	20
Residual Range Organics (RRO)	714	ND	925	890	115	110	1	50.0-150			3.86	20
<i>(S) o-Terphenyl</i>					108	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) R3338333-1 08/30/18 12:58

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>	84.0			52.0-156

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3338333-2 08/30/18 13:17 • (LCSD) R3338333-3 08/30/18 14:26

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	782	775	104	103	50.0-150			0.899	20
Residual Range Organics (RRO)	750	632	646	84.3	86.1	50.0-150			2.19	20
<i>(S) o-Terphenyl</i>				98.5	98.5	52.0-156				

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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
<i>(S) o-Terphenyl</i>	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
<i>(S) o-Terphenyl</i>				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
<i>(S) o-Terphenyl</i>					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) R3337876-1 08/29/18 16:17

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>	84.5			52.0-156

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

(LCS) R3337876-2 08/29/18 16:37 • (LCSD) R3337876-3 08/29/18 16:57

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	772	764	103	102	50.0-150			1.04	20
Residual Range Organics (RRO)	750	682	683	90.9	91.1	50.0-150			0.147	20
<i>(S) o-Terphenyl</i>				97.5	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) R3339428-1 09/05/18 20:10

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>	67.0			52.0-156

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

(LCS) R3339428-2 09/05/18 20:30 • (LCSD) R3339428-3 09/05/18 20:50

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	641	614	85.5	81.9	50.0-150			4.30	20
Residual Range Organics (RRO)	750	663	645	88.4	86.0	50.0-150			2.75	20
<i>(S) o-Terphenyl</i>				78.0	74.0	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) R3337548-3 08/29/18 01:53

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	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	92.5			31.0-160
(S) 2-Fluorobiphenyl	91.5			48.0-148
(S) p-Terphenyl-d14	89.0			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3337548-1 08/29/18 01:07 • (LCSD) R3337548-2 08/29/18 01:30

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	1.89	2.04	94.5	102	67.0-150			7.63	20
Acenaphthene	2.00	1.85	2.05	92.5	102	65.0-138			10.3	20
Acenaphthylene	2.00	1.89	2.08	94.5	104	66.0-140			9.57	20
Benzo(a)anthracene	2.00	1.74	1.97	87.0	98.5	61.0-140			12.4	20
Benzo(a)pyrene	2.00	1.47	1.68	73.5	84.0	60.0-143			13.3	20
Benzo(b)fluoranthene	2.00	1.65	1.95	82.5	97.5	58.0-141			16.7	20
Benzo(g,h,i)perylene	2.00	1.16	1.36	58.0	68.0	52.0-153			15.9	20
Benzo(k)fluoranthene	2.00	1.37	1.53	68.5	76.5	58.0-148			11.0	20
Chrysene	2.00	1.72	1.98	86.0	99.0	64.0-144			14.1	20
Dibenz(a,h)anthracene	2.00	1.18	1.32	59.0	66.0	52.0-155			11.2	20
Fluoranthene	2.00	1.88	2.07	94.0	103	69.0-153			9.62	20



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

(LCS) R3337548-1 08/29/18 01:07 • (LCSD) R3337548-2 08/29/18 01:30

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	1.89	2.09	94.5	105	64.0-136			10.1	20
Indeno(1,2,3-cd)pyrene	2.00	1.24	1.42	62.0	71.0	54.0-153			13.5	20
Naphthalene	2.00	1.88	2.04	94.0	102	61.0-137			8.16	20
Phenanthrene	2.00	1.87	2.08	93.5	104	62.0-137			10.6	20
Pyrene	2.00	1.83	2.08	91.5	104	60.0-142			12.8	20
1-Methylnaphthalene	2.00	1.92	2.11	96.0	105	66.0-142			9.43	20
2-Methylnaphthalene	2.00	1.81	2.01	90.5	100	62.0-136			10.5	20
2-Chloronaphthalene	2.00	1.86	2.08	93.0	104	64.0-140			11.2	20
<i>(S) Nitrobenzene-d5</i>				96.5	101	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				93.5	101	48.0-148				
<i>(S) p-Terphenyl-d14</i>				83.0	97.0	37.0-146				

L1020519-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1020519-04 08/29/18 03:25 • (MS) R3337548-4 08/29/18 03:49 • (MSD) R3337548-5 08/29/18 04:12

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	1.71	1.79	85.5	89.5	1	56.0-156			4.57	20
Acenaphthene	2.00	ND	1.70	1.77	85.0	88.5	1	44.0-153			4.03	20
Acenaphthylene	2.00	ND	1.71	1.79	85.5	89.5	1	53.0-150			4.57	20
Benzo(a)anthracene	2.00	ND	1.54	1.68	77.0	84.0	1	47.0-151			8.70	20
Benzo(a)pyrene	2.00	ND	1.29	1.46	64.5	73.0	1	45.0-146			12.4	20
Benzo(b)fluoranthene	2.00	ND	1.35	1.57	67.5	78.5	1	43.0-142			15.1	20
Benzo(g,h,i)perylene	2.00	ND	0.990	1.10	49.5	55.0	1	40.0-147			10.5	20
Benzo(k)fluoranthene	2.00	ND	1.33	1.41	66.5	70.5	1	43.0-148			5.84	21
Chrysene	2.00	ND	1.53	1.69	76.5	84.5	1	50.0-148			9.94	20
Dibenz(a,h)anthracene	2.00	ND	0.955	1.05	47.7	52.5	1	37.0-151			9.48	20
Fluoranthene	2.00	ND	1.71	1.81	85.5	90.5	1	56.0-157			5.68	20
Fluorene	2.00	ND	1.72	1.81	86.0	90.5	1	48.0-148			5.10	20
Indeno(1,2,3-cd)pyrene	2.00	ND	1.03	1.17	51.5	58.5	1	41.0-148			12.7	20
Naphthalene	2.00	ND	1.70	1.77	85.0	88.5	1	10.0-160			4.03	20
Phenanthrene	2.00	ND	1.68	1.79	84.0	89.5	1	47.0-147			6.34	20
Pyrene	2.00	ND	1.67	1.77	83.5	88.5	1	51.0-148			5.81	20
1-Methylnaphthalene	2.00	ND	1.75	1.83	87.5	91.5	1	21.0-160			4.47	20
2-Methylnaphthalene	2.00	ND	1.67	1.74	83.5	87.0	1	31.0-160			4.11	20
2-Chloronaphthalene	2.00	ND	1.70	1.80	85.0	90.0	1	52.0-148			5.71	20
<i>(S) Nitrobenzene-d5</i>					86.0	87.5		31.0-160				
<i>(S) 2-Fluorobiphenyl</i>					85.0	86.0		48.0-148				
<i>(S) p-Terphenyl-d14</i>					72.0	80.0		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.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.



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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	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

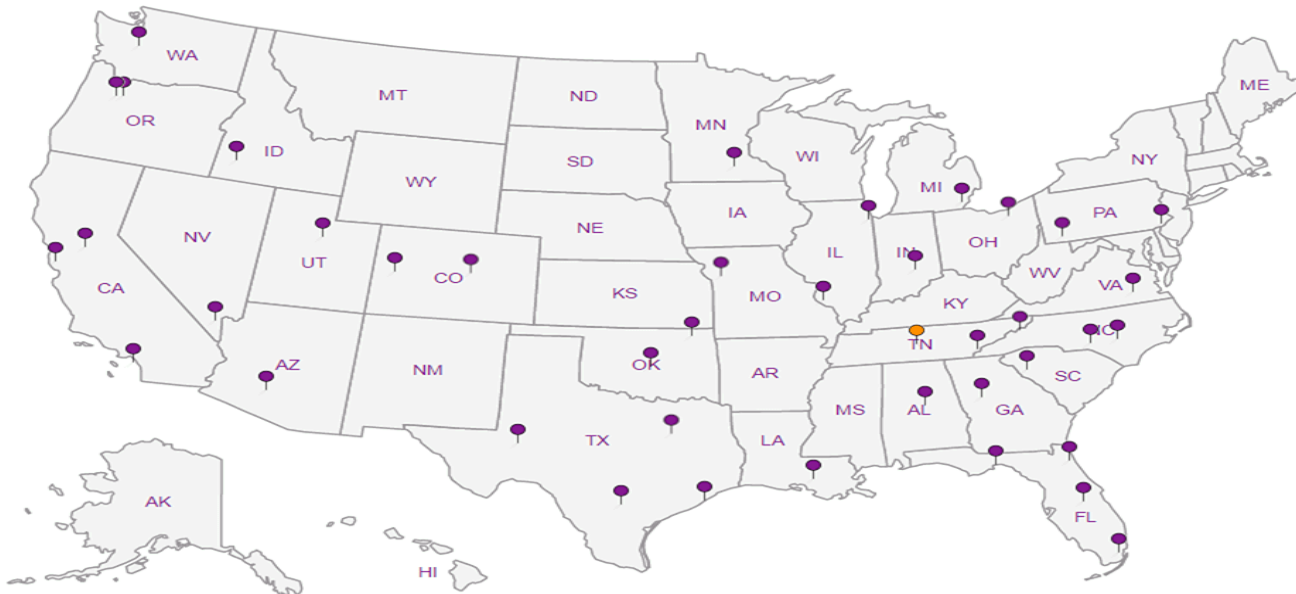
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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  
 22 22

Report to:  
**Ryan Hultgren**

Email To: [RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com),  
[KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com)

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

City/State  
 Collected: **Wishram, WA**

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

Client Project #  
**1896120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Collected by (print):  
**Julia Schwarz**

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
-----------	-----------	----------	-------	------	------	--------------

RMD-4-20180822	Grab	GW	n/a	8/22/18	0940	12
WMW-13-20180822		GW			1050	12
WMW-14-20180822		GW			1115	10
WMW-15-20180822		GW			1240	8
RMD-3-20180822		GW			1300	10
WMW-17-20180822		GW			1510	12
RMD-1-20180822		GW			1515	12
WMW-16-20180822		GW			1705	15
RMD-2-20180822		GW			1705	12
D-1-20180822		GW			1720	12

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

Remarks:  
**RAD SCREEN: <0.5 mR/h**  
 pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_  
 Samples returned via:  
 UPS  FedEx  Courier

Relinquished by: (Signature) \_\_\_\_\_  
 Date: 8/24/18 Time: 0800  
 Relinquished by: (Signature) \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: (Signature) \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature) **To FedEx**  
 Trip Blank Received:  Yes  No  
 (HCl) MeOH TBR  
 Temp: **2.07** °C  
 Bottles Received: **216**  
 Received for lab by: (Signature) **Sybil M a**  
 Date: 8/25/18 Time: 8:15

Sample Receipt Checklist  
 COC Seal Present/Intact:   N  
 COC Signed/Accurate:   N  
 Bottles arrive intact:   N  
 Correct bottles used:   N  
 Sufficient volume sent:   N  
 If Applicable  
 VOA Zero Headspace:   N  
 Preservation Correct/Checked:   N  
 If preservation required by Login: Date/Time  
 Hold: \_\_\_\_\_  
 Condition:  NCF  OK

Analysis / Container / Preservative	1	2	3	4	5	6	7	8	9	10	11	12
Dissolved As 250mlHDPE-NoPres, Total As												
Dissolved Fe, Mn 250mlHDPE-HNO3												
NH3, NO2NO3 250mlHDPE-H2SO4												
NWTPHDXLVI- No SGT 40mlAmb-HCl-BT												
NWTPHDXLVI- w/ 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 1 of 2  
  
 12065 Lebanon Rd  
 Mount Juliet, TN 37122  
 Phone: 615-758-5858  
 Phone: 800-767-5859  
 Fax: 615-758-5859  


L# **1020953**  
**H113**  
 Acctnum: **BNSF1KEN**  
 Template: **T139244**  
 Prelogin: **P666494**  
 TSR: **134 - Mark W. Beasley**  
 PB: **89-186**  
 Shipped Via: **FedEX Ground**

Remarks	Sample # (lab only)
	01
MS/MSD	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:  
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 #  
1896120\*00

Lab Project #  
BNSF1KEN-WISHRAM

Collected by (print):  
Julia Schwarz

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

Immediately Packed on Ice N Y X

Same Day Five Day  
Next Day 5 Day (Rad Only)  
Two Day 10 Day (Rad Only)  
Three Day

Date Results Needed

No. of  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Analysis / Container / Preservative
WMW-13-20180823	Grab	GW	n/a	8/23/18	0835	8	Dissolved As 250mlHDPE-NoPres
WMW-09-20180823		GW			0940	10	Dissolved Fe, Mn 250mlHDPE-HNO3
WMW-12-20180823		GW			1002	8	NH3, NO2NO3 250mlHDPE-H2SO4
WMW-10-20180823		GW			1105	8	NWTPHDXLVI- No SGT 40mlAmb-HCl-BT
WMW-11-20180823		GW			1230	8	NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT
WMW-05-20180823		GW			1310	10	NWTPHGx 40mlAmb HCl
WMW-01-20180823		GW			1345	8	PAHSIMLVID 40mlAmb-NoPres-WT
WMW-03-20180823		GW			1145	10 <sup>9</sup>	RSK175 40mlAmb HCl Methane
D-2-20180823		GW			1150	10 <sup>1</sup>	Sulfate 125mlHDPE-NoPres
		GW					Sulfide 125mlAmb-S-NaOH+ZnAc

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:

RAD SCREEN: < 5 mR

4492 6222 2289  
4492 6222 2290

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
UPS  FedEx  Courier

Tracking # 4492 6222 2267 4492 6222 2278

Sample Receipt Checklist  
COC Seal Present/Intact:  N  
COC Signed/Accurate:  N  
Bottles arrive intact:  N  
Correct bottles used:  N  
Sufficient volume sent:  N  
If Applicable  
VOA Zero Headspace:  N  
Preservation Correct/Checked:  N

Relinquished by: (Signature)  
[Signature]  
Date: 8/24/18  
Time: 0800

Date: 8/24/18  
Time: 0800

Received by: (Signature)  
To FedEx  
Received by: (Signature)  
[Signature]

Trip Blank Received:  No  
4  
Temp: 2.0<sup>th</sup> °C  
Time: 214

If preservation required by Login: Date/Time  
Hold:  
Condition: NCF / OK

Chain of Custody Page 2 of 2



12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-9859



L# 1020953  
Table #  
Acctnum: BNSF1KEN  
Template: T139244  
Prelogin: P666494  
TSR: 134 - Mark W. Beasley  
PB:  
Shipped Via: FedEX Ground

Remarks	Sample # (lab only)
	-11
	-12
	-13
	-14
	-15
	-16
	-17
	-18
	-19

Jeremy W. Watkins



Login #:1020953	Client:BNSF1KEN	Date:08/25/18	Evaluated by:Matthew Lockhart
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**Non-Conformance (check applicable items)**

Sample Integrity	Chain of Custody Clarification	If Broken Container:
Parameter(s) past holding time	X Login Clarification Needed	Insufficient packing material around container
Improper temperature	Chain of custody is incomplete	Insufficient packing material inside cooler
Improper container type	Please specify Metals requested.	
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.	<b>If no Chain of Custody:</b>
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)Client wants to run dissolved Arsenic - field filtered?

2)Client wants to run for dissolved metals preserved with nitric acid but gave no indication on the COC or containers whether samples are field filter. Also where client is testing to run for total arsenic as well. client gave no indication which container is for field filter dissolve metals and which one is for total metals.

(Client does have the analysis on the labels.

3)Received one vial empty for WMW-03-20180823.

Client informed by:	Call	Email	Voice Mail	Date: 8/27/18	Time: 1445
TSR Initials: MB	Client Contact:				

**Login Instructions:**

- 1) Dissolved metals are field filtered
- 2) Dissolved metals are field filtered, dissolved/total are listed on the pre-printed label
- 3) Run from full containers



September 10, 2018

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1021969  
Samples Received: 08/30/2018  
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-23-20180827 L1021969-01 GW

Collected by  
Alice Robinson  
Collected date/time  
08/27/18 10:10  
Received date/time  
08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1160250	1	09/04/18 12:50	09/04/18 12:50	JER
Wet Chemistry by Method 353.2	WG1160253	5	09/05/18 13:48	09/05/18 13:48	JER
Wet Chemistry by Method 4500S2 D-2011	WG1159362	1	08/31/18 16:12	08/31/18 16:12	MJA
Wet Chemistry by Method 9056A	WG1159933	1	09/01/18 04:57	09/01/18 04:57	MCG
Mercury by Method 7470A	WG1159706	1	08/31/18 09:37	09/05/18 10:34	ABL
Mercury by Method 7470A	WG1159968	1	08/31/18 10:04	09/06/18 14:32	EL
Metals (ICPMS) by Method 6020A	WG1160033	1	09/02/18 23:47	09/03/18 20:18	LAT
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 13:51	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1161268	1	09/05/18 13:35	09/05/18 13:35	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159936	1	08/31/18 10:46	08/31/18 10:46	PP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1161044	1	09/04/18 07:15	09/05/18 08:05	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1160221	1	09/01/18 07:14	09/01/18 13:36	KM

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

## WMW-22-20180827 L1021969-02 GW

Collected by  
Alice Robinson  
Collected date/time  
08/27/18 11:20  
Received date/time  
08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1160250	1	09/04/18 12:52	09/04/18 12:52	JER
Wet Chemistry by Method 353.2	WG1160253	1	09/05/18 13:50	09/05/18 13:50	JER
Wet Chemistry by Method 4500S2 D-2011	WG1159362	1	08/31/18 16:12	08/31/18 16:12	MJA
Wet Chemistry by Method 9056A	WG1159933	1	09/01/18 06:23	09/01/18 06:23	MCG
Mercury by Method 7470A	WG1159706	1	08/31/18 09:37	09/05/18 10:36	ABL
Mercury by Method 7470A	WG1159968	1	08/31/18 10:04	09/06/18 14:40	EL
Metals (ICPMS) by Method 6020A	WG1160033	1	09/02/18 23:47	09/03/18 20:22	LD
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 13:56	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1161268	1	09/05/18 13:38	09/05/18 13:38	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159936	1	08/31/18 11:05	08/31/18 11:05	PP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1160884	1	09/02/18 16:35	09/04/18 11:00	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1160886	1	09/02/18 16:40	09/04/18 07:44	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1160221	1	09/01/18 07:14	09/01/18 13:59	KM

## WMW-21-20180827 L1021969-04 GW

Collected by  
Alice Robinson  
Collected date/time  
08/27/18 13:00  
Received date/time  
08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1160250	1	09/04/18 12:53	09/04/18 12:53	JER
Wet Chemistry by Method 353.2	WG1160253	1	09/05/18 13:53	09/05/18 13:53	JER
Wet Chemistry by Method 4500S2 D-2011	WG1159362	1	08/31/18 16:12	08/31/18 16:12	MJA
Wet Chemistry by Method 9056A	WG1159933	1	09/01/18 06:38	09/01/18 06:38	MCG
Mercury by Method 7470A	WG1159706	1	08/31/18 09:37	09/05/18 10:39	ABL
Mercury by Method 7470A	WG1159968	1	08/31/18 10:04	09/06/18 14:42	EL
Metals (ICPMS) by Method 6020A	WG1160033	1	09/02/18 23:47	09/03/18 20:27	LD
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 14:28	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1161268	1	09/05/18 13:42	09/05/18 13:42	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1159936	1	08/31/18 11:24	08/31/18 11:24	PP
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1160884	1	09/02/18 16:35	09/04/18 11:20	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1160886	1	09/02/18 16:40	09/04/18 08:03	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1160221	1	09/01/18 07:14	09/01/18 14:22	KM

# SAMPLE SUMMARY

## WMW-20-20180827 L1021969-06 GW

Collected by  
Alice Robinson  
Collected date/time  
08/27/18 15:10  
Received date/time  
08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1160250	1	09/04/18 12:55	09/04/18 12:55	JER
Wet Chemistry by Method 353.2	WG1160253	1	09/05/18 14:02	09/05/18 14:02	JER
Wet Chemistry by Method 4500S2 D-2011	WG1159362	1	08/31/18 16:12	08/31/18 16:12	MJA
Wet Chemistry by Method 9056A	WG1159933	1	09/01/18 06:52	09/01/18 06:52	MCG
Mercury by Method 7470A	WG1159706	1	08/31/18 09:37	09/05/18 10:41	ABL
Mercury by Method 7470A	WG1159968	1	08/31/18 10:04	09/06/18 14:45	EL
Metals (ICPMS) by Method 6020A	WG1160033	1	09/02/18 23:47	09/03/18 21:01	LD
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 14:33	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1161268	1	09/05/18 13:44	09/05/18 13:44	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160780	1	09/02/18 14:56	09/02/18 14:56	GLN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1160884	1	09/02/18 16:35	09/04/18 11:40	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1160221	1	09/01/18 07:14	09/01/18 14:45	KM

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

## WMW-19-20180827 L1021969-07 GW

Collected by  
Alice Robinson  
Collected date/time  
08/27/18 16:50  
Received date/time  
08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1160250	1	09/04/18 12:57	09/04/18 12:57	JER
Wet Chemistry by Method 353.2	WG1160253	1	09/05/18 14:03	09/05/18 14:03	JER
Wet Chemistry by Method 4500S2 D-2011	WG1159362	1	08/31/18 16:13	08/31/18 16:13	MJA
Wet Chemistry by Method 9056A	WG1159933	1	09/01/18 07:06	09/01/18 07:06	MCG
Mercury by Method 7470A	WG1159706	1	08/31/18 09:37	09/05/18 10:44	ABL
Metals (ICPMS) by Method 6020A	WG1160033	1	09/02/18 23:47	09/03/18 21:05	LD
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 14:37	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1161268	1	09/05/18 13:48	09/05/18 13:48	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160780	1	09/02/18 15:17	09/02/18 15:17	GLN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1160884	1	09/02/18 16:35	09/04/18 11:59	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1160221	1	09/01/18 07:14	09/01/18 15:08	KM

## WMW-31-20180827 L1021969-08 GW

Collected by  
Alice Robinson  
Collected date/time  
08/28/18 10:00  
Received date/time  
08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1160250	1	09/04/18 13:03	09/04/18 13:03	JER
Wet Chemistry by Method 353.2	WG1160253	1	09/05/18 14:05	09/05/18 14:05	JER
Wet Chemistry by Method 4500S2 D-2011	WG1159362	1	08/31/18 16:13	08/31/18 16:13	MJA
Wet Chemistry by Method 9056A	WG1159933	1	09/01/18 07:21	09/01/18 07:21	MCG
Mercury by Method 7470A	WG1159706	1	08/31/18 09:37	09/05/18 10:46	ABL
Mercury by Method 7470A	WG1159968	1	08/31/18 10:04	09/06/18 14:47	EL
Metals (ICPMS) by Method 6020A	WG1160033	1	09/02/18 23:47	09/03/18 21:10	LD
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 14:42	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1161268	1	09/05/18 13:52	09/05/18 13:52	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160287	1	08/31/18 22:51	08/31/18 22:51	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160780	1	09/02/18 15:38	09/02/18 15:38	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1160884	1	09/02/18 16:35	09/04/18 12:19	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1160221	1	09/01/18 07:14	09/01/18 15:31	KM



# SAMPLE SUMMARY

## WMW-32-20180827 L1021969-09 GW

Collected by  
Alice Robinson  
Collected date/time  
08/28/18 15:35  
Received date/time  
08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1160250	1	09/04/18 13:05	09/04/18 13:05	JER
Wet Chemistry by Method 353.2	WG1160253	5	09/05/18 14:06	09/05/18 14:06	JER
Wet Chemistry by Method 4500S2 D-2011	WG1159362	1	08/31/18 16:13	08/31/18 16:13	MJA
Wet Chemistry by Method 9056A	WG1159933	1	09/01/18 07:35	09/01/18 07:35	MCG
Mercury by Method 7470A	WG1159706	1	08/31/18 09:37	09/05/18 10:49	ABL
Mercury by Method 7470A	WG1159968	1	08/31/18 10:04	09/06/18 14:49	EL
Metals (ICPMS) by Method 6020A	WG1160033	1	09/02/18 23:47	09/03/18 21:14	LD
Metals (ICPMS) by Method 6020A	WG1160033	1	09/02/18 23:47	09/04/18 12:13	LAT
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 14:46	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1160460	1	09/01/18 06:15	09/01/18 06:15	LRL
Volatile Organic Compounds (GC) by Method RSK175	WG1161268	1	09/05/18 13:55	09/05/18 13:55	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160287	1	08/31/18 23:10	08/31/18 23:10	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160780	1	09/02/18 15:58	09/02/18 15:58	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1160884	1	09/02/18 16:35	09/04/18 12:39	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1160221	1	09/01/18 07:14	09/01/18 15:54	KM

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

## WMW-28-20180827 L1021969-10 GW

Collected by  
Alice Robinson  
Collected date/time  
08/29/18 10:27  
Received date/time  
08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1160250	1	09/04/18 13:06	09/04/18 13:06	JER
Wet Chemistry by Method 353.2	WG1160253	1	09/05/18 14:08	09/05/18 14:08	JER
Wet Chemistry by Method 4500S2 D-2011	WG1159362	1	08/31/18 16:14	08/31/18 16:14	MJA
Wet Chemistry by Method 9056A	WG1159933	1	09/01/18 07:50	09/01/18 07:50	MCG
Mercury by Method 7470A	WG1159706	1	08/31/18 09:37	09/05/18 10:51	ABL
Mercury by Method 7470A	WG1159968	1	08/31/18 10:04	09/06/18 14:57	EL
Metals (ICPMS) by Method 6020A	WG1160033	1	09/02/18 23:47	09/03/18 21:18	LD
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 14:51	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1161268	1	09/05/18 13:58	09/05/18 13:58	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160287	1	08/31/18 23:30	08/31/18 23:30	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160780	1	09/02/18 16:19	09/02/18 16:19	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1160884	1	09/02/18 16:35	09/04/18 12:58	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1160221	1	09/01/18 07:14	09/01/18 16:17	KM

## D-1-201080829 L1021969-11 GW

Collected by  
Alice Robinson  
Collected date/time  
08/29/18 10:45  
Received date/time  
08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1160250	1	09/04/18 13:08	09/04/18 13:08	JER
Wet Chemistry by Method 353.2	WG1160253	1	09/05/18 14:09	09/05/18 14:09	JER
Wet Chemistry by Method 4500S2 D-2011	WG1159966	1	09/02/18 16:19	09/02/18 16:19	TH
Wet Chemistry by Method 9056A	WG1159933	1	09/01/18 08:04	09/01/18 08:04	MCG
Mercury by Method 7470A	WG1159706	1	08/31/18 09:37	09/05/18 11:16	ABL
Mercury by Method 7470A	WG1159968	1	08/31/18 10:04	09/06/18 14:59	EL
Metals (ICPMS) by Method 6020A	WG1160033	1	09/02/18 23:47	09/03/18 21:23	LD
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 14:56	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1161268	1	09/05/18 14:04	09/05/18 14:04	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160287	1	08/31/18 23:49	08/31/18 23:49	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160780	1	09/02/18 16:39	09/02/18 16:39	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1160884	1	09/02/18 16:35	09/04/18 13:18	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1160221	1	09/01/18 07:14	09/01/18 16:40	KM

# SAMPLE SUMMARY



TRIP BLANK L1021969-12 GW

Collected by Alice Robinson	Collected date/time 08/27/18 00:00	Received date/time 08/30/18 08:45
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Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160287	1	08/31/18 19:37	08/31/18 19:37	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160780	1	09/02/18 13:54	09/02/18 13:54	LRL

- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Sr
- <sup>6</sup>Qc
- <sup>7</sup>Gl
- <sup>8</sup>Al
- <sup>9</sup>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

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/04/2018 12:50	<a href="#">WG1160250</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	7470		500	5	09/05/2018 13:48	<a href="#">WG1160253</a>

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	08/31/2018 16:12	<a href="#">WG1159362</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	37300		5000	1	09/01/2018 04:57	<a href="#">WG1159933</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/05/2018 10:34	<a href="#">WG1159706</a>
Mercury,Dissolved	ND	J6	0.200	1	09/06/2018 14:32	<a href="#">WG1159968</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	17.8		2.00	1	09/03/2018 20:18	<a href="#">WG1160033</a>
Arsenic,Dissolved	17.6		2.00	1	09/05/2018 13:51	<a href="#">WG1160516</a>
Barium	22.5		5.00	1	09/03/2018 20:18	<a href="#">WG1160033</a>
Barium,Dissolved	22.6		5.00	1	09/05/2018 13:51	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/03/2018 20:18	<a href="#">WG1160033</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 13:51	<a href="#">WG1160516</a>
Chromium	ND		2.00	1	09/03/2018 20:18	<a href="#">WG1160033</a>
Chromium,Dissolved	ND		2.00	1	09/05/2018 13:51	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/05/2018 13:51	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/03/2018 20:18	<a href="#">WG1160033</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 13:51	<a href="#">WG1160516</a>
Manganese,Dissolved	109		5.00	1	09/05/2018 13:51	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/03/2018 20:18	<a href="#">WG1160033</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 13:51	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/03/2018 20:18	<a href="#">WG1160033</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 13:51	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/05/2018 13:35	<a href="#">WG1161268</a>
Ethane	ND		13.0	1	09/05/2018 13:35	<a href="#">WG1161268</a>
Ethene	ND		13.0	1	09/05/2018 13:35	<a href="#">WG1161268</a>



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	08/31/2018 10:46	<a href="#">WG1159936</a>
Toluene	ND		1.00	1	08/31/2018 10:46	<a href="#">WG1159936</a>
Ethylbenzene	ND		1.00	1	08/31/2018 10:46	<a href="#">WG1159936</a>
o-Xylene	ND		1.00	1	08/31/2018 10:46	<a href="#">WG1159936</a>
m&p-Xylene	ND		2.00	1	08/31/2018 10:46	<a href="#">WG1159936</a>
(S) Toluene-d8	98.3		80.0-120		08/31/2018 10:46	<a href="#">WG1159936</a>
(S) Dibromofluoromethane	104		75.0-120		08/31/2018 10:46	<a href="#">WG1159936</a>
(S) a,a,a-Trifluorotoluene	104		80.0-120		08/31/2018 10:46	<a href="#">WG1159936</a>
(S) 4-Bromofluorobenzene	101		77.0-126		08/31/2018 10:46	<a href="#">WG1159936</a>

- 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)	203		200	1	09/05/2018 08:05	<a href="#">WG1161044</a>
Residual Range Organics (RRO)	341		250	1	09/05/2018 08:05	<a href="#">WG1161044</a>
(S) o-Terphenyl	117		52.0-156		09/05/2018 08:05	<a href="#">WG1161044</a>

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	09/01/2018 13:36	<a href="#">WG1160221</a>
Acenaphthene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Acenaphthylene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Benzo(a)anthracene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Benzo(a)pyrene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Chrysene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Fluoranthene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Fluorene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Naphthalene	ND		0.250	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Phenanthrene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
Pyrene	ND		0.0500	1	09/01/2018 13:36	<a href="#">WG1160221</a>
1-Methylnaphthalene	ND		0.250	1	09/01/2018 13:36	<a href="#">WG1160221</a>
2-Methylnaphthalene	ND		0.250	1	09/01/2018 13:36	<a href="#">WG1160221</a>
2-Chloronaphthalene	ND		0.250	1	09/01/2018 13:36	<a href="#">WG1160221</a>
(S) Nitrobenzene-d5	71.0		31.0-160		09/01/2018 13:36	<a href="#">WG1160221</a>
(S) 2-Fluorobiphenyl	92.5		48.0-148		09/01/2018 13:36	<a href="#">WG1160221</a>
(S) p-Terphenyl-d14	92.0		37.0-146		09/01/2018 13:36	<a href="#">WG1160221</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/04/2018 12:52	<a href="#">WG1160250</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3380		100	1	09/05/2018 13:50	<a href="#">WG1160253</a>

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	08/31/2018 16:12	<a href="#">WG1159362</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	37200		5000	1	09/01/2018 06:23	<a href="#">WG1159933</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/05/2018 10:36	<a href="#">WG1159706</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 14:40	<a href="#">WG1159968</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	5.35		2.00	1	09/03/2018 20:22	<a href="#">WG1160033</a>
Arsenic,Dissolved	5.90		2.00	1	09/05/2018 13:56	<a href="#">WG1160516</a>
Barium	32.3		5.00	1	09/03/2018 20:22	<a href="#">WG1160033</a>
Barium,Dissolved	32.6		5.00	1	09/05/2018 13:56	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/03/2018 20:22	<a href="#">WG1160033</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 13:56	<a href="#">WG1160516</a>
Chromium	ND		2.00	1	09/03/2018 20:22	<a href="#">WG1160033</a>
Chromium,Dissolved	ND		2.00	1	09/05/2018 13:56	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/05/2018 13:56	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/03/2018 20:22	<a href="#">WG1160033</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 13:56	<a href="#">WG1160516</a>
Manganese,Dissolved	30.4		5.00	1	09/05/2018 13:56	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/03/2018 20:22	<a href="#">WG1160033</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 13:56	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/03/2018 20:22	<a href="#">WG1160033</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 13:56	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/05/2018 13:38	<a href="#">WG1161268</a>
Ethane	ND		13.0	1	09/05/2018 13:38	<a href="#">WG1161268</a>
Ethene	ND		13.0	1	09/05/2018 13:38	<a href="#">WG1161268</a>



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	08/31/2018 11:05	<a href="#">WG1159936</a>
Toluene	ND		1.00	1	08/31/2018 11:05	<a href="#">WG1159936</a>
Ethylbenzene	ND		1.00	1	08/31/2018 11:05	<a href="#">WG1159936</a>
o-Xylene	ND		1.00	1	08/31/2018 11:05	<a href="#">WG1159936</a>
m&p-Xylene	ND		2.00	1	08/31/2018 11:05	<a href="#">WG1159936</a>
(S) Toluene-d8	99.9		80.0-120		08/31/2018 11:05	<a href="#">WG1159936</a>
(S) Dibromofluoromethane	104		75.0-120		08/31/2018 11:05	<a href="#">WG1159936</a>
(S) a,a,a-Trifluorotoluene	105		80.0-120		08/31/2018 11:05	<a href="#">WG1159936</a>
(S) 4-Bromofluorobenzene	98.5		77.0-126		08/31/2018 11:05	<a href="#">WG1159936</a>

1 Cp

2 Tc

3 Ss

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)	ND		200	1	09/04/2018 11:00	<a href="#">WG1160884</a>
Residual Range Organics (RRO)	ND		250	1	09/04/2018 11:00	<a href="#">WG1160884</a>
(S) o-Terphenyl	90.5		52.0-156		09/04/2018 11:00	<a href="#">WG1160884</a>

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)	ND		200	1	09/04/2018 07:44	<a href="#">WG1160886</a>
Residual Range Organics (RRO)	ND		250	1	09/04/2018 07:44	<a href="#">WG1160886</a>
(S) o-Terphenyl	74.2		52.0-156		09/04/2018 07:44	<a href="#">WG1160886</a>

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	09/01/2018 13:59	<a href="#">WG1160221</a>
Acenaphthene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Acenaphthylene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Benzo(a)anthracene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Benzo(a)pyrene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Chrysene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Fluoranthene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Fluorene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Naphthalene	ND		0.250	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Phenanthrene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
Pyrene	ND		0.0500	1	09/01/2018 13:59	<a href="#">WG1160221</a>
1-Methylnaphthalene	ND		0.250	1	09/01/2018 13:59	<a href="#">WG1160221</a>
2-Methylnaphthalene	ND		0.250	1	09/01/2018 13:59	<a href="#">WG1160221</a>
2-Chloronaphthalene	ND		0.250	1	09/01/2018 13:59	<a href="#">WG1160221</a>
(S) Nitrobenzene-d5	71.6		31.0-160		09/01/2018 13:59	<a href="#">WG1160221</a>
(S) 2-Fluorobiphenyl	94.2		48.0-148		09/01/2018 13:59	<a href="#">WG1160221</a>
(S) p-Terphenyl-d14	92.1		37.0-146		09/01/2018 13:59	<a href="#">WG1160221</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/04/2018 12:53	<a href="#">WG1160250</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1780	J6	100	1	09/05/2018 13:53	<a href="#">WG1160253</a>

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	08/31/2018 16:12	<a href="#">WG1159362</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	14400		5000	1	09/01/2018 06:38	<a href="#">WG1159933</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/05/2018 10:39	<a href="#">WG1159706</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 14:42	<a href="#">WG1159968</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	6.25		2.00	1	09/03/2018 20:27	<a href="#">WG1160033</a>
Arsenic,Dissolved	5.82		2.00	1	09/05/2018 14:28	<a href="#">WG1160516</a>
Barium	23.3		5.00	1	09/03/2018 20:27	<a href="#">WG1160033</a>
Barium,Dissolved	22.0		5.00	1	09/05/2018 14:28	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/03/2018 20:27	<a href="#">WG1160033</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 14:28	<a href="#">WG1160516</a>
Chromium	ND		2.00	1	09/03/2018 20:27	<a href="#">WG1160033</a>
Chromium,Dissolved	ND		2.00	1	09/05/2018 14:28	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/05/2018 14:28	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/03/2018 20:27	<a href="#">WG1160033</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 14:28	<a href="#">WG1160516</a>
Manganese,Dissolved	939		5.00	1	09/05/2018 14:28	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/03/2018 20:27	<a href="#">WG1160033</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 14:28	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/03/2018 20:27	<a href="#">WG1160033</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 14:28	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/05/2018 13:42	<a href="#">WG1161268</a>
Ethane	ND		13.0	1	09/05/2018 13:42	<a href="#">WG1161268</a>
Ethene	ND		13.0	1	09/05/2018 13:42	<a href="#">WG1161268</a>





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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	08/31/2018 11:24	<a href="#">WG1159936</a>
Toluene	ND		1.00	1	08/31/2018 11:24	<a href="#">WG1159936</a>
Ethylbenzene	ND		1.00	1	08/31/2018 11:24	<a href="#">WG1159936</a>
o-Xylene	ND		1.00	1	08/31/2018 11:24	<a href="#">WG1159936</a>
m&p-Xylene	ND		2.00	1	08/31/2018 11:24	<a href="#">WG1159936</a>
(S) Toluene-d8	100		80.0-120		08/31/2018 11:24	<a href="#">WG1159936</a>
(S) Dibromofluoromethane	104		75.0-120		08/31/2018 11:24	<a href="#">WG1159936</a>
(S) a,a,a-Trifluorotoluene	103		80.0-120		08/31/2018 11:24	<a href="#">WG1159936</a>
(S) 4-Bromofluorobenzene	101		77.0-126		08/31/2018 11:24	<a href="#">WG1159936</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

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	09/04/2018 11:20	<a href="#">WG1160884</a>
Residual Range Organics (RRO)	ND		250	1	09/04/2018 11:20	<a href="#">WG1160884</a>
(S) o-Terphenyl	100		52.0-156		09/04/2018 11:20	<a href="#">WG1160884</a>

6 Qc

7 Gl

8 Al

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	09/04/2018 08:03	<a href="#">WG1160886</a>
Residual Range Organics (RRO)	ND		250	1	09/04/2018 08:03	<a href="#">WG1160886</a>
(S) o-Terphenyl	86.8		52.0-156		09/04/2018 08:03	<a href="#">WG1160886</a>

9 Sc

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Acenaphthene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Acenaphthylene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Benzo(a)anthracene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Benzo(a)pyrene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Chrysene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Fluoranthene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Fluorene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Naphthalene	ND		0.250	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Phenanthrene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
Pyrene	ND		0.0500	1	09/01/2018 14:22	<a href="#">WG1160221</a>
1-Methylnaphthalene	ND		0.250	1	09/01/2018 14:22	<a href="#">WG1160221</a>
2-Methylnaphthalene	ND		0.250	1	09/01/2018 14:22	<a href="#">WG1160221</a>
2-Chloronaphthalene	ND		0.250	1	09/01/2018 14:22	<a href="#">WG1160221</a>
(S) Nitrobenzene-d5	71.1		31.0-160		09/01/2018 14:22	<a href="#">WG1160221</a>
(S) 2-Fluorobiphenyl	92.6		48.0-148		09/01/2018 14:22	<a href="#">WG1160221</a>
(S) p-Terphenyl-d14	91.1		37.0-146		09/01/2018 14:22	<a href="#">WG1160221</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/04/2018 12:55	<a href="#">WG1160250</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	09/05/2018 14:02	<a href="#">WG1160253</a>

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	08/31/2018 16:12	<a href="#">WG1159362</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	9920		5000	1	09/01/2018 06:52	<a href="#">WG1159933</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/05/2018 10:41	<a href="#">WG1159706</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 14:45	<a href="#">WG1159968</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	7.58		2.00	1	09/03/2018 21:01	<a href="#">WG1160033</a>
Arsenic,Dissolved	7.59		2.00	1	09/05/2018 14:33	<a href="#">WG1160516</a>
Barium	47.9		5.00	1	09/03/2018 21:01	<a href="#">WG1160033</a>
Barium,Dissolved	46.2		5.00	1	09/05/2018 14:33	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/03/2018 21:01	<a href="#">WG1160033</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 14:33	<a href="#">WG1160516</a>
Chromium	ND		2.00	1	09/03/2018 21:01	<a href="#">WG1160033</a>
Chromium,Dissolved	ND		2.00	1	09/05/2018 14:33	<a href="#">WG1160516</a>
Iron,Dissolved	4210		100	1	09/05/2018 14:33	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/03/2018 21:01	<a href="#">WG1160033</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 14:33	<a href="#">WG1160516</a>
Manganese,Dissolved	2410		5.00	1	09/05/2018 14:33	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/03/2018 21:01	<a href="#">WG1160033</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 14:33	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/03/2018 21:01	<a href="#">WG1160033</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 14:33	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	429		10.0	1	09/05/2018 13:44	<a href="#">WG1161268</a>
Ethane	ND		13.0	1	09/05/2018 13:44	<a href="#">WG1161268</a>
Ethene	ND		13.0	1	09/05/2018 13:44	<a href="#">WG1161268</a>



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	09/02/2018 14:56	<a href="#">WG1160780</a>
Toluene	ND		1.00	1	09/02/2018 14:56	<a href="#">WG1160780</a>
Ethylbenzene	ND		1.00	1	09/02/2018 14:56	<a href="#">WG1160780</a>
o-Xylene	ND		1.00	1	09/02/2018 14:56	<a href="#">WG1160780</a>
m&p-Xylene	ND		2.00	1	09/02/2018 14:56	<a href="#">WG1160780</a>
(S) Toluene-d8	106		80.0-120		09/02/2018 14:56	<a href="#">WG1160780</a>
(S) Dibromofluoromethane	111		75.0-120		09/02/2018 14:56	<a href="#">WG1160780</a>
(S) a,a,a-Trifluorotoluene	104		80.0-120		09/02/2018 14:56	<a href="#">WG1160780</a>
(S) 4-Bromofluorobenzene	105		77.0-126		09/02/2018 14:56	<a href="#">WG1160780</a>

- 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)	292		200	1	09/04/2018 11:40	<a href="#">WG1160884</a>
Residual Range Organics (RRO)	588		250	1	09/04/2018 11:40	<a href="#">WG1160884</a>
(S) o-Terphenyl	103		52.0-156		09/04/2018 11:40	<a href="#">WG1160884</a>

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	09/01/2018 14:45	<a href="#">WG1160221</a>
Acenaphthene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Acenaphthylene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Benzo(a)anthracene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Benzo(a)pyrene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Chrysene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Fluoranthene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Fluorene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Naphthalene	ND		0.250	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Phenanthrene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
Pyrene	ND		0.0500	1	09/01/2018 14:45	<a href="#">WG1160221</a>
1-Methylnaphthalene	ND		0.250	1	09/01/2018 14:45	<a href="#">WG1160221</a>
2-Methylnaphthalene	ND		0.250	1	09/01/2018 14:45	<a href="#">WG1160221</a>
2-Chloronaphthalene	ND		0.250	1	09/01/2018 14:45	<a href="#">WG1160221</a>
(S) Nitrobenzene-d5	72.6		31.0-160		09/01/2018 14:45	<a href="#">WG1160221</a>
(S) 2-Fluorobiphenyl	94.2		48.0-148		09/01/2018 14:45	<a href="#">WG1160221</a>
(S) p-Terphenyl-d14	89.5		37.0-146		09/01/2018 14:45	<a href="#">WG1160221</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/04/2018 12:57	<a href="#">WG1160250</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	139		100	1	09/05/2018 14:03	<a href="#">WG1160253</a>

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	08/31/2018 16:13	<a href="#">WG1159362</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	7040		5000	1	09/01/2018 07:06	<a href="#">WG1159933</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/05/2018 10:44	<a href="#">WG1159706</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.30		2.00	1	09/03/2018 21:05	<a href="#">WG1160033</a>
Barium	18.8		5.00	1	09/03/2018 21:05	<a href="#">WG1160033</a>
Cadmium	ND		1.00	1	09/03/2018 21:05	<a href="#">WG1160033</a>
Chromium	ND		2.00	1	09/03/2018 21:05	<a href="#">WG1160033</a>
Iron,Dissolved	368		100	1	09/05/2018 14:37	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/03/2018 21:05	<a href="#">WG1160033</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 14:37	<a href="#">WG1160516</a>
Manganese,Dissolved	420		5.00	1	09/05/2018 14:37	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/03/2018 21:05	<a href="#">WG1160033</a>
Silver	ND		2.00	1	09/03/2018 21:05	<a href="#">WG1160033</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/05/2018 13:48	<a href="#">WG1161268</a>
Ethane	ND		13.0	1	09/05/2018 13:48	<a href="#">WG1161268</a>
Ethene	ND		13.0	1	09/05/2018 13:48	<a href="#">WG1161268</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	09/02/2018 15:17	<a href="#">WG1160780</a>
Toluene	ND		1.00	1	09/02/2018 15:17	<a href="#">WG1160780</a>
Ethylbenzene	ND		1.00	1	09/02/2018 15:17	<a href="#">WG1160780</a>
o-Xylene	ND		1.00	1	09/02/2018 15:17	<a href="#">WG1160780</a>
m&p-Xylene	ND		2.00	1	09/02/2018 15:17	<a href="#">WG1160780</a>
(S) Toluene-d8	108		80.0-120		09/02/2018 15:17	<a href="#">WG1160780</a>



Collected date/time: 08/27/18 16:50

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
(S) Dibromofluoromethane	108		75.0-120		09/02/2018 15:17	WG1160780
(S) a,a,a-Trifluorotoluene	102		80.0-120		09/02/2018 15:17	WG1160780
(S) 4-Bromofluorobenzene	105		77.0-126		09/02/2018 15:17	WG1160780

1 Cp

2 Tc

3 Ss

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	09/04/2018 11:59	WG1160884
Residual Range Organics (RRO)	ND		250	1	09/04/2018 11:59	WG1160884
(S) o-Terphenyl	97.9		52.0-156		09/04/2018 11:59	WG1160884

4 Cn

5 Sr

6 Qc

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	09/01/2018 15:08	WG1160221
Acenaphthene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Acenaphthylene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Benzo(a)anthracene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Benzo(a)pyrene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Benzo(b)fluoranthene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Benzo(g,h,i)perylene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Benzo(k)fluoranthene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Chrysene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Dibenz(a,h)anthracene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Fluoranthene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Fluorene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Naphthalene	ND		0.250	1	09/01/2018 15:08	WG1160221
Phenanthrene	ND		0.0500	1	09/01/2018 15:08	WG1160221
Pyrene	ND		0.0500	1	09/01/2018 15:08	WG1160221
1-Methylnaphthalene	ND		0.250	1	09/01/2018 15:08	WG1160221
2-Methylnaphthalene	ND		0.250	1	09/01/2018 15:08	WG1160221
2-Chloronaphthalene	ND		0.250	1	09/01/2018 15:08	WG1160221
(S) Nitrobenzene-d5	72.1		31.0-160		09/01/2018 15:08	WG1160221
(S) 2-Fluorobiphenyl	94.2		48.0-148		09/01/2018 15:08	WG1160221
(S) p-Terphenyl-d14	92.1		37.0-146		09/01/2018 15:08	WG1160221

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	09/04/2018 13:03	<a href="#">WG1160250</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3360		100	1	09/05/2018 14:05	<a href="#">WG1160253</a>

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	08/31/2018 16:13	<a href="#">WG1159362</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	50300		5000	1	09/01/2018 07:21	<a href="#">WG1159933</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/05/2018 10:46	<a href="#">WG1159706</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 14:47	<a href="#">WG1159968</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	2.42		2.00	1	09/03/2018 21:10	<a href="#">WG1160033</a>
Arsenic,Dissolved	2.18		2.00	1	09/05/2018 14:42	<a href="#">WG1160516</a>
Barium	54.9		5.00	1	09/03/2018 21:10	<a href="#">WG1160033</a>
Barium,Dissolved	55.2		5.00	1	09/05/2018 14:42	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/03/2018 21:10	<a href="#">WG1160033</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 14:42	<a href="#">WG1160516</a>
Chromium	ND		2.00	1	09/03/2018 21:10	<a href="#">WG1160033</a>
Chromium,Dissolved	ND		2.00	1	09/05/2018 14:42	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/05/2018 14:42	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/03/2018 21:10	<a href="#">WG1160033</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 14:42	<a href="#">WG1160516</a>
Manganese,Dissolved	587		5.00	1	09/05/2018 14:42	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/03/2018 21:10	<a href="#">WG1160033</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 14:42	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/03/2018 21:10	<a href="#">WG1160033</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 14:42	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/05/2018 13:52	<a href="#">WG1161268</a>
Ethane	ND		13.0	1	09/05/2018 13:52	<a href="#">WG1161268</a>
Ethene	ND		13.0	1	09/05/2018 13:52	<a href="#">WG1161268</a>



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	08/31/2018 22:51	<a href="#">WG1160287</a>
Acrolein	ND		50.0	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Acrylonitrile	ND		10.0	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Benzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Bromobenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Bromodichloromethane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Bromoform	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Bromomethane	ND		5.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
n-Butylbenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
sec-Butylbenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
tert-Butylbenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Carbon tetrachloride	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Chlorobenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Chlorodibromomethane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Chloroethane	ND		5.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Chloroform	ND		5.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Chloromethane	ND		2.50	1	08/31/2018 22:51	<a href="#">WG1160287</a>
2-Chlorotoluene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
4-Chlorotoluene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,2-Dibromoethane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Dibromomethane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,2-Dichlorobenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,3-Dichlorobenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,4-Dichlorobenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 15:38	<a href="#">WG1160780</a>
1,1-Dichloroethane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,2-Dichloroethane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,1-Dichloroethene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
cis-1,2-Dichloroethene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
trans-1,2-Dichloroethene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,2-Dichloropropane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,1-Dichloropropene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,3-Dichloropropane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
cis-1,3-Dichloropropene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
trans-1,3-Dichloropropene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
2,2-Dichloropropane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Di-isopropyl ether	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Ethylbenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Hexachloro-1,3-butadiene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Isopropylbenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
p-Isopropyltoluene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
2-Butanone (MEK)	ND		10.0	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Methylene Chloride	ND		5.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Methyl tert-butyl ether	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Naphthalene	ND		5.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
n-Propylbenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Styrene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Tetrachloroethene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
Toluene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,2,3-Trichlorobenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>
1,2,4-Trichlorobenzene	ND		1.00	1	08/31/2018 22:51	<a href="#">WG1160287</a>

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	08/31/2018 22:51	WG1160287
1,1,2-Trichloroethane	ND		1.00	1	08/31/2018 22:51	WG1160287
Trichloroethene	ND		1.00	1	08/31/2018 22:51	WG1160287
Trichlorofluoromethane	ND		5.00	1	08/31/2018 22:51	WG1160287
1,2,3-Trichloropropane	ND		2.50	1	08/31/2018 22:51	WG1160287
1,2,4-Trimethylbenzene	ND		1.00	1	08/31/2018 22:51	WG1160287
1,2,3-Trimethylbenzene	ND		1.00	1	08/31/2018 22:51	WG1160287
1,3,5-Trimethylbenzene	ND		1.00	1	08/31/2018 22:51	WG1160287
Vinyl chloride	ND		1.00	1	08/31/2018 22:51	WG1160287
o-Xylene	ND		1.00	1	08/31/2018 22:51	WG1160287
m&p-Xylene	ND		2.00	1	08/31/2018 22:51	WG1160287
(S) Toluene-d8	100		80.0-120		08/31/2018 22:51	WG1160287
(S) Toluene-d8	105		80.0-120		09/02/2018 15:38	WG1160780
(S) Dibromofluoromethane	99.3		75.0-120		08/31/2018 22:51	WG1160287
(S) Dibromofluoromethane	112		75.0-120		09/02/2018 15:38	WG1160780
(S) 4-Bromofluorobenzene	98.6		77.0-126		08/31/2018 22:51	WG1160287
(S) 4-Bromofluorobenzene	104		77.0-126		09/02/2018 15:38	WG1160780

- 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	09/04/2018 12:19	WG1160884
Residual Range Organics (RRO)	ND		250	1	09/04/2018 12:19	WG1160884
(S) o-Terphenyl	100		52.0-156		09/04/2018 12:19	WG1160884

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Acenaphthene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Acenaphthylene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Benzo(a)anthracene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Benzo(a)pyrene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Benzo(b)fluoranthene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Benzo(g,h,i)perylene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Benzo(k)fluoranthene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Chrysene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Dibenz(a,h)anthracene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Fluoranthene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Fluorene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Naphthalene	ND		0.250	1	09/01/2018 15:31	WG1160221
Phenanthrene	ND		0.0500	1	09/01/2018 15:31	WG1160221
Pyrene	ND		0.0500	1	09/01/2018 15:31	WG1160221
1-Methylnaphthalene	ND		0.250	1	09/01/2018 15:31	WG1160221
2-Methylnaphthalene	ND		0.250	1	09/01/2018 15:31	WG1160221
2-Chloronaphthalene	ND		0.250	1	09/01/2018 15:31	WG1160221
(S) Nitrobenzene-d5	73.2		31.0-160		09/01/2018 15:31	WG1160221
(S) 2-Fluorobiphenyl	95.3		48.0-148		09/01/2018 15:31	WG1160221
(S) p-Terphenyl-d14	91.1		37.0-146		09/01/2018 15:31	WG1160221





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/04/2018 13:05	<a href="#">WG1160250</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	14900		500	5	09/05/2018 14:06	<a href="#">WG1160253</a>

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	08/31/2018 16:13	<a href="#">WG1159362</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	29100		5000	1	09/01/2018 07:35	<a href="#">WG1159933</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/05/2018 10:49	<a href="#">WG1159706</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 14:49	<a href="#">WG1159968</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.66		2.00	1	09/03/2018 21:14	<a href="#">WG1160033</a>
Arsenic,Dissolved	3.15		2.00	1	09/05/2018 14:46	<a href="#">WG1160516</a>
Barium	48.6		5.00	1	09/03/2018 21:14	<a href="#">WG1160033</a>
Barium,Dissolved	51.9		5.00	1	09/05/2018 14:46	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/03/2018 21:14	<a href="#">WG1160033</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 14:46	<a href="#">WG1160516</a>
Chromium	ND		2.00	1	09/03/2018 21:14	<a href="#">WG1160033</a>
Chromium,Dissolved	ND		2.00	1	09/05/2018 14:46	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/05/2018 14:46	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/03/2018 21:14	<a href="#">WG1160033</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 14:46	<a href="#">WG1160516</a>
Manganese,Dissolved	419		5.00	1	09/05/2018 14:46	<a href="#">WG1160516</a>
Selenium	3.09		2.00	1	09/04/2018 12:13	<a href="#">WG1160033</a>
Selenium,Dissolved	3.01		2.00	1	09/05/2018 14:46	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/03/2018 21:14	<a href="#">WG1160033</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 14:46	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	09/01/2018 06:15	<a href="#">WG1160460</a>
(S) a, a, a-Trifluorotoluene(FID)	99.1		78.0-120		09/01/2018 06:15	<a href="#">WG1160460</a>



Collected date/time: 08/28/18 15:35

L1021969

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	09/05/2018 13:55	<a href="#">WG1161268</a>
Ethane	ND		13.0	1	09/05/2018 13:55	<a href="#">WG1161268</a>
Ethene	ND		13.0	1	09/05/2018 13:55	<a href="#">WG1161268</a>

- 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	08/31/2018 23:10	<a href="#">WG1160287</a>
Acrolein	ND		50.0	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Acrylonitrile	ND		10.0	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Benzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Bromobenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Bromodichloromethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Bromoform	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Bromomethane	ND		5.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
n-Butylbenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
sec-Butylbenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
tert-Butylbenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Carbon tetrachloride	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Chlorobenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Chlorodibromomethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Chloroethane	ND		5.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Chloroform	ND		5.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Chloromethane	ND		2.50	1	08/31/2018 23:10	<a href="#">WG1160287</a>
2-Chlorotoluene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
4-Chlorotoluene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,2-Dibromoethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Dibromomethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,2-Dichlorobenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,3-Dichlorobenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,4-Dichlorobenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 15:58	<a href="#">WG1160780</a>
1,1-Dichloroethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,2-Dichloroethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,1-Dichloroethene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
cis-1,2-Dichloroethene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
trans-1,2-Dichloroethene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,2-Dichloropropane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,1-Dichloropropene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,3-Dichloropropane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
cis-1,3-Dichloropropene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
trans-1,3-Dichloropropene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
2,2-Dichloropropane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Di-isopropyl ether	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Ethylbenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Hexachloro-1,3-butadiene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Isopropylbenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
p-Isopropyltoluene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
2-Butanone (MEK)	ND		10.0	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Methylene Chloride	ND		5.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Methyl tert-butyl ether	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Naphthalene	ND		5.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
n-Propylbenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Styrene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Tetrachloroethene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Toluene	7.11		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,2,3-Trichlorobenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,2,4-Trichlorobenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,1,1-Trichloroethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,1,2-Trichloroethane	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Trichloroethene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Trichlorofluoromethane	ND		5.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,2,3-Trichloropropane	ND		2.50	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
1,3,5-Trimethylbenzene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
Vinyl chloride	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
o-Xylene	ND		1.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
m&p-Xylene	ND		2.00	1	08/31/2018 23:10	<a href="#">WG1160287</a>
(S) Toluene-d8	100		80.0-120		08/31/2018 23:10	<a href="#">WG1160287</a>
(S) Toluene-d8	108		80.0-120		09/02/2018 15:58	<a href="#">WG1160780</a>
(S) Dibromofluoromethane	102		75.0-120		08/31/2018 23:10	<a href="#">WG1160287</a>
(S) Dibromofluoromethane	109		75.0-120		09/02/2018 15:58	<a href="#">WG1160780</a>
(S) 4-Bromofluorobenzene	99.7		77.0-126		08/31/2018 23:10	<a href="#">WG1160287</a>
(S) 4-Bromofluorobenzene	107		77.0-126		09/02/2018 15:58	<a href="#">WG1160780</a>

- 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	09/04/2018 12:39	<a href="#">WG1160884</a>
Residual Range Organics (RRO)	ND		250	1	09/04/2018 12:39	<a href="#">WG1160884</a>
(S) o-Terphenyl	103		52.0-156		09/04/2018 12:39	<a href="#">WG1160884</a>

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	09/01/2018 15:54	<a href="#">WG1160221</a>
Acenaphthene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Acenaphthylene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Benzo(a)anthracene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Benzo(a)pyrene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Chrysene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Fluoranthene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Fluorene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Naphthalene	ND		0.250	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Phenanthrene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
Pyrene	ND		0.0500	1	09/01/2018 15:54	<a href="#">WG1160221</a>
1-Methylnaphthalene	ND		0.250	1	09/01/2018 15:54	<a href="#">WG1160221</a>
2-Methylnaphthalene	ND		0.250	1	09/01/2018 15:54	<a href="#">WG1160221</a>
2-Chloronaphthalene	ND		0.250	1	09/01/2018 15:54	<a href="#">WG1160221</a>
(S) Nitrobenzene-d5	73.2		31.0-160		09/01/2018 15:54	<a href="#">WG1160221</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	95.8		48.0-148		09/01/2018 15:54	<a href="#">WG1160221</a>
(S) p-Terphenyl-d14	93.7		37.0-146		09/01/2018 15:54	<a href="#">WG1160221</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/04/2018 13:06	<a href="#">WG1160250</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3330		100	1	09/05/2018 14:08	<a href="#">WG1160253</a>

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	08/31/2018 16:14	<a href="#">WG1159362</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	11300		5000	1	09/01/2018 07:50	<a href="#">WG1159933</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/05/2018 10:51	<a href="#">WG1159706</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 14:57	<a href="#">WG1159968</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	7.38		2.00	1	09/03/2018 21:18	<a href="#">WG1160033</a>
Arsenic,Dissolved	7.60		2.00	1	09/05/2018 14:51	<a href="#">WG1160516</a>
Barium	28.4		5.00	1	09/03/2018 21:18	<a href="#">WG1160033</a>
Barium,Dissolved	27.0		5.00	1	09/05/2018 14:51	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/03/2018 21:18	<a href="#">WG1160033</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 14:51	<a href="#">WG1160516</a>
Chromium	2.07		2.00	1	09/03/2018 21:18	<a href="#">WG1160033</a>
Chromium,Dissolved	2.16		2.00	1	09/05/2018 14:51	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/05/2018 14:51	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/03/2018 21:18	<a href="#">WG1160033</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 14:51	<a href="#">WG1160516</a>
Manganese,Dissolved	160		5.00	1	09/05/2018 14:51	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/03/2018 21:18	<a href="#">WG1160033</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 14:51	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/03/2018 21:18	<a href="#">WG1160033</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 14:51	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/05/2018 13:58	<a href="#">WG1161268</a>
Ethane	ND		13.0	1	09/05/2018 13:58	<a href="#">WG1161268</a>
Ethene	ND		13.0	1	09/05/2018 13:58	<a href="#">WG1161268</a>



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	08/31/2018 23:30	WG1160287
Acrolein	ND		50.0	1	08/31/2018 23:30	WG1160287
Acrylonitrile	ND		10.0	1	08/31/2018 23:30	WG1160287
Benzene	ND		1.00	1	08/31/2018 23:30	WG1160287
Bromobenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
Bromodichloromethane	ND		1.00	1	08/31/2018 23:30	WG1160287
Bromoform	ND		1.00	1	08/31/2018 23:30	WG1160287
Bromomethane	ND		5.00	1	08/31/2018 23:30	WG1160287
n-Butylbenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
sec-Butylbenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
tert-Butylbenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
Carbon tetrachloride	ND		1.00	1	08/31/2018 23:30	WG1160287
Chlorobenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
Chlorodibromomethane	ND		1.00	1	08/31/2018 23:30	WG1160287
Chloroethane	ND		5.00	1	08/31/2018 23:30	WG1160287
Chloroform	ND		5.00	1	08/31/2018 23:30	WG1160287
Chloromethane	ND		2.50	1	08/31/2018 23:30	WG1160287
2-Chlorotoluene	ND		1.00	1	08/31/2018 23:30	WG1160287
4-Chlorotoluene	ND		1.00	1	08/31/2018 23:30	WG1160287
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/31/2018 23:30	WG1160287
1,2-Dibromoethane	ND		1.00	1	08/31/2018 23:30	WG1160287
Dibromomethane	ND		1.00	1	08/31/2018 23:30	WG1160287
1,2-Dichlorobenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
1,3-Dichlorobenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
1,4-Dichlorobenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 16:19	WG1160780
1,1-Dichloroethane	ND		1.00	1	08/31/2018 23:30	WG1160287
1,2-Dichloroethane	ND		1.00	1	08/31/2018 23:30	WG1160287
1,1-Dichloroethene	ND		1.00	1	08/31/2018 23:30	WG1160287
cis-1,2-Dichloroethene	ND		1.00	1	08/31/2018 23:30	WG1160287
trans-1,2-Dichloroethene	ND		1.00	1	08/31/2018 23:30	WG1160287
1,2-Dichloropropane	ND		1.00	1	08/31/2018 23:30	WG1160287
1,1-Dichloropropene	ND		1.00	1	08/31/2018 23:30	WG1160287
1,3-Dichloropropane	ND		1.00	1	08/31/2018 23:30	WG1160287
cis-1,3-Dichloropropene	ND		1.00	1	08/31/2018 23:30	WG1160287
trans-1,3-Dichloropropene	ND		1.00	1	08/31/2018 23:30	WG1160287
2,2-Dichloropropane	ND		1.00	1	08/31/2018 23:30	WG1160287
Di-isopropyl ether	ND		1.00	1	08/31/2018 23:30	WG1160287
Ethylbenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
Hexachloro-1,3-butadiene	ND		1.00	1	08/31/2018 23:30	WG1160287
Isopropylbenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
p-Isopropyltoluene	ND		1.00	1	08/31/2018 23:30	WG1160287
2-Butanone (MEK)	ND		10.0	1	08/31/2018 23:30	WG1160287
Methylene Chloride	ND		5.00	1	08/31/2018 23:30	WG1160287
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/31/2018 23:30	WG1160287
Methyl tert-butyl ether	ND		1.00	1	08/31/2018 23:30	WG1160287
Naphthalene	ND		5.00	1	08/31/2018 23:30	WG1160287
n-Propylbenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
Styrene	ND		1.00	1	08/31/2018 23:30	WG1160287
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/31/2018 23:30	WG1160287
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/31/2018 23:30	WG1160287
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/31/2018 23:30	WG1160287
Tetrachloroethene	ND		1.00	1	08/31/2018 23:30	WG1160287
Toluene	ND		1.00	1	08/31/2018 23:30	WG1160287
1,2,3-Trichlorobenzene	ND		1.00	1	08/31/2018 23:30	WG1160287
1,2,4-Trichlorobenzene	ND		1.00	1	08/31/2018 23:30	WG1160287

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	
1,1,1-Trichloroethane	ND		1.00	1	08/31/2018 23:30	<a href="#">WG1160287</a>
1,1,2-Trichloroethane	ND		1.00	1	08/31/2018 23:30	<a href="#">WG1160287</a>
Trichloroethene	ND		1.00	1	08/31/2018 23:30	<a href="#">WG1160287</a>
Trichlorofluoromethane	ND		5.00	1	08/31/2018 23:30	<a href="#">WG1160287</a>
1,2,3-Trichloropropane	ND		2.50	1	08/31/2018 23:30	<a href="#">WG1160287</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/31/2018 23:30	<a href="#">WG1160287</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/31/2018 23:30	<a href="#">WG1160287</a>
1,3,5-Trimethylbenzene	ND		1.00	1	08/31/2018 23:30	<a href="#">WG1160287</a>
Vinyl chloride	ND		1.00	1	08/31/2018 23:30	<a href="#">WG1160287</a>
o-Xylene	ND		1.00	1	08/31/2018 23:30	<a href="#">WG1160287</a>
m&p-Xylene	ND		2.00	1	08/31/2018 23:30	<a href="#">WG1160287</a>
(S) Toluene-d8	98.8		80.0-120		08/31/2018 23:30	<a href="#">WG1160287</a>
(S) Toluene-d8	104		80.0-120		09/02/2018 16:19	<a href="#">WG1160780</a>
(S) Dibromofluoromethane	99.1		75.0-120		08/31/2018 23:30	<a href="#">WG1160287</a>
(S) Dibromofluoromethane	111		75.0-120		09/02/2018 16:19	<a href="#">WG1160780</a>
(S) 4-Bromofluorobenzene	96.9		77.0-126		08/31/2018 23:30	<a href="#">WG1160287</a>
(S) 4-Bromofluorobenzene	105		77.0-126		09/02/2018 16:19	<a href="#">WG1160780</a>

- 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	09/04/2018 12:58	<a href="#">WG1160884</a>
Residual Range Organics (RRO)	335		250	1	09/04/2018 12:58	<a href="#">WG1160884</a>
(S) o-Terphenyl	97.4		52.0-156		09/04/2018 12:58	<a href="#">WG1160884</a>

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	09/01/2018 16:17	<a href="#">WG1160221</a>
Acenaphthene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Acenaphthylene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Benzo(a)anthracene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Benzo(a)pyrene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Chrysene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Fluoranthene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Fluorene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Naphthalene	ND		0.250	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Phenanthrene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
Pyrene	ND		0.0500	1	09/01/2018 16:17	<a href="#">WG1160221</a>
1-Methylnaphthalene	ND		0.250	1	09/01/2018 16:17	<a href="#">WG1160221</a>
2-Methylnaphthalene	ND		0.250	1	09/01/2018 16:17	<a href="#">WG1160221</a>
2-Chloronaphthalene	ND		0.250	1	09/01/2018 16:17	<a href="#">WG1160221</a>
(S) Nitrobenzene-d5	71.6		31.0-160		09/01/2018 16:17	<a href="#">WG1160221</a>
(S) 2-Fluorobiphenyl	93.7		48.0-148		09/01/2018 16:17	<a href="#">WG1160221</a>
(S) p-Terphenyl-d14	90.5		37.0-146		09/01/2018 16:17	<a href="#">WG1160221</a>



Collected date/time: 08/29/18 10:45

L1021969

## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/04/2018 13:08	<a href="#">WG1160250</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3320		100	1	09/05/2018 14:09	<a href="#">WG1160253</a>

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	09/02/2018 16:19	<a href="#">WG1159966</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	1100		5000	1	09/01/2018 08:04	<a href="#">WG1159933</a>

7 Gl

8 Al

## Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/05/2018 11:16	<a href="#">WG1159706</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 14:59	<a href="#">WG1159968</a>

9 Sc

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	7.39		2.00	1	09/03/2018 21:23	<a href="#">WG1160033</a>
Arsenic,Dissolved	8.15		2.00	1	09/05/2018 14:56	<a href="#">WG1160516</a>
Barium	28.3		5.00	1	09/03/2018 21:23	<a href="#">WG1160033</a>
Barium,Dissolved	27.5		5.00	1	09/05/2018 14:56	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/03/2018 21:23	<a href="#">WG1160033</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 14:56	<a href="#">WG1160516</a>
Chromium	2.20		2.00	1	09/03/2018 21:23	<a href="#">WG1160033</a>
Chromium,Dissolved	2.12		2.00	1	09/05/2018 14:56	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/05/2018 14:56	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/03/2018 21:23	<a href="#">WG1160033</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 14:56	<a href="#">WG1160516</a>
Manganese,Dissolved	163		5.00	1	09/05/2018 14:56	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/03/2018 21:23	<a href="#">WG1160033</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 14:56	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/03/2018 21:23	<a href="#">WG1160033</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 14:56	<a href="#">WG1160516</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/05/2018 14:04	<a href="#">WG1161268</a>
Ethane	ND		13.0	1	09/05/2018 14:04	<a href="#">WG1161268</a>
Ethene	ND		13.0	1	09/05/2018 14:04	<a href="#">WG1161268</a>





Collected date/time: 08/29/18 10:45

L1021969

## 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	08/31/2018 23:49	<a href="#">WG1160287</a>
Acrolein	ND		50.0	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Acrylonitrile	ND		10.0	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Benzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Bromobenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Bromodichloromethane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Bromoform	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Bromomethane	ND		5.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
n-Butylbenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
sec-Butylbenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
tert-Butylbenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Carbon tetrachloride	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Chlorobenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Chlorodibromomethane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Chloroethane	ND		5.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Chloroform	ND		5.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Chloromethane	ND		2.50	1	08/31/2018 23:49	<a href="#">WG1160287</a>
2-Chlorotoluene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
4-Chlorotoluene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,2-Dibromoethane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Dibromomethane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,2-Dichlorobenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,3-Dichlorobenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,4-Dichlorobenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 16:39	<a href="#">WG1160780</a>
1,1-Dichloroethane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,2-Dichloroethane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,1-Dichloroethene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
cis-1,2-Dichloroethene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
trans-1,2-Dichloroethene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,2-Dichloropropane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,1-Dichloropropene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,3-Dichloropropane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
cis-1,3-Dichloropropene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
trans-1,3-Dichloropropene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
2,2-Dichloropropane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Di-isopropyl ether	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Ethylbenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Hexachloro-1,3-butadiene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Isopropylbenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
p-Isopropyltoluene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
2-Butanone (MEK)	ND		10.0	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Methylene Chloride	ND		5.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Methyl tert-butyl ether	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Naphthalene	ND		5.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
n-Propylbenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Styrene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Tetrachloroethene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
Toluene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,2,3-Trichlorobenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>
1,2,4-Trichlorobenzene	ND		1.00	1	08/31/2018 23:49	<a href="#">WG1160287</a>

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	
1,1,1-Trichloroethane	ND		1.00	1	08/31/2018 23:49	WG1160287
1,1,2-Trichloroethane	ND		1.00	1	08/31/2018 23:49	WG1160287
Trichloroethene	ND		1.00	1	08/31/2018 23:49	WG1160287
Trichlorofluoromethane	ND		5.00	1	08/31/2018 23:49	WG1160287
1,2,3-Trichloropropane	ND		2.50	1	08/31/2018 23:49	WG1160287
1,2,4-Trimethylbenzene	ND		1.00	1	08/31/2018 23:49	WG1160287
1,2,3-Trimethylbenzene	ND		1.00	1	08/31/2018 23:49	WG1160287
1,3,5-Trimethylbenzene	ND		1.00	1	08/31/2018 23:49	WG1160287
Vinyl chloride	ND		1.00	1	08/31/2018 23:49	WG1160287
o-Xylene	ND		1.00	1	08/31/2018 23:49	WG1160287
m&p-Xylene	ND		2.00	1	08/31/2018 23:49	WG1160287
(S) Toluene-d8	98.0		80.0-120		08/31/2018 23:49	WG1160287
(S) Toluene-d8	105		80.0-120		09/02/2018 16:39	WG1160780
(S) Dibromofluoromethane	99.1		75.0-120		08/31/2018 23:49	WG1160287
(S) Dibromofluoromethane	112		75.0-120		09/02/2018 16:39	WG1160780
(S) 4-Bromofluorobenzene	100		77.0-126		08/31/2018 23:49	WG1160287
(S) 4-Bromofluorobenzene	104		77.0-126		09/02/2018 16:39	WG1160780

- 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	09/04/2018 13:18	WG1160884
Residual Range Organics (RRO)	351		250	1	09/04/2018 13:18	WG1160884
(S) o-Terphenyl	94.7		52.0-156		09/04/2018 13:18	WG1160884

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	09/01/2018 16:40	WG1160221
Acenaphthene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Acenaphthylene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Benzo(a)anthracene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Benzo(a)pyrene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Benzo(b)fluoranthene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Benzo(g,h,i)perylene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Benzo(k)fluoranthene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Chrysene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Dibenz(a,h)anthracene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Fluoranthene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Fluorene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Naphthalene	ND		0.250	1	09/01/2018 16:40	WG1160221
Phenanthrene	ND		0.0500	1	09/01/2018 16:40	WG1160221
Pyrene	ND		0.0500	1	09/01/2018 16:40	WG1160221
1-Methylnaphthalene	ND		0.250	1	09/01/2018 16:40	WG1160221
2-Methylnaphthalene	ND		0.250	1	09/01/2018 16:40	WG1160221
2-Chloronaphthalene	ND		0.250	1	09/01/2018 16:40	WG1160221
(S) Nitrobenzene-d5	73.7		31.0-160		09/01/2018 16:40	WG1160221
(S) 2-Fluorobiphenyl	97.4		48.0-148		09/01/2018 16:40	WG1160221
(S) p-Terphenyl-d14	94.2		37.0-146		09/01/2018 16:40	WG1160221



Collected date/time: 08/27/18 00:00

L1021969

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	08/31/2018 19:37	WG1160287
Acrolein	ND		50.0	1	08/31/2018 19:37	WG1160287
Acrylonitrile	ND		10.0	1	08/31/2018 19:37	WG1160287
Benzene	ND		1.00	1	08/31/2018 19:37	WG1160287
Bromobenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
Bromodichloromethane	ND		1.00	1	08/31/2018 19:37	WG1160287
Bromoform	ND		1.00	1	08/31/2018 19:37	WG1160287
Bromomethane	ND		5.00	1	08/31/2018 19:37	WG1160287
n-Butylbenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
sec-Butylbenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
tert-Butylbenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
Carbon tetrachloride	ND		1.00	1	08/31/2018 19:37	WG1160287
Chlorobenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
Chlorodibromomethane	ND		1.00	1	08/31/2018 19:37	WG1160287
Chloroethane	ND		5.00	1	08/31/2018 19:37	WG1160287
Chloroform	ND		5.00	1	08/31/2018 19:37	WG1160287
Chloromethane	ND		2.50	1	08/31/2018 19:37	WG1160287
2-Chlorotoluene	ND		1.00	1	08/31/2018 19:37	WG1160287
4-Chlorotoluene	ND		1.00	1	08/31/2018 19:37	WG1160287
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/31/2018 19:37	WG1160287
1,2-Dibromoethane	ND		1.00	1	08/31/2018 19:37	WG1160287
Dibromomethane	ND		1.00	1	08/31/2018 19:37	WG1160287
1,2-Dichlorobenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
1,3-Dichlorobenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
1,4-Dichlorobenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 13:54	WG1160780
1,1-Dichloroethane	ND		1.00	1	08/31/2018 19:37	WG1160287
1,2-Dichloroethane	ND		1.00	1	08/31/2018 19:37	WG1160287
1,1-Dichloroethene	ND		1.00	1	08/31/2018 19:37	WG1160287
cis-1,2-Dichloroethene	ND		1.00	1	08/31/2018 19:37	WG1160287
trans-1,2-Dichloroethene	ND		1.00	1	08/31/2018 19:37	WG1160287
1,2-Dichloropropane	ND		1.00	1	08/31/2018 19:37	WG1160287
1,1-Dichloropropene	ND		1.00	1	08/31/2018 19:37	WG1160287
1,3-Dichloropropane	ND		1.00	1	08/31/2018 19:37	WG1160287
cis-1,3-Dichloropropene	ND		1.00	1	08/31/2018 19:37	WG1160287
trans-1,3-Dichloropropene	ND		1.00	1	08/31/2018 19:37	WG1160287
2,2-Dichloropropane	ND		1.00	1	08/31/2018 19:37	WG1160287
Di-isopropyl ether	ND		1.00	1	08/31/2018 19:37	WG1160287
Ethylbenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
Hexachloro-1,3-butadiene	ND		1.00	1	08/31/2018 19:37	WG1160287
Isopropylbenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
p-Isopropyltoluene	ND		1.00	1	08/31/2018 19:37	WG1160287
2-Butanone (MEK)	ND		10.0	1	08/31/2018 19:37	WG1160287
Methylene Chloride	ND		5.00	1	08/31/2018 19:37	WG1160287
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/31/2018 19:37	WG1160287
Methyl tert-butyl ether	ND		1.00	1	08/31/2018 19:37	WG1160287
Naphthalene	ND		5.00	1	08/31/2018 19:37	WG1160287
n-Propylbenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
Styrene	ND		1.00	1	08/31/2018 19:37	WG1160287
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/31/2018 19:37	WG1160287
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/31/2018 19:37	WG1160287
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/31/2018 19:37	WG1160287
Tetrachloroethene	ND		1.00	1	08/31/2018 19:37	WG1160287
Toluene	ND		1.00	1	08/31/2018 19:37	WG1160287
1,2,3-Trichlorobenzene	ND		1.00	1	08/31/2018 19:37	WG1160287
1,2,4-Trichlorobenzene	ND		1.00	1	08/31/2018 19:37	WG1160287

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/27/18 00:00

L1021969

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	08/31/2018 19:37	<a href="#">WG1160287</a>
1,1,2-Trichloroethane	ND		1.00	1	08/31/2018 19:37	<a href="#">WG1160287</a>
Trichloroethene	ND		1.00	1	08/31/2018 19:37	<a href="#">WG1160287</a>
Trichlorofluoromethane	ND		5.00	1	08/31/2018 19:37	<a href="#">WG1160287</a>
1,2,3-Trichloropropane	ND		2.50	1	08/31/2018 19:37	<a href="#">WG1160287</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/31/2018 19:37	<a href="#">WG1160287</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/31/2018 19:37	<a href="#">WG1160287</a>
1,3,5-Trimethylbenzene	ND		1.00	1	08/31/2018 19:37	<a href="#">WG1160287</a>
Vinyl chloride	ND		1.00	1	08/31/2018 19:37	<a href="#">WG1160287</a>
o-Xylene	ND		1.00	1	08/31/2018 19:37	<a href="#">WG1160287</a>
m&p-Xylene	ND		2.00	1	08/31/2018 19:37	<a href="#">WG1160287</a>
(S) Toluene-d8	98.9		80.0-120		08/31/2018 19:37	<a href="#">WG1160287</a>
(S) Toluene-d8	106		80.0-120		09/02/2018 13:54	<a href="#">WG1160780</a>
(S) Dibromofluoromethane	98.9		75.0-120		08/31/2018 19:37	<a href="#">WG1160287</a>
(S) Dibromofluoromethane	105		75.0-120		09/02/2018 13:54	<a href="#">WG1160780</a>
(S) 4-Bromofluorobenzene	99.9		77.0-126		08/31/2018 19:37	<a href="#">WG1160287</a>
(S) 4-Bromofluorobenzene	105		77.0-126		09/02/2018 13:54	<a href="#">WG1160780</a>

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



Method Blank (MB)

(MB) R3338927-1 09/04/18 12:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

L1021328-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1021328-01 09/04/18 12:27 • (DUP) R3338927-4 09/04/18 12:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	45.0	1	18.2	J P1	10

<sup>6</sup> Qc

L1021969-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1021969-11 09/04/18 13:08 • (DUP) R3338927-6 09/04/18 13:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3338927-2 09/04/18 12:23 • (LCSD) R3338927-3 09/04/18 12:25

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7420	7370	98.9	98.3	90.0-110			0.636	10

L1021328-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1021328-04 09/04/18 12:33 • (MS) R3338927-5 09/04/18 12:34

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4620	92.5	1	90.0-110	

L1022073-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022073-01 09/04/18 13:11 • (MS) R3338927-7 09/04/18 13:13 • (MSD) R3338927-8 09/04/18 13:14

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	263	5030	5060	95.4	95.9	1	90.0-110			0.496	10



Method Blank (MB)

(MB) R3339339-1 09/05/18 13:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1021969-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1021969-02 09/05/18 13:50 • (DUP) R3339339-4 09/05/18 13:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	3380	3400	1	0.649		20

L1022200-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1022200-03 09/05/18 14:29 • (DUP) R3339339-6 09/05/18 14:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	985	993	1	0.809		20

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

(LCS) R3339339-2 09/05/18 13:42 • (LCSD) R3339339-3 09/05/18 13:44

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	4000	3690	3770	92.2	94.2	90.0-110			2.09	20

L1021969-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1021969-04 09/05/18 13:53 • (MS) R3339339-5 09/05/18 13:54

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	1780	4020	89.3	1	90.0-110	<u>J6</u>

L1022200-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022200-04 09/05/18 14:32 • (MS) R3339339-7 09/05/18 14:33 • (MSD) R3339339-8 09/05/18 14:35

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	577	2820	2850	89.8	90.7	1	90.0-110	<u>J6</u>		0.776	20



Method Blank (MB)

(MB) R3338450-1 08/31/18 16:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1021720-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1021720-01 08/31/18 16:06 • (DUP) R3338450-4 08/31/18 16:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

L1021720-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1021720-11 08/31/18 16:10 • (DUP) R3338450-7 08/31/18 16:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

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

(LCS) R3338450-2 08/31/18 16:01 • (LCSD) R3338450-3 08/31/18 16:05

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	514	505	103	101	85.0-115			1.77	20

L1021720-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021720-02 08/31/18 16:06 • (MS) R3338450-5 08/31/18 16:06 • (MSD) R3338450-6 08/31/18 16:06

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	U	345	343	34.5	34.3	1	80.0-120	J6	J6	0.581	20



Method Blank (MB)

(MB) R3338670-1 09/02/18 16:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022029-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1022029-02 09/02/18 16:20 • (DUP) R3338670-4 09/02/18 16:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1022700-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1022700-02 09/02/18 16:25 • (DUP) R3338670-7 09/02/18 16:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

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

(LCS) R3338670-2 09/02/18 16:15 • (LCSD) R3338670-3 09/02/18 16:15

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	513	513	103	103	85.0-115			0.000	20

L1022029-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022029-05 09/02/18 16:21 • (MS) R3338670-5 09/02/18 16:22 • (MSD) R3338670-6 09/02/18 16:22

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	410	409	41.0	40.9	1	80.0-120	<u>J6</u>	<u>J6</u>	0.244	20





Method Blank (MB)

(MB) R3338564-1 09/01/18 03:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1021969-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1021969-01 09/01/18 04:57 • (DUP) R3338564-4 09/01/18 05:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	37300	37200	1	0.189		15

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

(LCS) R3338564-2 09/01/18 03:30 • (LCSD) R3338564-3 09/01/18 03:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	40600	40500	101	101	80.0-120			0.204	15

L1021969-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021969-01 09/01/18 04:57 • (MS) R3338564-5 09/01/18 05:26 • (MSD) R3338564-6 09/01/18 06:09

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	37300	85200	85400	95.8	96.3	1	80.0-120			0.262	15



Method Blank (MB)

(MB) R3339223-1 09/05/18 09:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3339223-2 09/05/18 09:42 • (LCSD) R3339223-3 09/05/18 09:45

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 %
Mercury	3.00	2.80	2.72	93.4	90.6	80.0-120			2.98	20

L1021816-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021816-09 09/05/18 09:47 • (MS) R3339223-4 09/05/18 09:54 • (MSD) R3339223-5 09/05/18 09:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	U	2.99	2.95	99.8	98.3	1	75.0-125			1.51	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3339875-1 09/06/18 14:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3339875-2 09/06/18 14:28 • (LCSD) R3339875-3 09/06/18 14:30

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	2.44	2.75	81.2	91.8	80.0-120			12.2	20

<sup>7</sup> Gl

<sup>8</sup> Al

L1021969-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021969-01 09/06/18 14:32 • (MS) R3339875-4 09/06/18 14:35 • (MSD) R3339875-5 09/06/18 14:37

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	2.21	2.54	73.5	84.6	1	75.0-125	<u>J6</u>		14.1	20

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3338729-1 09/03/18 19:47

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	0.286	↓	0.240	2.00
Selenium	U		0.380	2.00
Silver	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3338729-2 09/03/18 19:51 • (LCSD) R3338729-3 09/03/18 19:56

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	%	%	%			%	%
Arsenic	50.0	47.9	48.4	95.9	96.8	80.0-120			0.947	20
Barium	50.0	45.8	46.3	91.7	92.6	80.0-120			1.05	20
Cadmium	50.0	48.9	47.9	97.9	95.7	80.0-120			2.22	20
Chromium	50.0	49.5	48.8	99.1	97.6	80.0-120			1.53	20
Lead	50.0	46.6	47.8	93.3	95.5	80.0-120			2.37	20
Selenium	50.0	51.0	50.4	102	101	80.0-120			1.34	20
Silver	50.0	47.3	47.6	94.6	95.2	80.0-120			0.633	20

L1022004-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022004-11 09/03/18 20:00 • (MS) R3338729-5 09/03/18 20:09 • (MSD) R3338729-6 09/03/18 20:13

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	6.41	53.7	53.4	94.6	93.9	1	75.0-125			0.682	20
Barium	50.0	88.8	136	134	94.7	89.7	1	75.0-125			1.82	20
Cadmium	50.0	U	49.3	48.0	98.6	96.0	1	75.0-125			2.62	20
Chromium	50.0	7.54	54.8	54.8	94.6	94.4	1	75.0-125			0.155	20
Lead	50.0	0.403	47.0	47.3	93.2	93.9	1	75.0-125			0.648	20
Selenium	50.0	4.28	59.8	58.9	111	109	1	75.0-125			1.53	20
Silver	50.0	U	47.4	47.4	94.7	94.8	1	75.0-125			0.143	20



Method Blank (MB)

(MB) R3339287-1 09/05/18 13:15

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
Iron,Dissolved	U		15.0	100
Lead,Dissolved	U		0.240	2.00
Manganese,Dissolved	U		0.250	5.00
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) R3339287-2 09/05/18 13:19 • (LCSD) R3339287-3 09/05/18 13:24

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	49.8	48.9	99.7	97.9	80.0-120			1.79	20
Barium,Dissolved	50.0	47.9	47.4	95.9	94.9	80.0-120			1.02	20
Cadmium,Dissolved	50.0	47.6	48.3	95.3	96.7	80.0-120			1.48	20
Chromium,Dissolved	50.0	50.0	50.3	100	101	80.0-120			0.544	20
Iron,Dissolved	5000	5010	4930	100	98.5	80.0-120			1.66	20
Lead,Dissolved	50.0	47.8	47.0	95.7	94.0	80.0-120			1.81	20
Manganese,Dissolved	50.0	48.7	48.0	97.5	96.0	80.0-120			1.55	20
Selenium,Dissolved	50.0	48.3	48.5	96.6	96.9	80.0-120			0.306	20
Silver,Dissolved	50.0	51.0	50.2	102	100	80.0-120			1.56	20

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/05/18 13:29 • (MS) R3339287-5 09/05/18 13:38 • (MSD) R3339287-6 09/05/18 13:42

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	4.96	51.7	51.4	93.4	92.9	1	75.0-125			0.502	20
Barium,Dissolved	50.0	26.5	73.8	78.8	94.7	105	1	75.0-125			6.46	20
Cadmium,Dissolved	50.0	ND	48.1	50.1	96.3	100	1	75.0-125			3.95	20
Chromium,Dissolved	50.0	ND	48.2	48.5	96.4	97.1	1	75.0-125			0.664	20
Iron,Dissolved	5000	ND	4790	4840	95.4	96.3	1	75.0-125			0.910	20
Lead,Dissolved	50.0	ND	47.1	48.7	93.4	96.6	1	75.0-125			3.33	20
Manganese,Dissolved	50.0	334	378	371	88.9	74.3	1	75.0-125		V	1.94	20
Selenium,Dissolved	50.0	ND	49.6	51.2	97.2	100	1	75.0-125			3.15	20
Silver,Dissolved	50.0	ND	50.4	51.6	101	103	1	75.0-125			2.20	20



Method Blank (MB)

(MB) R3339534-3 09/01/18 05:37

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	34.9	↓	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	99.2			78.0-120

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) R3339534-1 09/01/18 04:21 • (LCSD) R3339534-2 09/01/18 04:52

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 %
Gasoline Range Organics-NWTPH	5500	5390	5380	97.9	97.9	70.0-124			0.0719	20
(S) a,a,a-Trifluorotoluene(FID)				105	105	78.0-120				

L1021639-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021639-18 09/01/18 08:32 • (MS) R3339534-4 09/01/18 14:38 • (MSD) R3339534-5 09/01/18 15:01

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 %
Gasoline Range Organics-NWTPH	5500	U	3820	3980	69.4	72.3	1	10.0-155			4.19	21
(S) a,a,a-Trifluorotoluene(FID)					100	99.9		78.0-120				



Method Blank (MB)

(MB) R3339312-1 09/05/18 13:30

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

L1021990-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1021990-02 09/05/18 14:12 • (DUP) R3339312-2 09/05/18 14:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	4750	4670	1	1.72		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

L1022175-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022175-01 09/05/18 14:34 • (DUP) R3339312-3 09/05/18 15:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	118	115	1	2.43		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1022177-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022177-01 09/05/18 14:37 • (DUP) R3339312-4 09/05/18 15:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	60.9	60.7	1	0.323		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20



L1022179-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022179-01 09/05/18 14:40 • (DUP) R3339312-5 09/05/18 15:09

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	37.3	35.5	1	4.91		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) R3339312-6 09/05/18 15:12 • (LCSD) R3339312-7 09/05/18 15:15

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 %
Methane	67.8	71.9	73.2	106	108	85.0-115			1.72	20
Ethane	129	118	122	91.2	94.5	85.0-115			3.56	20
Ethene	127	117	121	92.3	95.3	85.0-115			3.14	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3338469-3 08/31/18 05:05

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	99.0			80.0-120
(S) Dibromofluoromethane	104			75.0-120
(S) a,a,a-Trifluorotoluene	104			80.0-120
(S) 4-Bromofluorobenzene	101			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) R3338469-1 08/31/18 04:08 • (LCSD) R3338469-2 08/31/18 04:27

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	%	%	%			%	%
Benzene	25.0	23.4	23.5	93.6	94.0	70.0-123			0.366	20
Ethylbenzene	25.0	25.0	24.5	100	98.1	79.0-123			1.96	20
Toluene	25.0	23.8	23.3	95.1	93.1	79.0-120			2.09	20
o-Xylene	25.0	26.4	25.9	106	104	80.0-122			2.11	20
m&p-Xylenes	50.0	50.3	50.0	101	99.9	80.0-122			0.787	20
(S) Toluene-d8				98.9	97.5	80.0-120				
(S) Dibromofluoromethane				103	103	75.0-120				
(S) a,a,a-Trifluorotoluene				102	102	80.0-120				
(S) 4-Bromofluorobenzene				98.2	101	77.0-126				



Method Blank (MB)

(MB) R3338611-4 08/31/18 15:31

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
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
Isopropylbenzene	U		0.326	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3338611-4 08/31/18 15:31

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
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	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
1,2,4-Trimethylbenzene	U		0.373	1.00
1,2,3-Trimethylbenzene	U		0.321	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	100			80.0-120
(S) Dibromofluoromethane	94.8			75.0-120
(S) 4-Bromofluorobenzene	97.7			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) R3338611-1 08/31/18 14:12 • (LCSD) R3338611-2 08/31/18 14:31

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	106	110	84.6	88.3	19.0-160			4.31	27
Acrylonitrile	125	115	114	92.0	91.2	55.0-149			0.932	20
Benzene	25.0	25.6	25.0	102	99.9	70.0-123			2.31	20
Bromobenzene	25.0	25.9	26.0	104	104	73.0-121			0.337	20



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

(LCS) R3338611-1 08/31/18 14:12 • (LCSD) R3338611-2 08/31/18 14:31

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 %
Bromodichloromethane	25.0	26.5	25.6	106	102	75.0-120			3.32	20
Bromoform	25.0	29.2	29.0	117	116	68.0-132			0.638	20
Bromomethane	25.0	21.8	21.7	87.4	87.0	10.0-160			0.483	25
n-Butylbenzene	25.0	25.1	24.2	100	96.9	73.0-125			3.54	20
sec-Butylbenzene	25.0	26.3	26.0	105	104	75.0-125			0.832	20
tert-Butylbenzene	25.0	27.2	27.0	109	108	76.0-124			1.01	20
Carbon tetrachloride	25.0	27.2	25.9	109	103	68.0-126			4.89	20
Chlorobenzene	25.0	27.6	27.6	110	110	80.0-121			0.148	20
Chlorodibromomethane	25.0	28.0	28.2	112	113	77.0-125			0.875	20
Chloroethane	25.0	21.8	22.3	87.1	89.2	47.0-150			2.38	20
Chloroform	25.0	26.2	25.9	105	104	73.0-120			1.25	20
Chloromethane	25.0	20.7	20.3	82.9	81.3	41.0-142			1.88	20
2-Chlorotoluene	25.0	27.5	27.2	110	109	76.0-123			1.33	20
4-Chlorotoluene	25.0	27.4	27.0	110	108	75.0-122			1.41	20
1,2-Dibromo-3-Chloropropane	25.0	22.8	23.1	91.0	92.4	58.0-134			1.49	20
1,2-Dibromoethane	25.0	25.8	26.0	103	104	80.0-122			0.707	20
Dibromomethane	25.0	25.4	25.1	102	100	80.0-120			1.50	20
1,2-Dichlorobenzene	25.0	25.5	25.5	102	102	79.0-121			0.289	20
1,3-Dichlorobenzene	25.0	26.6	26.8	106	107	79.0-120			0.657	20
1,4-Dichlorobenzene	25.0	25.5	25.5	102	102	79.0-120			0.0286	20
1,1-Dichloroethane	25.0	26.5	25.8	106	103	70.0-126			2.70	20
1,2-Dichloroethane	25.0	25.3	24.5	101	98.1	70.0-128			3.05	20
1,1-Dichloroethene	25.0	26.3	25.7	105	103	71.0-124			2.67	20
Acrolein	125	130	128	104	103	10.0-160			0.966	26
cis-1,2-Dichloroethene	25.0	27.1	26.7	109	107	73.0-120			1.66	20
trans-1,2-Dichloroethene	25.0	26.7	25.7	107	103	73.0-120			3.61	20
1,2-Dichloropropane	25.0	26.8	26.0	107	104	77.0-125			2.86	20
1,1-Dichloropropene	25.0	26.0	25.2	104	101	74.0-126			3.03	20
1,3-Dichloropropane	25.0	26.1	26.3	104	105	80.0-120			0.834	20
cis-1,3-Dichloropropene	25.0	27.8	27.4	111	110	80.0-123			1.42	20
trans-1,3-Dichloropropene	25.0	27.6	28.0	110	112	78.0-124			1.25	20
2,2-Dichloropropane	25.0	25.7	25.2	103	101	58.0-130			2.22	20
Di-isopropyl ether	25.0	27.1	26.6	108	106	58.0-138			1.71	20
Ethylbenzene	25.0	27.0	26.4	108	106	79.0-123			2.19	20
Hexachloro-1,3-butadiene	25.0	25.5	25.7	102	103	54.0-138			0.736	20
Isopropylbenzene	25.0	27.4	27.0	109	108	76.0-127			1.43	20
p-Isopropyltoluene	25.0	26.5	26.4	106	106	76.0-125			0.300	20
2-Butanone (MEK)	125	111	112	89.1	89.8	44.0-160			0.750	20
Methylene Chloride	25.0	24.9	24.7	99.6	99.0	67.0-120			0.651	20
4-Methyl-2-pentanone (MIBK)	125	120	120	95.9	96.0	68.0-142			0.0651	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) R3338611-1 08/31/18 14:12 • (LCSD) R3338611-2 08/31/18 14:31

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 %
Methyl tert-butyl ether	25.0	25.3	24.7	101	98.7	68.0-125			2.43	20
Naphthalene	25.0	23.3	23.4	93.1	93.4	54.0-135			0.414	20
n-Propylbenzene	25.0	26.9	26.7	107	107	77.0-124			0.805	20
Styrene	25.0	28.3	28.0	113	112	73.0-130			1.02	20
1,1,1,2-Tetrachloroethane	25.0	29.2	29.2	117	117	75.0-125			0.0665	20
1,1,2,2-Tetrachloroethane	25.0	24.8	25.1	99.4	100	65.0-130			1.06	20
1,1,2-Trichlorotrifluoroethane	25.0	27.5	27.2	110	109	69.0-132			1.03	20
Tetrachloroethene	25.0	28.2	28.3	113	113	72.0-132			0.206	20
Toluene	25.0	26.3	25.9	105	104	79.0-120			1.30	20
1,2,3-Trichlorobenzene	25.0	25.2	25.3	101	101	50.0-138			0.157	20
1,2,4-Trichlorobenzene	25.0	25.9	25.8	103	103	57.0-137			0.145	20
1,1,1-Trichloroethane	25.0	27.2	26.5	109	106	73.0-124			2.37	20
1,1,2-Trichloroethane	25.0	26.1	26.8	104	107	80.0-120			2.39	20
Trichloroethene	25.0	27.4	26.9	110	108	78.0-124			1.80	20
Trichlorofluoromethane	25.0	23.9	23.0	95.7	92.1	59.0-147			3.83	20
1,2,3-Trichloropropane	25.0	26.2	26.2	105	105	73.0-130			0.00362	20
1,2,4-Trimethylbenzene	25.0	26.8	26.9	107	108	76.0-121			0.618	20
1,2,3-Trimethylbenzene	25.0	25.5	25.4	102	102	77.0-120			0.506	20
1,3,5-Trimethylbenzene	25.0	27.7	27.3	111	109	76.0-122			1.64	20
Vinyl chloride	25.0	22.5	22.7	90.1	90.9	67.0-131			0.896	20
o-Xylene	25.0	26.3	26.7	105	107	80.0-122			1.22	20
m&p-Xylenes	50.0	53.0	53.4	106	107	80.0-122			0.724	20
(S) Toluene-d8				99.9	100	80.0-120				
(S) Dibromofluoromethane				98.2	95.6	75.0-120				
(S) 4-Bromofluorobenzene				98.5	98.2	77.0-126				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1021816-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021816-09 08/31/18 19:56 • (MS) R3338611-5 09/01/18 00:08 • (MSD) R3338611-6 09/01/18 00:28

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	121	120	96.5	96.3	1	10.0-160			0.182	35
Acrylonitrile	125	U	140	139	112	111	1	21.0-160			1.17	32
Benzene	25.0	U	28.5	28.3	114	113	1	17.0-158			1.01	27
Bromobenzene	25.0	U	28.7	27.9	115	112	1	30.0-149			2.49	28
Bromodichloromethane	25.0	U	30.8	29.9	123	120	1	31.0-150			3.07	27
Bromoform	25.0	U	33.0	32.4	132	129	1	29.0-150			2.06	29
Bromomethane	25.0	U	25.9	23.8	103	95.0	1	10.0-160			8.49	38
n-Butylbenzene	25.0	U	26.4	25.9	106	103	1	31.0-150			2.21	30



L1021816-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021816-09 08/31/18 19:56 • (MS) R3338611-5 09/01/18 00:08 • (MSD) R3338611-6 09/01/18 00:28

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 %
sec-Butylbenzene	25.0	U	29.7	28.8	119	115	1	33.0-155			3.08	29
tert-Butylbenzene	25.0	U	31.2	30.0	125	120	1	34.0-153			3.85	28
Carbon tetrachloride	25.0	U	30.4	29.8	122	119	1	23.0-159			1.99	28
Chlorobenzene	25.0	U	30.1	29.6	120	118	1	33.0-152			1.74	27
Chlorodibromomethane	25.0	U	30.9	30.2	124	121	1	37.0-149			2.32	27
Chloroethane	25.0	U	23.8	23.7	95.4	94.9	1	10.0-160			0.522	30
Chloroform	25.0	U	29.0	28.5	116	114	1	29.0-154			1.71	28
Chloromethane	25.0	U	26.3	25.4	105	102	1	10.0-160			3.39	29
2-Chlorotoluene	25.0	U	30.2	29.2	121	117	1	32.0-153			3.18	28
4-Chlorotoluene	25.0	U	29.5	28.5	118	114	1	32.0-150			3.19	28
1,2-Dibromo-3-Chloropropane	25.0	U	28.0	27.1	112	108	1	22.0-151			3.41	34
1,2-Dibromoethane	25.0	U	28.9	28.4	116	114	1	34.0-147			1.52	27
Dibromomethane	25.0	U	28.6	28.3	114	113	1	30.0-151			0.822	27
1,2-Dichlorobenzene	25.0	U	27.9	27.3	112	109	1	34.0-149			2.32	28
1,3-Dichlorobenzene	25.0	U	29.7	28.4	119	114	1	36.0-146			4.59	27
1,4-Dichlorobenzene	25.0	U	27.9	27.2	112	109	1	35.0-142			2.58	27
1,1-Dichloroethane	25.0	U	29.4	28.8	118	115	1	25.0-158			2.13	27
1,2-Dichloroethane	25.0	U	27.6	27.2	111	109	1	29.0-151			1.48	27
1,1-Dichloroethene	25.0	U	31.3	29.9	125	119	1	11.0-160			4.87	29
cis-1,2-Dichloroethene	25.0	U	29.6	29.5	119	118	1	10.0-160			0.448	27
trans-1,2-Dichloroethene	25.0	U	29.5	29.1	118	116	1	17.0-153			1.49	27
1,2-Dichloropropane	25.0	U	30.5	29.6	122	118	1	30.0-156			3.06	27
1,1-Dichloropropene	25.0	U	28.5	27.8	114	111	1	25.0-158			2.42	27
1,3-Dichloropropane	25.0	U	28.4	27.6	113	110	1	38.0-147			2.66	27
cis-1,3-Dichloropropene	25.0	U	27.3	26.6	109	106	1	34.0-149			2.76	28
trans-1,3-Dichloropropene	25.0	U	27.8	27.1	111	108	1	32.0-149			2.61	28
2,2-Dichloropropane	25.0	U	21.4	20.9	85.6	83.7	1	24.0-152			2.30	29
Di-isopropyl ether	25.0	U	28.5	28.5	114	114	1	21.0-160			0.199	28
Ethylbenzene	25.0	U	29.8	28.6	119	114	1	30.0-155			3.96	27
Hexachloro-1,3-butadiene	25.0	U	28.5	28.9	114	116	1	20.0-154			1.53	34
Acrolein	125	U	244	251	195	201	1	10.0-160	J5	J5	2.70	39
Isopropylbenzene	25.0	U	31.0	29.8	124	119	1	28.0-157			3.84	27
p-Isopropyltoluene	25.0	U	29.0	28.0	116	112	1	30.0-154			3.53	29
2-Butanone (MEK)	125	U	135	135	108	108	1	10.0-160			0.0768	32
Methylene Chloride	25.0	U	27.6	26.6	110	106	1	23.0-144			3.66	28
4-Methyl-2-pentanone (MIBK)	125	U	141	139	112	111	1	29.0-160			1.14	29
Methyl tert-butyl ether	25.0	U	26.8	26.2	107	105	1	28.0-150			2.39	29
Naphthalene	25.0	U	27.4	27.0	110	108	1	12.0-156			1.45	35
n-Propylbenzene	25.0	U	30.2	28.7	121	115	1	31.0-154			5.07	28
Styrene	25.0	U	32.1	31.0	129	124	1	33.0-155			3.65	28

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1021816-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1021816-09 08/31/18 19:56 • (MS) R3338611-5 09/01/18 00:08 • (MSD) R3338611-6 09/01/18 00:28

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 %
1,1,1,2-Tetrachloroethane	25.0	U	31.3	31.4	125	126	1	36.0-151			0.475	29
1,1,2,2-Tetrachloroethane	25.0	U	31.1	30.4	125	122	1	33.0-150			2.38	28
1,1,2-Trichlorotrifluoroethane	25.0	U	27.5	27.2	110	109	1	23.0-160			0.960	30
Tetrachloroethene	25.0	U	30.7	30.0	123	120	1	10.0-160			2.30	27
Toluene	25.0	U	29.7	28.5	119	114	1	26.0-154			3.96	28
1,2,3-Trichlorobenzene	25.0	U	28.0	27.6	112	110	1	17.0-150			1.38	36
1,2,4-Trichlorobenzene	25.0	U	28.2	27.7	113	111	1	24.0-150			1.71	33
1,1,1-Trichloroethane	25.0	U	30.5	30.2	122	121	1	23.0-160			1.23	28
1,1,2-Trichloroethane	25.0	U	28.8	28.7	115	115	1	35.0-147			0.380	27
Trichloroethene	25.0	U	29.4	28.5	118	114	1	10.0-160			2.92	25
Trichlorofluoromethane	25.0	U	29.3	28.4	117	114	1	17.0-160			3.02	31
1,2,3-Trichloropropane	25.0	U	30.5	29.2	122	117	1	34.0-151			4.62	29
1,2,4-Trimethylbenzene	25.0	U	30.1	28.8	120	115	1	26.0-154			4.28	27
1,2,3-Trimethylbenzene	25.0	U	26.7	25.6	107	102	1	32.0-149			4.10	28
1,3,5-Trimethylbenzene	25.0	U	30.7	29.7	123	119	1	28.0-153			3.17	27
Vinyl chloride	25.0	U	28.7	27.7	115	111	1	10.0-160			3.50	27
o-Xylene	25.0	U	29.4	28.9	118	116	1	45.0-144			1.74	26
m&p-Xylenes	50.0	U	59.3	57.6	119	115	1	43.0-146			2.83	26
(S) Toluene-d8					98.4	98.6		80.0-120				
(S) Dibromofluoromethane					96.2	96.7		75.0-120				
(S) 4-Bromofluorobenzene					97.7	97.4		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) R3339122-4 09/02/18 13:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Dichlorodifluoromethane	U		0.551	5.00
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	106			80.0-120
(S) Dibromofluoromethane	103			75.0-120
(S) 4-Bromofluorobenzene	105			77.0-126
(S) a,a,a-Trifluorotoluene	101			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) R3339122-1 09/02/18 12:04 • (LCSD) R3339122-2 09/02/18 12:24

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	24.7	24.7	98.9	98.6	70.0-123			0.235	20
Dichlorodifluoromethane	25.0	30.2	29.5	121	118	51.0-149			2.12	20
Ethylbenzene	25.0	26.0	25.7	104	103	79.0-123			1.38	20
Toluene	25.0	25.7	25.0	103	99.9	79.0-120			2.69	20
o-Xylene	25.0	25.6	25.1	102	100	80.0-122			2.09	20
m&p-Xylenes	50.0	51.1	50.8	102	102	80.0-122			0.718	20
(S) Toluene-d8				104	102	80.0-120				
(S) Dibromofluoromethane				102	101	75.0-120				
(S) 4-Bromofluorobenzene				99.4	100	77.0-126				
(S) a,a,a-Trifluorotoluene				102	101	80.0-120				





Method Blank (MB)

(MB) R3338987-1 09/03/18 21:21

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>	86.0			52.0-156

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

(LCS) R3338987-2 09/03/18 21:40 • (LCSD) R3338987-3 09/03/18 21:59

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	730	738	97.3	98.4	50.0-150			1.09	20
Residual Range Organics (RRO)	750	756	727	101	96.9	50.0-150			3.91	20
<i>(S) o-Terphenyl</i>				105	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) R3339199-1 09/05/18 02:47

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>	126			52.0-156

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

(LCS) R3339199-2 09/05/18 03:07 • (LCSD) R3339199-3 09/05/18 03:27

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	990	1000	132	133	50.0-150			1.01	20
Residual Range Organics (RRO)	750	919	911	123	121	50.0-150			0.874	20
<i>(S) o-Terphenyl</i>				124	124	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) R3338988-1 09/03/18 20:22

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>	67.0			52.0-156

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

(LCS) R3338988-2 09/03/18 20:42 • (LCSD) R3338988-3 09/03/18 21:01

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	618	625	82.4	83.3	50.0-150			1.13	20
Residual Range Organics (RRO)	750	620	637	82.7	84.9	50.0-150			2.70	20
<i>(S) o-Terphenyl</i>				87.5	88.0	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) R3338559-1 09/01/18 11:41

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-Chloronaphthalene	U		0.00647	0.250
2-Methylnaphthalene	U		0.00902	0.250
(S) Nitrobenzene-d5	83.5			31.0-160
(S) 2-Fluorobiphenyl	106			48.0-148
(S) p-Terphenyl-d14	105			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3338559-3 09/01/18 12:27 • (LCSD) R3338559-2 09/01/18 12:04

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	1.70	1.77	85.0	88.5	67.0-150			4.03	20
Acenaphthene	2.00	1.64	1.67	82.0	83.5	65.0-138			1.81	20
Acenaphthylene	2.00	1.60	1.63	80.0	81.5	66.0-140			1.86	20
Benzo(a)anthracene	2.00	1.70	1.73	85.0	86.5	61.0-140			1.75	20
Benzo(a)pyrene	2.00	1.75	1.79	87.5	89.5	60.0-143			2.26	20
Benzo(b)fluoranthene	2.00	1.85	1.88	92.5	94.0	58.0-141			1.61	20
Benzo(g,h,i)perylene	2.00	1.90	1.94	95.0	97.0	52.0-153			2.08	20
Benzo(k)fluoranthene	2.00	1.69	1.75	84.5	87.5	58.0-148			3.49	20
Chrysene	2.00	1.78	1.81	89.0	90.5	64.0-144			1.67	20
Dibenz(a,h)anthracene	2.00	1.90	1.91	95.0	95.5	52.0-155			0.525	20
Fluoranthene	2.00	1.92	1.97	96.0	98.5	69.0-153			2.57	20



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

(LCS) R3338559-3 09/01/18 12:27 • (LCSD) R3338559-2 09/01/18 12:04

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	1.70	1.73	85.0	86.5	64.0-136			1.75	20
Indeno(1,2,3-cd)pyrene	2.00	1.88	1.93	94.0	96.5	54.0-153			2.62	20
Naphthalene	2.00	1.60	1.61	80.0	80.5	61.0-137			0.623	20
Phenanthrene	2.00	1.61	1.65	80.5	82.5	62.0-137			2.45	20
Pyrene	2.00	1.69	1.72	84.5	86.0	60.0-142			1.76	20
1-Methylnaphthalene	2.00	1.80	1.83	90.0	91.5	66.0-142			1.65	20
2-Methylnaphthalene	2.00	1.71	1.74	85.5	87.0	62.0-136			1.74	20
2-Chloronaphthalene	2.00	1.74	1.77	87.0	88.5	64.0-140			1.71	20
<i>(S) Nitrobenzene-d5</i>				71.5	74.5	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				90.5	92.5	48.0-148				
<i>(S) p-Terphenyl-d14</i>				91.5	92.0	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.
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.



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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	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

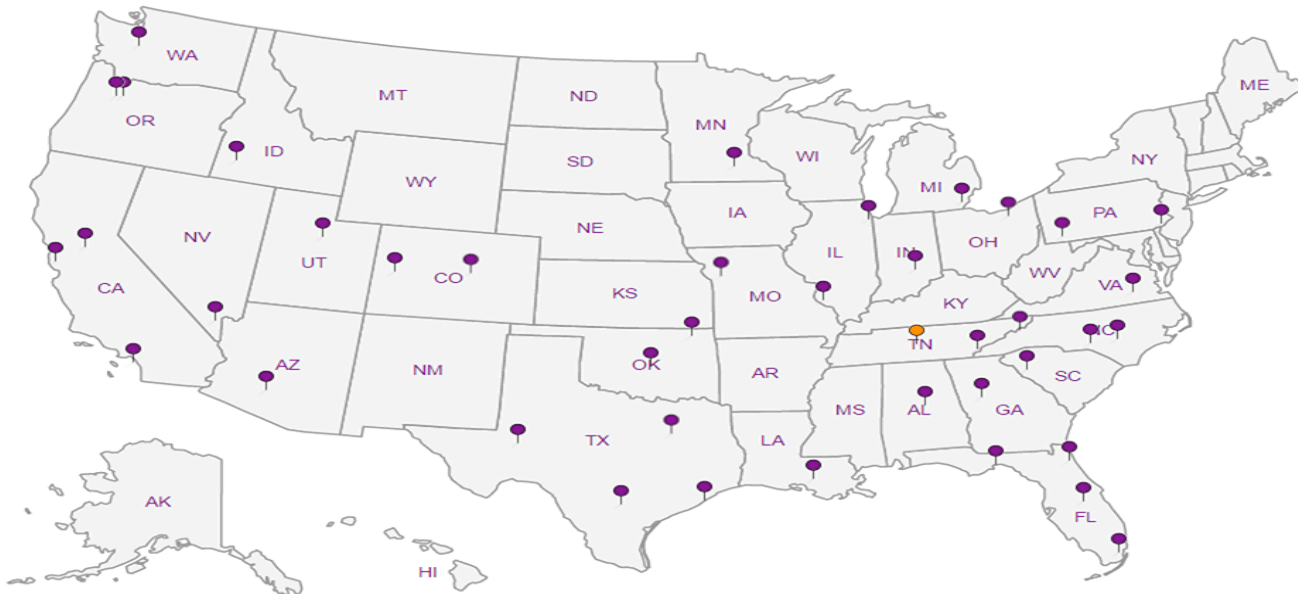
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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     



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):  
Alise Robinson

Site/Facility ID #  
Wishram

P.O. #

Collected by (signature):  
Alise 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

No.  
of  
Cnts

Immediately  
Packed on Ice N      Y ✓

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	DisM6020RCR8+ Fe,Mn 250mlHDPE-HNO3	Dissolved Pb 250mlHDPE-NoPres HNO3	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPDXLVI- No SGT 40mlAmb-HCl-BT	NWTPDXLVI- w/ SGT 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Sulfide 125mlAmb-S-NaOH+ZnAc	Remarks	Sample # (lab only)
WMW-23-20180827	grab	GW	20'	8-27-18	10:10	13	X	X	X	X	X	X	X	X	X	X		01
WMW-22-20180827		GW		8-27-18	11:20	15	X	X	X	X	X	X	X	X	X	X		02/03
WMW-21-20180827		GW		8-27-18	13:00	15	X	X	X	X	X	X	X	X	X	X		04/05
WMW-20-20180827		GW		8-27-18	15:10	13	X	X	X	X	X	X	X	X	X	X		06
WMW-19-20180827		GW		8-27-18	16:50	13	X	X	X	X	X	X	X	X	X	X		07
WMW-31-20180828		GW	15'	8-28-18	10:00	14	X	X	X	X	X	X	X	X	X	X		08
WMW-32-20180828		GW		8-28-18	15:35	16	X	X	X	X	X	X	X	X	X	X		09
WMW-28-20180829		GW		8-29-18	10:27	14	X	X	X	X	X	X	X	X	X	X		10
D-1-20180829		GW		8-29-18	10:45	14	X	X	X	X	X	X	X	X	X	X		11
Trip Blank		GW																12

\* 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 # 4492 6222 5120 / 4492 6222 5119

pH      Temp       
Flow      Other     

Sample Receipt Checklist  
COC Seal Present/Intact:      NP      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)  
Alise Robinson

Date: 8-29-18 Time: 14:00

Received by: (Signature)

Trip Blank Received:      Yes / No  
     HCl / MeOH  
     TBR

Relinquished by: (Signature)

Date:      Time:     

Received by: (Signature)

Temp: 0549 °C Bottles Received: 127

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:      Time:     

Received for lab by (Signature)  
    

Date: 8/30/18 Time: 0845

Hold:      Condition: NCF / OK





September 12, 2018

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1022656  
Samples Received: 09/01/2018  
Project Number: 1896120\*04  
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  
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-30-20180829 L1022656-01 GW

Collected by  
Alice Robinson  
Collected date/time  
08/29/18 16:40  
Received date/time  
09/01/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1161879	1	09/06/18 12:16	09/06/18 12:16	JER
Wet Chemistry by Method 353.2	WG1161888	1	09/10/18 10:57	09/10/18 10:57	JER
Wet Chemistry by Method 4500S2 D-2011	WG1159966	1	09/02/18 16:23	09/02/18 16:23	TH
Wet Chemistry by Method 9056A	WG1161391	1	09/07/18 07:08	09/07/18 07:08	ELN
Mercury by Method 7470A	WG1160814	1	09/06/18 09:45	09/07/18 10:51	ABL
Mercury by Method 7470A	WG1160816	1	09/04/18 09:56	09/06/18 15:29	EL
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 15:37	JPD
Metals (ICPMS) by Method 6020A	WG1161791	1	09/07/18 16:28	09/09/18 16:20	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1161909	1	09/06/18 14:43	09/06/18 14:43	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160890	1	09/02/18 17:42	09/02/18 17:42	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1162436	1	09/06/18 19:09	09/07/18 19:56	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1161836	1	09/05/18 18:11	09/05/18 23:49	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1161305	1	09/04/18 21:12	09/05/18 18:12	CJR

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

## WMW-26-20180829 L1022656-02 GW

Collected by  
Alice Robinson  
Collected date/time  
08/29/18 17:30  
Received date/time  
09/01/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1161879	1	09/06/18 12:17	09/06/18 12:17	JER
Wet Chemistry by Method 353.2	WG1161888	1	09/10/18 11:05	09/10/18 11:05	JER
Wet Chemistry by Method 4500S2 D-2011	WG1160769	1	09/02/18 16:46	09/02/18 16:46	TH
Wet Chemistry by Method 9056A	WG1161391	1	09/07/18 07:22	09/07/18 07:22	ELN
Mercury by Method 7470A	WG1160814	1	09/06/18 09:45	09/07/18 10:59	ABL
Mercury by Method 7470A	WG1160816	1	09/04/18 09:56	09/06/18 15:31	EL
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 15:41	JPD
Metals (ICPMS) by Method 6020A	WG1161791	1	09/07/18 16:28	09/09/18 16:25	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1161909	1	09/06/18 14:45	09/06/18 14:45	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160890	1	09/02/18 18:02	09/02/18 18:02	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1162436	1	09/06/18 19:09	09/07/18 20:16	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1161836	1	09/05/18 18:11	09/06/18 00:09	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1161305	1	09/04/18 21:12	09/05/18 18:35	CJR

## WMW-24-20180829 L1022656-03 GW

Collected by  
Alice Robinson  
Collected date/time  
08/30/18 09:25  
Received date/time  
09/01/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1161879	1	09/06/18 12:19	09/06/18 12:19	JER
Wet Chemistry by Method 353.2	WG1161888	2	09/10/18 11:06	09/10/18 11:06	JER
Wet Chemistry by Method 4500S2 D-2011	WG1160769	1	09/02/18 16:46	09/02/18 16:46	TH
Wet Chemistry by Method 9056A	WG1161391	1	09/07/18 07:36	09/07/18 07:36	ELN
Mercury by Method 7470A	WG1160814	1	09/06/18 09:45	09/07/18 11:01	ABL
Mercury by Method 7470A	WG1160816	1	09/04/18 09:56	09/06/18 15:33	EL
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 15:46	JPD
Metals (ICPMS) by Method 6020A	WG1161791	1	09/07/18 16:28	09/09/18 16:45	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1161909	1	09/06/18 14:48	09/06/18 14:48	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160890	1	09/02/18 18:21	09/02/18 18:21	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1162436	1	09/06/18 19:09	09/07/18 22:56	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1161850	1	09/05/18 20:00	09/06/18 13:31	CJR

# SAMPLE SUMMARY



TRIP BLANK L1022656-04 GW

Collected by Alice Robinson  
Collected date/time 08/29/18 00:00  
Received date/time 09/01/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160890	1	09/02/18 16:44	09/02/18 16:44	ACG

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> 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

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/06/2018 12:16	<a href="#">WG1161879</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	527		100	1	09/10/2018 10:57	<a href="#">WG1161888</a>

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	09/02/2018 16:23	<a href="#">WG1159966</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	29600		5000	1	09/07/2018 07:08	<a href="#">WG1161391</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/07/2018 10:51	<a href="#">WG1160814</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 15:29	<a href="#">WG1160816</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.37		2.00	1	09/09/2018 16:20	<a href="#">WG1161791</a>
Arsenic,Dissolved	4.20		2.00	1	09/05/2018 15:37	<a href="#">WG1160516</a>
Barium	43.0		5.00	1	09/09/2018 16:20	<a href="#">WG1161791</a>
Barium,Dissolved	39.9		5.00	1	09/05/2018 15:37	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/09/2018 16:20	<a href="#">WG1161791</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 15:37	<a href="#">WG1160516</a>
Chromium	ND		2.00	1	09/09/2018 16:20	<a href="#">WG1161791</a>
Chromium,Dissolved	ND		2.00	1	09/05/2018 15:37	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/05/2018 15:37	<a href="#">WG1160516</a>
Lead	2.85		2.00	1	09/09/2018 16:20	<a href="#">WG1161791</a>
Lead,Dissolved	5.69		2.00	1	09/05/2018 15:37	<a href="#">WG1160516</a>
Manganese,Dissolved	497		5.00	1	09/05/2018 15:37	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/09/2018 16:20	<a href="#">WG1161791</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 15:37	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/09/2018 16:20	<a href="#">WG1161791</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 15:37	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/06/2018 14:43	<a href="#">WG1161909</a>
Ethane	ND		13.0	1	09/06/2018 14:43	<a href="#">WG1161909</a>
Ethene	ND		13.0	1	09/06/2018 14:43	<a href="#">WG1161909</a>





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	09/02/2018 17:42	<a href="#">WG1160890</a>
Acrolein	ND		50.0	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Acrylonitrile	ND		10.0	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Benzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Bromobenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Bromodichloromethane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Bromoform	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Bromomethane	ND		5.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
n-Butylbenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
sec-Butylbenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
tert-Butylbenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Carbon tetrachloride	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Chlorobenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Chlorodibromomethane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Chloroethane	ND		5.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Chloroform	ND		5.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Chloromethane	ND		2.50	1	09/02/2018 17:42	<a href="#">WG1160890</a>
2-Chlorotoluene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
4-Chlorotoluene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,2-Dibromoethane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Dibromomethane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,2-Dichlorobenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,3-Dichlorobenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,4-Dichlorobenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,1-Dichloroethane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,2-Dichloroethane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,1-Dichloroethene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,2-Dichloropropane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,1-Dichloropropene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,3-Dichloropropane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
2,2-Dichloropropane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Di-isopropyl ether	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Ethylbenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Isopropylbenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
p-Isopropyltoluene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
2-Butanone (MEK)	ND		10.0	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Methylene Chloride	ND		5.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Methyl tert-butyl ether	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Naphthalene	ND		5.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
n-Propylbenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Styrene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Tetrachloroethene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Toluene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>

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	09/02/2018 17:42	<a href="#">WG1160890</a>
1,1,2-Trichloroethane	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Trichloroethene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Trichlorofluoromethane	ND		5.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,2,3-Trichloropropane	ND		2.50	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
Vinyl chloride	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
o-Xylene	ND		1.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
m&p-Xylene	ND		2.00	1	09/02/2018 17:42	<a href="#">WG1160890</a>
(S) Toluene-d8	97.9		80.0-120		09/02/2018 17:42	<a href="#">WG1160890</a>
(S) Dibromofluoromethane	98.6		75.0-120		09/02/2018 17:42	<a href="#">WG1160890</a>
(S) 4-Bromofluorobenzene	98.0		77.0-126		09/02/2018 17:42	<a href="#">WG1160890</a>

- 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)	441		200	1	09/07/2018 19:56	<a href="#">WG1162436</a>
Residual Range Organics (RRO)	942		250	1	09/07/2018 19:56	<a href="#">WG1162436</a>
(S) o-Terphenyl	96.3		52.0-156		09/07/2018 19:56	<a href="#">WG1162436</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	09/05/2018 23:49	<a href="#">WG1161836</a>
Residual Range Organics (RRO)	ND		250	1	09/05/2018 23:49	<a href="#">WG1161836</a>
(S) o-Terphenyl	104		52.0-156		09/05/2018 23:49	<a href="#">WG1161836</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Acenaphthene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Acenaphthylene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Benzo(a)anthracene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Benzo(a)pyrene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Chrysene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Dibenz(a,h)anthracene	0.0689		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Fluoranthene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Fluorene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Naphthalene	ND		0.250	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Phenanthrene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
Pyrene	ND		0.0500	1	09/05/2018 18:12	<a href="#">WG1161305</a>
1-Methylnaphthalene	ND		0.250	1	09/05/2018 18:12	<a href="#">WG1161305</a>
2-Methylnaphthalene	ND		0.250	1	09/05/2018 18:12	<a href="#">WG1161305</a>
2-Chloronaphthalene	ND		0.250	1	09/05/2018 18:12	<a href="#">WG1161305</a>
(S) Nitrobenzene-d5	85.3		31.0-160		09/05/2018 18:12	<a href="#">WG1161305</a>
(S) 2-Fluorobiphenyl	81.1		48.0-148		09/05/2018 18:12	<a href="#">WG1161305</a>
(S) p-Terphenyl-d14	88.9		37.0-146		09/05/2018 18:12	<a href="#">WG1161305</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/06/2018 12:17	<a href="#">WG1161879</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	794		100	1	09/10/2018 11:05	<a href="#">WG1161888</a>

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	09/02/2018 16:46	<a href="#">WG1160769</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	32100		5000	1	09/07/2018 07:22	<a href="#">WG1161391</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/07/2018 10:59	<a href="#">WG1160814</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 15:31	<a href="#">WG1160816</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	2.33		2.00	1	09/09/2018 16:25	<a href="#">WG1161791</a>
Arsenic,Dissolved	2.42		2.00	1	09/05/2018 15:41	<a href="#">WG1160516</a>
Barium	68.5		5.00	1	09/09/2018 16:25	<a href="#">WG1161791</a>
Barium,Dissolved	73.2		5.00	1	09/05/2018 15:41	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/09/2018 16:25	<a href="#">WG1161791</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 15:41	<a href="#">WG1160516</a>
Chromium	ND		2.00	1	09/09/2018 16:25	<a href="#">WG1161791</a>
Chromium,Dissolved	ND		2.00	1	09/05/2018 15:41	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/05/2018 15:41	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/09/2018 16:25	<a href="#">WG1161791</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 15:41	<a href="#">WG1160516</a>
Manganese,Dissolved	1760		5.00	1	09/05/2018 15:41	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/09/2018 16:25	<a href="#">WG1161791</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 15:41	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/09/2018 16:25	<a href="#">WG1161791</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 15:41	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/06/2018 14:45	<a href="#">WG1161909</a>
Ethane	ND		13.0	1	09/06/2018 14:45	<a href="#">WG1161909</a>
Ethene	ND		13.0	1	09/06/2018 14:45	<a href="#">WG1161909</a>



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	09/02/2018 18:02	<a href="#">WG1160890</a>
Acrolein	ND		50.0	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Acrylonitrile	ND		10.0	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Benzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Bromobenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Bromodichloromethane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Bromoform	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Bromomethane	ND		5.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
n-Butylbenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
sec-Butylbenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
tert-Butylbenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Carbon tetrachloride	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Chlorobenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Chlorodibromomethane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Chloroethane	ND		5.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Chloroform	ND		5.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Chloromethane	ND		2.50	1	09/02/2018 18:02	<a href="#">WG1160890</a>
2-Chlorotoluene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
4-Chlorotoluene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,2-Dibromoethane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Dibromomethane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,2-Dichlorobenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,3-Dichlorobenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,4-Dichlorobenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,1-Dichloroethane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,2-Dichloroethane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,1-Dichloroethene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,2-Dichloropropane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,1-Dichloropropene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,3-Dichloropropane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
2,2-Dichloropropane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Di-isopropyl ether	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Ethylbenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Isopropylbenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
p-Isopropyltoluene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
2-Butanone (MEK)	ND		10.0	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Methylene Chloride	ND		5.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Methyl tert-butyl ether	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Naphthalene	ND		5.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
n-Propylbenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Styrene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Tetrachloroethene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Toluene	1.57		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>

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	09/02/2018 18:02	<a href="#">WG1160890</a>
1,1,2-Trichloroethane	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Trichloroethene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Trichlorofluoromethane	ND		5.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,2,3-Trichloropropane	ND		2.50	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
Vinyl chloride	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
o-Xylene	ND		1.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
m&p-Xylene	ND		2.00	1	09/02/2018 18:02	<a href="#">WG1160890</a>
(S) Toluene-d8	102		80.0-120		09/02/2018 18:02	<a href="#">WG1160890</a>
(S) Dibromofluoromethane	97.5		75.0-120		09/02/2018 18:02	<a href="#">WG1160890</a>
(S) 4-Bromofluorobenzene	94.8		77.0-126		09/02/2018 18:02	<a href="#">WG1160890</a>

- 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)	793		200	1	09/07/2018 20:16	<a href="#">WG1162436</a>
Residual Range Organics (RRO)	1690		250	1	09/07/2018 20:16	<a href="#">WG1162436</a>
(S) o-Terphenyl	91.6		52.0-156		09/07/2018 20:16	<a href="#">WG1162436</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	304		200	1	09/06/2018 00:09	<a href="#">WG1161836</a>
Residual Range Organics (RRO)	397		250	1	09/06/2018 00:09	<a href="#">WG1161836</a>
(S) o-Terphenyl	99.5		52.0-156		09/06/2018 00:09	<a href="#">WG1161836</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Acenaphthene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Acenaphthylene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Benzo(a)anthracene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Benzo(a)pyrene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Chrysene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Fluoranthene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Fluorene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Naphthalene	ND		0.250	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Phenanthrene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
Pyrene	ND		0.0500	1	09/05/2018 18:35	<a href="#">WG1161305</a>
1-Methylnaphthalene	ND		0.250	1	09/05/2018 18:35	<a href="#">WG1161305</a>
2-Methylnaphthalene	ND		0.250	1	09/05/2018 18:35	<a href="#">WG1161305</a>
2-Chloronaphthalene	ND		0.250	1	09/05/2018 18:35	<a href="#">WG1161305</a>
(S) Nitrobenzene-d5	84.7		31.0-160		09/05/2018 18:35	<a href="#">WG1161305</a>
(S) 2-Fluorobiphenyl	80.0		48.0-148		09/05/2018 18:35	<a href="#">WG1161305</a>
(S) p-Terphenyl-d14	88.9		37.0-146		09/05/2018 18:35	<a href="#">WG1161305</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/06/2018 12:19	<a href="#">WG1161879</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5610		200	2	09/10/2018 11:06	<a href="#">WG1161888</a>

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	09/02/2018 16:46	<a href="#">WG1160769</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	33800		5000	1	09/07/2018 07:36	<a href="#">WG1161391</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/07/2018 11:01	<a href="#">WG1160814</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 15:33	<a href="#">WG1160816</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	35.5		2.00	1	09/09/2018 16:45	<a href="#">WG1161791</a>
Arsenic,Dissolved	37.0		2.00	1	09/05/2018 15:46	<a href="#">WG1160516</a>
Barium	36.6		5.00	1	09/09/2018 16:45	<a href="#">WG1161791</a>
Barium,Dissolved	37.3		5.00	1	09/05/2018 15:46	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/09/2018 16:45	<a href="#">WG1161791</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 15:46	<a href="#">WG1160516</a>
Chromium	6.97		2.00	1	09/09/2018 16:45	<a href="#">WG1161791</a>
Chromium,Dissolved	6.39		2.00	1	09/05/2018 15:46	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/05/2018 15:46	<a href="#">WG1160516</a>
Lead	ND		2.00	1	09/09/2018 16:45	<a href="#">WG1161791</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 15:46	<a href="#">WG1160516</a>
Manganese,Dissolved	489		5.00	1	09/05/2018 15:46	<a href="#">WG1160516</a>
Selenium	ND		2.00	1	09/09/2018 16:45	<a href="#">WG1161791</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 15:46	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/09/2018 16:45	<a href="#">WG1161791</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 15:46	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/06/2018 14:48	<a href="#">WG1161909</a>
Ethane	ND		13.0	1	09/06/2018 14:48	<a href="#">WG1161909</a>
Ethene	ND		13.0	1	09/06/2018 14:48	<a href="#">WG1161909</a>



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	09/02/2018 18:21	<a href="#">WG1160890</a>
Acrolein	ND		50.0	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Acrylonitrile	ND		10.0	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Benzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Bromobenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Bromodichloromethane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Bromoform	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Bromomethane	ND		5.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
n-Butylbenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
sec-Butylbenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
tert-Butylbenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Carbon tetrachloride	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Chlorobenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Chlorodibromomethane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Chloroethane	ND		5.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Chloroform	ND		5.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Chloromethane	ND		2.50	1	09/02/2018 18:21	<a href="#">WG1160890</a>
2-Chlorotoluene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
4-Chlorotoluene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,2-Dibromoethane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Dibromomethane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,2-Dichlorobenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,3-Dichlorobenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,4-Dichlorobenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,1-Dichloroethane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,2-Dichloroethane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,1-Dichloroethene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,2-Dichloropropane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,1-Dichloropropene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,3-Dichloropropane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
2,2-Dichloropropane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Di-isopropyl ether	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Ethylbenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Isopropylbenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
p-Isopropyltoluene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
2-Butanone (MEK)	ND		10.0	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Methylene Chloride	ND		5.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Methyl tert-butyl ether	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Naphthalene	ND		5.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
n-Propylbenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Styrene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Tetrachloroethene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Toluene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>

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	09/02/2018 18:21	<a href="#">WG1160890</a>
1,1,2-Trichloroethane	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Trichloroethene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Trichlorofluoromethane	ND		5.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,2,3-Trichloropropane	ND		2.50	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
Vinyl chloride	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
o-Xylene	ND		1.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
m&p-Xylene	ND		2.00	1	09/02/2018 18:21	<a href="#">WG1160890</a>
(S) Toluene-d8	102		80.0-120		09/02/2018 18:21	<a href="#">WG1160890</a>
(S) Dibromofluoromethane	98.5		75.0-120		09/02/2018 18:21	<a href="#">WG1160890</a>
(S) 4-Bromofluorobenzene	98.1		77.0-126		09/02/2018 18:21	<a href="#">WG1160890</a>

- 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)	287		200	1	09/07/2018 22:56	<a href="#">WG1162436</a>
Residual Range Organics (RRO)	719		250	1	09/07/2018 22:56	<a href="#">WG1162436</a>
(S) o-Terphenyl	89.5		52.0-156		09/07/2018 22:56	<a href="#">WG1162436</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Acenaphthene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Acenaphthylene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Benzo(a)anthracene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Benzo(a)pyrene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Chrysene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Fluoranthene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Fluorene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Naphthalene	ND		0.250	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Phenanthrene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
Pyrene	ND		0.0500	1	09/06/2018 13:31	<a href="#">WG1161850</a>
1-Methylnaphthalene	ND		0.250	1	09/06/2018 13:31	<a href="#">WG1161850</a>
2-Methylnaphthalene	ND		0.250	1	09/06/2018 13:31	<a href="#">WG1161850</a>
2-Chloronaphthalene	ND		0.250	1	09/06/2018 13:31	<a href="#">WG1161850</a>
(S) Nitrobenzene-d5	85.8		31.0-160		09/06/2018 13:31	<a href="#">WG1161850</a>
(S) 2-Fluorobiphenyl	101		48.0-148		09/06/2018 13:31	<a href="#">WG1161850</a>
(S) p-Terphenyl-d14	98.9		37.0-146		09/06/2018 13:31	<a href="#">WG1161850</a>





Collected date/time: 08/29/18 00:00

L1022656

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	09/02/2018 16:44	WG1160890
Acrolein	ND		50.0	1	09/02/2018 16:44	WG1160890
Acrylonitrile	ND		10.0	1	09/02/2018 16:44	WG1160890
Benzene	ND		1.00	1	09/02/2018 16:44	WG1160890
Bromobenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
Bromodichloromethane	ND		1.00	1	09/02/2018 16:44	WG1160890
Bromoform	ND		1.00	1	09/02/2018 16:44	WG1160890
Bromomethane	ND		5.00	1	09/02/2018 16:44	WG1160890
n-Butylbenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
sec-Butylbenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
tert-Butylbenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
Carbon tetrachloride	ND		1.00	1	09/02/2018 16:44	WG1160890
Chlorobenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
Chlorodibromomethane	ND		1.00	1	09/02/2018 16:44	WG1160890
Chloroethane	ND		5.00	1	09/02/2018 16:44	WG1160890
Chloroform	ND		5.00	1	09/02/2018 16:44	WG1160890
Chloromethane	ND		2.50	1	09/02/2018 16:44	WG1160890
2-Chlorotoluene	ND		1.00	1	09/02/2018 16:44	WG1160890
4-Chlorotoluene	ND		1.00	1	09/02/2018 16:44	WG1160890
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2018 16:44	WG1160890
1,2-Dibromoethane	ND		1.00	1	09/02/2018 16:44	WG1160890
Dibromomethane	ND		1.00	1	09/02/2018 16:44	WG1160890
1,2-Dichlorobenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
1,3-Dichlorobenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
1,4-Dichlorobenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 16:44	WG1160890
1,1-Dichloroethane	ND		1.00	1	09/02/2018 16:44	WG1160890
1,2-Dichloroethane	ND		1.00	1	09/02/2018 16:44	WG1160890
1,1-Dichloroethene	ND		1.00	1	09/02/2018 16:44	WG1160890
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2018 16:44	WG1160890
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2018 16:44	WG1160890
1,2-Dichloropropane	ND		1.00	1	09/02/2018 16:44	WG1160890
1,1-Dichloropropene	ND		1.00	1	09/02/2018 16:44	WG1160890
1,3-Dichloropropane	ND		1.00	1	09/02/2018 16:44	WG1160890
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2018 16:44	WG1160890
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2018 16:44	WG1160890
2,2-Dichloropropane	ND		1.00	1	09/02/2018 16:44	WG1160890
Di-isopropyl ether	ND		1.00	1	09/02/2018 16:44	WG1160890
Ethylbenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2018 16:44	WG1160890
Isopropylbenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
p-Isopropyltoluene	ND		1.00	1	09/02/2018 16:44	WG1160890
2-Butanone (MEK)	ND		10.0	1	09/02/2018 16:44	WG1160890
Methylene Chloride	ND		5.00	1	09/02/2018 16:44	WG1160890
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2018 16:44	WG1160890
Methyl tert-butyl ether	ND		1.00	1	09/02/2018 16:44	WG1160890
Naphthalene	ND		5.00	1	09/02/2018 16:44	WG1160890
n-Propylbenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
Styrene	ND		1.00	1	09/02/2018 16:44	WG1160890
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2018 16:44	WG1160890
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2018 16:44	WG1160890
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2018 16:44	WG1160890
Tetrachloroethene	ND		1.00	1	09/02/2018 16:44	WG1160890
Toluene	ND		1.00	1	09/02/2018 16:44	WG1160890
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2018 16:44	WG1160890
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2018 16:44	WG1160890

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





Collected date/time: 08/29/18 00:00

L1022656

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	09/02/2018 16:44	<a href="#">WG1160890</a>
1,1,2-Trichloroethane	ND		1.00	1	09/02/2018 16:44	<a href="#">WG1160890</a>
Trichloroethene	ND		1.00	1	09/02/2018 16:44	<a href="#">WG1160890</a>
Trichlorofluoromethane	ND		5.00	1	09/02/2018 16:44	<a href="#">WG1160890</a>
1,2,3-Trichloropropane	ND		2.50	1	09/02/2018 16:44	<a href="#">WG1160890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2018 16:44	<a href="#">WG1160890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2018 16:44	<a href="#">WG1160890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2018 16:44	<a href="#">WG1160890</a>
Vinyl chloride	ND		1.00	1	09/02/2018 16:44	<a href="#">WG1160890</a>
o-Xylene	ND		1.00	1	09/02/2018 16:44	<a href="#">WG1160890</a>
m&p-Xylene	ND		2.00	1	09/02/2018 16:44	<a href="#">WG1160890</a>
(S) Toluene-d8	98.4		80.0-120		09/02/2018 16:44	<a href="#">WG1160890</a>
(S) Dibromofluoromethane	99.8		75.0-120		09/02/2018 16:44	<a href="#">WG1160890</a>
(S) 4-Bromofluorobenzene	97.1		77.0-126		09/02/2018 16:44	<a href="#">WG1160890</a>

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



Method Blank (MB)

(MB) R3339785-1 09/06/18 12:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022656-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1022656-03 09/06/18 12:19 • (DUP) R3339785-4 09/06/18 12:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1022964-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022964-01 09/06/18 12:55 • (DUP) R3339785-7 09/06/18 12:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

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

(LCS) R3339785-2 09/06/18 12:09 • (LCSD) R3339785-3 09/06/18 12:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7500	7470	100	99.5	90.0-110			0.481	10

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/06/18 12:22 • (MS) R3339785-5 09/06/18 12:28 • (MSD) R3339785-6 09/06/18 12:30

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	4770	4800	95.3	95.9	1	90.0-110			0.669	10

L1022966-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1022966-01 09/06/18 12:59 • (MS) R3339785-8 09/06/18 13:00

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	547	5320	95.5	1	90.0-110	



Method Blank (MB)

(MB) R3340576-1 09/10/18 10:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022596-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022596-01 09/10/18 10:51 • (DUP) R3340576-4 09/10/18 10:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1200	1180	1	1.60		20

L1022959-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1022959-02 09/10/18 11:32 • (DUP) R3340576-7 09/10/18 11:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	270	268	1	0.743		20

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

(LCS) R3340576-2 09/10/18 10:45 • (LCSD) R3340576-3 09/10/18 10:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	4000	4090	3990	102	99.7	90.0-110			2.55	20

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/10/18 11:08 • (MS) R3340576-5 09/10/18 11:09 • (MSD) R3340576-6 09/10/18 11:11

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	447	1380	1320	37.3	35.0	1	90.0-110	<u>J6</u>	<u>J6</u>	4.37	20

L1022959-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1022959-03 09/10/18 11:35 • (MS) R3340576-8 09/10/18 11:37

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	144	964	32.8	1	90.0-110	<u>J6</u>



Method Blank (MB)

(MB) R3338670-1 09/02/18 16:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022029-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1022029-02 09/02/18 16:20 • (DUP) R3338670-4 09/02/18 16:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1022700-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1022700-02 09/02/18 16:25 • (DUP) R3338670-7 09/02/18 16:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

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

(LCS) R3338670-2 09/02/18 16:15 • (LCSD) R3338670-3 09/02/18 16:15

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	513	513	103	103	85.0-115			0.000	20

L1022029-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022029-05 09/02/18 16:21 • (MS) R3338670-5 09/02/18 16:22 • (MSD) R3338670-6 09/02/18 16:22

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	410	409	41.0	40.9	1	80.0-120	<u>J6</u>	<u>J6</u>	0.244	20



Method Blank (MB)

(MB) R3338672-1 09/02/18 16:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022689-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1022689-02 09/02/18 16:47 • (DUP) R3338672-5 09/02/18 16:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

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

(LCS) R3338672-2 09/02/18 16:42 • (LCSD) R3338672-3 09/02/18 16:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	514	514	103	103	85.0-115			0.000	20

L1022707-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022707-03 09/02/18 16:48 • (MS) R3338672-6 09/02/18 16:48 • (MSD) R3338672-7 09/02/18 16:48

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	637	636	63.7	63.6	1	80.0-120	J6	J6	0.157	20



Method Blank (MB)

(MB) R3340015-1 09/07/18 00:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022567-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022567-01 09/07/18 04:07 • (DUP) R3340015-4 09/07/18 04:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	22000	22000	1	0.00591		15

L1022664-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022664-01 09/07/18 07:50 • (DUP) R3340015-7 09/07/18 08:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	7070	7070	1	0.0255		15

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

(LCS) R3340015-2 09/07/18 00:35 • (LCSD) R3340015-3 09/07/18 00:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	38700	38700	96.7	96.8	80.0-120			0.0750	15

L1022567-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022567-01 09/07/18 04:07 • (MS) R3340015-5 09/07/18 04:35 • (MSD) R3340015-6 09/07/18 04:49

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	22000	68100	68100	92.2	92.2	1	80.0-120			0.0260	15

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/07/18 07:50 • (MS) R3340015-8 09/07/18 08:18 • (MSD) R3340015-9 09/07/18 08:32

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	7070	54800	54700	95.5	95.2	1	80.0-120			0.274	15



Method Blank (MB)

(MB) R3340043-1 09/07/18 10:37

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	0.0511	↓	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) R3340043-2 09/07/18 10:46 • (LCSD) R3340043-3 09/07/18 10:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	2.87	2.63	95.5	87.6	80.0-120			8.70	20

L1022656-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022656-01 09/07/18 10:51 • (MS) R3340043-4 09/07/18 10:54 • (MSD) R3340043-5 09/07/18 10:56

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	2.84	2.63	94.6	87.6	1	75.0-125			7.68	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3339876-1 09/06/18 15:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3339876-2 09/06/18 15:04 • (LCSD) R3339876-3 09/06/18 15:07

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 %
Mercury,Dissolved	3.00	2.97	3.07	99.0	102	80.0-120			3.38	20

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/06/18 15:09 • (MS) R3339876-4 09/06/18 15:11 • (MSD) R3339876-5 09/06/18 15:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	3.00	ND	3.18	2.19	106	73.0	1	75.0-125		<u>J3 J6</u>	37.0	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Method Blank (MB)

(MB) R3339287-1 09/05/18 13:15

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
Iron,Dissolved	U		15.0	100
Lead,Dissolved	U		0.240	2.00
Manganese,Dissolved	U		0.250	5.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3339287-2 09/05/18 13:19 • (LCSD) R3339287-3 09/05/18 13:24

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	49.8	48.9	99.7	97.9	80.0-120			1.79	20
Barium,Dissolved	50.0	47.9	47.4	95.9	94.9	80.0-120			1.02	20
Cadmium,Dissolved	50.0	47.6	48.3	95.3	96.7	80.0-120			1.48	20
Chromium,Dissolved	50.0	50.0	50.3	100	101	80.0-120			0.544	20
Iron,Dissolved	5000	5010	4930	100	98.5	80.0-120			1.66	20
Lead,Dissolved	50.0	47.8	47.0	95.7	94.0	80.0-120			1.81	20
Manganese,Dissolved	50.0	48.7	48.0	97.5	96.0	80.0-120			1.55	20
Selenium,Dissolved	50.0	48.3	48.5	96.6	96.9	80.0-120			0.306	20
Silver,Dissolved	50.0	51.0	50.2	102	100	80.0-120			1.56	20

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/05/18 13:29 • (MS) R3339287-5 09/05/18 13:38 • (MSD) R3339287-6 09/05/18 13:42

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	4.96	51.7	51.4	93.4	92.9	1	75.0-125			0.502	20
Barium,Dissolved	50.0	26.5	73.8	78.8	94.7	105	1	75.0-125			6.46	20
Cadmium,Dissolved	50.0	ND	48.1	50.1	96.3	100	1	75.0-125			3.95	20
Chromium,Dissolved	50.0	ND	48.2	48.5	96.4	97.1	1	75.0-125			0.664	20
Iron,Dissolved	5000	ND	4790	4840	95.4	96.3	1	75.0-125			0.910	20
Lead,Dissolved	50.0	ND	47.1	48.7	93.4	96.6	1	75.0-125			3.33	20
Manganese,Dissolved	50.0	334	378	371	88.9	74.3	1	75.0-125		V	1.94	20
Selenium,Dissolved	50.0	ND	49.6	51.2	97.2	100	1	75.0-125			3.15	20
Silver,Dissolved	50.0	ND	50.4	51.6	101	103	1	75.0-125			2.20	20



Method Blank (MB)

(MB) R3340424-1 09/09/18 15:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3340424-2 09/09/18 15:43 • (LCSD) R3340424-3 09/09/18 15:48

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	50.0	49.1	100	98.1	80.0-120			1.87	20
Barium	50.0	49.9	48.6	99.8	97.2	80.0-120			2.69	20
Cadmium	50.0	48.8	48.5	97.5	97.0	80.0-120			0.534	20
Chromium	50.0	49.6	49.7	99.2	99.3	80.0-120			0.0978	20
Lead	50.0	49.0	49.0	98.0	97.9	80.0-120			0.0654	20
Selenium	50.0	51.5	51.6	103	103	80.0-120			0.229	20
Silver	50.0	49.0	48.6	98.0	97.3	80.0-120			0.698	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022888-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022888-06 09/09/18 15:54 • (MS) R3340424-5 09/09/18 16:04 • (MSD) R3340424-6 09/09/18 16:09

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	0.886	49.7	49.5	97.7	97.2	1	75.0-125			0.542	20
Barium	50.0	5.28	56.0	53.6	101	96.7	1	75.0-125			4.27	20
Cadmium	50.0	U	48.5	48.5	97.0	97.0	1	75.0-125			0.0144	20
Chromium	50.0	1.92	51.1	49.7	98.3	95.5	1	75.0-125			2.85	20
Lead	50.0	0.274	49.7	48.9	98.9	97.3	1	75.0-125			1.64	20
Selenium	50.0	U	53.0	50.8	106	102	1	75.0-125			4.22	20
Silver	50.0	U	49.5	48.3	99.1	96.5	1	75.0-125			2.64	20



Method Blank (MB)

(MB) R3339705-1 09/06/18 14:06

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022664-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022664-01 09/06/18 14:56 • (DUP) R3339705-2 09/06/18 15:00

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

L1022890-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022890-01 09/06/18 15:25 • (DUP) R3339705-3 09/06/18 15:35

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) R3339705-4 09/06/18 15:41 • (LCSD) R3339705-5 09/06/18 15:44

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	71.9	71.8	106	106	85.0-115			0.0605	20
Ethane	129	117	122	90.9	94.4	85.0-115			3.79	20
Ethene	127	116	120	91.6	94.6	85.0-115			3.17	20



Method Blank (MB)

(MB) R3340580-3 09/02/18 16:25

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3340580-3 09/02/18 16:25

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	98.9			75.0-120
(S) 4-Bromofluorobenzene	97.6			77.0-126

1  
Cp

2  
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

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

(LCS) R3340580-1 09/02/18 14:47 • (LCSD) R3340580-2 09/02/18 15:07

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 %
Acetone	125	132	129	105	103	19.0-160			2.17	27
Acrolein	125	130	126	104	101	10.0-160			3.05	26
Acrylonitrile	125	129	126	103	100	55.0-149			2.45	20



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

(LCS) R3340580-1 09/02/18 14:47 • (LCSD) R3340580-2 09/02/18 15:07

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 %
Benzene	25.0	26.6	25.0	106	99.9	70.0-123			6.18	20
Bromobenzene	25.0	26.4	25.3	106	101	73.0-121			4.32	20
Bromodichloromethane	25.0	26.1	25.1	104	100	75.0-120			3.85	20
Bromoform	25.0	26.2	25.9	105	104	68.0-132			1.13	20
Bromomethane	25.0	15.6	19.0	62.3	76.0	10.0-160			19.8	25
n-Butylbenzene	25.0	27.5	27.6	110	110	73.0-125			0.504	20
sec-Butylbenzene	25.0	27.0	26.5	108	106	75.0-125			1.81	20
tert-Butylbenzene	25.0	26.6	26.0	107	104	76.0-124			2.40	20
Carbon tetrachloride	25.0	25.9	25.1	103	100	68.0-126			2.93	20
Chlorobenzene	25.0	28.2	26.5	113	106	80.0-121			6.24	20
Chlorodibromomethane	25.0	28.4	26.9	114	108	77.0-125			5.31	20
Chloroethane	25.0	33.8	31.5	135	126	47.0-150			6.85	20
Chloroform	25.0	27.3	25.6	109	102	73.0-120			6.31	20
Chloromethane	25.0	27.1	25.3	108	101	41.0-142			6.94	20
2-Chlorotoluene	25.0	26.5	26.0	106	104	76.0-123			2.12	20
4-Chlorotoluene	25.0	27.0	26.1	108	104	75.0-122			3.50	20
1,2-Dibromo-3-Chloropropane	25.0	24.9	25.2	99.7	101	58.0-134			0.991	20
1,2-Dibromoethane	25.0	28.6	27.3	114	109	80.0-122			4.80	20
Dibromomethane	25.0	27.9	27.7	112	111	80.0-120			0.583	20
1,2-Dichlorobenzene	25.0	27.1	27.1	108	108	79.0-121			0.169	20
1,3-Dichlorobenzene	25.0	27.6	26.5	111	106	79.0-120			4.11	20
1,4-Dichlorobenzene	25.0	25.3	25.0	101	100	79.0-120			1.11	20
Dichlorodifluoromethane	25.0	28.5	27.9	114	111	51.0-149			2.25	20
1,1-Dichloroethane	25.0	26.5	24.7	106	99.0	70.0-126			6.83	20
1,2-Dichloroethane	25.0	27.4	25.9	109	104	70.0-128			5.52	20
1,1-Dichloroethene	25.0	27.2	26.8	109	107	71.0-124			1.43	20
cis-1,2-Dichloroethene	25.0	27.0	26.0	108	104	73.0-120			4.06	20
trans-1,2-Dichloroethene	25.0	26.4	24.9	105	99.5	73.0-120			5.74	20
1,2-Dichloropropane	25.0	27.5	26.4	110	106	77.0-125			4.21	20
1,1-Dichloropropene	25.0	27.2	25.9	109	104	74.0-126			4.87	20
1,3-Dichloropropane	25.0	26.5	25.7	106	103	80.0-120			2.71	20
cis-1,3-Dichloropropene	25.0	27.9	26.6	112	106	80.0-123			4.96	20
trans-1,3-Dichloropropene	25.0	26.4	25.2	105	101	78.0-124			4.60	20
2,2-Dichloropropane	25.0	25.6	24.8	102	99.1	58.0-130			3.24	20
Di-isopropyl ether	25.0	26.0	25.0	104	100	58.0-138			3.81	20
Ethylbenzene	25.0	28.1	26.5	112	106	79.0-123			5.73	20
Hexachloro-1,3-butadiene	25.0	26.1	26.9	104	107	54.0-138			2.97	20
Isopropylbenzene	25.0	27.3	26.4	109	106	76.0-127			3.33	20
p-Isopropyltoluene	25.0	27.2	26.4	109	106	76.0-125			2.82	20
2-Butanone (MEK)	125	136	134	108	107	44.0-160			1.44	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) R3340580-1 09/02/18 14:47 • (LCSD) R3340580-2 09/02/18 15:07

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 %
Methylene Chloride	25.0	25.7	24.1	103	96.3	67.0-120			6.35	20
4-Methyl-2-pentanone (MIBK)	125	130	126	104	101	68.0-142			3.07	20
Methyl tert-butyl ether	25.0	26.5	24.7	106	98.8	68.0-125			7.16	20
Naphthalene	25.0	24.6	24.8	98.5	99.4	54.0-135			0.898	20
n-Propylbenzene	25.0	27.2	26.4	109	105	77.0-124			3.00	20
Styrene	25.0	28.7	27.9	115	112	73.0-130			2.70	20
1,1,1,2-Tetrachloroethane	25.0	27.5	25.4	110	102	75.0-125			8.07	20
1,1,2,2-Tetrachloroethane	25.0	24.4	23.5	97.5	94.0	65.0-130			3.68	20
Tetrachloroethene	25.0	30.0	27.5	120	110	72.0-132			8.49	20
Toluene	25.0	26.4	25.5	106	102	79.0-120			3.55	20
1,1,2-Trichlorotrifluoroethane	25.0	28.1	28.1	113	112	69.0-132			0.166	20
1,2,3-Trichlorobenzene	25.0	26.8	26.4	107	106	50.0-138			1.39	20
1,2,4-Trichlorobenzene	25.0	27.7	27.7	111	111	57.0-137			0.0986	20
1,1,1-Trichloroethane	25.0	27.7	26.2	111	105	73.0-124			5.42	20
1,1,2-Trichloroethane	25.0	28.7	26.5	115	106	80.0-120			8.08	20
Trichloroethene	25.0	28.6	26.9	114	108	78.0-124			6.01	20
Trichlorofluoromethane	25.0	31.4	30.3	126	121	59.0-147			3.81	20
1,2,3-Trichloropropane	25.0	24.9	25.8	99.7	103	73.0-130			3.64	20
1,2,3-Trimethylbenzene	25.0	26.6	25.5	106	102	77.0-120			4.44	20
1,2,4-Trimethylbenzene	25.0	26.8	26.2	107	105	76.0-121			2.33	20
1,3,5-Trimethylbenzene	25.0	25.3	24.4	101	97.6	76.0-122			3.61	20
Vinyl chloride	25.0	29.5	27.4	118	110	67.0-131			7.52	20
o-Xylene	25.0	28.6	27.0	114	108	80.0-122			5.65	20
m&p-Xylenes	50.0	55.2	51.9	110	104	80.0-122			6.14	20
(S) Toluene-d8				100	99.0	80.0-120				
(S) Dibromofluoromethane				96.9	96.1	75.0-120				
(S) 4-Bromofluorobenzene				96.9	100	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) R3340288-1 09/07/18 14:41

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>	73.0			52.0-156

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

(LCS) R3340288-2 09/07/18 15:01 • (LCSD) R3340288-3 09/07/18 15:58

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	871	871	116	116	50.0-150			0.000	20
Residual Range Organics (RRO)	750	808	820	108	109	50.0-150			1.47	20
<i>(S) o-Terphenyl</i>				99.5	98.5	52.0-156				

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Method Blank (MB)

(MB) R3339494-1 09/05/18 22:49

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>	93.0			52.0-156

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

(LCS) R3339494-2 09/05/18 23:09 • (LCSD) R3339494-3 09/05/18 23:29

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	829	843	111	112	50.0-150			1.67	20
Residual Range Organics (RRO)	750	774	802	103	107	50.0-150			3.55	20
<i>(S) o-Terphenyl</i>				108	108	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) R3339535-3 09/05/18 09:48

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	0.0275	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	92.0			31.0-160
(S) 2-Fluorobiphenyl	82.0			48.0-148
(S) p-Terphenyl-d14	87.5			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3339535-1 09/05/18 09:02 • (LCSD) R3339535-2 09/05/18 09:25

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	1.88	1.78	94.0	89.0	67.0-150			5.46	20
Acenaphthene	2.00	1.77	1.68	88.5	84.0	65.0-138			5.22	20
Acenaphthylene	2.00	1.82	1.73	91.0	86.5	66.0-140			5.07	20
Benzo(a)anthracene	2.00	1.67	1.63	83.5	81.5	61.0-140			2.42	20
Benzo(a)pyrene	2.00	1.73	1.68	86.5	84.0	60.0-143			2.93	20
Benzo(b)fluoranthene	2.00	1.66	1.60	83.0	80.0	58.0-141			3.68	20
Benzo(g,h,i)perylene	2.00	1.84	1.80	92.0	90.0	52.0-153			2.20	20
Benzo(k)fluoranthene	2.00	1.81	1.76	90.5	88.0	58.0-148			2.80	20
Chrysene	2.00	1.73	1.68	86.5	84.0	64.0-144			2.93	20
Dibenz(a,h)anthracene	2.00	1.82	1.78	91.0	89.0	52.0-155			2.22	20
Fluoranthene	2.00	1.76	1.71	88.0	85.5	69.0-153			2.88	20



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

(LCS) R3339535-1 09/05/18 09:02 • (LCSD) R3339535-2 09/05/18 09:25

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	1.72	1.64	86.0	82.0	64.0-136			4.76	20
Indeno(1,2,3-cd)pyrene	2.00	1.84	1.80	92.0	90.0	54.0-153			2.20	20
Naphthalene	2.00	1.74	1.64	87.0	82.0	61.0-137			5.92	20
Phenanthrene	2.00	1.75	1.69	87.5	84.5	62.0-137			3.49	20
Pyrene	2.00	1.72	1.70	86.0	85.0	60.0-142			1.17	20
1-Methylnaphthalene	2.00	1.78	1.69	89.0	84.5	66.0-142			5.19	20
2-Methylnaphthalene	2.00	1.67	1.59	83.5	79.5	62.0-136			4.91	20
2-Chloronaphthalene	2.00	1.74	1.63	87.0	81.5	64.0-140			6.53	20
<i>(S) Nitrobenzene-d5</i>				94.0	88.0	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				82.0	78.5	48.0-148				
<i>(S) p-Terphenyl-d14</i>				86.5	84.0	37.0-146				

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3339563-1 09/06/18 07:38

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	0.00478	↓	0.00212	0.0500
Benzo(g,h,i)perylene	0.00363	↓	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	0.0229	↓	0.0198	0.250
Phenanthrene	0.00968	↓	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	87.0			31.0-160
(S) 2-Fluorobiphenyl	99.5			48.0-148
(S) p-Terphenyl-d14	106			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) R3339563-2 09/06/18 08:00 • (LCSD) R3339563-3 09/06/18 08:22

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	2.12	2.06	106	103	67.0-150			2.87	20
Acenaphthene	2.00	1.93	1.89	96.5	94.5	65.0-138			2.09	20
Acenaphthylene	2.00	1.97	1.93	98.5	96.5	66.0-140			2.05	20
Benzo(a)anthracene	2.00	1.88	1.86	94.0	93.0	61.0-140			1.07	20
Benzo(a)pyrene	2.00	1.87	1.80	93.5	90.0	60.0-143			3.81	20
Benzo(b)fluoranthene	2.00	1.77	1.76	88.5	88.0	58.0-141			0.567	20
Benzo(g,h,i)perylene	2.00	1.62	1.58	81.0	79.0	52.0-153			2.50	20
Benzo(k)fluoranthene	2.00	1.96	1.83	98.0	91.5	58.0-148			6.86	20
Chrysene	2.00	1.97	1.95	98.5	97.5	64.0-144			1.02	20
Dibenz(a,h)anthracene	2.00	1.55	1.51	77.5	75.5	52.0-155			2.61	20
Fluoranthene	2.00	2.08	2.02	104	101	69.0-153			2.93	20



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

(LCS) R3339563-2 09/06/18 08:00 • (LCSD) R3339563-3 09/06/18 08:22

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	1.91	1.88	95.5	94.0	64.0-136			1.58	20
Indeno(1,2,3-cd)pyrene	2.00	1.60	1.55	80.0	77.5	54.0-153			3.17	20
Naphthalene	2.00	1.94	1.89	97.0	94.5	61.0-137			2.61	20
Phenanthrene	2.00	1.83	1.81	91.5	90.5	62.0-137			1.10	20
Pyrene	2.00	2.04	2.00	102	100	60.0-142			1.98	20
1-Methylnaphthalene	2.00	2.14	2.08	107	104	66.0-142			2.84	20
2-Methylnaphthalene	2.00	2.00	1.99	100	99.5	62.0-136			0.501	20
2-Chloronaphthalene	2.00	2.01	1.97	100	98.5	64.0-140			2.01	20
<i>(S) Nitrobenzene-d5</i>				86.5	85.0	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				99.5	99.0	48.0-148				
<i>(S) p-Terphenyl-d14</i>				101	101	37.0-146				

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/06/18 12:25 • (MS) R3339563-4 09/06/18 12:47 • (MSD) R3339563-5 09/06/18 13:09

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	2.34	2.24	117	112	1	56.0-156			4.37	20
Acenaphthene	2.00	ND	1.96	1.90	98.0	95.0	1	44.0-153			3.11	20
Acenaphthylene	2.00	ND	2.04	1.96	102	98.0	1	53.0-150			4.00	20
Benzo(a)anthracene	2.00	ND	1.97	1.87	98.5	93.5	1	47.0-151			5.21	20
Benzo(a)pyrene	2.00	ND	1.85	1.78	92.5	89.0	1	45.0-146			3.86	20
Benzo(b)fluoranthene	2.00	ND	1.90	1.84	94.8	91.8	1	43.0-142			3.21	20
Benzo(g,h,i)perylene	2.00	ND	1.61	1.57	80.5	78.5	1	40.0-147			2.52	20
Benzo(k)fluoranthene	2.00	ND	1.74	1.72	87.0	86.0	1	43.0-148			1.16	21
Chrysene	2.00	ND	2.03	1.93	102	96.5	1	50.0-148			5.05	20
Dibenz(a,h)anthracene	2.00	ND	1.52	1.48	75.1	73.1	1	37.0-151			2.67	20
Fluoranthene	2.00	ND	2.24	2.18	112	109	1	56.0-157			2.71	20
Fluorene	2.00	ND	1.90	1.82	95.0	91.0	1	48.0-148			4.30	20
Indeno(1,2,3-cd)pyrene	2.00	ND	1.59	1.56	77.8	76.3	1	41.0-148			1.90	20
Naphthalene	2.00	ND	1.96	1.91	98.0	95.5	1	10.0-160			2.58	20
Phenanthrene	2.00	ND	1.81	1.74	90.0	86.5	1	47.0-147			3.94	20
Pyrene	2.00	ND	2.12	2.07	106	103	1	51.0-148			2.39	20
1-Methylnaphthalene	2.00	ND	2.16	2.08	108	104	1	21.0-160			3.77	20
2-Methylnaphthalene	2.00	ND	2.04	1.99	102	99.5	1	31.0-160			2.48	20
2-Chloronaphthalene	2.00	ND	2.06	1.98	103	99.0	1	52.0-148			3.96	20
<i>(S) Nitrobenzene-d5</i>					87.5	86.5		31.0-160				
<i>(S) 2-Fluorobiphenyl</i>					103	99.0		48.0-148				
<i>(S) p-Terphenyl-d14</i>					105	99.0		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.
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 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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	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

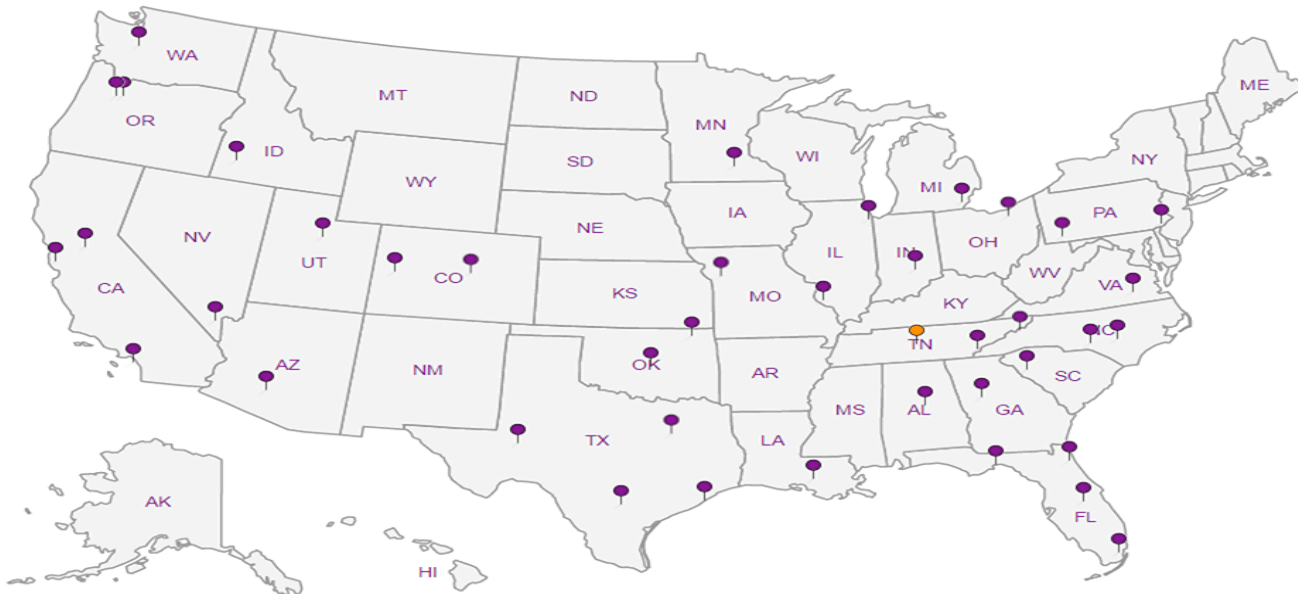
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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   



12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5855  
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):  
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 #

Date Results Needed

No.  
of  
Cntrs

Immediately  
Packed on Ice N    Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DisM6020RCRAB+ Fe,Mn 250mlHDPE-HNO3	Dissolved Pb 250mlHDPE-NoPres	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVI- No SGT 40mlAmb-HCl-BT	NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Sulfide 125mlAmb-S-NaOH+ZnAc	Remarks	Sample # (lab only)
WMW-30-20180829	grab	GW	15'	8-29-18	16:40	16	X	X	X	X	X	X	X	X	X	X		-01
WMW-26-20180829	↓	GW	↓	8-29-18	17:30	16	X	X	X	X	X	X	X	X	X	X		-02
WMW-24-20180830	↓	GW	↓	8-30-18	9:25	14	X	X	X	X	X	X	X	X	X	X		-03
Trip Blank		GW				1												-04
		GW																
		GW																
		GW																
		GW																
		GW																

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - Waste Water  
DW - Drinking Water  
OT - Other

Remarks: Dissolved metals samples are field-filtered

pH    Temp     
RAD SCREEN: <0.5 mR/hr  
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 6222 5211

Relinquished by: (Signature) <u>Alice Robinson</u>	Date: <u>8-31-18</u>	Time: <u>10:30</u>	Received by: (Signature) <u>[Signature]</u>	Trip Blank Received: Yes <u>  </u> No <u>  </u> HCl / MeOH TBR	Bottles Received: <u>46</u>	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <u>3.3</u> °C <u>3.37</u>		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <u>[Signature]</u>	Date: <u>9/1/18</u>	Time: <u>0845</u>	Hold: Condition: NCF / <u>  </u>



# 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: 800-757-5859  
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):  
Alice Robinson

Site/Facility ID #

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 #

Date Results Needed

Immediately  
Packed on Ice N  Y

No.  
of  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl										
WMW-30-20180829	grab	GW	15'	8-21-18	16:40	16	XX			XX										-01
WMW-26-20180829	↓	GW	↓	8-29-18	17:30	16	XX			XX										-02
WMW-24-20180829	↓	GW	↓	8-30-18	9:25	14	XX			XX										-03
Trip Blank		GW				1				XX										-04
		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:

Samples returned via:  
 UPS  FedEx  Courier

Tracking # 4492 6222 5211

FAD SCREEN: <0.5 mR/hr

pH      Temp       
Flow      Other     

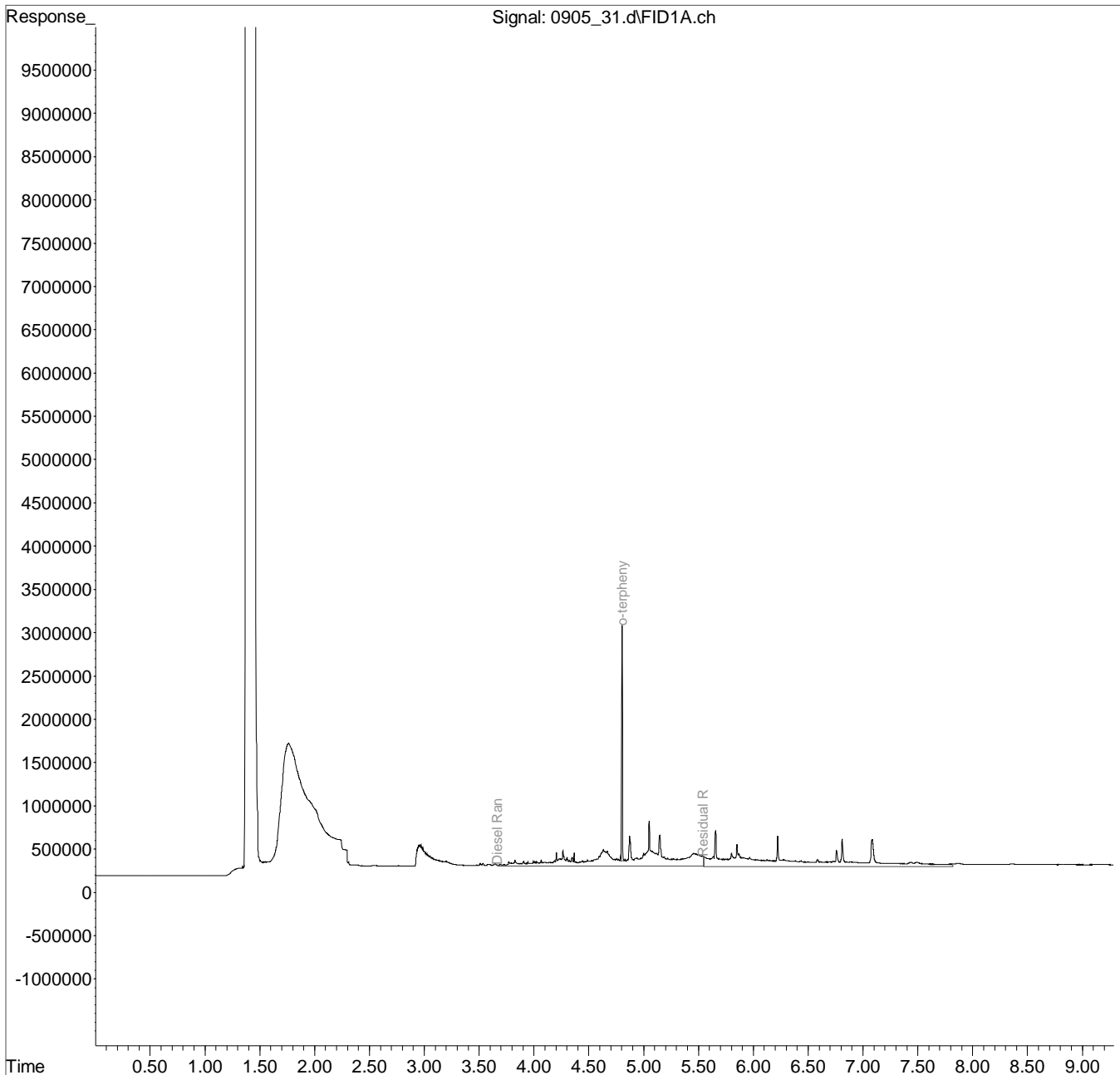
Sample Receipt Checklist	
COC Seal Present/Intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
COC Signed/Accurate:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Correct bottles used:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Sufficient volume sent:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
If Applicable	
VQA Zero Headspaces:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Preservation Correct/Checked:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Relinquished by: (Signature) <u>Alice Robinson</u>	Date: 8-31-18	Time: 10:30	Received by: (Signature) <u>[Signature]</u>	Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No HCl / MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <u>3.39</u> °C Bottles Received: <u>46</u>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <u>[Signature]</u>	Date: <u>9/1/18</u> Time: <u>0845</u> Hold: Condition: <u>NCF / 10</u>

Data Path : C:\msdchem\1\data\090518\  
 Data File : 0905 31.d  
 Signal(s) : FID1A.ch  
 Acq On : 5 Sep 2018 11:49 pm  
 Operator : 784  
 Sample : L1022656-01 1x WG1161836  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 23 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Sep 06 08:24:06 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

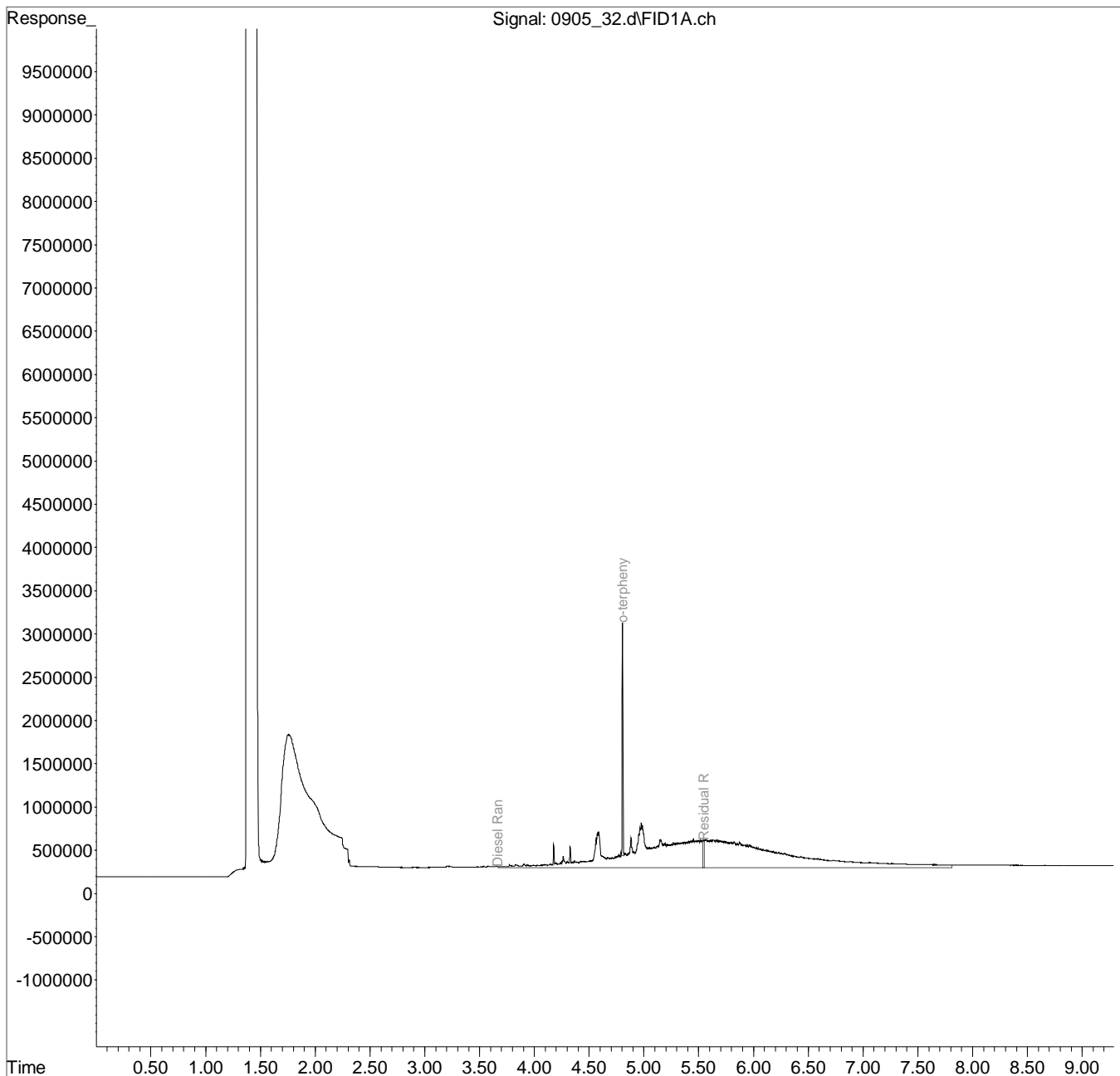
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\090518\  
 Data File : 0905 32.d  
 Signal(s) : FID1A.ch  
 Acq On : 6 Sep 2018 12:09 am  
 Operator : 784  
 Sample : L1022656-02 1x WG1161836  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 24 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Sep 06 08:24:36 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

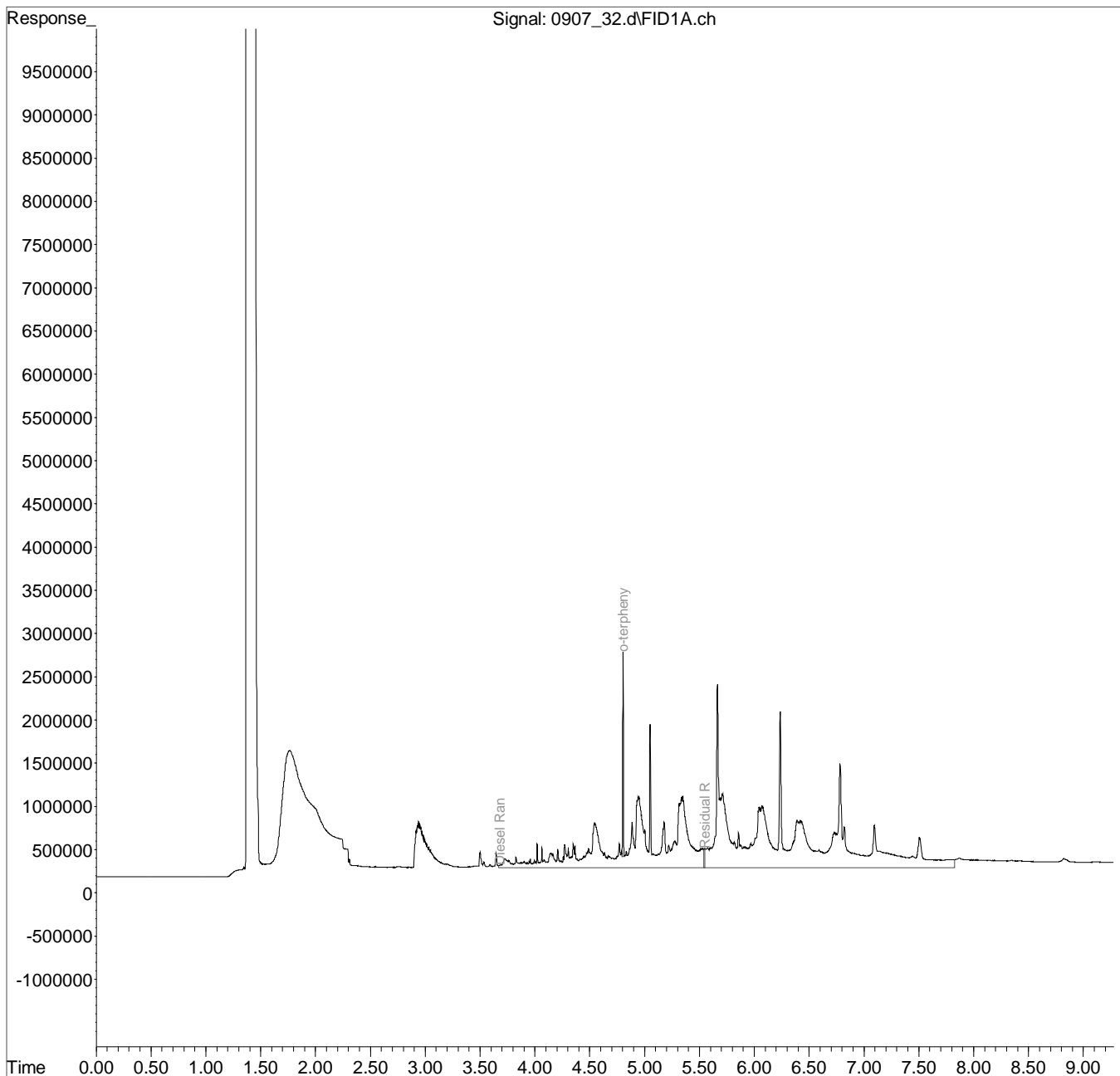
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\090718\  
 Data File : 0907 32.d  
 Signal(s) : FID1A.ch  
 Acq On : 7 Sep 2018 7:56 pm  
 Operator : 773  
 Sample : L1022656-01 1x WG1162436  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 27 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Sep 08 12:51:21 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

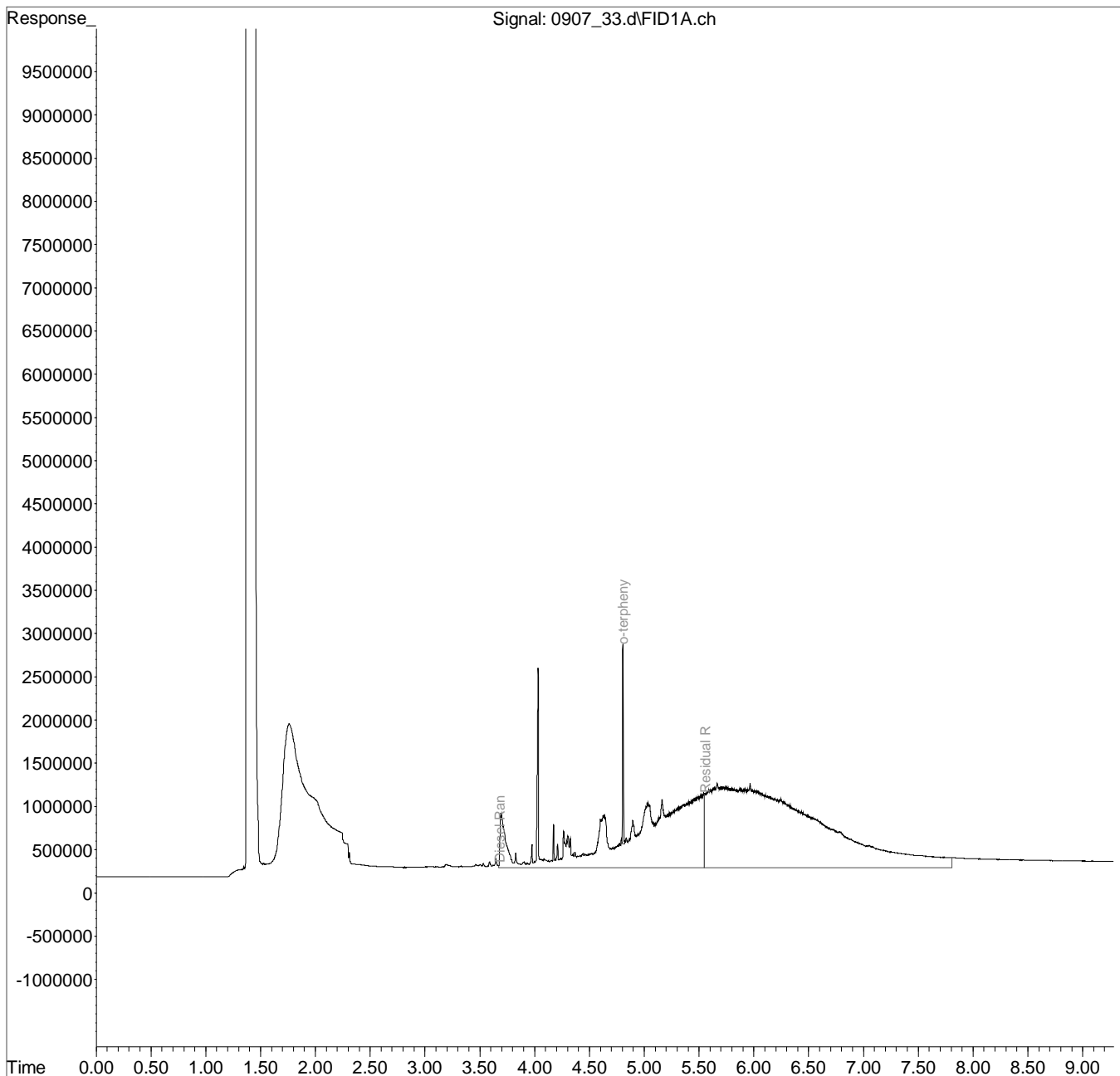
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\090718\  
 Data File : 0907 33.d  
 Signal(s) : FID1A.ch  
 Acq On : 7 Sep 2018 8:16 pm  
 Operator : 773  
 Sample : L1022656-02 1x WG1162436  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 28 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Sep 08 12:53:13 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

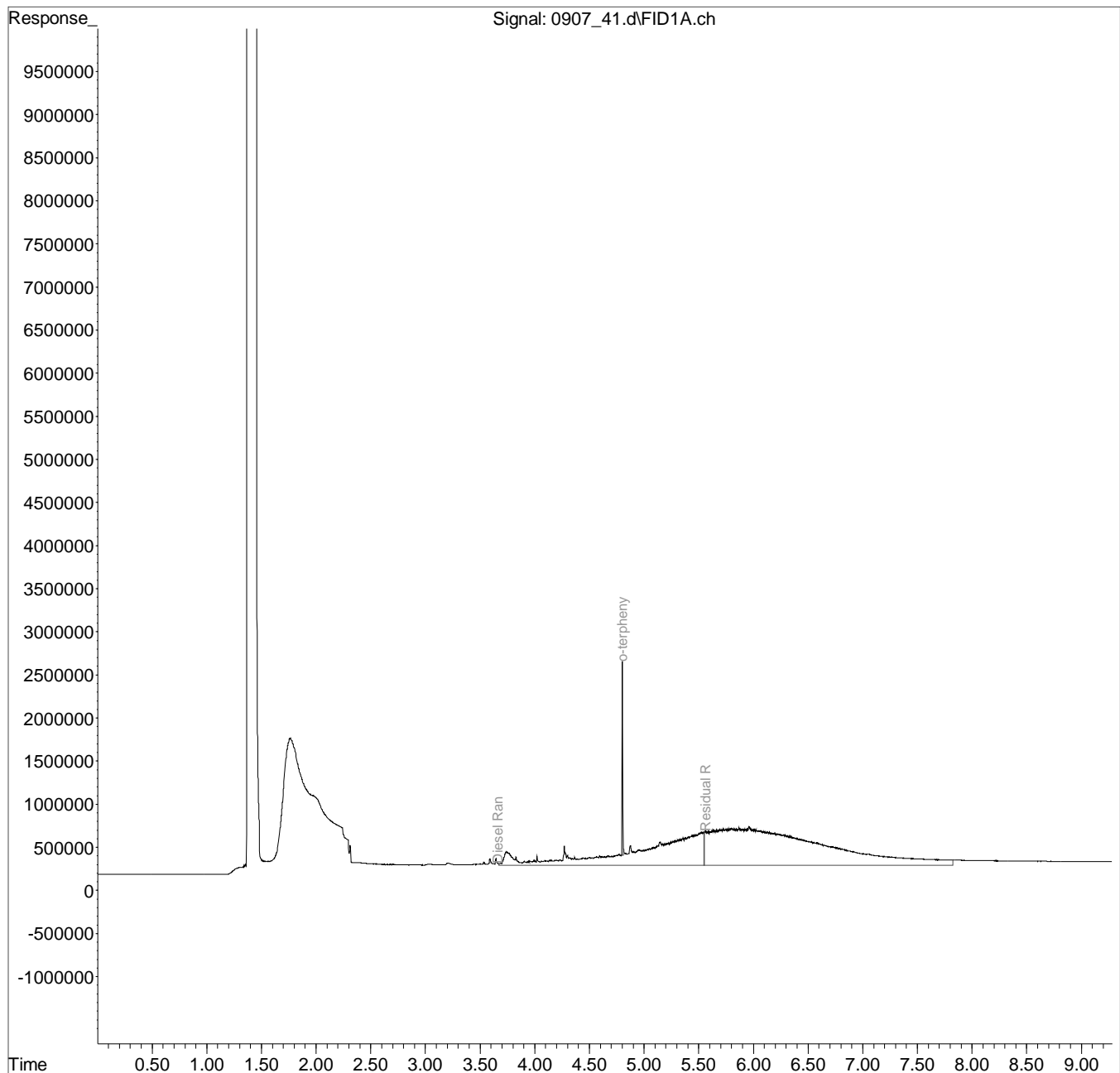
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\090718\  
Data File : 0907 41.d  
Signal(s) : FID1A.ch  
Acq On : 7 Sep 2018 10:56 pm  
Operator : 773  
Sample : L1022656-03 1x WG1162436  
Misc : M.I.s on ranges are corrections  
ALS Vial : 29 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Sep 08 13:03:01 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



September 12, 2018

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1022664  
Samples Received: 09/01/2018  
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.



<b>Cp: Cover Page</b>	<b>1</b>	<b><sup>1</sup>Cp</b>
<b>Tc: Table of Contents</b>	<b>2</b>	<b><sup>2</sup>Tc</b>
<b>Ss: Sample Summary</b>	<b>3</b>	<b><sup>3</sup>Ss</b>
<b>Cn: Case Narrative</b>	<b>4</b>	<b><sup>4</sup>Cn</b>
<b>Sr: Sample Results</b>	<b>5</b>	<b><sup>5</sup>Sr</b>
WMW-27-20180830 L1022664-01	<b>5</b>	<b><sup>4</sup>Cn</b>
TRIP BLANK L1022664-02	<b>8</b>	<b><sup>5</sup>Sr</b>
<b>Qc: Quality Control Summary</b>	<b>10</b>	<b><sup>6</sup>Qc</b>
Wet Chemistry by Method 350.1	<b>10</b>	<b><sup>7</sup>Gl</b>
Wet Chemistry by Method 353.2	<b>11</b>	<b><sup>8</sup>Al</b>
Wet Chemistry by Method 4500S2 D-2011	<b>12</b>	<b><sup>9</sup>Sc</b>
Wet Chemistry by Method 9056A	<b>13</b>	
Mercury by Method 7470A	<b>14</b>	
Metals (ICPMS) by Method 6020A	<b>16</b>	
Volatile Organic Compounds (GC) by Method RSK175	<b>19</b>	
Volatile Organic Compounds (GC/MS) by Method 8260C	<b>20</b>	
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	<b>30</b>	
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	<b>31</b>	
<b>Gl: Glossary of Terms</b>	<b>33</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>34</b>	
<b>Sc: Sample Chain of Custody</b>	<b>35</b>	



# SAMPLE SUMMARY



## WMW-27-20180830 L1022664-01 GW

Collected by: Alice Robinson  
 Collected date/time: 08/30/18 14:15  
 Received date/time: 09/01/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1161879	1	09/06/18 12:22	09/06/18 12:22	JER
Wet Chemistry by Method 353.2	WG1161888	1	09/10/18 11:08	09/10/18 11:08	JER
Wet Chemistry by Method 4500S2 D-2011	WG1160769	1	09/02/18 16:46	09/02/18 16:46	TH
Wet Chemistry by Method 9056A	WG1161391	1	09/07/18 07:50	09/07/18 07:50	ELN
Mercury by Method 7470A	WG1160813	1	09/06/18 09:43	09/07/18 09:36	ABL
Mercury by Method 7470A	WG1160816	1	09/04/18 09:56	09/06/18 15:09	EL
Metals (ICPMS) by Method 6020A	WG1160516	1	09/04/18 21:48	09/05/18 13:29	JPD
Metals (ICPMS) by Method 6020A	WG1161497	1	09/05/18 13:02	09/05/18 21:50	LD
Metals (ICPMS) by Method 6020A	WG1161806	1	09/06/18 15:42	09/06/18 19:28	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1161909	1	09/06/18 14:56	09/06/18 14:56	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1163895	1	09/10/18 14:03	09/10/18 14:03	RAS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1162436	1	09/06/18 19:09	09/07/18 23:16	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1161850	1	09/05/18 20:00	09/06/18 12:25	CJR

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

## TRIP BLANK L1022664-02 GW

Collected by: Alice Robinson  
 Collected date/time: 08/30/18 00:00  
 Received date/time: 09/01/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160890	1	09/02/18 17:04	09/02/18 17:04	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

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/06/2018 12:22	<a href="#">WG1161879</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	447	J6	100	1	09/10/2018 11:08	<a href="#">WG1161888</a>

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	09/02/2018 16:46	<a href="#">WG1160769</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	7070		5000	1	09/07/2018 07:50	<a href="#">WG1161391</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/07/2018 09:36	<a href="#">WG1160813</a>
Mercury,Dissolved	ND	J3 J6	0.200	1	09/06/2018 15:09	<a href="#">WG1160816</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.31		2.00	1	09/05/2018 21:50	<a href="#">WG1161497</a>
Arsenic,Dissolved	4.96		2.00	1	09/05/2018 13:29	<a href="#">WG1160516</a>
Barium	24.1		5.00	1	09/05/2018 21:50	<a href="#">WG1161497</a>
Barium,Dissolved	26.5	O1	5.00	1	09/05/2018 13:29	<a href="#">WG1160516</a>
Cadmium	ND		1.00	1	09/05/2018 21:50	<a href="#">WG1161497</a>
Cadmium,Dissolved	ND		1.00	1	09/05/2018 13:29	<a href="#">WG1160516</a>
Chromium	ND		2.00	1	09/05/2018 21:50	<a href="#">WG1161497</a>
Chromium,Dissolved	ND		2.00	1	09/05/2018 13:29	<a href="#">WG1160516</a>
Iron,Dissolved	ND		100	1	09/06/2018 19:28	<a href="#">WG1161806</a>
Lead	ND		2.00	1	09/05/2018 21:50	<a href="#">WG1161497</a>
Lead,Dissolved	ND		2.00	1	09/05/2018 13:29	<a href="#">WG1160516</a>
Manganese,Dissolved	307	V	5.00	1	09/06/2018 19:28	<a href="#">WG1161806</a>
Selenium	ND		2.00	1	09/05/2018 21:50	<a href="#">WG1161497</a>
Selenium,Dissolved	ND		2.00	1	09/05/2018 13:29	<a href="#">WG1160516</a>
Silver	ND		2.00	1	09/05/2018 21:50	<a href="#">WG1161497</a>
Silver,Dissolved	ND		2.00	1	09/05/2018 13:29	<a href="#">WG1160516</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/06/2018 14:56	<a href="#">WG1161909</a>
Ethane	ND		13.0	1	09/06/2018 14:56	<a href="#">WG1161909</a>
Ethene	ND		13.0	1	09/06/2018 14:56	<a href="#">WG1161909</a>



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	09/10/2018 14:03	WG1163895
Acrolein	ND		50.0	1	09/10/2018 14:03	WG1163895
Acrylonitrile	ND		10.0	1	09/10/2018 14:03	WG1163895
Benzene	ND		1.00	1	09/10/2018 14:03	WG1163895
Bromobenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
Bromodichloromethane	ND		1.00	1	09/10/2018 14:03	WG1163895
Bromoform	ND		1.00	1	09/10/2018 14:03	WG1163895
Bromomethane	ND		5.00	1	09/10/2018 14:03	WG1163895
n-Butylbenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
sec-Butylbenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
tert-Butylbenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
Carbon tetrachloride	ND		1.00	1	09/10/2018 14:03	WG1163895
Chlorobenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
Chlorodibromomethane	ND		1.00	1	09/10/2018 14:03	WG1163895
Chloroethane	ND		5.00	1	09/10/2018 14:03	WG1163895
Chloroform	ND		5.00	1	09/10/2018 14:03	WG1163895
Chloromethane	ND		2.50	1	09/10/2018 14:03	WG1163895
2-Chlorotoluene	ND		1.00	1	09/10/2018 14:03	WG1163895
4-Chlorotoluene	ND		1.00	1	09/10/2018 14:03	WG1163895
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/10/2018 14:03	WG1163895
1,2-Dibromoethane	ND		1.00	1	09/10/2018 14:03	WG1163895
Dibromomethane	ND		1.00	1	09/10/2018 14:03	WG1163895
1,2-Dichlorobenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
1,3-Dichlorobenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
1,4-Dichlorobenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
Dichlorodifluoromethane	ND		5.00	1	09/10/2018 14:03	WG1163895
1,1-Dichloroethane	ND		1.00	1	09/10/2018 14:03	WG1163895
1,2-Dichloroethane	ND		1.00	1	09/10/2018 14:03	WG1163895
1,1-Dichloroethene	ND		1.00	1	09/10/2018 14:03	WG1163895
cis-1,2-Dichloroethene	ND		1.00	1	09/10/2018 14:03	WG1163895
trans-1,2-Dichloroethene	ND		1.00	1	09/10/2018 14:03	WG1163895
1,2-Dichloropropane	ND		1.00	1	09/10/2018 14:03	WG1163895
1,1-Dichloropropene	ND		1.00	1	09/10/2018 14:03	WG1163895
1,3-Dichloropropane	ND		1.00	1	09/10/2018 14:03	WG1163895
cis-1,3-Dichloropropene	ND		1.00	1	09/10/2018 14:03	WG1163895
trans-1,3-Dichloropropene	ND		1.00	1	09/10/2018 14:03	WG1163895
2,2-Dichloropropane	ND		1.00	1	09/10/2018 14:03	WG1163895
Di-isopropyl ether	ND		1.00	1	09/10/2018 14:03	WG1163895
Ethylbenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
Hexachloro-1,3-butadiene	ND		1.00	1	09/10/2018 14:03	WG1163895
Isopropylbenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
p-Isopropyltoluene	ND		1.00	1	09/10/2018 14:03	WG1163895
2-Butanone (MEK)	ND		10.0	1	09/10/2018 14:03	WG1163895
Methylene Chloride	ND		5.00	1	09/10/2018 14:03	WG1163895
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/10/2018 14:03	WG1163895
Methyl tert-butyl ether	ND		1.00	1	09/10/2018 14:03	WG1163895
Naphthalene	ND		5.00	1	09/10/2018 14:03	WG1163895
n-Propylbenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
Styrene	ND		1.00	1	09/10/2018 14:03	WG1163895
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/10/2018 14:03	WG1163895
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/10/2018 14:03	WG1163895
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/10/2018 14:03	WG1163895
Tetrachloroethene	ND		1.00	1	09/10/2018 14:03	WG1163895
Toluene	ND		1.00	1	09/10/2018 14:03	WG1163895
1,2,3-Trichlorobenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
1,2,4-Trichlorobenzene	ND		1.00	1	09/10/2018 14:03	WG1163895

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	09/10/2018 14:03	WG1163895
1,1,2-Trichloroethane	ND		1.00	1	09/10/2018 14:03	WG1163895
Trichloroethene	ND		1.00	1	09/10/2018 14:03	WG1163895
Trichlorofluoromethane	ND		5.00	1	09/10/2018 14:03	WG1163895
1,2,3-Trichloropropane	ND		2.50	1	09/10/2018 14:03	WG1163895
1,2,4-Trimethylbenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
1,2,3-Trimethylbenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
1,3,5-Trimethylbenzene	ND		1.00	1	09/10/2018 14:03	WG1163895
Vinyl chloride	ND		1.00	1	09/10/2018 14:03	WG1163895
o-Xylene	ND		1.00	1	09/10/2018 14:03	WG1163895
m&p-Xylene	ND		2.00	1	09/10/2018 14:03	WG1163895
(S) Toluene-d8	109		80.0-120		09/10/2018 14:03	WG1163895
(S) Dibromofluoromethane	96.1		75.0-120		09/10/2018 14:03	WG1163895
(S) 4-Bromofluorobenzene	102		77.0-126		09/10/2018 14:03	WG1163895

- 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	09/07/2018 23:16	WG1162436
Residual Range Organics (RRO)	ND		250	1	09/07/2018 23:16	WG1162436
(S) o-Terphenyl	88.4		52.0-156		09/07/2018 23:16	WG1162436

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Acenaphthene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Acenaphthylene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Benzo(a)anthracene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Benzo(a)pyrene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Benzo(b)fluoranthene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Benzo(g,h,i)perylene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Benzo(k)fluoranthene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Chrysene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Dibenz(a,h)anthracene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Fluoranthene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Fluorene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Naphthalene	ND		0.250	1	09/06/2018 12:25	WG1161850
Phenanthrene	ND		0.0500	1	09/06/2018 12:25	WG1161850
Pyrene	ND		0.0500	1	09/06/2018 12:25	WG1161850
1-Methylnaphthalene	ND		0.250	1	09/06/2018 12:25	WG1161850
2-Methylnaphthalene	ND		0.250	1	09/06/2018 12:25	WG1161850
2-Chloronaphthalene	ND		0.250	1	09/06/2018 12:25	WG1161850
(S) Nitrobenzene-d5	84.7		31.0-160		09/06/2018 12:25	WG1161850
(S) 2-Fluorobiphenyl	98.9		48.0-148		09/06/2018 12:25	WG1161850
(S) p-Terphenyl-d14	99.5		37.0-146		09/06/2018 12:25	WG1161850



Collected date/time: 08/30/18 00:00

L1022664

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	09/02/2018 17:04	WG1160890
Acrolein	ND		50.0	1	09/02/2018 17:04	WG1160890
Acrylonitrile	ND		10.0	1	09/02/2018 17:04	WG1160890
Benzene	ND		1.00	1	09/02/2018 17:04	WG1160890
Bromobenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
Bromodichloromethane	ND		1.00	1	09/02/2018 17:04	WG1160890
Bromoform	ND		1.00	1	09/02/2018 17:04	WG1160890
Bromomethane	ND		5.00	1	09/02/2018 17:04	WG1160890
n-Butylbenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
sec-Butylbenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
tert-Butylbenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
Carbon tetrachloride	ND		1.00	1	09/02/2018 17:04	WG1160890
Chlorobenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
Chlorodibromomethane	ND		1.00	1	09/02/2018 17:04	WG1160890
Chloroethane	ND		5.00	1	09/02/2018 17:04	WG1160890
Chloroform	ND		5.00	1	09/02/2018 17:04	WG1160890
Chloromethane	ND		2.50	1	09/02/2018 17:04	WG1160890
2-Chlorotoluene	ND		1.00	1	09/02/2018 17:04	WG1160890
4-Chlorotoluene	ND		1.00	1	09/02/2018 17:04	WG1160890
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2018 17:04	WG1160890
1,2-Dibromoethane	ND		1.00	1	09/02/2018 17:04	WG1160890
Dibromomethane	ND		1.00	1	09/02/2018 17:04	WG1160890
1,2-Dichlorobenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
1,3-Dichlorobenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
1,4-Dichlorobenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 17:04	WG1160890
1,1-Dichloroethane	ND		1.00	1	09/02/2018 17:04	WG1160890
1,2-Dichloroethane	ND		1.00	1	09/02/2018 17:04	WG1160890
1,1-Dichloroethene	ND		1.00	1	09/02/2018 17:04	WG1160890
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2018 17:04	WG1160890
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2018 17:04	WG1160890
1,2-Dichloropropane	ND		1.00	1	09/02/2018 17:04	WG1160890
1,1-Dichloropropene	ND		1.00	1	09/02/2018 17:04	WG1160890
1,3-Dichloropropane	ND		1.00	1	09/02/2018 17:04	WG1160890
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2018 17:04	WG1160890
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2018 17:04	WG1160890
2,2-Dichloropropane	ND		1.00	1	09/02/2018 17:04	WG1160890
Di-isopropyl ether	ND		1.00	1	09/02/2018 17:04	WG1160890
Ethylbenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2018 17:04	WG1160890
Isopropylbenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
p-Isopropyltoluene	ND		1.00	1	09/02/2018 17:04	WG1160890
2-Butanone (MEK)	ND		10.0	1	09/02/2018 17:04	WG1160890
Methylene Chloride	ND		5.00	1	09/02/2018 17:04	WG1160890
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2018 17:04	WG1160890
Methyl tert-butyl ether	ND		1.00	1	09/02/2018 17:04	WG1160890
Naphthalene	ND		5.00	1	09/02/2018 17:04	WG1160890
n-Propylbenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
Styrene	ND		1.00	1	09/02/2018 17:04	WG1160890
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2018 17:04	WG1160890
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2018 17:04	WG1160890
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2018 17:04	WG1160890
Tetrachloroethene	ND		1.00	1	09/02/2018 17:04	WG1160890
Toluene	ND		1.00	1	09/02/2018 17:04	WG1160890
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2018 17:04	WG1160890
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2018 17:04	WG1160890

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc



Collected date/time: 08/30/18 00:00

L1022664

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	09/02/2018 17:04	<a href="#">WG1160890</a>
1,1,2-Trichloroethane	ND		1.00	1	09/02/2018 17:04	<a href="#">WG1160890</a>
Trichloroethene	ND		1.00	1	09/02/2018 17:04	<a href="#">WG1160890</a>
Trichlorofluoromethane	ND		5.00	1	09/02/2018 17:04	<a href="#">WG1160890</a>
1,2,3-Trichloropropane	ND		2.50	1	09/02/2018 17:04	<a href="#">WG1160890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2018 17:04	<a href="#">WG1160890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2018 17:04	<a href="#">WG1160890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2018 17:04	<a href="#">WG1160890</a>
Vinyl chloride	ND		1.00	1	09/02/2018 17:04	<a href="#">WG1160890</a>
o-Xylene	ND		1.00	1	09/02/2018 17:04	<a href="#">WG1160890</a>
m&p-Xylene	ND		2.00	1	09/02/2018 17:04	<a href="#">WG1160890</a>
(S) Toluene-d8	99.1		80.0-120		09/02/2018 17:04	<a href="#">WG1160890</a>
(S) Dibromofluoromethane	97.0		75.0-120		09/02/2018 17:04	<a href="#">WG1160890</a>
(S) 4-Bromofluorobenzene	97.2		77.0-126		09/02/2018 17:04	<a href="#">WG1160890</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3339785-1 09/06/18 12:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022656-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1022656-03 09/06/18 12:19 • (DUP) R3339785-4 09/06/18 12:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1022964-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022964-01 09/06/18 12:55 • (DUP) R3339785-7 09/06/18 12:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

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

(LCS) R3339785-2 09/06/18 12:09 • (LCSD) R3339785-3 09/06/18 12:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7500	7470	100	99.5	90.0-110			0.481	10

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/06/18 12:22 • (MS) R3339785-5 09/06/18 12:28 • (MSD) R3339785-6 09/06/18 12:30

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	4770	4800	95.3	95.9	1	90.0-110			0.669	10

L1022966-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1022966-01 09/06/18 12:59 • (MS) R3339785-8 09/06/18 13:00

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	547	5320	95.5	1	90.0-110	





Method Blank (MB)

(MB) R3340576-1 09/10/18 10:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022596-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022596-01 09/10/18 10:51 • (DUP) R3340576-4 09/10/18 10:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1200	1180	1	1.60		20

L1022959-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1022959-02 09/10/18 11:32 • (DUP) R3340576-7 09/10/18 11:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	270	268	1	0.743		20

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

(LCS) R3340576-2 09/10/18 10:45 • (LCSD) R3340576-3 09/10/18 10:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	4000	4090	3990	102	99.7	90.0-110			2.55	20

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/10/18 11:08 • (MS) R3340576-5 09/10/18 11:09 • (MSD) R3340576-6 09/10/18 11:11

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	447	1380	1320	37.3	35.0	1	90.0-110	<u>J6</u>	<u>J6</u>	4.37	20

L1022959-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1022959-03 09/10/18 11:35 • (MS) R3340576-8 09/10/18 11:37

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	144	964	32.8	1	90.0-110	<u>J6</u>



Method Blank (MB)

(MB) R3338672-1 09/02/18 16:42

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

L1022689-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1022689-02 09/02/18 16:47 • (DUP) R3338672-5 09/02/18 16:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

6 Qc

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

(LCS) R3338672-2 09/02/18 16:42 • (LCSD) R3338672-3 09/02/18 16:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	514	514	103	103	85.0-115			0.000	20

7 Gl

8 Al

L1022707-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022707-03 09/02/18 16:48 • (MS) R3338672-6 09/02/18 16:48 • (MSD) R3338672-7 09/02/18 16:48

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	637	636	63.7	63.6	1	80.0-120	J6	J6	0.157	20

9 Sc



Method Blank (MB)

(MB) R3340015-1 09/07/18 00:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022567-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022567-01 09/07/18 04:07 • (DUP) R3340015-4 09/07/18 04:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	22000	22000	1	0.00591		15

L1022664-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022664-01 09/07/18 07:50 • (DUP) R3340015-7 09/07/18 08:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	7070	7070	1	0.0255		15

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

(LCS) R3340015-2 09/07/18 00:35 • (LCSD) R3340015-3 09/07/18 00:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	38700	38700	96.7	96.8	80.0-120			0.0750	15

L1022567-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022567-01 09/07/18 04:07 • (MS) R3340015-5 09/07/18 04:35 • (MSD) R3340015-6 09/07/18 04:49

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	22000	68100	68100	92.2	92.2	1	80.0-120			0.0260	15

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/07/18 07:50 • (MS) R3340015-8 09/07/18 08:18 • (MSD) R3340015-9 09/07/18 08:32

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	7070	54800	54700	95.5	95.2	1	80.0-120			0.274	15



Method Blank (MB)

(MB) R3339997-1 09/07/18 09:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	0.0550	↓	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) R3339997-2 09/07/18 09:31 • (LCSD) R3339997-3 09/07/18 09:33

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 %
Mercury	3.00	2.99	2.92	99.8	97.2	80.0-120			2.63	20

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/07/18 09:36 • (MS) R3339997-4 09/07/18 09:38 • (MSD) R3339997-5 09/07/18 09:45

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	2.92	2.96	97.2	98.6	1	75.0-125			1.42	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3339876-1 09/06/18 15:02

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) R3339876-2 09/06/18 15:04 • (LCSD) R3339876-3 09/06/18 15:07

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 %
Mercury,Dissolved	3.00	2.97	3.07	99.0	102	80.0-120			3.38	20

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/06/18 15:09 • (MS) R3339876-4 09/06/18 15:11 • (MSD) R3339876-5 09/06/18 15:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	3.00	ND	3.18	2.19	106	73.0	1	75.0-125		<u>J3 J6</u>	37.0	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3339287-1 09/05/18 13:15

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) R3339287-2 09/05/18 13:19 • (LCSD) R3339287-3 09/05/18 13:24

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	49.8	48.9	99.7	97.9	80.0-120			1.79	20
Barium,Dissolved	50.0	47.9	47.4	95.9	94.9	80.0-120			1.02	20
Cadmium,Dissolved	50.0	47.6	48.3	95.3	96.7	80.0-120			1.48	20
Chromium,Dissolved	50.0	50.0	50.3	100	101	80.0-120			0.544	20
Lead,Dissolved	50.0	47.8	47.0	95.7	94.0	80.0-120			1.81	20
Selenium,Dissolved	50.0	48.3	48.5	96.6	96.9	80.0-120			0.306	20
Silver,Dissolved	50.0	51.0	50.2	102	100	80.0-120			1.56	20

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/05/18 13:29 • (MS) R3339287-5 09/05/18 13:38 • (MSD) R3339287-6 09/05/18 13:42

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	4.96	51.7	51.4	93.4	92.9	1	75.0-125			0.502	20
Barium,Dissolved	50.0	26.5	73.8	78.8	94.7	105	1	75.0-125			6.46	20
Cadmium,Dissolved	50.0	ND	48.1	50.1	96.3	100	1	75.0-125			3.95	20
Chromium,Dissolved	50.0	ND	48.2	48.5	96.4	97.1	1	75.0-125			0.664	20
Lead,Dissolved	50.0	ND	47.1	48.7	93.4	96.6	1	75.0-125			3.33	20
Selenium,Dissolved	50.0	ND	49.6	51.2	97.2	100	1	75.0-125			3.15	20
Silver,Dissolved	50.0	ND	50.4	51.6	101	103	1	75.0-125			2.20	20



Method Blank (MB)

(MB) R3339434-1 09/05/18 21:37

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



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

(LCS) R3339434-2 09/05/18 21:41 • (LCSD) R3339434-3 09/05/18 21:46

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	50.0	49.3	47.6	98.6	95.2	80.0-120			3.53	20
Barium	50.0	50.1	44.0	100	87.9	80.0-120			13.0	20
Cadmium	50.0	49.3	48.2	98.6	96.5	80.0-120			2.15	20
Chromium	50.0	50.4	48.9	101	97.8	80.0-120			3.06	20
Lead	50.0	48.8	46.8	97.6	93.7	80.0-120			4.09	20
Selenium	50.0	48.6	47.8	97.2	95.6	80.0-120			1.68	20
Silver	50.0	48.9	46.9	97.8	93.8	80.0-120			4.25	20



L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/05/18 21:50 • (MS) R3339434-5 09/05/18 21:59 • (MSD) R3339434-6 09/05/18 22:03

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	%	%		%			%	%
Arsenic	50.0	4.31	52.3	52.9	96.0	97.2	1	75.0-125			1.11	20
Barium	50.0	24.1	74.1	74.0	99.9	99.7	1	75.0-125			0.139	20
Cadmium	50.0	ND	50.6	50.4	101	101	1	75.0-125			0.475	20
Chromium	50.0	ND	48.8	49.8	97.7	99.7	1	75.0-125			2.01	20
Lead	50.0	ND	48.6	49.3	97.2	98.6	1	75.0-125			1.50	20
Selenium	50.0	ND	51.5	52.8	102	104	1	75.0-125			2.53	20
Silver	50.0	ND	49.1	49.3	98.3	98.6	1	75.0-125			0.347	20



Method Blank (MB)

(MB) R3339853-1 09/06/18 19:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron,Dissolved	U		15.0	100
Manganese,Dissolved	0.403	J	0.250	5.00

1 Cp

2 Tc

3 Ss

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

(LCS) R3339853-2 09/06/18 19:19 • (LCSD) R3339853-3 09/06/18 19:23

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	4720	4730	94.4	94.5	80.0-120			0.165	20
Manganese,Dissolved	50.0	46.3	46.1	92.5	92.3	80.0-120			0.250	20

4 Cn

5 Sr

6 Qc

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/06/18 19:28 • (MS) R3339853-5 09/06/18 19:36 • (MSD) R3339853-6 09/06/18 19:41

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	ND	4640	4540	92.4	90.5	1	75.0-125			2.02	20
Manganese,Dissolved	50.0	307	347	342	79.3	69.7	1	75.0-125		V	1.39	20

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3339705-1 09/06/18 14:06

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

L1022664-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022664-01 09/06/18 14:56 • (DUP) R3339705-2 09/06/18 15:00

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

L1022890-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022890-01 09/06/18 15:25 • (DUP) R3339705-3 09/06/18 15:35

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) R3339705-4 09/06/18 15:41 • (LCSD) R3339705-5 09/06/18 15:44

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	71.9	71.8	106	106	85.0-115			0.0605	20
Ethane	129	117	122	90.9	94.4	85.0-115			3.79	20
Ethene	127	116	120	91.6	94.6	85.0-115			3.17	20



Method Blank (MB)

(MB) R3340580-3 09/02/18 16:25

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3340580-3 09/02/18 16:25

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	98.9			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) R3340580-1 09/02/18 14:47 • (LCSD) R3340580-2 09/02/18 15:07

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 %
Acetone	125	132	129	105	103	19.0-160			2.17	27
Acrolein	125	130	126	104	101	10.0-160			3.05	26
Acrylonitrile	125	129	126	103	100	55.0-149			2.45	20



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

(LCS) R3340580-1 09/02/18 14:47 • (LCSD) R3340580-2 09/02/18 15:07

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 %
Benzene	25.0	26.6	25.0	106	99.9	70.0-123			6.18	20
Bromobenzene	25.0	26.4	25.3	106	101	73.0-121			4.32	20
Bromodichloromethane	25.0	26.1	25.1	104	100	75.0-120			3.85	20
Bromoform	25.0	26.2	25.9	105	104	68.0-132			1.13	20
Bromomethane	25.0	15.6	19.0	62.3	76.0	10.0-160			19.8	25
n-Butylbenzene	25.0	27.5	27.6	110	110	73.0-125			0.504	20
sec-Butylbenzene	25.0	27.0	26.5	108	106	75.0-125			1.81	20
tert-Butylbenzene	25.0	26.6	26.0	107	104	76.0-124			2.40	20
Carbon tetrachloride	25.0	25.9	25.1	103	100	68.0-126			2.93	20
Chlorobenzene	25.0	28.2	26.5	113	106	80.0-121			6.24	20
Chlorodibromomethane	25.0	28.4	26.9	114	108	77.0-125			5.31	20
Chloroethane	25.0	33.8	31.5	135	126	47.0-150			6.85	20
Chloroform	25.0	27.3	25.6	109	102	73.0-120			6.31	20
Chloromethane	25.0	27.1	25.3	108	101	41.0-142			6.94	20
2-Chlorotoluene	25.0	26.5	26.0	106	104	76.0-123			2.12	20
4-Chlorotoluene	25.0	27.0	26.1	108	104	75.0-122			3.50	20
1,2-Dibromo-3-Chloropropane	25.0	24.9	25.2	99.7	101	58.0-134			0.991	20
1,2-Dibromoethane	25.0	28.6	27.3	114	109	80.0-122			4.80	20
Dibromomethane	25.0	27.9	27.7	112	111	80.0-120			0.583	20
1,2-Dichlorobenzene	25.0	27.1	27.1	108	108	79.0-121			0.169	20
1,3-Dichlorobenzene	25.0	27.6	26.5	111	106	79.0-120			4.11	20
1,4-Dichlorobenzene	25.0	25.3	25.0	101	100	79.0-120			1.11	20
Dichlorodifluoromethane	25.0	28.5	27.9	114	111	51.0-149			2.25	20
1,1-Dichloroethane	25.0	26.5	24.7	106	99.0	70.0-126			6.83	20
1,2-Dichloroethane	25.0	27.4	25.9	109	104	70.0-128			5.52	20
1,1-Dichloroethene	25.0	27.2	26.8	109	107	71.0-124			1.43	20
cis-1,2-Dichloroethene	25.0	27.0	26.0	108	104	73.0-120			4.06	20
trans-1,2-Dichloroethene	25.0	26.4	24.9	105	99.5	73.0-120			5.74	20
1,2-Dichloropropane	25.0	27.5	26.4	110	106	77.0-125			4.21	20
1,1-Dichloropropene	25.0	27.2	25.9	109	104	74.0-126			4.87	20
1,3-Dichloropropane	25.0	26.5	25.7	106	103	80.0-120			2.71	20
cis-1,3-Dichloropropene	25.0	27.9	26.6	112	106	80.0-123			4.96	20
trans-1,3-Dichloropropene	25.0	26.4	25.2	105	101	78.0-124			4.60	20
2,2-Dichloropropane	25.0	25.6	24.8	102	99.1	58.0-130			3.24	20
Di-isopropyl ether	25.0	26.0	25.0	104	100	58.0-138			3.81	20
Ethylbenzene	25.0	28.1	26.5	112	106	79.0-123			5.73	20
Hexachloro-1,3-butadiene	25.0	26.1	26.9	104	107	54.0-138			2.97	20
Isopropylbenzene	25.0	27.3	26.4	109	106	76.0-127			3.33	20
p-Isopropyltoluene	25.0	27.2	26.4	109	106	76.0-125			2.82	20
2-Butanone (MEK)	125	136	134	108	107	44.0-160			1.44	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) R3340580-1 09/02/18 14:47 • (LCSD) R3340580-2 09/02/18 15:07

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 %
Methylene Chloride	25.0	25.7	24.1	103	96.3	67.0-120			6.35	20
4-Methyl-2-pentanone (MIBK)	125	130	126	104	101	68.0-142			3.07	20
Methyl tert-butyl ether	25.0	26.5	24.7	106	98.8	68.0-125			7.16	20
Naphthalene	25.0	24.6	24.8	98.5	99.4	54.0-135			0.898	20
n-Propylbenzene	25.0	27.2	26.4	109	105	77.0-124			3.00	20
Styrene	25.0	28.7	27.9	115	112	73.0-130			2.70	20
1,1,1,2-Tetrachloroethane	25.0	27.5	25.4	110	102	75.0-125			8.07	20
1,1,2,2-Tetrachloroethane	25.0	24.4	23.5	97.5	94.0	65.0-130			3.68	20
Tetrachloroethene	25.0	30.0	27.5	120	110	72.0-132			8.49	20
Toluene	25.0	26.4	25.5	106	102	79.0-120			3.55	20
1,1,2-Trichlorotrifluoroethane	25.0	28.1	28.1	113	112	69.0-132			0.166	20
1,2,3-Trichlorobenzene	25.0	26.8	26.4	107	106	50.0-138			1.39	20
1,2,4-Trichlorobenzene	25.0	27.7	27.7	111	111	57.0-137			0.0986	20
1,1,1-Trichloroethane	25.0	27.7	26.2	111	105	73.0-124			5.42	20
1,1,2-Trichloroethane	25.0	28.7	26.5	115	106	80.0-120			8.08	20
Trichloroethene	25.0	28.6	26.9	114	108	78.0-124			6.01	20
Trichlorofluoromethane	25.0	31.4	30.3	126	121	59.0-147			3.81	20
1,2,3-Trichloropropane	25.0	24.9	25.8	99.7	103	73.0-130			3.64	20
1,2,3-Trimethylbenzene	25.0	26.6	25.5	106	102	77.0-120			4.44	20
1,2,4-Trimethylbenzene	25.0	26.8	26.2	107	105	76.0-121			2.33	20
1,3,5-Trimethylbenzene	25.0	25.3	24.4	101	97.6	76.0-122			3.61	20
Vinyl chloride	25.0	29.5	27.4	118	110	67.0-131			7.52	20
o-Xylene	25.0	28.6	27.0	114	108	80.0-122			5.65	20
m&p-Xylenes	50.0	55.2	51.9	110	104	80.0-122			6.14	20
(S) Toluene-d8				100	99.0	80.0-120				
(S) Dibromofluoromethane				96.9	96.1	75.0-120				
(S) 4-Bromofluorobenzene				96.9	100	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) R3340632-3 09/10/18 10:11

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	U		0.256	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3340632-3 09/10/18 10:11

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	110			80.0-120
(S) Dibromofluoromethane	96.9			75.0-120
(S) 4-Bromofluorobenzene	102			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) R3340632-1 09/10/18 08:53 • (LCSD) R3340632-2 09/10/18 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	115	115	92.1	91.6	19.0-160			0.546	27
Acrolein	125	115	120	92.0	96.0	10.0-160			4.35	26
Acrylonitrile	125	129	120	103	95.7	55.0-149			7.82	20



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

(LCS) R3340632-1 09/10/18 08:53 • (LCSD) R3340632-2 09/10/18 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	24.7	24.0	99.0	96.0	70.0-123			3.07	20
Bromobenzene	25.0	23.1	22.9	92.3	91.6	73.0-121			0.805	20
Bromodichloromethane	25.0	23.7	22.9	94.7	91.6	75.0-120			3.27	20
Bromoform	25.0	24.0	23.9	95.9	95.8	68.0-132			0.161	20
Bromomethane	25.0	25.5	26.9	102	108	10.0-160			5.44	25
n-Butylbenzene	25.0	28.4	27.8	114	111	73.0-125			2.07	20
sec-Butylbenzene	25.0	27.5	27.4	110	110	75.0-125			0.491	20
tert-Butylbenzene	25.0	27.1	27.2	108	109	76.0-124			0.388	20
Carbon tetrachloride	25.0	24.7	23.4	98.9	93.5	68.0-126			5.60	20
Chlorobenzene	25.0	27.6	26.9	111	108	80.0-121			2.68	20
Chlorodibromomethane	25.0	25.8	25.3	103	101	77.0-125			1.93	20
Chloroethane	25.0	25.8	24.3	103	97.0	47.0-150			6.02	20
Chloroform	25.0	22.3	21.7	89.1	86.8	73.0-120			2.53	20
Chloromethane	25.0	20.9	20.2	83.8	80.9	41.0-142			3.47	20
2-Chlorotoluene	25.0	26.5	26.5	106	106	76.0-123			0.189	20
4-Chlorotoluene	25.0	24.7	24.6	98.7	98.5	75.0-122			0.201	20
1,2-Dibromo-3-Chloropropane	25.0	24.3	25.2	97.4	101	58.0-134			3.46	20
1,2-Dibromoethane	25.0	25.6	26.1	102	104	80.0-122			1.90	20
Dibromomethane	25.0	24.1	24.0	96.2	96.2	80.0-120			0.0783	20
1,2-Dichlorobenzene	25.0	26.4	26.3	106	105	79.0-121			0.332	20
1,3-Dichlorobenzene	25.0	26.3	26.6	105	106	79.0-120			0.937	20
1,4-Dichlorobenzene	25.0	25.0	24.7	99.9	98.8	79.0-120			1.10	20
Dichlorodifluoromethane	25.0	22.5	21.2	90.0	84.8	51.0-149			5.90	20
1,1-Dichloroethane	25.0	24.9	23.7	99.5	94.9	70.0-126			4.75	20
1,2-Dichloroethane	25.0	22.5	21.9	89.8	87.5	70.0-128			2.56	20
1,1-Dichloroethene	25.0	25.8	24.5	103	98.1	71.0-124			4.90	20
cis-1,2-Dichloroethene	25.0	23.4	23.0	93.6	92.0	73.0-120			1.70	20
trans-1,2-Dichloroethene	25.0	24.5	23.9	98.2	95.6	73.0-120			2.68	20
1,2-Dichloropropane	25.0	24.6	23.9	98.3	95.5	77.0-125			2.94	20
1,1-Dichloropropene	25.0	25.8	25.3	103	101	74.0-126			1.99	20
1,3-Dichloropropane	25.0	26.5	26.0	106	104	80.0-120			1.63	20
cis-1,3-Dichloropropene	25.0	26.9	26.6	108	106	80.0-123			1.34	20
trans-1,3-Dichloropropene	25.0	26.9	26.8	108	107	78.0-124			0.358	20
2,2-Dichloropropane	25.0	23.9	23.3	95.8	93.1	58.0-130			2.79	20
Di-isopropyl ether	25.0	22.1	21.9	88.5	87.4	58.0-138			1.28	20
Ethylbenzene	25.0	27.3	27.0	109	108	79.0-123			1.08	20
Hexachloro-1,3-butadiene	25.0	28.8	28.1	115	113	54.0-138			2.36	20
Isopropylbenzene	25.0	27.0	26.8	108	107	76.0-127			0.552	20
p-Isopropyltoluene	25.0	27.5	27.6	110	110	76.0-125			0.201	20
2-Butanone (MEK)	125	119	119	95.4	95.3	44.0-160			0.190	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) R3340632-1 09/10/18 08:53 • (LCSD) R3340632-2 09/10/18 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	21.9	21.2	87.6	84.9	67.0-120			3.16	20
4-Methyl-2-pentanone (MIBK)	125	121	120	96.8	96.1	68.0-142			0.747	20
Methyl tert-butyl ether	25.0	22.8	22.2	91.1	88.7	68.0-125			2.62	20
Naphthalene	25.0	22.2	23.8	88.7	95.1	54.0-135			6.93	20
n-Propylbenzene	25.0	26.1	25.8	104	103	77.0-124			0.981	20
Styrene	25.0	26.2	27.4	105	109	73.0-130			4.25	20
1,1,1,2-Tetrachloroethane	25.0	26.8	26.5	107	106	75.0-125			1.46	20
1,1,2,2-Tetrachloroethane	25.0	23.5	23.6	93.9	94.2	65.0-130			0.363	20
Tetrachloroethene	25.0	28.5	28.0	114	112	72.0-132			2.12	20
Toluene	25.0	27.2	26.6	109	107	79.0-120			2.21	20
1,1,2-Trichlorotrifluoroethane	25.0	25.9	24.9	104	99.7	69.0-132			3.95	20
1,2,3-Trichlorobenzene	25.0	25.2	25.9	101	104	50.0-138			2.60	20
1,2,4-Trichlorobenzene	25.0	25.3	25.5	101	102	57.0-137			0.787	20
1,1,1-Trichloroethane	25.0	25.0	24.2	99.9	96.6	73.0-124			3.31	20
1,1,2-Trichloroethane	25.0	25.0	24.9	100	99.7	80.0-120			0.437	20
Trichloroethene	25.0	27.3	27.3	109	109	78.0-124			0.151	20
Trichlorofluoromethane	25.0	24.4	23.2	97.4	92.9	59.0-147			4.72	20
1,2,3-Trichloropropane	25.0	25.0	25.1	100	100	73.0-130			0.0163	20
1,2,3-Trimethylbenzene	25.0	24.7	24.7	98.9	98.9	77.0-120			0.0554	20
1,2,4-Trimethylbenzene	25.0	26.1	25.7	104	103	76.0-121			1.57	20
1,3,5-Trimethylbenzene	25.0	26.2	26.1	105	105	76.0-122			0.381	20
Vinyl chloride	25.0	25.4	24.5	101	98.1	67.0-131			3.30	20
o-Xylene	25.0	27.0	26.9	108	107	80.0-122			0.439	20
m&p-Xylenes	50.0	54.7	54.0	109	108	80.0-122			1.17	20
(S) Toluene-d8				109	108	80.0-120				
(S) Dibromofluoromethane				95.9	92.8	75.0-120				
(S) 4-Bromofluorobenzene				99.9	99.9	77.0-126				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/10/18 14:03 • (MS) R3340632-4 09/10/18 14:23 • (MSD) R3340632-5 09/10/18 14:42

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 %
Acetone	125	ND	95.3	94.0	76.3	75.2	1	10.0-160			1.37	35
Acrolein	125	ND	117	116	93.9	93.1	1	10.0-160			0.826	39
Acrylonitrile	125	ND	111	112	88.5	89.2	1	21.0-160			0.781	32
Benzene	25.0	ND	24.2	23.4	97.0	93.6	1	17.0-158			3.50	27
Bromobenzene	25.0	ND	22.6	22.0	90.5	88.0	1	30.0-149			2.73	28
Bromodichloromethane	25.0	ND	22.6	21.7	90.2	86.9	1	31.0-150			3.79	27



L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/10/18 14:03 • (MS) R3340632-4 09/10/18 14:23 • (MSD) R3340632-5 09/10/18 14:42

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 %
Bromoform	25.0	ND	22.5	21.3	89.9	85.3	1	29.0-150			5.24	29
Bromomethane	25.0	ND	25.2	25.8	101	103	1	10.0-160			2.34	38
n-Butylbenzene	25.0	ND	26.7	26.3	107	105	1	31.0-150			1.50	30
sec-Butylbenzene	25.0	ND	26.4	26.0	106	104	1	33.0-155			1.49	29
tert-Butylbenzene	25.0	ND	26.2	25.5	105	102	1	34.0-153			2.80	28
Carbon tetrachloride	25.0	ND	24.8	24.0	99.3	95.9	1	23.0-159			3.48	28
Chlorobenzene	25.0	ND	26.3	25.5	105	102	1	33.0-152			3.01	27
Chlorodibromomethane	25.0	ND	24.1	23.2	96.2	92.9	1	37.0-149			3.54	27
Chloroethane	25.0	ND	24.6	23.7	98.3	94.9	1	10.0-160			3.53	30
Chloroform	25.0	ND	22.5	21.6	89.8	86.3	1	29.0-154			4.00	28
Chloromethane	25.0	ND	20.2	19.4	80.8	77.4	1	10.0-160			4.26	29
2-Chlorotoluene	25.0	ND	25.9	25.4	104	102	1	32.0-153			1.99	28
4-Chlorotoluene	25.0	ND	24.2	23.6	96.9	94.5	1	32.0-150			2.47	28
1,2-Dibromo-3-Chloropropane	25.0	ND	21.9	22.3	87.6	89.3	1	22.0-151			1.84	34
1,2-Dibromoethane	25.0	ND	24.5	23.5	98.2	94.2	1	34.0-147			4.14	27
Dibromomethane	25.0	ND	23.6	22.5	94.5	90.0	1	30.0-151			4.79	27
1,2-Dichlorobenzene	25.0	ND	25.4	24.7	101	98.7	1	34.0-149			2.66	28
1,3-Dichlorobenzene	25.0	ND	25.1	25.0	100	99.9	1	36.0-146			0.314	27
1,4-Dichlorobenzene	25.0	ND	23.7	23.3	94.9	93.1	1	35.0-142			1.92	27
Dichlorodifluoromethane	25.0	ND	19.8	18.7	79.3	74.7	1	10.0-160			5.88	29
1,1-Dichloroethane	25.0	ND	24.5	23.2	97.8	92.8	1	25.0-158			5.28	27
1,2-Dichloroethane	25.0	ND	22.1	21.6	88.5	86.3	1	29.0-151			2.57	27
1,1-Dichloroethene	25.0	ND	25.9	25.0	104	100	1	11.0-160			3.66	29
cis-1,2-Dichloroethene	25.0	ND	23.7	22.4	94.8	89.7	1	10.0-160			5.48	27
trans-1,2-Dichloroethene	25.0	ND	24.7	23.5	98.9	94.0	1	17.0-153			5.07	27
1,2-Dichloropropane	25.0	ND	23.7	23.5	94.7	94.1	1	30.0-156			0.689	27
1,1-Dichloropropene	25.0	ND	26.3	25.2	105	101	1	25.0-158			4.19	27
1,3-Dichloropropane	25.0	ND	25.2	24.4	101	97.5	1	38.0-147			3.12	27
cis-1,3-Dichloropropene	25.0	ND	25.2	24.7	101	98.6	1	34.0-149			2.19	28
trans-1,3-Dichloropropene	25.0	ND	25.7	24.6	103	98.3	1	32.0-149			4.41	28
2,2-Dichloropropane	25.0	ND	24.2	23.1	96.7	92.3	1	24.0-152			4.65	29
Di-isopropyl ether	25.0	ND	21.8	20.9	87.2	83.6	1	21.0-160			4.17	28
Ethylbenzene	25.0	ND	26.0	25.5	104	102	1	30.0-155			2.07	27
Hexachloro-1,3-butadiene	25.0	ND	26.6	26.3	106	105	1	20.0-154			1.03	34
Isopropylbenzene	25.0	ND	26.2	25.9	105	103	1	28.0-157			1.23	27
p-Isopropyltoluene	25.0	ND	26.4	25.9	106	103	1	30.0-154			2.07	29
2-Butanone (MEK)	125	ND	108	106	86.6	85.1	1	10.0-160			1.73	32
Methylene Chloride	25.0	ND	21.4	20.6	85.4	82.4	1	23.0-144			3.62	28
4-Methyl-2-pentanone (MIBK)	125	ND	112	110	89.2	88.3	1	29.0-160			1.05	29
Methyl tert-butyl ether	25.0	ND	22.0	21.3	88.0	85.3	1	28.0-150			3.02	29

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/10/18 14:03 • (MS) R3340632-4 09/10/18 14:23 • (MSD) R3340632-5 09/10/18 14:42

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 %
Naphthalene	25.0	ND	20.1	21.0	80.4	84.1	1	12.0-156			4.60	35
n-Propylbenzene	25.0	ND	25.2	24.9	101	99.7	1	31.0-154			1.33	28
Styrene	25.0	ND	26.5	24.8	106	99.2	1	33.0-155			6.43	28
1,1,1,2-Tetrachloroethane	25.0	ND	25.7	25.0	103	99.8	1	36.0-151			2.82	29
1,1,2,2-Tetrachloroethane	25.0	ND	22.3	22.0	89.3	87.9	1	33.0-150			1.57	28
Tetrachloroethene	25.0	ND	27.8	27.3	111	109	1	10.0-160			1.81	27
Toluene	25.0	ND	25.9	25.1	104	100	1	26.0-154			3.21	28
1,1,2-Trichlorotrifluoroethane	25.0	ND	25.7	24.6	103	98.5	1	23.0-160			4.12	30
1,2,3-Trichlorobenzene	25.0	ND	23.1	24.1	92.2	96.2	1	17.0-150			4.25	36
1,2,4-Trichlorobenzene	25.0	ND	23.3	23.9	93.2	95.7	1	24.0-150			2.64	33
1,1,1-Trichloroethane	25.0	ND	24.8	24.4	99.3	97.7	1	23.0-160			1.59	28
1,1,2-Trichloroethane	25.0	ND	24.1	23.1	96.4	92.4	1	35.0-147			4.18	27
Trichloroethene	25.0	ND	27.2	25.9	109	104	1	10.0-160			4.70	25
Trichlorofluoromethane	25.0	ND	24.2	23.5	96.8	94.1	1	17.0-160			2.79	31
1,2,3-Trichloropropane	25.0	ND	23.2	23.2	92.6	92.8	1	34.0-151			0.206	29
1,2,3-Trimethylbenzene	25.0	ND	23.9	23.1	95.7	92.4	1	32.0-149			3.57	28
1,2,4-Trimethylbenzene	25.0	ND	24.8	24.4	99.1	97.7	1	26.0-154			1.41	27
1,3,5-Trimethylbenzene	25.0	ND	24.9	24.7	99.7	99.0	1	28.0-153			0.752	27
Vinyl chloride	25.0	ND	25.0	23.9	100	95.4	1	10.0-160			4.66	27
o-Xylene	25.0	ND	25.7	25.1	103	100	1	45.0-144			2.65	26
m&p-Xylenes	50.0	ND	52.7	51.0	105	102	1	43.0-146			3.16	26
<i>(S) Toluene-d8</i>					107	107		80.0-120				
<i>(S) Dibromofluoromethane</i>					96.1	95.9		75.0-120				
<i>(S) 4-Bromofluorobenzene</i>					100	100		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) R3340288-1 09/07/18 14:41

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	73.0			52.0-156

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

(LCS) R3340288-2 09/07/18 15:01 • (LCSD) R3340288-3 09/07/18 15:58

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	871	871	116	116	50.0-150			0.000	20
Residual Range Organics (RRO)	750	808	820	108	109	50.0-150			1.47	20
(S) o-Terphenyl				99.5	98.5	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) R3339563-1 09/06/18 07:38

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	0.00478	↓	0.00212	0.0500
Benzo(g,h,i)perylene	0.00363	↓	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	0.0229	↓	0.0198	0.250
Phenanthrene	0.00968	↓	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	87.0			31.0-160
(S) 2-Fluorobiphenyl	99.5			48.0-148
(S) p-Terphenyl-d14	106			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3339563-2 09/06/18 08:00 • (LCSD) R3339563-3 09/06/18 08:22

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	2.12	2.06	106	103	67.0-150			2.87	20
Acenaphthene	2.00	1.93	1.89	96.5	94.5	65.0-138			2.09	20
Acenaphthylene	2.00	1.97	1.93	98.5	96.5	66.0-140			2.05	20
Benzo(a)anthracene	2.00	1.88	1.86	94.0	93.0	61.0-140			1.07	20
Benzo(a)pyrene	2.00	1.87	1.80	93.5	90.0	60.0-143			3.81	20
Benzo(b)fluoranthene	2.00	1.77	1.76	88.5	88.0	58.0-141			0.567	20
Benzo(g,h,i)perylene	2.00	1.62	1.58	81.0	79.0	52.0-153			2.50	20
Benzo(k)fluoranthene	2.00	1.96	1.83	98.0	91.5	58.0-148			6.86	20
Chrysene	2.00	1.97	1.95	98.5	97.5	64.0-144			1.02	20
Dibenz(a,h)anthracene	2.00	1.55	1.51	77.5	75.5	52.0-155			2.61	20
Fluoranthene	2.00	2.08	2.02	104	101	69.0-153			2.93	20



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

(LCS) R3339563-2 09/06/18 08:00 • (LCSD) R3339563-3 09/06/18 08:22

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	1.91	1.88	95.5	94.0	64.0-136			1.58	20
Indeno(1,2,3-cd)pyrene	2.00	1.60	1.55	80.0	77.5	54.0-153			3.17	20
Naphthalene	2.00	1.94	1.89	97.0	94.5	61.0-137			2.61	20
Phenanthrene	2.00	1.83	1.81	91.5	90.5	62.0-137			1.10	20
Pyrene	2.00	2.04	2.00	102	100	60.0-142			1.98	20
1-Methylnaphthalene	2.00	2.14	2.08	107	104	66.0-142			2.84	20
2-Methylnaphthalene	2.00	2.00	1.99	100	99.5	62.0-136			0.501	20
2-Chloronaphthalene	2.00	2.01	1.97	100	98.5	64.0-140			2.01	20
<i>(S) Nitrobenzene-d5</i>				86.5	85.0	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				99.5	99.0	48.0-148				
<i>(S) p-Terphenyl-d14</i>				101	101	37.0-146				

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/06/18 12:25 • (MS) R3339563-4 09/06/18 12:47 • (MSD) R3339563-5 09/06/18 13:09

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	2.34	2.24	117	112	1	56.0-156			4.37	20
Acenaphthene	2.00	ND	1.96	1.90	98.0	95.0	1	44.0-153			3.11	20
Acenaphthylene	2.00	ND	2.04	1.96	102	98.0	1	53.0-150			4.00	20
Benzo(a)anthracene	2.00	ND	1.97	1.87	98.5	93.5	1	47.0-151			5.21	20
Benzo(a)pyrene	2.00	ND	1.85	1.78	92.5	89.0	1	45.0-146			3.86	20
Benzo(b)fluoranthene	2.00	ND	1.90	1.84	94.8	91.8	1	43.0-142			3.21	20
Benzo(g,h,i)perylene	2.00	ND	1.61	1.57	80.5	78.5	1	40.0-147			2.52	20
Benzo(k)fluoranthene	2.00	ND	1.74	1.72	87.0	86.0	1	43.0-148			1.16	21
Chrysene	2.00	ND	2.03	1.93	102	96.5	1	50.0-148			5.05	20
Dibenz(a,h)anthracene	2.00	ND	1.52	1.48	75.1	73.1	1	37.0-151			2.67	20
Fluoranthene	2.00	ND	2.24	2.18	112	109	1	56.0-157			2.71	20
Fluorene	2.00	ND	1.90	1.82	95.0	91.0	1	48.0-148			4.30	20
Indeno(1,2,3-cd)pyrene	2.00	ND	1.59	1.56	77.8	76.3	1	41.0-148			1.90	20
Naphthalene	2.00	ND	1.96	1.91	98.0	95.5	1	10.0-160			2.58	20
Phenanthrene	2.00	ND	1.81	1.74	90.0	86.5	1	47.0-147			3.94	20
Pyrene	2.00	ND	2.12	2.07	106	103	1	51.0-148			2.39	20
1-Methylnaphthalene	2.00	ND	2.16	2.08	108	104	1	21.0-160			3.77	20
2-Methylnaphthalene	2.00	ND	2.04	1.99	102	99.5	1	31.0-160			2.48	20
2-Chloronaphthalene	2.00	ND	2.06	1.98	103	99.0	1	52.0-148			3.96	20
<i>(S) Nitrobenzene-d5</i>					87.5	86.5		31.0-160				
<i>(S) 2-Fluorobiphenyl</i>					103	99.0		48.0-148				
<i>(S) p-Terphenyl-d14</i>					105	99.0		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 GI

8 AI

9 Sc

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	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

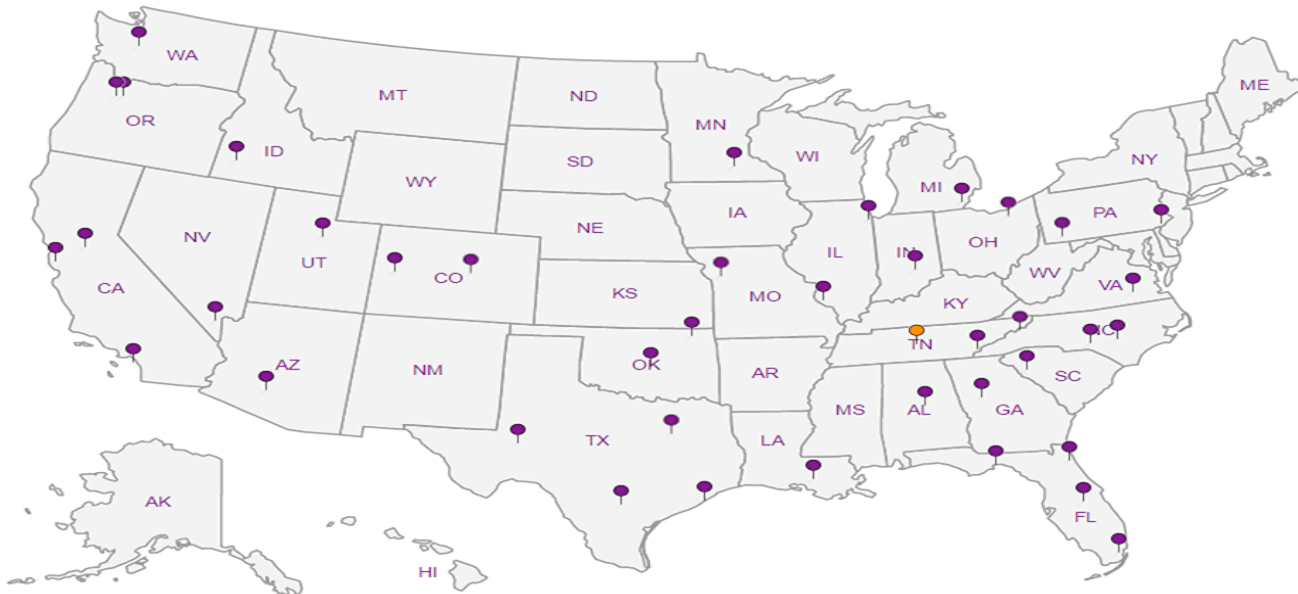
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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

Project:  
 Description: BNSF - Wishram Rail yard, WA

City/State Collected: *Wishram, WA*

Client Project #  
 1896120\*04

Lab Project #  
 BNSF1KEN-WISHRAM

Phone: 253-835-6400  
 Fax:

Site/Facility ID #

P.O. #

Collected by (print):  
*Alice Robinson*

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 Cntrs

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



L# *L1022664*

**A190**

Acctnum: BNSF1KEN  
 Template: T139245  
 Prelogin: P666498  
 TSR: 134 - Mark W. Beasley  
 PB: *8-9-186*

Shipped Via: FedEX Ground

Remarks Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DisM6020RCRA8+ Fe,Mn 250mlHDPE-HNO3	Dissolved Pb 250mlHDPE-NoPres	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVI- No SGT 40mlAmb-HCl-BT	NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	PAHSIMLYID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Sulfide 125mlAmb-S-NaOH+ZnAc	MS/MSD	
<i>WMW-27-20180630</i>	<i>grab</i>	<i>GW</i>	<i>15'</i>	<i>8-30-18</i>	<i>14:15</i>	<i>4</i>	X	X	X				X	X	X	X	<i>MS/MSD</i>	<i>-01</i>
<i>Trip Blank</i>						<i>142</i>												<i>-02</i>

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

Remarks: *Dissolved metals sample is field-filtered*

pH \_\_\_\_\_ Temp \_\_\_\_\_

RAD SCREEN: <0.5 mR/hr Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking # *4492 6222 5222*

Trip Blank Received:  Yes /  No  
 HCl / MeOH  
 TBR

COC Seal Present/Intact:  N  
 COC Signed/Accurate:  N  
 Bottles arrive intact:  N  
 Correct bottles used:  N  
 Sufficient volume sent:  N

If Applicable  
 VOA Zero Headspace:  N  
 Preservation Correct/Checked:  N

Relinquished by: (Signature) <i>Alice Robinson</i>	Date: <i>8-31-18</i>	Time: <i>10:30</i>	Received by: (Signature)	Trip Blank Received: <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No <i>1</i>	Temp: _____ °C	Bottles Received: <i>42</i>	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <i>3.3</i> °C	<i>2.17</i>	<i>42</i>	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>K. Clemen</i>	Date: <i>9/1/18</i>	Time: <i>0845</i>	Hold:	Condition: NCF / <input checked="" type="checkbox"/> 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**

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

City/State Collected: **Wishram, WA**

Lab Project #  
**BNSF1KEN-WISHRAM**

Client Project #  
**1896120\*04**

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

Collected by (print):  
**Alie Robinson**

Site/Facility ID #

P.O. #

Quote #

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

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_

**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

QR Code

Email To: **RyanHultgren@kennedyjenks.com, KatieTeague@kennedyjenks.com**

L# **402264**

Table #

Acctnum: **BNSF1KEN**

Template: **T139245**

Prelogin: **P666498**

TSR: **134 - Mark W. Beasley**

PB: **8-9-18**

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total M6020RCR8 250mlHDPE-HNO3	Total Pb 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl	Remarks	Sample # (lab only)
<b>WMW-27-20060830</b>	<b>grab</b>	<b>GW</b>	<b>15'</b>	<b>8-30-18</b>	<b>14:15</b>	<b>14</b>			<b>X</b>		<b>MS/MSD</b>	<b>-01</b>
<b>Trip Blank</b>		<b>GW</b>				<b>142</b>			<b>X</b>			<b>-02</b>
		<b>GW</b>										
		<b>GW</b>										
		<b>GW</b>										
		<b>GW</b>										
		<b>GW</b>										
		<b>GW</b>										
		<b>GW</b>										
		<b>GW</b>										

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

Remarks:  
**RAD SCREEN: <0.5 mR/hr**

Flow \_\_\_\_\_ Other \_\_\_\_\_

Temp \_\_\_\_\_

Tracking # **4492 6222 5222**

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) **Alie Robinson** Date: **8-31-18** Time: **10:30**

Received by: (Signature) \_\_\_\_\_ Trip Blank Received:  Yes  No  
 HCl / MeOH  
 TBR

Temp: **21.17** °C Bottles Received: **42**

If preservation required by Login: Date/Time

Relinquished by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

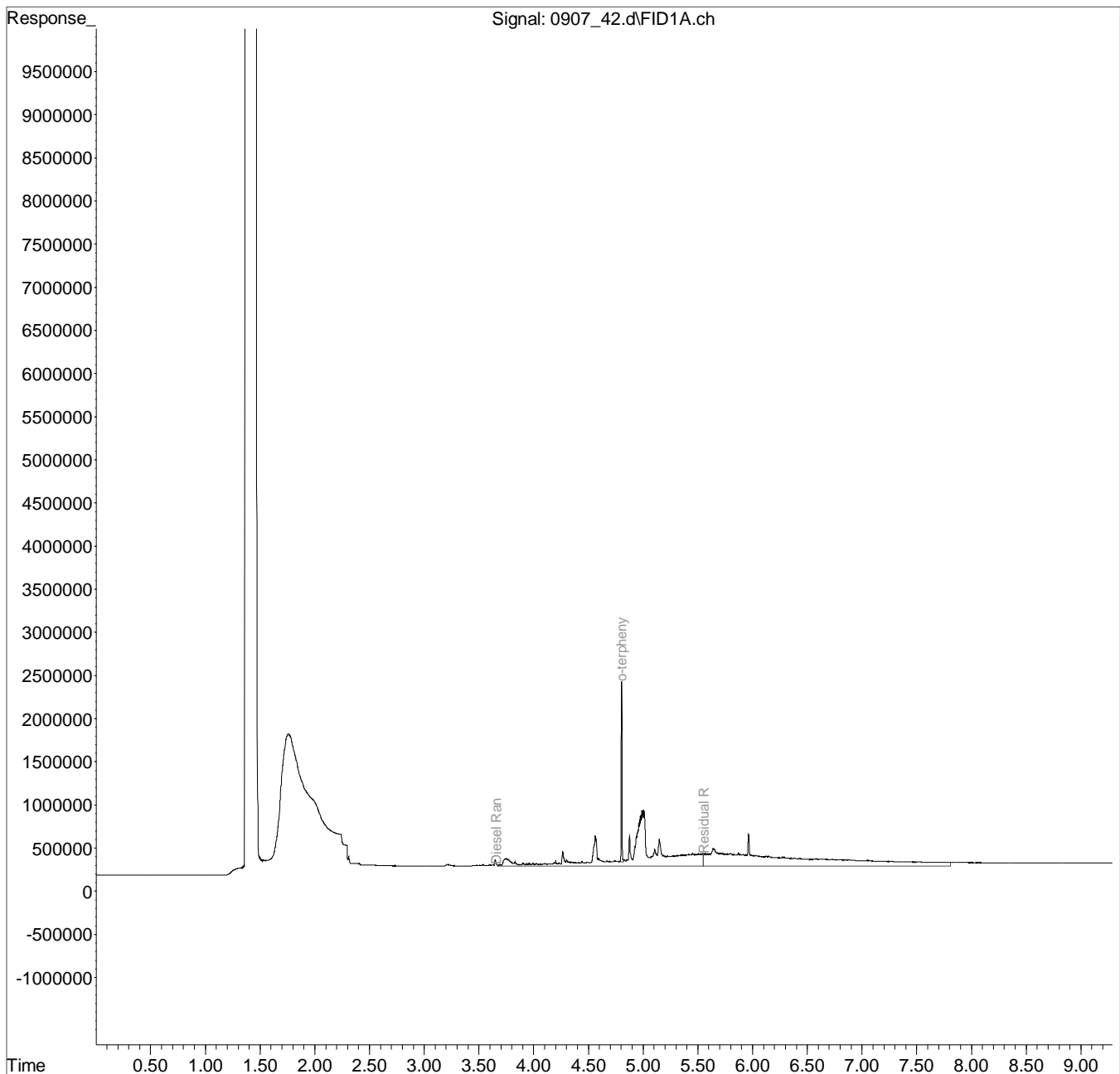
Received for lab by: (Signature) **Heemu** Date: **9/1/18** Time: **0845**

Hold: \_\_\_\_\_ Condition: **NCF / 01**

Data Path : C:\msdchem\1\data\090718\  
Data File : 0907 42.d  
Signal(s) : FID1A.ch  
Acq On : 7 Sep 2018 11:16 pm  
Operator : 773  
Sample : L1022664-01 1x WG1162436  
Misc : M.I.s on ranges are corrections  
ALS Vial : 30 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Sep 08 13:03:44 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



September 12, 2018

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1022689  
Samples Received: 09/01/2018  
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
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# SAMPLE SUMMARY



## RMD-5-20180830 L1022689-01 GW

Collected by  
Alice Robinson  
Collected date/time  
08/30/18 12:55  
Received date/time  
09/01/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1161879	1	09/06/18 12:32	09/06/18 12:32	JER
Wet Chemistry by Method 353.2	WG1161888	1	09/10/18 11:12	09/10/18 11:12	JER
Wet Chemistry by Method 4500S2 D-2011	WG1160769	1	09/02/18 16:47	09/02/18 16:47	TH
Wet Chemistry by Method 9056A	WG1161391	1	09/07/18 09:14	09/07/18 09:14	ELN
Metals (ICPMS) by Method 6020A	WG1161791	1	09/07/18 16:28	09/09/18 16:56	LD
Metals (ICPMS) by Method 6020A	WG1162700	1	09/10/18 11:58	09/11/18 00:15	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1161909	1	09/06/18 15:03	09/06/18 15:03	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160890	1	09/02/18 19:00	09/02/18 19:00	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1162436	1	09/06/18 19:09	09/07/18 23:36	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1161836	1	09/05/18 18:11	09/06/18 00:29	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1161306	1	09/04/18 21:14	09/05/18 17:11	KM

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

## RMD-6-20180831 L1022689-02 GW

Collected by  
Alice Robinson  
Collected date/time  
08/30/18 16:55  
Received date/time  
09/01/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1161879	1	09/06/18 12:33	09/06/18 12:33	JER
Wet Chemistry by Method 353.2	WG1161888	1	09/10/18 11:14	09/10/18 11:14	JER
Wet Chemistry by Method 4500S2 D-2011	WG1160769	1	09/02/18 16:47	09/02/18 16:47	TH
Wet Chemistry by Method 9056A	WG1161391	1	09/07/18 09:28	09/07/18 09:28	ELN
Mercury by Method 7470A	WG1160814	1	09/06/18 09:45	09/07/18 11:03	ABL
Mercury by Method 7470A	WG1160816	1	09/04/18 09:56	09/06/18 15:36	EL
Metals (ICPMS) by Method 6020A	WG1161791	1	09/07/18 16:28	09/09/18 17:01	LD
Metals (ICPMS) by Method 6020A	WG1162700	1	09/10/18 11:58	09/11/18 00:39	LD
Metals (ICPMS) by Method 6020A	WG1162700	1	09/10/18 11:58	09/11/18 12:10	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1161909	1	09/06/18 15:08	09/06/18 15:08	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160890	1	09/02/18 19:20	09/02/18 19:20	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1160945	1	09/03/18 06:20	09/04/18 22:10	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1161836	1	09/05/18 18:11	09/06/18 00:49	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1161306	1	09/04/18 21:14	09/05/18 17:33	KM

## WMW-29-20180831 L1022689-03 GW

Collected by  
Alice Robinson  
Collected date/time  
08/31/18 19:10  
Received date/time  
09/01/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1161879	1	09/06/18 12:35	09/06/18 12:35	JER
Wet Chemistry by Method 353.2	WG1161888	1	09/10/18 11:15	09/10/18 11:15	JER
Wet Chemistry by Method 4500S2 D-2011	WG1160769	1	09/02/18 16:48	09/02/18 16:48	TH
Wet Chemistry by Method 9056A	WG1161634	1	09/07/18 03:49	09/07/18 03:49	ELN
Mercury by Method 7470A	WG1160814	1	09/06/18 09:45	09/07/18 11:06	ABL
Mercury by Method 7470A	WG1160816	1	09/04/18 09:56	09/06/18 15:38	EL
Metals (ICPMS) by Method 6020A	WG1161791	1	09/07/18 16:28	09/09/18 17:06	LD
Metals (ICPMS) by Method 6020A	WG1162700	1	09/10/18 11:58	09/11/18 00:43	LD
Metals (ICPMS) by Method 6020A	WG1162700	1	09/10/18 11:58	09/11/18 12:14	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG1161909	1	09/06/18 15:11	09/06/18 15:11	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160890	1	09/02/18 19:39	09/02/18 19:39	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1162436	1	09/06/18 19:09	09/07/18 23:56	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1162436	5	09/06/18 19:09	09/08/18 17:01	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1161306	1	09/04/18 21:14	09/05/18 17:55	KM

# SAMPLE SUMMARY



TRIP BLANK L1022689-04 GW

Collected by Alice Robinson  
Collected date/time 08/30/18 00:00  
Received date/time 09/01/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1160890	1	09/02/18 17:23	09/02/18 17:23	ACG

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> 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

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





## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/06/2018 12:32	<a href="#">WG1161879</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	358		100	1	09/10/2018 11:12	<a href="#">WG1161888</a>

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	09/02/2018 16:47	<a href="#">WG1160769</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	33700		5000	1	09/07/2018 09:14	<a href="#">WG1161391</a>

7 Gl

8 Al

9 Sc

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	09/11/2018 00:15	<a href="#">WG1162700</a>
Lead	ND		2.00	1	09/09/2018 16:56	<a href="#">WG1161791</a>
Lead,Dissolved	ND		2.00	1	09/11/2018 00:15	<a href="#">WG1162700</a>
Manganese,Dissolved	481		5.00	1	09/11/2018 00:15	<a href="#">WG1162700</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/06/2018 15:03	<a href="#">WG1161909</a>
Ethane	ND		13.0	1	09/06/2018 15:03	<a href="#">WG1161909</a>
Ethene	ND		13.0	1	09/06/2018 15:03	<a href="#">WG1161909</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	09/02/2018 19:00	<a href="#">WG1160890</a>
Toluene	ND		1.00	1	09/02/2018 19:00	<a href="#">WG1160890</a>
Ethylbenzene	ND		1.00	1	09/02/2018 19:00	<a href="#">WG1160890</a>
o-Xylene	ND		1.00	1	09/02/2018 19:00	<a href="#">WG1160890</a>
m&p-Xylene	ND		2.00	1	09/02/2018 19:00	<a href="#">WG1160890</a>
(S) Toluene-d8	99.8		80.0-120		09/02/2018 19:00	<a href="#">WG1160890</a>
(S) Dibromofluoromethane	98.6		75.0-120		09/02/2018 19:00	<a href="#">WG1160890</a>
(S) a,a,a-Trifluorotoluene	99.1		80.0-120		09/02/2018 19:00	<a href="#">WG1160890</a>
(S) 4-Bromofluorobenzene	98.0		77.0-126		09/02/2018 19:00	<a href="#">WG1160890</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1000		200	1	09/07/2018 23:36	<a href="#">WG1162436</a>
Residual Range Organics (RRO)	501		250	1	09/07/2018 23:36	<a href="#">WG1162436</a>
(S) o-Terphenyl	88.4		52.0-156		09/07/2018 23:36	<a href="#">WG1162436</a>



Collected date/time: 08/30/18 12:55

L1022689

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	737		200	1	09/06/2018 00:29	<a href="#">WG1161836</a>
Residual Range Organics (RRO)	260		250	1	09/06/2018 00:29	<a href="#">WG1161836</a>
<i>(S) o-Terphenyl</i>	102		52.0-156		09/06/2018 00:29	<a href="#">WG1161836</a>

1 Cp

2 Tc

3 Ss

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Acenaphthene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Acenaphthylene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Benzo(a)anthracene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Benzo(a)pyrene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Chrysene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Fluoranthene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Fluorene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Naphthalene	ND		0.250	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Phenanthrene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
Pyrene	ND		0.0500	1	09/05/2018 17:11	<a href="#">WG1161306</a>
1-Methylnaphthalene	ND		0.250	1	09/05/2018 17:11	<a href="#">WG1161306</a>
2-Methylnaphthalene	ND		0.250	1	09/05/2018 17:11	<a href="#">WG1161306</a>
2-Chloronaphthalene	ND		0.250	1	09/05/2018 17:11	<a href="#">WG1161306</a>
<i>(S) Nitrobenzene-d5</i>	42.1		31.0-160		09/05/2018 17:11	<a href="#">WG1161306</a>
<i>(S) 2-Fluorobiphenyl</i>	83.7		48.0-148		09/05/2018 17:11	<a href="#">WG1161306</a>
<i>(S) p-Terphenyl-d14</i>	90.0		37.0-146		09/05/2018 17:11	<a href="#">WG1161306</a>

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	09/06/2018 12:33	<a href="#">WG1161879</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1990		100	1	09/10/2018 11:14	<a href="#">WG1161888</a>

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	09/02/2018 16:47	<a href="#">WG1160769</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	78700		5000	1	09/07/2018 09:28	<a href="#">WG1161391</a>

7 Gl

8 Al

## Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/07/2018 11:03	<a href="#">WG1160814</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 15:36	<a href="#">WG1160816</a>

9 Sc

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	10.6		2.00	1	09/09/2018 17:01	<a href="#">WG1161791</a>
Arsenic,Dissolved	9.95		2.00	1	09/11/2018 00:39	<a href="#">WG1162700</a>
Barium	31.3		5.00	1	09/09/2018 17:01	<a href="#">WG1161791</a>
Barium,Dissolved	32.6		5.00	1	09/11/2018 12:10	<a href="#">WG1162700</a>
Cadmium	ND		1.00	1	09/09/2018 17:01	<a href="#">WG1161791</a>
Cadmium,Dissolved	ND		1.00	1	09/11/2018 00:39	<a href="#">WG1162700</a>
Chromium	ND		2.00	1	09/09/2018 17:01	<a href="#">WG1161791</a>
Chromium,Dissolved	ND		2.00	1	09/11/2018 12:10	<a href="#">WG1162700</a>
Iron,Dissolved	ND		100	1	09/11/2018 00:39	<a href="#">WG1162700</a>
Lead	ND		2.00	1	09/09/2018 17:01	<a href="#">WG1161791</a>
Lead,Dissolved	ND		2.00	1	09/11/2018 00:39	<a href="#">WG1162700</a>
Manganese,Dissolved	204		5.00	1	09/11/2018 00:39	<a href="#">WG1162700</a>
Selenium	ND		2.00	1	09/09/2018 17:01	<a href="#">WG1161791</a>
Selenium,Dissolved	ND		2.00	1	09/11/2018 00:39	<a href="#">WG1162700</a>
Silver	ND		2.00	1	09/09/2018 17:01	<a href="#">WG1161791</a>
Silver,Dissolved	ND		2.00	1	09/11/2018 00:39	<a href="#">WG1162700</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/06/2018 15:08	<a href="#">WG1161909</a>
Ethane	ND		13.0	1	09/06/2018 15:08	<a href="#">WG1161909</a>
Ethene	ND		13.0	1	09/06/2018 15:08	<a href="#">WG1161909</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	09/02/2018 19:20	<a href="#">WG1160890</a>
Toluene	ND		1.00	1	09/02/2018 19:20	<a href="#">WG1160890</a>
Ethylbenzene	ND		1.00	1	09/02/2018 19:20	<a href="#">WG1160890</a>
o-Xylene	ND		1.00	1	09/02/2018 19:20	<a href="#">WG1160890</a>
m&p-Xylene	ND		2.00	1	09/02/2018 19:20	<a href="#">WG1160890</a>
(S) Toluene-d8	101		80.0-120		09/02/2018 19:20	<a href="#">WG1160890</a>
(S) Dibromofluoromethane	100		75.0-120		09/02/2018 19:20	<a href="#">WG1160890</a>
(S) a,a,a-Trifluorotoluene	97.2		80.0-120		09/02/2018 19:20	<a href="#">WG1160890</a>
(S) 4-Bromofluorobenzene	98.4		77.0-126		09/02/2018 19:20	<a href="#">WG1160890</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

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	09/04/2018 22:10	<a href="#">WG1160945</a>
Residual Range Organics (RRO)	ND		250	1	09/04/2018 22:10	<a href="#">WG1160945</a>
(S) o-Terphenyl	117		52.0-156		09/04/2018 22:10	<a href="#">WG1160945</a>

6 Qc

7 Gl

8 Al

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	09/06/2018 00:49	<a href="#">WG1161836</a>
Residual Range Organics (RRO)	ND		250	1	09/06/2018 00:49	<a href="#">WG1161836</a>
(S) o-Terphenyl	103		52.0-156		09/06/2018 00:49	<a href="#">WG1161836</a>

9 Sc

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Acenaphthene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Acenaphthylene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Benzo(a)anthracene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Benzo(a)pyrene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Chrysene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Fluoranthene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Fluorene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Naphthalene	ND		0.250	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Phenanthrene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
Pyrene	ND		0.0500	1	09/05/2018 17:33	<a href="#">WG1161306</a>
1-Methylnaphthalene	ND		0.250	1	09/05/2018 17:33	<a href="#">WG1161306</a>
2-Methylnaphthalene	ND		0.250	1	09/05/2018 17:33	<a href="#">WG1161306</a>
2-Chloronaphthalene	ND		0.250	1	09/05/2018 17:33	<a href="#">WG1161306</a>
(S) Nitrobenzene-d5	42.7		31.0-160		09/05/2018 17:33	<a href="#">WG1161306</a>
(S) 2-Fluorobiphenyl	88.9		48.0-148		09/05/2018 17:33	<a href="#">WG1161306</a>
(S) p-Terphenyl-d14	87.4		37.0-146		09/05/2018 17:33	<a href="#">WG1161306</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	09/06/2018 12:35	<a href="#">WG1161879</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	09/10/2018 11:15	<a href="#">WG1161888</a>

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	09/02/2018 16:48	<a href="#">WG1160769</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	14600		5000	1	09/07/2018 03:49	<a href="#">WG1161634</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	09/07/2018 11:06	<a href="#">WG1160814</a>
Mercury,Dissolved	ND		0.200	1	09/06/2018 15:38	<a href="#">WG1160816</a>

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.70		2.00	1	09/09/2018 17:06	<a href="#">WG1161791</a>
Arsenic,Dissolved	3.42		2.00	1	09/11/2018 00:43	<a href="#">WG1162700</a>
Barium	160		5.00	1	09/09/2018 17:06	<a href="#">WG1161791</a>
Barium,Dissolved	152		5.00	1	09/11/2018 12:14	<a href="#">WG1162700</a>
Cadmium	ND		1.00	1	09/09/2018 17:06	<a href="#">WG1161791</a>
Cadmium,Dissolved	ND		1.00	1	09/11/2018 00:43	<a href="#">WG1162700</a>
Chromium	ND		2.00	1	09/09/2018 17:06	<a href="#">WG1161791</a>
Chromium,Dissolved	ND		2.00	1	09/11/2018 12:14	<a href="#">WG1162700</a>
Iron,Dissolved	191		100	1	09/11/2018 00:43	<a href="#">WG1162700</a>
Lead	ND		2.00	1	09/09/2018 17:06	<a href="#">WG1161791</a>
Lead,Dissolved	ND		2.00	1	09/11/2018 00:43	<a href="#">WG1162700</a>
Manganese,Dissolved	5160		5.00	1	09/11/2018 00:43	<a href="#">WG1162700</a>
Selenium	ND		2.00	1	09/09/2018 17:06	<a href="#">WG1161791</a>
Selenium,Dissolved	ND		2.00	1	09/11/2018 00:43	<a href="#">WG1162700</a>
Silver	ND		2.00	1	09/09/2018 17:06	<a href="#">WG1161791</a>
Silver,Dissolved	ND		2.00	1	09/11/2018 00:43	<a href="#">WG1162700</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	15.6		10.0	1	09/06/2018 15:11	<a href="#">WG1161909</a>
Ethane	ND		13.0	1	09/06/2018 15:11	<a href="#">WG1161909</a>
Ethene	ND		13.0	1	09/06/2018 15:11	<a href="#">WG1161909</a>



Collected date/time: 08/31/18 19:10

L1022689

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	09/02/2018 19:39	<a href="#">WG1160890</a>
Acrolein	ND		50.0	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Acrylonitrile	ND		10.0	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Benzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Bromobenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Bromodichloromethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Bromoform	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Bromomethane	ND		5.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
n-Butylbenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
sec-Butylbenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
tert-Butylbenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Carbon tetrachloride	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Chlorobenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Chlorodibromomethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Chloroethane	ND		5.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Chloroform	ND		5.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Chloromethane	ND		2.50	1	09/02/2018 19:39	<a href="#">WG1160890</a>
2-Chlorotoluene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
4-Chlorotoluene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,2-Dibromoethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Dibromomethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,2-Dichlorobenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,3-Dichlorobenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,4-Dichlorobenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,1-Dichloroethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,2-Dichloroethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,1-Dichloroethene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,2-Dichloropropane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,1-Dichloropropene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,3-Dichloropropane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
2,2-Dichloropropane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Di-isopropyl ether	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Ethylbenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Isopropylbenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
p-Isopropyltoluene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
2-Butanone (MEK)	ND		10.0	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Methylene Chloride	ND		5.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Methyl tert-butyl ether	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Naphthalene	ND		5.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
n-Propylbenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Styrene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Tetrachloroethene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Toluene	4.76		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>

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	
1,1,1-Trichloroethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,1,2-Trichloroethane	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Trichloroethene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Trichlorofluoromethane	ND		5.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,2,3-Trichloropropane	ND		2.50	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
Vinyl chloride	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
o-Xylene	ND		1.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
m&p-Xylene	ND		2.00	1	09/02/2018 19:39	<a href="#">WG1160890</a>
(S) Toluene-d8	100		80.0-120		09/02/2018 19:39	<a href="#">WG1160890</a>
(S) Dibromofluoromethane	97.8		75.0-120		09/02/2018 19:39	<a href="#">WG1160890</a>
(S) 4-Bromofluorobenzene	98.0		77.0-126		09/02/2018 19:39	<a href="#">WG1160890</a>

- 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)	3940		200	1	09/07/2018 23:56	<a href="#">WG1162436</a>
Residual Range Organics (RRO)	3830		1250	5	09/08/2018 17:01	<a href="#">WG1162436</a>
(S) o-Terphenyl	99.5		52.0-156		09/07/2018 23:56	<a href="#">WG1162436</a>
(S) o-Terphenyl	96.3		52.0-156		09/08/2018 17:01	<a href="#">WG1162436</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	0.0782		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Acenaphthene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Acenaphthylene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Benzo(a)anthracene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Benzo(a)pyrene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Benzo(b)fluoranthene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Benzo(g,h,i)perylene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Benzo(k)fluoranthene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Chrysene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Dibenz(a,h)anthracene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Fluoranthene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Fluorene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Naphthalene	ND		0.250	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Phenanthrene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
Pyrene	ND		0.0500	1	09/05/2018 17:55	<a href="#">WG1161306</a>
1-Methylnaphthalene	ND		0.250	1	09/05/2018 17:55	<a href="#">WG1161306</a>
2-Methylnaphthalene	ND		0.250	1	09/05/2018 17:55	<a href="#">WG1161306</a>
2-Chloronaphthalene	ND		0.250	1	09/05/2018 17:55	<a href="#">WG1161306</a>
(S) Nitrobenzene-d5	40.7		31.0-160		09/05/2018 17:55	<a href="#">WG1161306</a>
(S) 2-Fluorobiphenyl	80.0		48.0-148		09/05/2018 17:55	<a href="#">WG1161306</a>
(S) p-Terphenyl-d14	85.8		37.0-146		09/05/2018 17:55	<a href="#">WG1161306</a>



Collected date/time: 08/30/18 00:00

L1022689

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	09/02/2018 17:23	WG1160890
Acrolein	ND		50.0	1	09/02/2018 17:23	WG1160890
Acrylonitrile	ND		10.0	1	09/02/2018 17:23	WG1160890
Benzene	ND		1.00	1	09/02/2018 17:23	WG1160890
Bromobenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
Bromodichloromethane	ND		1.00	1	09/02/2018 17:23	WG1160890
Bromoform	ND		1.00	1	09/02/2018 17:23	WG1160890
Bromomethane	ND		5.00	1	09/02/2018 17:23	WG1160890
n-Butylbenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
sec-Butylbenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
tert-Butylbenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
Carbon tetrachloride	ND		1.00	1	09/02/2018 17:23	WG1160890
Chlorobenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
Chlorodibromomethane	ND		1.00	1	09/02/2018 17:23	WG1160890
Chloroethane	ND		5.00	1	09/02/2018 17:23	WG1160890
Chloroform	ND		5.00	1	09/02/2018 17:23	WG1160890
Chloromethane	ND		2.50	1	09/02/2018 17:23	WG1160890
2-Chlorotoluene	ND		1.00	1	09/02/2018 17:23	WG1160890
4-Chlorotoluene	ND		1.00	1	09/02/2018 17:23	WG1160890
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2018 17:23	WG1160890
1,2-Dibromoethane	ND		1.00	1	09/02/2018 17:23	WG1160890
Dibromomethane	ND		1.00	1	09/02/2018 17:23	WG1160890
1,2-Dichlorobenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
1,3-Dichlorobenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
1,4-Dichlorobenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
Dichlorodifluoromethane	ND		5.00	1	09/02/2018 17:23	WG1160890
1,1-Dichloroethane	ND		1.00	1	09/02/2018 17:23	WG1160890
1,2-Dichloroethane	ND		1.00	1	09/02/2018 17:23	WG1160890
1,1-Dichloroethene	ND		1.00	1	09/02/2018 17:23	WG1160890
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2018 17:23	WG1160890
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2018 17:23	WG1160890
1,2-Dichloropropane	ND		1.00	1	09/02/2018 17:23	WG1160890
1,1-Dichloropropene	ND		1.00	1	09/02/2018 17:23	WG1160890
1,3-Dichloropropane	ND		1.00	1	09/02/2018 17:23	WG1160890
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2018 17:23	WG1160890
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2018 17:23	WG1160890
2,2-Dichloropropane	ND		1.00	1	09/02/2018 17:23	WG1160890
Di-isopropyl ether	ND		1.00	1	09/02/2018 17:23	WG1160890
Ethylbenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2018 17:23	WG1160890
Isopropylbenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
p-Isopropyltoluene	ND		1.00	1	09/02/2018 17:23	WG1160890
2-Butanone (MEK)	ND		10.0	1	09/02/2018 17:23	WG1160890
Methylene Chloride	ND		5.00	1	09/02/2018 17:23	WG1160890
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2018 17:23	WG1160890
Methyl tert-butyl ether	ND		1.00	1	09/02/2018 17:23	WG1160890
Naphthalene	ND		5.00	1	09/02/2018 17:23	WG1160890
n-Propylbenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
Styrene	ND		1.00	1	09/02/2018 17:23	WG1160890
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2018 17:23	WG1160890
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2018 17:23	WG1160890
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2018 17:23	WG1160890
Tetrachloroethene	ND		1.00	1	09/02/2018 17:23	WG1160890
Toluene	ND		1.00	1	09/02/2018 17:23	WG1160890
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2018 17:23	WG1160890
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2018 17:23	WG1160890

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc





Collected date/time: 08/30/18 00:00

L1022689

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	09/02/2018 17:23	<a href="#">WG1160890</a>
1,1,2-Trichloroethane	ND		1.00	1	09/02/2018 17:23	<a href="#">WG1160890</a>
Trichloroethene	ND		1.00	1	09/02/2018 17:23	<a href="#">WG1160890</a>
Trichlorofluoromethane	ND		5.00	1	09/02/2018 17:23	<a href="#">WG1160890</a>
1,2,3-Trichloropropane	ND		2.50	1	09/02/2018 17:23	<a href="#">WG1160890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2018 17:23	<a href="#">WG1160890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2018 17:23	<a href="#">WG1160890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2018 17:23	<a href="#">WG1160890</a>
Vinyl chloride	ND		1.00	1	09/02/2018 17:23	<a href="#">WG1160890</a>
o-Xylene	ND		1.00	1	09/02/2018 17:23	<a href="#">WG1160890</a>
m&p-Xylene	ND		2.00	1	09/02/2018 17:23	<a href="#">WG1160890</a>
(S) Toluene-d8	101		80.0-120		09/02/2018 17:23	<a href="#">WG1160890</a>
(S) Dibromofluoromethane	98.5		75.0-120		09/02/2018 17:23	<a href="#">WG1160890</a>
(S) 4-Bromofluorobenzene	98.3		77.0-126		09/02/2018 17:23	<a href="#">WG1160890</a>

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



Method Blank (MB)

(MB) R3339785-1 09/06/18 12:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022656-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1022656-03 09/06/18 12:19 • (DUP) R3339785-4 09/06/18 12:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1022964-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022964-01 09/06/18 12:55 • (DUP) R3339785-7 09/06/18 12:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

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

(LCS) R3339785-2 09/06/18 12:09 • (LCSD) R3339785-3 09/06/18 12:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ammonia Nitrogen	7500	7500	7470	100	99.5	90.0-110			0.481	10

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/06/18 12:22 • (MS) R3339785-5 09/06/18 12:28 • (MSD) R3339785-6 09/06/18 12:30

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	4770	4800	95.3	95.9	1	90.0-110			0.669	10

L1022966-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1022966-01 09/06/18 12:59 • (MS) R3339785-8 09/06/18 13:00

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	547	5320	95.5	1	90.0-110	



Method Blank (MB)

(MB) R3340576-1 09/10/18 10:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022596-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022596-01 09/10/18 10:51 • (DUP) R3340576-4 09/10/18 10:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1200	1180	1	1.60		20

L1022959-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1022959-02 09/10/18 11:32 • (DUP) R3340576-7 09/10/18 11:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	270	268	1	0.743		20

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

(LCS) R3340576-2 09/10/18 10:45 • (LCSD) R3340576-3 09/10/18 10:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	4000	4090	3990	102	99.7	90.0-110			2.55	20

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/10/18 11:08 • (MS) R3340576-5 09/10/18 11:09 • (MSD) R3340576-6 09/10/18 11:11

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	447	1380	1320	37.3	35.0	1	90.0-110	<u>J6</u>	<u>J6</u>	4.37	20

L1022959-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1022959-03 09/10/18 11:35 • (MS) R3340576-8 09/10/18 11:37

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	144	964	32.8	1	90.0-110	<u>J6</u>



Method Blank (MB)

(MB) R3338672-1 09/02/18 16:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

L1022689-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1022689-02 09/02/18 16:47 • (DUP) R3338672-5 09/02/18 16:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

<sup>6</sup> Qc

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

(LCS) R3338672-2 09/02/18 16:42 • (LCSD) R3338672-3 09/02/18 16:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	500	514	514	103	103	85.0-115			0.000	20

<sup>7</sup> Gl

<sup>8</sup> Al

L1022707-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022707-03 09/02/18 16:48 • (MS) R3338672-6 09/02/18 16:48 • (MSD) R3338672-7 09/02/18 16:48

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	637	636	63.7	63.6	1	80.0-120	<u>J6</u>	<u>J6</u>	0.157	20

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3340015-1 09/07/18 00:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022567-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022567-01 09/07/18 04:07 • (DUP) R3340015-4 09/07/18 04:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	22000	22000	1	0.00591		15

L1022664-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022664-01 09/07/18 07:50 • (DUP) R3340015-7 09/07/18 08:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	7070	7070	1	0.0255		15

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

(LCS) R3340015-2 09/07/18 00:35 • (LCSD) R3340015-3 09/07/18 00:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	38700	38700	96.7	96.8	80.0-120			0.0750	15

L1022567-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022567-01 09/07/18 04:07 • (MS) R3340015-5 09/07/18 04:35 • (MSD) R3340015-6 09/07/18 04:49

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	22000	68100	68100	92.2	92.2	1	80.0-120			0.0260	15

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/07/18 07:50 • (MS) R3340015-8 09/07/18 08:18 • (MSD) R3340015-9 09/07/18 08:32

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	7070	54800	54700	95.5	95.2	1	80.0-120			0.274	15



Method Blank (MB)

(MB) R3340147-1 09/07/18 01:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	347	↓	77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022835-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022835-01 09/07/18 04:26 • (DUP) R3340147-4 09/07/18 05:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	35400	35300	1	0.0690		15

L1022885-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1022885-07 09/07/18 09:34 • (DUP) R3340147-7 09/07/18 09:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	305000	305000	1	0.0554	E	15

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

(LCS) R3340147-2 09/07/18 02:00 • (LCSD) R3340147-3 09/07/18 02:18

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	40300	40400	101	101	80.0-120			0.300	15

L1022835-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022835-01 09/07/18 04:26 • (MS) R3340147-5 09/07/18 05:38 • (MSD) R3340147-6 09/07/18 05:56

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	35400	83300	83200	95.9	95.7	1	80.0-120			0.133	15

L1022885-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022885-07 09/07/18 09:34 • (MS) R3340147-8 09/07/18 10:11 • (MSD) R3340147-9 09/07/18 10:29

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	305000	326000	326000	42.7	42.8	1	80.0-120	E V	E V	0.0170	15



Method Blank (MB)

(MB) R3340043-1 09/07/18 10:37

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	0.0511	↓	0.0490	0.200

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

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

(LCS) R3340043-2 09/07/18 10:46 • (LCSD) R3340043-3 09/07/18 10:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	2.87	2.63	95.5	87.6	80.0-120			8.70	20

<sup>7</sup>Gl

<sup>8</sup>Al

L1022656-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022656-01 09/07/18 10:51 • (MS) R3340043-4 09/07/18 10:54 • (MSD) R3340043-5 09/07/18 10:56

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	2.84	2.63	94.6	87.6	1	75.0-125			7.68	20

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3339876-1 09/06/18 15:02

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

1 Cp

2 Tc

3 Ss

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

(LCS) R3339876-2 09/06/18 15:04 • (LCSD) R3339876-3 09/06/18 15:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury,Dissolved	3.00	2.97	3.07	99.0	102	80.0-120			3.38	20

4 Cn

5 Sr

L1022664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022664-01 09/06/18 15:09 • (MS) R3339876-4 09/06/18 15:11 • (MSD) R3339876-5 09/06/18 15:14

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	3.18	2.19	106	73.0	1	75.0-125		<u>J3 J6</u>	37.0	20

6 Qc

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3340424-1 09/09/18 15:38

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3340424-2 09/09/18 15:43 • (LCSD) R3340424-3 09/09/18 15:48

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	50.0	49.1	100	98.1	80.0-120			1.87	20
Barium	50.0	49.9	48.6	99.8	97.2	80.0-120			2.69	20
Cadmium	50.0	48.8	48.5	97.5	97.0	80.0-120			0.534	20
Chromium	50.0	49.6	49.7	99.2	99.3	80.0-120			0.0978	20
Lead	50.0	49.0	49.0	98.0	97.9	80.0-120			0.0654	20
Selenium	50.0	51.5	51.6	103	103	80.0-120			0.229	20
Silver	50.0	49.0	48.6	98.0	97.3	80.0-120			0.698	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022888-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022888-06 09/09/18 15:54 • (MS) R3340424-5 09/09/18 16:04 • (MSD) R3340424-6 09/09/18 16:09

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	0.886	49.7	49.5	97.7	97.2	1	75.0-125			0.542	20
Barium	50.0	5.28	56.0	53.6	101	96.7	1	75.0-125			4.27	20
Cadmium	50.0	U	48.5	48.5	97.0	97.0	1	75.0-125			0.0144	20
Chromium	50.0	1.92	51.1	49.7	98.3	95.5	1	75.0-125			2.85	20
Lead	50.0	0.274	49.7	48.9	98.9	97.3	1	75.0-125			1.64	20
Selenium	50.0	U	53.0	50.8	106	102	1	75.0-125			4.22	20
Silver	50.0	U	49.5	48.3	99.1	96.5	1	75.0-125			2.64	20



Method Blank (MB)

(MB) R3340741-1 09/11/18 00:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		0.250	2.00
Cadmium,Dissolved	U		0.160	1.00
Iron,Dissolved	U		15.0	100
Lead,Dissolved	0.317	J	0.240	2.00
Manganese,Dissolved	1.34	J	0.250	5.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Method Blank (MB)

(MB) R3340875-1 09/11/18 11:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Barium,Dissolved	U		0.360	5.00
Chromium,Dissolved	U		0.540	2.00

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

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

(LCS) R3340741-2 09/11/18 00:05 • (LCSD) R3340741-3 09/11/18 00:10

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	%	%	%			%	%
Arsenic,Dissolved	50.0	47.0	48.8	94.0	97.7	80.0-120			3.89	20
Cadmium,Dissolved	50.0	48.1	48.7	96.1	97.4	80.0-120			1.37	20
Iron,Dissolved	5000	4990	5120	99.8	102	80.0-120			2.45	20
Lead,Dissolved	50.0	45.8	45.8	91.7	91.5	80.0-120			0.158	20
Manganese,Dissolved	50.0	47.7	48.7	95.5	97.5	80.0-120			2.08	20
Selenium,Dissolved	50.0	49.6	50.7	99.3	101	80.0-120			2.06	20
Silver,Dissolved	50.0	46.1	47.1	92.3	94.2	80.0-120			2.04	20

<sup>9</sup> Sc

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

(LCS) R3340875-2 09/11/18 11:43 • (LCSD) R3340875-3 09/11/18 11:48

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	%	%	%			%	%
Barium,Dissolved	50.0	48.9	47.6	97.9	95.1	80.0-120			2.83	20
Chromium,Dissolved	50.0	50.2	50.8	100	102	80.0-120			1.13	20



L1022689-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022689-01 09/11/18 00:15 • (MS) R3340741-5 09/11/18 00:24 • (MSD) R3340741-6 09/11/18 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,Dissolved	50.0	6.78	54.1	54.4	94.6	95.3	1	75.0-125			0.697	20
Cadmium,Dissolved	50.0	ND	49.3	48.3	98.5	96.5	1	75.0-125			2.01	20
Iron,Dissolved	5000	ND	4900	4880	97.9	97.5	1	75.0-125			0.408	20
Lead,Dissolved	50.0	ND	47.0	46.9	91.8	91.6	1	75.0-125			0.249	20
Manganese,Dissolved	50.0	481	524	525	84.8	87.1	1	75.0-125			0.223	20
Selenium,Dissolved	50.0	ND	52.4	51.3	105	103	1	75.0-125			2.05	20
Silver,Dissolved	50.0	ND	48.1	48.0	96.1	95.9	1	75.0-125			0.212	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

L1022689-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022689-01 09/11/18 11:52 • (MS) R3340875-5 09/11/18 12:01 • (MSD) R3340875-6 09/11/18 12:05

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 %
Barium,Dissolved	50.0	39.0	86.6	89.9	95.2	102	1	75.0-125			3.76	20
Chromium,Dissolved	50.0	ND	49.5	49.8	98.9	99.6	1	75.0-125			0.637	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3339705-1 09/06/18 14:06

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1022664-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022664-01 09/06/18 14:56 • (DUP) R3339705-2 09/06/18 15:00

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

L1022890-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022890-01 09/06/18 15:25 • (DUP) R3339705-3 09/06/18 15:35

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) R3339705-4 09/06/18 15:41 • (LCSD) R3339705-5 09/06/18 15:44

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	71.9	71.8	106	106	85.0-115			0.0605	20
Ethane	129	117	122	90.9	94.4	85.0-115			3.79	20
Ethene	127	116	120	91.6	94.6	85.0-115			3.17	20



Method Blank (MB)

(MB) R3340580-3 09/02/18 16:25

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3340580-3 09/02/18 16:25

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	98.9			75.0-120
(S) a,a,a-Trifluorotoluene	98.6			80.0-120
(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) R3340580-1 09/02/18 14:47 • (LCSD) R3340580-2 09/02/18 15:07

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 %
Acetone	125	132	129	105	103	19.0-160			2.17	27
Acrolein	125	130	126	104	101	10.0-160			3.05	26



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

(LCS) R3340580-1 09/02/18 14:47 • (LCSD) R3340580-2 09/02/18 15:07

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 %
Acrylonitrile	125	129	126	103	100	55.0-149			2.45	20
Benzene	25.0	26.6	25.0	106	99.9	70.0-123			6.18	20
Bromobenzene	25.0	26.4	25.3	106	101	73.0-121			4.32	20
Bromodichloromethane	25.0	26.1	25.1	104	100	75.0-120			3.85	20
Bromoform	25.0	26.2	25.9	105	104	68.0-132			1.13	20
Bromomethane	25.0	15.6	19.0	62.3	76.0	10.0-160			19.8	25
n-Butylbenzene	25.0	27.5	27.6	110	110	73.0-125			0.504	20
sec-Butylbenzene	25.0	27.0	26.5	108	106	75.0-125			1.81	20
tert-Butylbenzene	25.0	26.6	26.0	107	104	76.0-124			2.40	20
Carbon tetrachloride	25.0	25.9	25.1	103	100	68.0-126			2.93	20
Chlorobenzene	25.0	28.2	26.5	113	106	80.0-121			6.24	20
Chlorodibromomethane	25.0	28.4	26.9	114	108	77.0-125			5.31	20
Chloroethane	25.0	33.8	31.5	135	126	47.0-150			6.85	20
Chloroform	25.0	27.3	25.6	109	102	73.0-120			6.31	20
Chloromethane	25.0	27.1	25.3	108	101	41.0-142			6.94	20
2-Chlorotoluene	25.0	26.5	26.0	106	104	76.0-123			2.12	20
4-Chlorotoluene	25.0	27.0	26.1	108	104	75.0-122			3.50	20
1,2-Dibromo-3-Chloropropane	25.0	24.9	25.2	99.7	101	58.0-134			0.991	20
1,2-Dibromoethane	25.0	28.6	27.3	114	109	80.0-122			4.80	20
Dibromomethane	25.0	27.9	27.7	112	111	80.0-120			0.583	20
1,2-Dichlorobenzene	25.0	27.1	27.1	108	108	79.0-121			0.169	20
1,3-Dichlorobenzene	25.0	27.6	26.5	111	106	79.0-120			4.11	20
1,4-Dichlorobenzene	25.0	25.3	25.0	101	100	79.0-120			1.11	20
Dichlorodifluoromethane	25.0	28.5	27.9	114	111	51.0-149			2.25	20
1,1-Dichloroethane	25.0	26.5	24.7	106	99.0	70.0-126			6.83	20
1,2-Dichloroethane	25.0	27.4	25.9	109	104	70.0-128			5.52	20
1,1-Dichloroethene	25.0	27.2	26.8	109	107	71.0-124			1.43	20
cis-1,2-Dichloroethene	25.0	27.0	26.0	108	104	73.0-120			4.06	20
trans-1,2-Dichloroethene	25.0	26.4	24.9	105	99.5	73.0-120			5.74	20
1,2-Dichloropropane	25.0	27.5	26.4	110	106	77.0-125			4.21	20
1,1-Dichloropropene	25.0	27.2	25.9	109	104	74.0-126			4.87	20
1,3-Dichloropropane	25.0	26.5	25.7	106	103	80.0-120			2.71	20
cis-1,3-Dichloropropene	25.0	27.9	26.6	112	106	80.0-123			4.96	20
trans-1,3-Dichloropropene	25.0	26.4	25.2	105	101	78.0-124			4.60	20
2,2-Dichloropropane	25.0	25.6	24.8	102	99.1	58.0-130			3.24	20
Di-isopropyl ether	25.0	26.0	25.0	104	100	58.0-138			3.81	20
Ethylbenzene	25.0	28.1	26.5	112	106	79.0-123			5.73	20
Hexachloro-1,3-butadiene	25.0	26.1	26.9	104	107	54.0-138			2.97	20
Isopropylbenzene	25.0	27.3	26.4	109	106	76.0-127			3.33	20
p-Isopropyltoluene	25.0	27.2	26.4	109	106	76.0-125			2.82	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3340580-1 09/02/18 14:47 • (LCSD) R3340580-2 09/02/18 15:07

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 %
2-Butanone (MEK)	125	136	134	108	107	44.0-160			1.44	20
Methylene Chloride	25.0	25.7	24.1	103	96.3	67.0-120			6.35	20
4-Methyl-2-pentanone (MIBK)	125	130	126	104	101	68.0-142			3.07	20
Methyl tert-butyl ether	25.0	26.5	24.7	106	98.8	68.0-125			7.16	20
Naphthalene	25.0	24.6	24.8	98.5	99.4	54.0-135			0.898	20
n-Propylbenzene	25.0	27.2	26.4	109	105	77.0-124			3.00	20
Styrene	25.0	28.7	27.9	115	112	73.0-130			2.70	20
1,1,1,2-Tetrachloroethane	25.0	27.5	25.4	110	102	75.0-125			8.07	20
1,1,2,2-Tetrachloroethane	25.0	24.4	23.5	97.5	94.0	65.0-130			3.68	20
Tetrachloroethene	25.0	30.0	27.5	120	110	72.0-132			8.49	20
Toluene	25.0	26.4	25.5	106	102	79.0-120			3.55	20
1,1,2-Trichlorotrifluoroethane	25.0	28.1	28.1	113	112	69.0-132			0.166	20
1,2,3-Trichlorobenzene	25.0	26.8	26.4	107	106	50.0-138			1.39	20
1,2,4-Trichlorobenzene	25.0	27.7	27.7	111	111	57.0-137			0.0986	20
1,1,1-Trichloroethane	25.0	27.7	26.2	111	105	73.0-124			5.42	20
1,1,2-Trichloroethane	25.0	28.7	26.5	115	106	80.0-120			8.08	20
Trichloroethene	25.0	28.6	26.9	114	108	78.0-124			6.01	20
Trichlorofluoromethane	25.0	31.4	30.3	126	121	59.0-147			3.81	20
1,2,3-Trichloropropane	25.0	24.9	25.8	99.7	103	73.0-130			3.64	20
1,2,3-Trimethylbenzene	25.0	26.6	25.5	106	102	77.0-120			4.44	20
1,2,4-Trimethylbenzene	25.0	26.8	26.2	107	105	76.0-121			2.33	20
1,3,5-Trimethylbenzene	25.0	25.3	24.4	101	97.6	76.0-122			3.61	20
Vinyl chloride	25.0	29.5	27.4	118	110	67.0-131			7.52	20
o-Xylene	25.0	28.6	27.0	114	108	80.0-122			5.65	20
m&p-Xylenes	50.0	55.2	51.9	110	104	80.0-122			6.14	20
(S) Toluene-d8				100	99.0	80.0-120				
(S) Dibromofluoromethane				96.9	96.1	75.0-120				
(S) a,a,a-Trifluorotoluene				99.1	102	80.0-120				
(S) 4-Bromofluorobenzene				96.9	100	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) R3338989-1 09/03/18 22:19

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	84.0			52.0-156

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

(LCS) R3338989-2 09/03/18 22:38 • (LCSD) R3338989-3 09/03/18 22:57

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	776	103	103	50.0-150			0.906	20
Residual Range Organics (RRO)	750	736	745	98.1	99.3	50.0-150			1.22	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



Method Blank (MB)

(MB) R3340288-1 09/07/18 14:41

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>	73.0			52.0-156

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

(LCS) R3340288-2 09/07/18 15:01 • (LCSD) R3340288-3 09/07/18 15:58

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	871	871	116	116	50.0-150			0.000	20
Residual Range Organics (RRO)	750	808	820	108	109	50.0-150			1.47	20
<i>(S) o-Terphenyl</i>				99.5	98.5	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) R3339494-1 09/05/18 22:49

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>	93.0			52.0-156

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

(LCS) R3339494-2 09/05/18 23:09 • (LCSD) R3339494-3 09/05/18 23:29

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	829	843	111	112	50.0-150			1.67	20
Residual Range Organics (RRO)	750	774	802	103	107	50.0-150			3.55	20
<i>(S) o-Terphenyl</i>				108	108	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) R3339232-3 09/05/18 10:37

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	0.0240	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	54.5			31.0-160
(S) 2-Fluorobiphenyl	92.0			48.0-148
(S) p-Terphenyl-d14	93.0			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) R3339232-1 09/05/18 09:54 • (LCSD) R3339232-2 09/05/18 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 %
Anthracene	2.00	1.82	1.78	91.0	89.0	67.0-150			2.22	20
Acenaphthene	2.00	1.66	1.66	83.0	83.0	65.0-138			0.000	20
Acenaphthylene	2.00	1.64	1.64	82.0	82.0	66.0-140			0.000	20
Benzo(a)anthracene	2.00	1.69	1.69	84.5	84.5	61.0-140			0.000	20
Benzo(a)pyrene	2.00	1.78	1.76	89.0	88.0	60.0-143			1.13	20
Benzo(b)fluoranthene	2.00	1.71	1.74	85.5	87.0	58.0-141			1.74	20
Benzo(g,h,i)perylene	2.00	1.87	1.87	93.5	93.5	52.0-153			0.000	20
Benzo(k)fluoranthene	2.00	1.83	1.83	91.5	91.5	58.0-148			0.000	20
Chrysene	2.00	1.75	1.75	87.5	87.5	64.0-144			0.000	20
Dibenz(a,h)anthracene	2.00	1.87	1.87	93.5	93.5	52.0-155			0.000	20
Fluoranthene	2.00	1.87	1.88	93.5	94.0	69.0-153			0.533	20



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

(LCS) R3339232-1 09/05/18 09:54 • (LCSD) R3339232-2 09/05/18 10:16

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 %
Fluorene	2.00	1.56	1.56	78.0	78.0	64.0-136			0.000	20
Indeno(1,2,3-cd)pyrene	2.00	1.88	1.89	94.0	94.5	54.0-153			0.531	20
Naphthalene	2.00	1.55	1.55	77.5	77.5	61.0-137			0.000	20
Phenanthrene	2.00	1.69	1.69	84.5	84.5	62.0-137			0.000	20
Pyrene	2.00	1.69	1.69	84.5	84.5	60.0-142			0.000	20
1-Methylnaphthalene	2.00	1.67	1.67	83.5	83.5	66.0-142			0.000	20
2-Methylnaphthalene	2.00	1.59	1.58	79.5	79.0	62.0-136			0.631	20
2-Chloronaphthalene	2.00	1.67	1.68	83.5	84.0	64.0-140			0.597	20
<i>(S) Nitrobenzene-d5</i>				55.0	53.5	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				88.0	88.0	48.0-148				
<i>(S) p-Terphenyl-d14</i>				86.5	86.5	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, 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).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	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

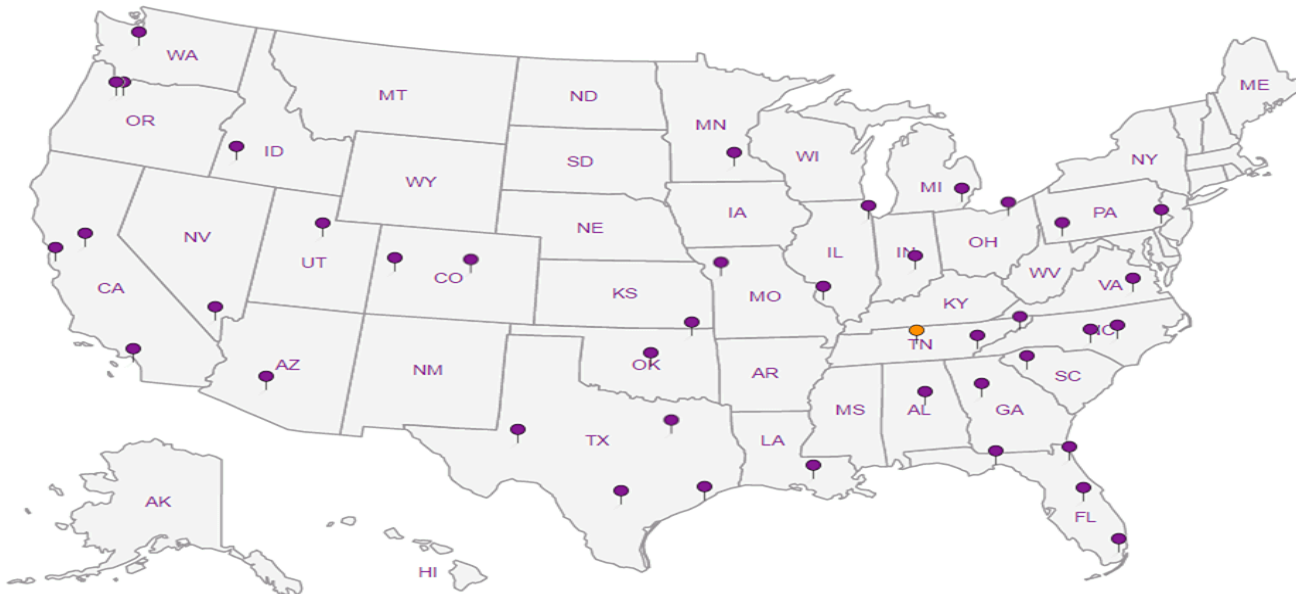
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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 # **1896120\*04** Lab Project # **BNSF1KEN-WISHRAM**

Fax: \_\_\_\_\_

Collected by (print): **Alice Robinson** Site/Facility ID # \_\_\_\_\_ P.O. # \_\_\_\_\_

Collected by (signature): **deli** **Rush?** (Lab MUST Be Notified)

Immediately \_\_\_\_\_ Three Day \_\_\_\_\_

Packed on Ice N  Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative	Chain of Custody
RMD-5-20180830	grab	GW	37.5'	8-30-18	12:55	16	DisM6020RCRA8+ Fe,Mn 250mlHDPE-HNO3	Pace Analytical* National Center for Testing & Innovation 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-9859 Fax: 615-758-5859 L# <b>U022689</b> <b>A191</b> Acctnum: <b>BNSF1KEN</b> Template: <b>T139245</b> Prelogin: <b>P666498</b> TSR: <b>134 - Mark W. Beasley</b> PB: <b>8-9-18</b> Shipped Via: <b>FedEX Ground</b>
RMD-6-20180831	↓	GW	55'	8-30-18	6:55	16	Dissolved Pb 250mlHDPE-HNO3 + Mn + Fe	
WMMW-29-20180831	↓	GW	15'	8-31-18	19:10	14	NH3, NO2NO3 250mlHDPE-H2SO4	
Trip Blank		GW				1	NWTPHDXLVI- No SGT 40mlAmb-HCl-BT	
		GW					NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT	
		GW					NWTPHGx 40mlAmb HCl	
		GW					PAHSIMLVID 40mlAmb-NoPres-WT	
		GW					RSK175 40mlAmb HCl	
		GW					Sulfate 125mlHDPE-NoPres	
		GW					Sulfide 125mlAmb-S-NaOH+ZnAc	

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative	Chain of Custody
RMD-5-20180830	grab	GW	37.5'	8-30-18	12:55	16	DisM6020RCRA8+ Fe,Mn 250mlHDPE-HNO3	Pace Analytical* National Center for Testing & Innovation 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-9859 Fax: 615-758-5859 L# <b>U022689</b> <b>A191</b> Acctnum: <b>BNSF1KEN</b> Template: <b>T139245</b> Prelogin: <b>P666498</b> TSR: <b>134 - Mark W. Beasley</b> PB: <b>8-9-18</b> Shipped Via: <b>FedEX Ground</b>
RMD-6-20180831	↓	GW	55'	8-30-18	6:55	16	Dissolved Pb 250mlHDPE-HNO3 + Mn + Fe	
WMMW-29-20180831	↓	GW	15'	8-31-18	19:10	14	NH3, NO2NO3 250mlHDPE-H2SO4	
Trip Blank		GW				1	NWTPHDXLVI- No SGT 40mlAmb-HCl-BT	
		GW					NWTPHDXLVI- w/ SGT 40mlAmb-HCl-BT	
		GW					NWTPHGx 40mlAmb HCl	
		GW					PAHSIMLVID 40mlAmb-NoPres-WT	
		GW					RSK175 40mlAmb HCl	
		GW					Sulfate 125mlHDPE-NoPres	
		GW					Sulfide 125mlAmb-S-NaOH+ZnAc	

\* Matrix: SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other \_\_\_\_\_

Remarks: **Dissolved metals samples have been filtered**

Tracking # **4492 6222 5200**

PH \_\_\_\_\_ Temp \_\_\_\_\_  
RAD SCREEN: **<0.5 mR/hr**  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier \_\_\_\_\_

**Sample Receipt Checklist**

CDC Seal Present/Intact:  NP  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

Relinquished by: (Signature) <b>deli</b>	Date: <b>8-31-18</b>	Time: <b>10:30</b>	Received by: (Signature)	Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>1</b> <input type="checkbox"/> HCl/MeOH <input type="checkbox"/> TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <b>4.7°C</b> Bottles Received: <b>46</b>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <b>Blamen</b>	Date: <b>9/1/18</b> Time: <b>0845</b> Hold: Condition: <b>NCF / OK</b>



# 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):  
*Alice Robinson*

Site/Facility ID #

P.O. #

Collected by (signature):  
*Aliu Bala*

**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

Immediately  
Packed on Ice: N \_\_\_ Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl									
RMD-5-20180830	grab	GW	37.5'	8-30-18	12:55	16	X	X	X										
RMD-6-20180830	↓	GW	55'	8-30-18	16:55	16	X	X	X										
NMW-29-20180831	↓	GW	15'	8-31-18	9:10	14	X	X	X										
Trip Blank		GW																	
		GW																	
		GW																	
		GW																	
		GW																	
		GW																	
		GW																	

L # **4022689**  
Table #  
Acctnum: **BNSF1KEN**  
Template: **T139245**  
Prelogin: **P666498**  
TSR: **134 - Mark W. Beasley**  
PB: **8-9-18**  
Shipped Via: **FedEX Ground**

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: *Dissolved Metals samples have been filtered*  
RAD SCREEN: <0.5 mR/hr

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

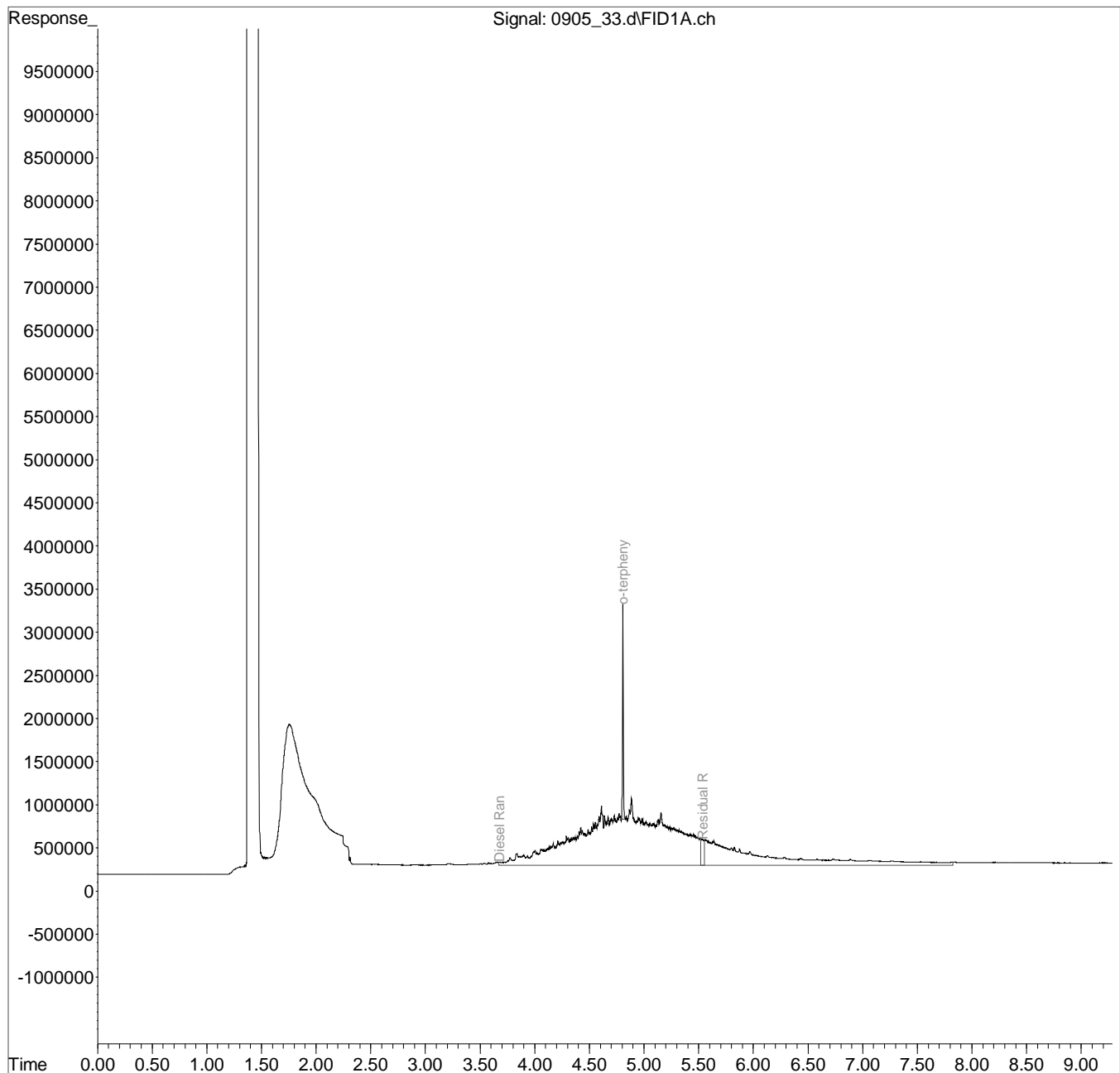
Samples returned via:  
UPS  FedEx \_\_\_ Courier \_\_\_  
Tracking # **4492 6222 5200**

Relinquished by: (Signature) <i>Aliu Bala</i>	Date: <b>8-31-18</b>	Time: <b>10:30</b>	Received by: (Signature)	Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>HCl / MeOH</b> <b>TBR</b>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: *C <b>4.7</b>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Bottles Received: <b>46</b>
				If preservation required by Login: Date/Time
				Hold: <b>9/1/18</b> <b>0845</b>
				Condition: <b>NCF / OK</b>

Data Path : C:\msdchem\1\data\090518\  
Data File : 0905 33.d  
Signal(s) : FID1A.ch  
Acq On : 6 Sep 2018 12:29 am  
Operator : 784  
Sample : L1022689-01 1x WG1161836  
Misc : M.I.s on ranges are corrections  
ALS Vial : 25 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Sep 06 08:25:09 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

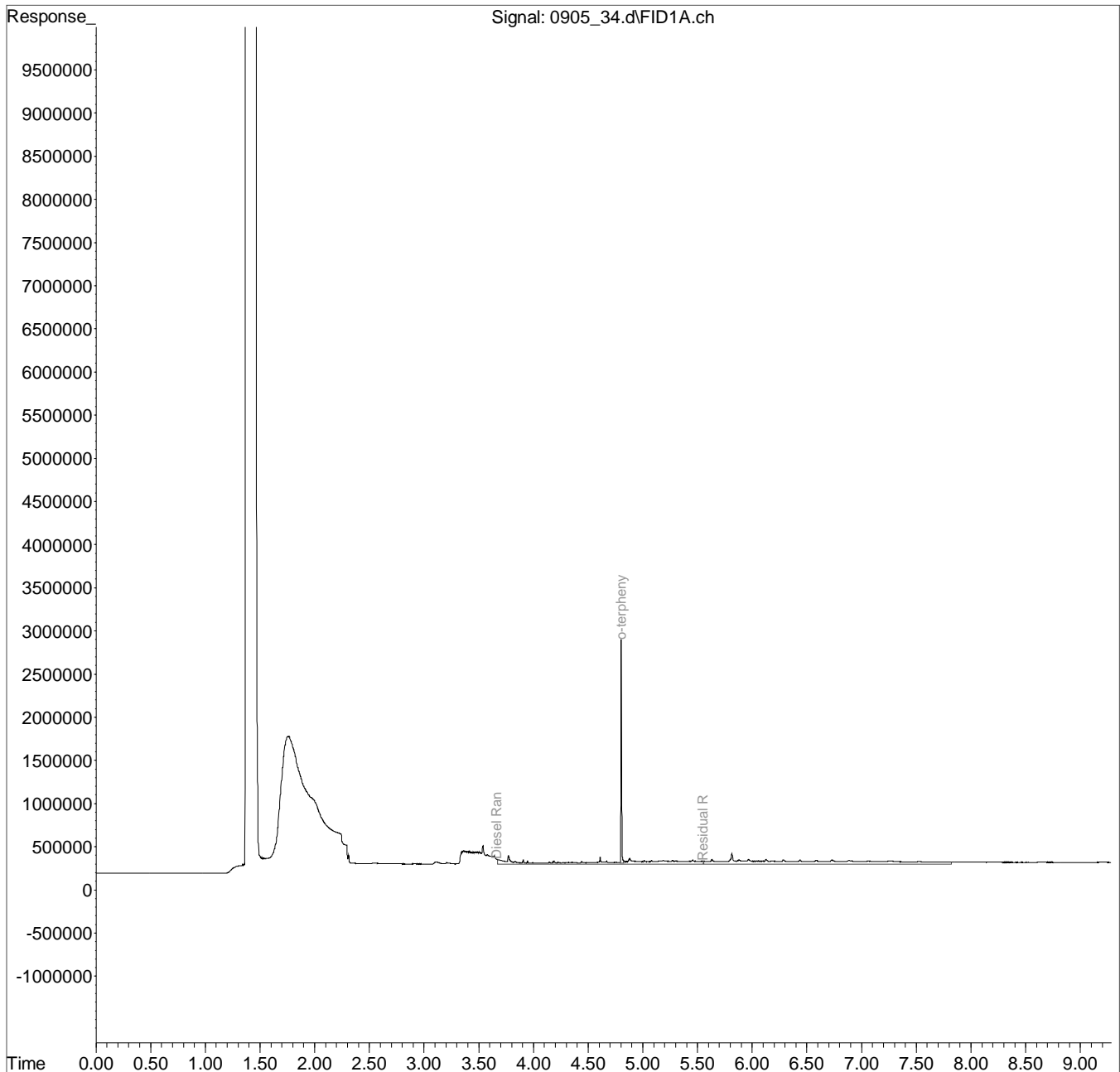
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\090518\  
 Data File : 0905 34.d  
 Signal(s) : FID1A.ch  
 Acq On : 6 Sep 2018 12:49 am  
 Operator : 784  
 Sample : L1022689-02 1x WG1161836  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 26 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Sep 06 08:25:39 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

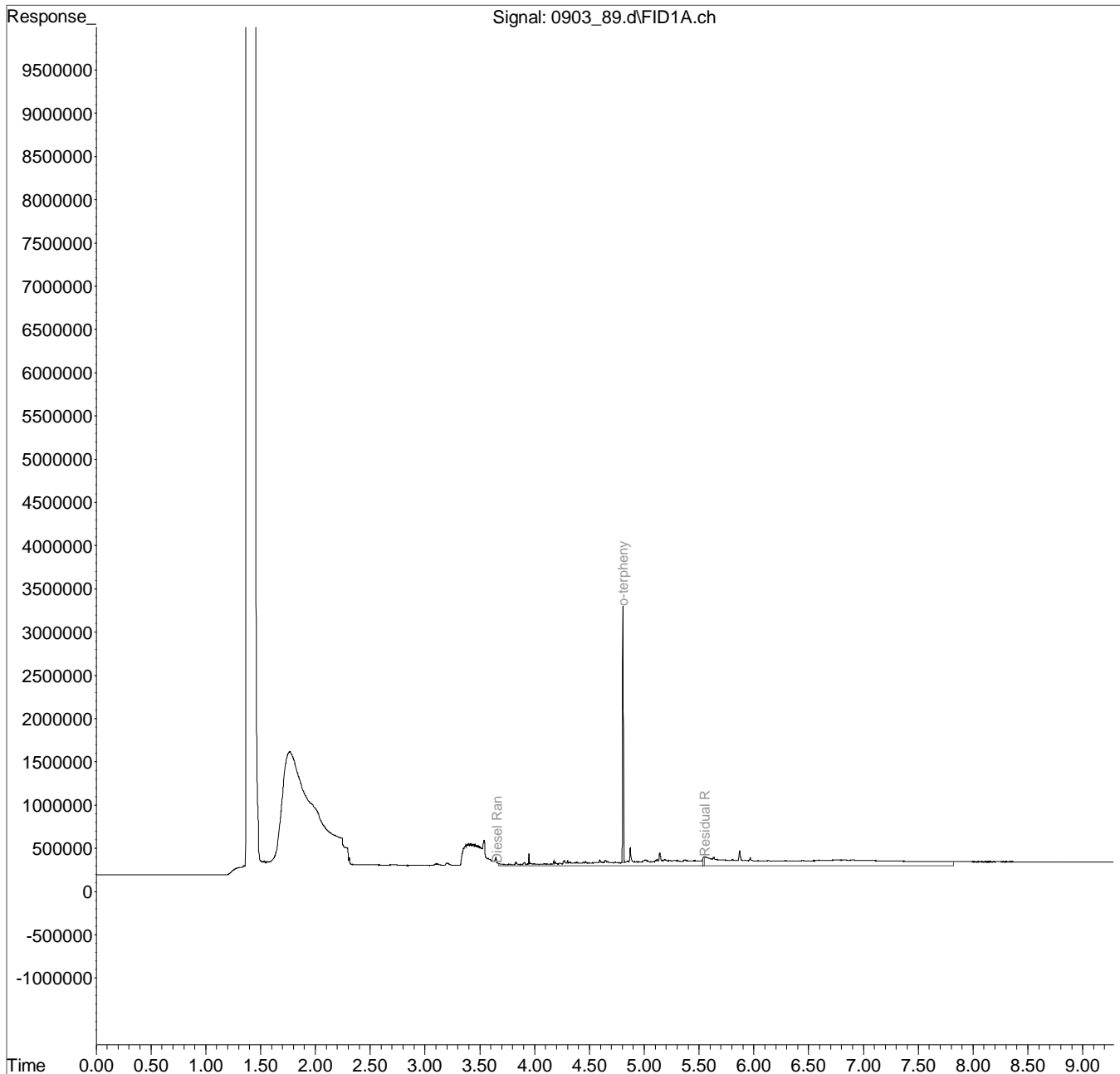
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\090318\  
 Data File : 0903 89.d  
 Signal(s) : FID1A.ch  
 Acq On : 4 Sep 2018 10:10 pm  
 Operator : 773  
 Sample : L1022689-02 1x WG1160945  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 66 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Sep 05 11:21:27 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

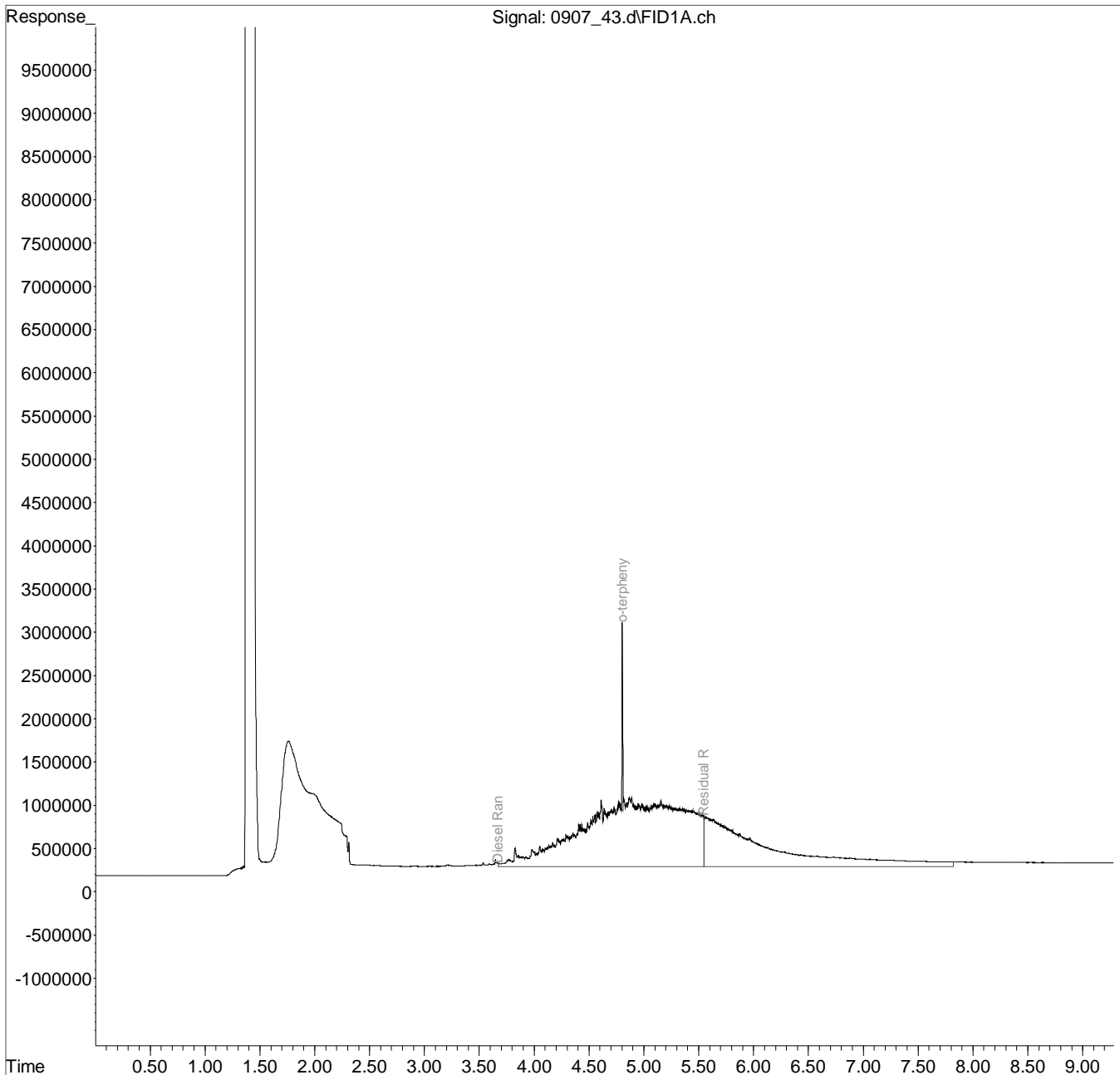
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\090718\  
 Data File : 0907 43.d  
 Signal(s) : FID1A.ch  
 Acq On : 7 Sep 2018 11:36 pm  
 Operator : 773  
 Sample : L1022689-01 1x WG1162436  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 31 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Sep 08 13:05:10 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

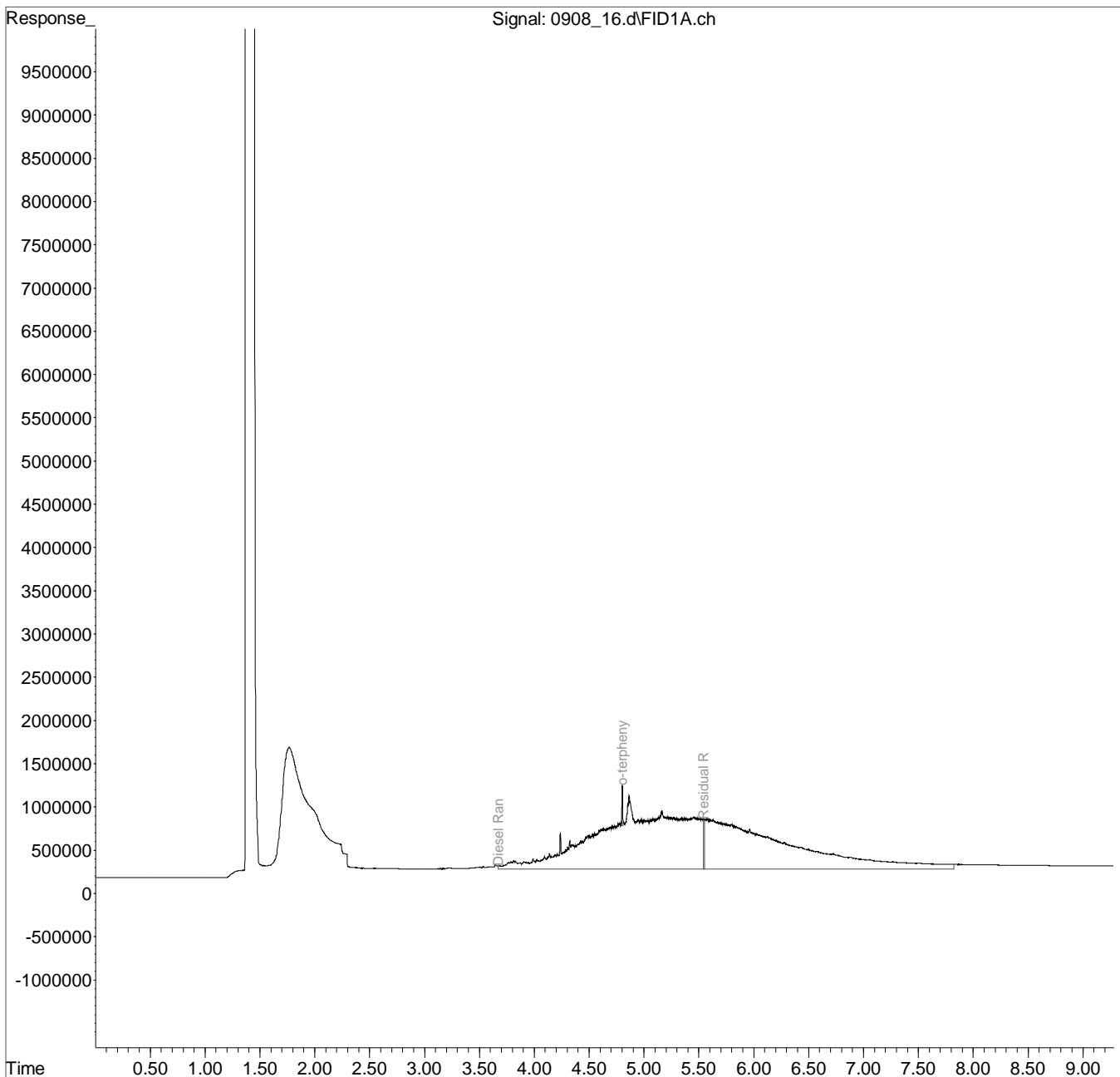
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\090818\  
 Data File : 0908 16.d  
 Signal(s) : FID1A.ch  
 Acq On : 8 Sep 2018 5:01 pm  
 Operator : 784  
 Sample : L1022689-03 5x WG1162436  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 12 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Sep 09 09:04:14 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

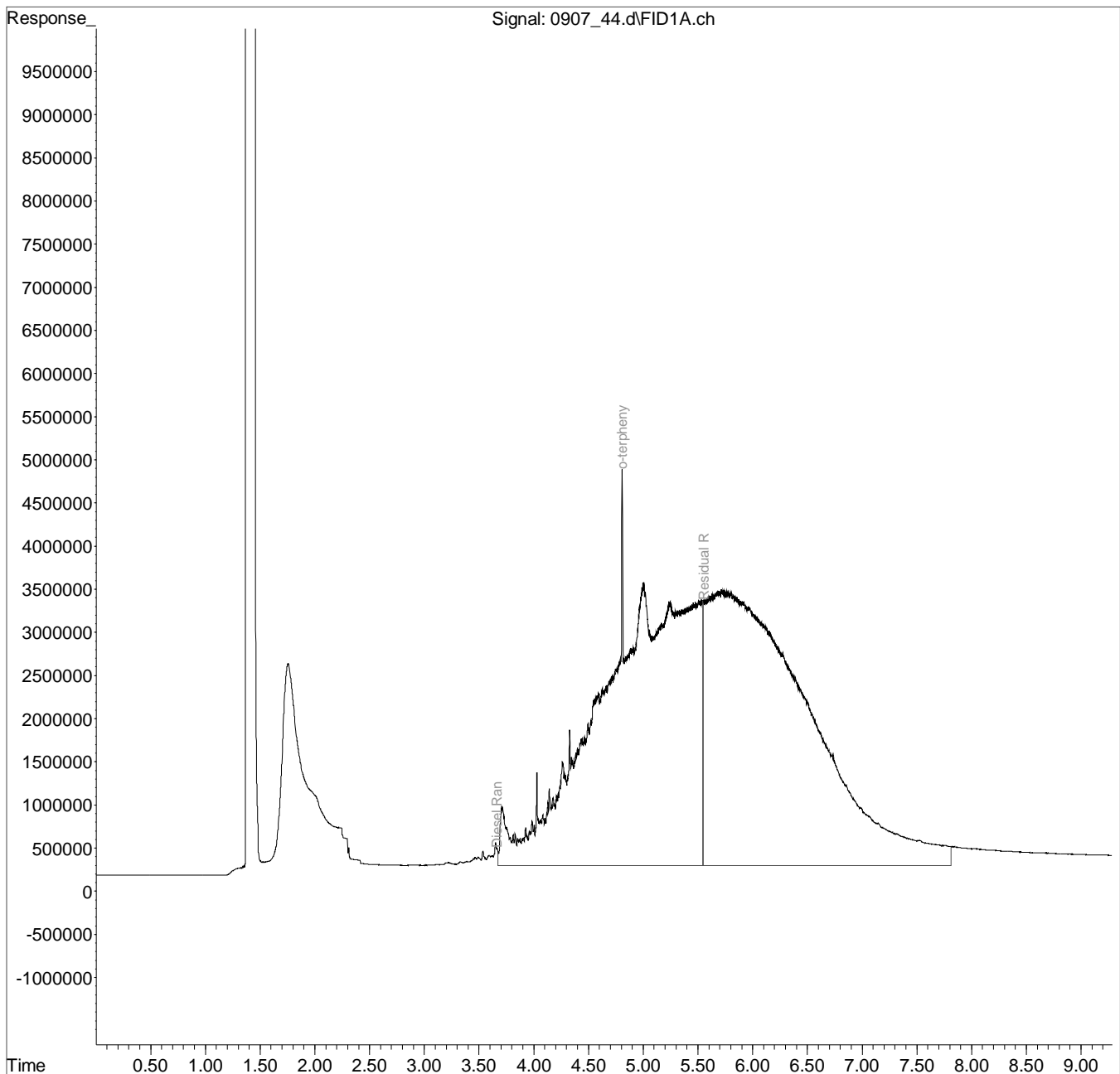
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\090718\  
Data File : 0907 44.d  
Signal(s) : FID1A.ch  
Acq On : 7 Sep 2018 11:56 pm  
Operator : 773  
Sample : L1022689-03 1x WG1162436  
Misc : M.I.s on ranges are corrections  
ALS Vial : 32 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Sep 08 13:06:15 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



---

Groundwater Analytical Reports  
5 to 7 November 2018



November 19, 2018

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1042805  
Samples Received: 11/09/2018  
Project Number: 1896120.00  
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-14-20181107 L1042805-01 GW

Collected by  
K. Teague  
Collected date/time  
11/07/18 09:20  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195348	1	11/13/18 18:30	11/13/18 18:30	JER
Wet Chemistry by Method 353.2	WG1195353	1	11/14/18 17:51	11/14/18 17:51	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194829	1	11/11/18 14:05	11/11/18 14:05	TH
Wet Chemistry by Method 9056A	WG1194397	1	11/10/18 16:24	11/10/18 16:24	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 19:46	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 11:40	11/12/18 11:40	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1194932	1	11/11/18 17:13	11/12/18 18:34	ADF

1  
Cp

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Sr

## WMW-15-20181107 L1042805-02 GW

Collected by  
K. Teague  
Collected date/time  
11/07/18 10:50  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195348	1	11/13/18 18:32	11/13/18 18:32	JER
Wet Chemistry by Method 353.2	WG1195353	1	11/14/18 17:53	11/14/18 17:53	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194829	1	11/11/18 14:06	11/11/18 14:06	TH
Wet Chemistry by Method 9056A	WG1194397	1	11/10/18 16:53	11/10/18 16:53	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 20:05	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 11:42	11/12/18 11:42	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1194932	1	11/11/18 17:13	11/12/18 18:54	ADF

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Qc

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## WMW-16-20181107 L1042805-03 GW

Collected by  
K. Teague  
Collected date/time  
11/07/18 12:00  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195348	1	11/13/18 18:34	11/13/18 18:34	JER
Wet Chemistry by Method 353.2	WG1195353	1	11/14/18 17:54	11/14/18 17:54	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194829	1	11/11/18 14:06	11/11/18 14:06	TH
Wet Chemistry by Method 9056A	WG1194397	1	11/10/18 17:03	11/10/18 17:03	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 20:09	LD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1194883	1	11/11/18 18:09	11/11/18 18:09	CAH
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 11:45	11/12/18 11:45	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1194932	1	11/11/18 17:13	11/12/18 19:14	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1195399	1	11/13/18 20:11	11/14/18 06:19	CJR

## WMW-17-20181107 L1042805-04 GW

Collected by  
K. Teague  
Collected date/time  
11/07/18 10:00  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195348	1	11/13/18 18:35	11/13/18 18:35	JER
Wet Chemistry by Method 353.2	WG1195353	1	11/14/18 18:02	11/14/18 18:02	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194830	1	11/11/18 14:47	11/11/18 14:47	TH
Wet Chemistry by Method 9056A	WG1194397	1	11/10/18 17:12	11/10/18 17:12	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 20:29	LD
Metals (ICPMS) by Method 6020B	WG1195052	1	11/13/18 15:38	11/15/18 15:12	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1194883	1	11/11/18 18:30	11/11/18 18:30	CAH
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 11:47	11/12/18 11:47	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1194932	1	11/11/18 17:13	11/12/18 19:35	ADF

# SAMPLE SUMMARY



## WMW-18-20181107 L1042805-05 GW

Collected by  
K. Teague  
Collected date/time  
11/07/18 08:20  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195348	1	11/13/18 18:37	11/13/18 18:37	JER
Wet Chemistry by Method 353.2	WG1195353	1	11/14/18 18:03	11/14/18 18:03	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194830	1	11/11/18 14:48	11/11/18 14:48	TH
Wet Chemistry by Method 9056A	WG1194397	1	11/10/18 17:22	11/10/18 17:22	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 20:33	LD
Metals (ICPMS) by Method 6020B	WG1195052	1	11/13/18 15:38	11/15/18 15:16	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 11:49	11/12/18 11:49	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1194932	1	11/11/18 17:13	11/12/18 19:55	SHG

1  
Cp

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Ss

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Cn

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Sr

## D-2-20181107 L1042805-06 GW

Collected by  
K. Teague  
Collected date/time  
11/07/18 10:30  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195348	1	11/13/18 18:43	11/13/18 18:43	JER
Wet Chemistry by Method 353.2	WG1195353	1	11/14/18 18:05	11/14/18 18:05	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194830	1	11/11/18 14:48	11/11/18 14:48	TH
Wet Chemistry by Method 9056A	WG1194397	1	11/10/18 17:51	11/10/18 17:51	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 20:38	LD
Metals (ICPMS) by Method 6020B	WG1195052	1	11/13/18 15:38	11/15/18 15:21	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1194883	1	11/11/18 18:50	11/11/18 18:50	CAH
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 11:52	11/12/18 11:52	MEL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1194932	1	11/11/18 17:13	11/12/18 20:15	SHG

6  
Qc

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Gl

8  
Al

9  
Sc

## TB-02-20181107 L1042805-07 GW

Collected by  
K. Teague  
Collected date/time  
11/07/18 00:00  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194370	1	11/09/18 22:13	11/09/18 22:13	TJJ



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

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/13/2018 18:30	<a href="#">WG1195348</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	408		100	1	11/14/2018 17:51	<a href="#">WG1195353</a>

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	11/11/2018 14:05	<a href="#">WG1194829</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	9630		5000	1	11/10/2018 16:24	<a href="#">WG1194397</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 19:46	<a href="#">WG1194497</a>
Manganese,Dissolved	ND		5.00	1	11/14/2018 19:46	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 11:40	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 11:40	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 11:40	<a href="#">WG1194494</a>

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	11/12/2018 18:34	<a href="#">WG1194932</a>
Residual Range Organics (RRO)	ND		250	1	11/12/2018 18:34	<a href="#">WG1194932</a>
(S) o-Terphenyl	81.1		52.0-156		11/12/2018 18:34	<a href="#">WG1194932</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	159		100	1	11/13/2018 18:32	<a href="#">WG1195348</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	300		100	1	11/14/2018 17:53	<a href="#">WG1195353</a>

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	11/11/2018 14:06	<a href="#">WG1194829</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	15300		5000	1	11/10/2018 16:53	<a href="#">WG1194397</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	193		100	1	11/14/2018 20:05	<a href="#">WG1194497</a>
Manganese,Dissolved	589		5.00	1	11/14/2018 20:05	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	262		10.0	1	11/12/2018 11:42	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 11:42	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 11:42	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2600		200	1	11/12/2018 18:54	<a href="#">WG1194932</a>
Residual Range Organics (RRO)	2160		250	1	11/12/2018 18:54	<a href="#">WG1194932</a>
(S) o-Terphenyl	95.3		52.0-156		11/12/2018 18:54	<a href="#">WG1194932</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	897		100	1	11/13/2018 18:34	<a href="#">WG1195348</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/14/2018 17:54	<a href="#">WG1195353</a>

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	11/11/2018 14:06	<a href="#">WG1194829</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	11/10/2018 17:03	<a href="#">WG1194397</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	2050		100	1	11/14/2018 20:09	<a href="#">WG1194497</a>
Manganese,Dissolved	944		5.00	1	11/14/2018 20:09	<a href="#">WG1194497</a>

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	11/11/2018 18:09	<a href="#">WG1194883</a>
(S) a,a,a-Trifluorotoluene(FID)	103		78.0-120		11/11/2018 18:09	<a href="#">WG1194883</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	2410		10.0	1	11/12/2018 11:45	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 11:45	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 11:45	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3760		200	1	11/12/2018 19:14	<a href="#">WG1194932</a>
Residual Range Organics (RRO)	2340		250	1	11/12/2018 19:14	<a href="#">WG1194932</a>
(S) o-Terphenyl	76.3		52.0-156		11/12/2018 19:14	<a href="#">WG1194932</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Acenaphthene	0.336		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Acenaphthylene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Benzo(a)anthracene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Benzo(a)pyrene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Benzo(b)fluoranthene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>





Collected date/time: 11/07/18 12:00

L1042805

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	11/14/2018 06:19	<a href="#">WG1195399</a>
Benzo(k)fluoranthene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Chrysene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Dibenz(a,h)anthracene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Fluoranthene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Fluorene	0.613		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Naphthalene	0.789		0.250	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Phenanthrene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
Pyrene	ND		0.0500	1	11/14/2018 06:19	<a href="#">WG1195399</a>
1-Methylnaphthalene	15.0		0.250	1	11/14/2018 06:19	<a href="#">WG1195399</a>
2-Methylnaphthalene	1.51		0.250	1	11/14/2018 06:19	<a href="#">WG1195399</a>
2-Chloronaphthalene	ND		0.250	1	11/14/2018 06:19	<a href="#">WG1195399</a>
(S) Nitrobenzene-d5	121		31.0-160		11/14/2018 06:19	<a href="#">WG1195399</a>
(S) 2-Fluorobiphenyl	111		48.0-148		11/14/2018 06:19	<a href="#">WG1195399</a>
(S) p-Terphenyl-d14	94.2		37.0-146		11/14/2018 06:19	<a href="#">WG1195399</a>

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	194		100	1	11/13/2018 18:35	<a href="#">WG1195348</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/14/2018 18:02	<a href="#">WG1195353</a>

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	11/11/2018 14:47	<a href="#">WG1194830</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	11/10/2018 17:12	<a href="#">WG1194397</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.76		2.00	1	11/15/2018 15:12	<a href="#">WG1195052</a>
Arsenic,Dissolved	4.35		2.00	1	11/14/2018 20:29	<a href="#">WG1194497</a>
Iron,Dissolved	2050		100	1	11/14/2018 20:29	<a href="#">WG1194497</a>
Manganese,Dissolved	687		5.00	1	11/14/2018 20:29	<a href="#">WG1194497</a>

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	11/11/2018 18:30	<a href="#">WG1194883</a>
(S) a,a,a-Trifluorotoluene(FID)	103		78.0-120		11/11/2018 18:30	<a href="#">WG1194883</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	586		10.0	1	11/12/2018 11:47	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 11:47	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 11:47	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	883		200	1	11/12/2018 19:35	<a href="#">WG1194932</a>
Residual Range Organics (RRO)	942		250	1	11/12/2018 19:35	<a href="#">WG1194932</a>
(S) o-Terphenyl	87.9		52.0-156		11/12/2018 19:35	<a href="#">WG1194932</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/13/2018 18:37	<a href="#">WG1195348</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	163		100	1	11/14/2018 18:03	<a href="#">WG1195353</a>

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	11/11/2018 14:48	<a href="#">WG1194830</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	13400		5000	1	11/10/2018 17:22	<a href="#">WG1194397</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	5.36		2.00	1	11/15/2018 15:16	<a href="#">WG1195052</a>
Arsenic,Dissolved	5.25		2.00	1	11/14/2018 20:33	<a href="#">WG1194497</a>
Iron,Dissolved	ND		100	1	11/14/2018 20:33	<a href="#">WG1194497</a>
Manganese,Dissolved	ND		5.00	1	11/14/2018 20:33	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 11:49	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 11:49	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 11:49	<a href="#">WG1194494</a>

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	11/12/2018 19:55	<a href="#">WG1194932</a>
Residual Range Organics (RRO)	ND		250	1	11/12/2018 19:55	<a href="#">WG1194932</a>
(S) o-Terphenyl	78.4		52.0-156		11/12/2018 19:55	<a href="#">WG1194932</a>



## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	188		100	1	11/13/2018 18:43	<a href="#">WG1195348</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/14/2018 18:05	<a href="#">WG1195353</a>

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	11/11/2018 14:48	<a href="#">WG1194830</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	11/10/2018 17:51	<a href="#">WG1194397</a>

7 Gl

8 Al

## Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.51		2.00	1	11/15/2018 15:21	<a href="#">WG1195052</a>
Arsenic,Dissolved	3.74		2.00	1	11/14/2018 20:38	<a href="#">WG1194497</a>
Iron,Dissolved	2000		100	1	11/14/2018 20:38	<a href="#">WG1194497</a>
Manganese,Dissolved	677		5.00	1	11/14/2018 20:38	<a href="#">WG1194497</a>

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	11/11/2018 18:50	<a href="#">WG1194883</a>
(S) a, a, a-Trifluorotoluene(FID)	103		78.0-120		11/11/2018 18:50	<a href="#">WG1194883</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	559		10.0	1	11/12/2018 11:52	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 11:52	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 11:52	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	853		200	1	11/12/2018 20:15	<a href="#">WG1194932</a>
Residual Range Organics (RRO)	896		250	1	11/12/2018 20:15	<a href="#">WG1194932</a>
(S) o-Terphenyl	87.9		52.0-156		11/12/2018 20:15	<a href="#">WG1194932</a>



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	11/09/2018 22:13	<a href="#">WG1194370</a>
Acrolein	ND		50.0	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Acrylonitrile	ND		10.0	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Benzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Bromobenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Bromodichloromethane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Bromoform	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Bromomethane	ND		5.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
n-Butylbenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
sec-Butylbenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
tert-Butylbenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Carbon tetrachloride	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Chlorobenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Chlorodibromomethane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Chloroethane	ND		5.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Chloroform	ND		5.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Chloromethane	ND		2.50	1	11/09/2018 22:13	<a href="#">WG1194370</a>
2-Chlorotoluene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
4-Chlorotoluene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,2-Dibromoethane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Dibromomethane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,2-Dichlorobenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,3-Dichlorobenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,4-Dichlorobenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Dichlorodifluoromethane	ND		5.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,1-Dichloroethane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,2-Dichloroethane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,1-Dichloroethene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,2-Dichloropropane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,1-Dichloropropene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,3-Dichloropropane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
2,2-Dichloropropane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Di-isopropyl ether	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Ethylbenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Isopropylbenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
p-Isopropyltoluene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
2-Butanone (MEK)	ND		10.0	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Methylene Chloride	ND		5.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Methyl tert-butyl ether	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Naphthalene	ND		5.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
n-Propylbenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Styrene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Tetrachloroethene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Toluene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>

- 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	11/09/2018 22:13	<a href="#">WG1194370</a>
1,1,2-Trichloroethane	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Trichloroethene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Trichlorofluoromethane	ND		5.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,2,3-Trichloropropane	ND		2.50	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
Vinyl chloride	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
o-Xylene	ND		1.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
m&p-Xylene	ND		2.00	1	11/09/2018 22:13	<a href="#">WG1194370</a>
(S) Toluene-d8	95.6		80.0-120		11/09/2018 22:13	<a href="#">WG1194370</a>
(S) Dibromofluoromethane	101		75.0-120		11/09/2018 22:13	<a href="#">WG1194370</a>
(S) 4-Bromofluorobenzene	101		77.0-126		11/09/2018 22:13	<a href="#">WG1194370</a>

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



Method Blank (MB)

(MB) R3359541-1 11/13/18 18:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

L1042667-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1042667-01 11/13/18 18:10 • (DUP) R3359541-3 11/13/18 18:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1042941-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1042941-03 11/13/18 18:46 • (DUP) R3359541-5 11/13/18 18:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	4440	4470	1	0.606		10

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3359541-2 11/13/18 18:04

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	7560	101	90.0-110	

L1042675-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1042675-01 11/13/18 18:13 • (MS) R3359541-4 11/13/18 18:15

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	28900	31300	47.8	1	90.0-110	<u>EV</u>

L1042941-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042941-04 11/13/18 18:50 • (MS) R3359541-6 11/13/18 18:51 • (MSD) R3359541-7 11/13/18 18:53

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	5000	195	5040	5020	96.8	96.5	1	90.0-110			0.338	10



Method Blank (MB)

(MB) R3359950-1 11/14/18 17:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1042674-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1042674-01 11/14/18 17:44 • (DUP) R3359950-3 11/14/18 17:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1270	1280	1	0.392		20

L1043071-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1043071-07 11/14/18 18:26 • (DUP) R3359950-5 11/14/18 18:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	3210	3090	1	3.74		20

Laboratory Control Sample (LCS)

(LCS) R3359950-2 11/14/18 17:42

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	3890	97.2	90.0-110	

L1042674-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1042674-02 11/14/18 17:47 • (MS) R3359950-4 11/14/18 17:48

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	1240	3090	74.0	1	90.0-110	<u>J6</u>

L1043071-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1043071-08 11/14/18 18:29 • (MS) R3359950-6 11/14/18 18:30 • (MSD) R3359950-7 11/14/18 18:32

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	ND	1710	1870	68.6	74.7	1	90.0-110	<u>J6</u>	<u>J6</u>	8.60	20





Method Blank (MB)

(MB) R3358825-1 11/11/18 13:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1042213-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1042213-10 11/11/18 13:58 • (DUP) R3358825-3 11/11/18 13:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1042805-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1042805-03 11/11/18 14:06 • (DUP) R3358825-6 11/11/18 14:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3358825-2 11/11/18 13:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	527	105	85.0-115	

L1042648-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042648-08 11/11/18 14:02 • (MS) R3358825-4 11/11/18 14:03 • (MSD) R3358825-5 11/11/18 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	7.00	882	881	87.5	87.4	1	80.0-120			0.113	20



Method Blank (MB)

(MB) R3358831-1 11/11/18 14:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1042805-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1042805-04 11/11/18 14:47 • (DUP) R3358831-3 11/11/18 14:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1042954-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1042954-03 11/11/18 14:51 • (DUP) R3358831-6 11/11/18 14:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3358831-2 11/11/18 14:47

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	491	98.2	85.0-115	



Method Blank (MB)

(MB) R3359130-1 11/10/18 09:35

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

L1042497-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1042497-04 11/10/18 13:12 • (DUP) R3359130-3 11/10/18 13:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	7270	7170	1	1.41		15

L1042805-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1042805-01 11/10/18 16:24 • (DUP) R3359130-6 11/10/18 16:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	9630	9570	1	0.560		15

Laboratory Control Sample (LCS)

(LCS) R3359130-2 11/10/18 09:44

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	40600	102	80.0-120	

L1042497-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042497-04 11/10/18 13:12 • (MS) R3359130-4 11/10/18 13:31 • (MSD) R3359130-5 11/10/18 14:00

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	7270	56000	56500	97.5	98.4	1	80.0-120			0.864	15

L1042805-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1042805-01 11/10/18 16:24 • (MS) R3359130-7 11/10/18 16:44

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	9630	60100	101	1	80.0-120	



Method Blank (MB)

(MB) R3359975-1 11/14/18 19:33

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
Manganese,Dissolved	U		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) R3359975-2 11/14/18 19:37 • (LCSD) R3359975-3 11/14/18 19:42

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 %
Arsenic,Dissolved	50.0	49.3	50.0	98.5	100	80.0-120			1.57	20
Iron,Dissolved	5000	5030	5020	101	100	80.0-120			0.129	20
Manganese,Dissolved	50.0	49.9	50.3	99.7	101	80.0-120			0.975	20

L1042805-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042805-01 11/14/18 19:46 • (MS) R3359975-5 11/14/18 19:56 • (MSD) R3359975-6 11/14/18 20:00

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	3.72	53.2	52.0	98.9	96.6	1	75.0-125			2.18	20
Iron,Dissolved	5000	ND	5030	4910	101	98.3	1	75.0-125			2.29	20
Manganese,Dissolved	50.0	ND	50.2	49.5	98.7	97.4	1	75.0-125			1.27	20



Method Blank (MB)

(MB) R3360285-1 11/15/18 14:14

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		0.250	2.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

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

(LCS) R3360285-2 11/15/18 14:19 • (LCSD) R3360285-3 11/15/18 14:23

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 %
Arsenic	50.0	51.7	51.1	103	102	80.0-120			1.17	20

<sup>7</sup>Gl

<sup>8</sup>Al

L1042658-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042658-12 11/15/18 14:27 • (MS) R3360285-5 11/15/18 14:36 • (MSD) R3360285-6 11/15/18 14:40

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	4.07	55.6	54.6	103	101	1	75.0-125			1.89	20

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3359283-5 11/11/18 17:22

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)	103			78.0-120

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) R3359283-3 11/11/18 16:20 • (LCSD) R3359283-4 11/11/18 16:41

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 %
Gasoline Range Organics-NWTPH	5500	4990	5070	90.7	92.2	70.0-124			1.71	20
(S) a,a,a-Trifluorotoluene(FID)				98.0	97.4	78.0-120				

L1042987-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042987-01 11/12/18 00:53 • (MS) R3359283-8 11/12/18 01:55 • (MSD) R3359283-9 11/12/18 02:15

Analyte	Spike Amount ug/l	Original Result	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		6160	6560	56.1	63.2	1	10.0-155			6.18	21
(S) a,a,a-Trifluorotoluene(FID)					100	101		78.0-120				



Method Blank (MB)

(MB) R3359032-1 11/12/18 11:37

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

L1042954-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1042954-04 11/12/18 12:08 • (DUP) R3359032-2 11/12/18 12:12

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

L1042954-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1042954-14 11/12/18 13:46 • (DUP) R3359032-3 11/12/18 13:49

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) R3359032-4 11/12/18 13:57 • (LCSD) R3359032-5 11/12/18 14:01

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	%	%	%			%	%
Methane	67.8	78.0	69.8	115	103	85.0-115			11.0	20
Ethane	129	117	111	90.5	86.3	85.0-115			4.69	20
Ethene	127	115	111	90.9	87.2	85.0-115			4.20	20



Method Blank (MB)

(MB) R3359470-3 11/09/18 20:51

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Method Blank (MB)

(MB) R3359470-3 11/09/18 20:51

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	94.8			80.0-120
(S) Dibromofluoromethane	102			75.0-120
(S) 4-Bromofluorobenzene	101			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) R3359470-1 11/09/18 19:54 • (LCSD) R3359470-2 11/09/18 20:13

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	135	137	108	110	19.0-160			1.93	27
Acrolein	125	159	167	127	134	10.0-160			4.70	26
Acrylonitrile	125	128	133	102	107	55.0-149			4.50	20



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

(LCS) R3359470-1 11/09/18 19:54 • (LCSD) R3359470-2 11/09/18 20:13

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 %
Benzene	25.0	23.8	24.5	95.2	98.0	70.0-123			2.93	20
Bromobenzene	25.0	22.1	21.8	88.3	87.1	73.0-121			1.33	20
Bromodichloromethane	25.0	23.4	24.3	93.8	97.4	75.0-120			3.81	20
Bromoform	25.0	22.7	23.5	90.9	94.0	68.0-132			3.29	20
Bromomethane	25.0	24.0	26.7	96.1	107	10.0-160			10.7	25
n-Butylbenzene	25.0	23.7	23.7	94.9	94.9	73.0-125			0.0179	20
sec-Butylbenzene	25.0	22.2	22.5	88.6	90.1	75.0-125			1.59	20
tert-Butylbenzene	25.0	23.4	23.6	93.4	94.3	76.0-124			0.907	20
Carbon tetrachloride	25.0	24.5	24.0	97.8	96.1	68.0-126			1.82	20
Chlorobenzene	25.0	23.2	24.7	92.9	98.8	80.0-121			6.14	20
Chlorodibromomethane	25.0	23.3	24.1	93.3	96.5	77.0-125			3.31	20
Chloroethane	25.0	27.6	27.2	110	109	47.0-150			1.19	20
Chloroform	25.0	22.0	22.3	88.0	89.1	73.0-120			1.27	20
Chloromethane	25.0	26.6	27.7	106	111	41.0-142			4.21	20
2-Chlorotoluene	25.0	24.7	25.6	98.9	102	76.0-123			3.35	20
4-Chlorotoluene	25.0	24.2	24.9	96.8	99.7	75.0-122			2.94	20
1,2-Dibromo-3-Chloropropane	25.0	22.8	24.7	91.1	98.8	58.0-134			8.13	20
1,2-Dibromoethane	25.0	23.8	25.0	95.3	100	80.0-122			4.98	20
Dibromomethane	25.0	24.6	24.4	98.6	97.8	80.0-120			0.835	20
1,2-Dichlorobenzene	25.0	24.8	25.1	99.3	100	79.0-121			0.968	20
1,3-Dichlorobenzene	25.0	24.8	25.3	99.1	101	79.0-120			2.23	20
1,4-Dichlorobenzene	25.0	21.9	23.2	87.7	92.6	79.0-120			5.46	20
Dichlorodifluoromethane	25.0	30.6	31.4	122	126	51.0-149			2.69	20
1,1-Dichloroethane	25.0	24.0	24.4	95.8	97.7	70.0-126			1.91	20
1,2-Dichloroethane	25.0	25.3	25.8	101	103	70.0-128			1.97	20
1,1-Dichloroethene	25.0	23.6	24.3	94.4	97.3	71.0-124			3.00	20
cis-1,2-Dichloroethene	25.0	23.2	23.5	92.9	94.0	73.0-120			1.11	20
trans-1,2-Dichloroethene	25.0	22.8	24.4	91.2	97.5	73.0-120			6.77	20
1,2-Dichloropropane	25.0	25.1	25.6	100	102	77.0-125			2.06	20
1,1-Dichloropropene	25.0	24.8	25.5	99.1	102	74.0-126			2.78	20
1,3-Dichloropropane	25.0	24.0	24.7	96.2	98.8	80.0-120			2.70	20
cis-1,3-Dichloropropene	25.0	24.6	25.3	98.4	101	80.0-123			2.68	20
trans-1,3-Dichloropropene	25.0	24.6	25.6	98.4	102	78.0-124			3.99	20
2,2-Dichloropropane	25.0	24.5	24.9	98.0	99.7	58.0-130			1.74	20
Di-isopropyl ether	25.0	24.2	24.7	96.8	98.7	58.0-138			1.90	20
Ethylbenzene	25.0	22.9	24.5	91.7	97.9	79.0-123			6.48	20
Hexachloro-1,3-butadiene	25.0	21.6	22.8	86.5	91.0	54.0-138			5.13	20
Isopropylbenzene	25.0	23.3	23.7	93.2	95.0	76.0-127			1.89	20
p-Isopropyltoluene	25.0	23.6	24.1	94.3	96.3	76.0-125			2.10	20
2-Butanone (MEK)	125	130	141	104	113	44.0-160			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) R3359470-1 11/09/18 19:54 • (LCSD) R3359470-2 11/09/18 20:13

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	23.0	23.7	91.9	94.7	67.0-120			3.01	20
4-Methyl-2-pentanone (MIBK)	125	123	133	98.7	106	68.0-142			7.44	20
Methyl tert-butyl ether	25.0	23.6	24.3	94.6	97.4	68.0-125			2.92	20
Naphthalene	25.0	22.0	23.1	88.1	92.3	54.0-135			4.67	20
n-Propylbenzene	25.0	24.2	24.5	96.8	97.9	77.0-124			1.06	20
Styrene	25.0	24.7	25.7	98.9	103	73.0-130			3.81	20
1,1,1,2-Tetrachloroethane	25.0	23.8	24.1	95.1	96.2	75.0-125			1.18	20
1,1,2,2-Tetrachloroethane	25.0	22.9	23.6	91.6	94.3	65.0-130			2.91	20
Tetrachloroethene	25.0	24.3	25.0	97.4	100	72.0-132			2.72	20
Toluene	25.0	23.7	24.3	94.7	97.3	79.0-120			2.68	20
1,1,2-Trichlorotrifluoroethane	25.0	25.7	25.8	103	103	69.0-132			0.405	20
1,2,3-Trichlorobenzene	25.0	24.6	25.4	98.3	102	50.0-138			3.43	20
1,2,4-Trichlorobenzene	25.0	21.7	22.7	86.7	91.0	57.0-137			4.76	20
1,1,1-Trichloroethane	25.0	24.3	24.6	97.3	98.5	73.0-124			1.19	20
1,1,2-Trichloroethane	25.0	23.1	23.7	92.5	94.8	80.0-120			2.46	20
Trichloroethene	25.0	24.9	24.8	99.5	99.3	78.0-124			0.243	20
Trichlorofluoromethane	25.0	27.6	27.6	111	110	59.0-147			0.260	20
1,2,3-Trichloropropane	25.0	24.7	26.0	98.7	104	73.0-130			5.10	20
1,2,3-Trimethylbenzene	25.0	23.5	24.0	94.1	95.9	77.0-120			1.88	20
1,2,4-Trimethylbenzene	25.0	23.5	24.2	94.0	96.8	76.0-121			2.96	20
1,3,5-Trimethylbenzene	25.0	22.7	23.3	90.7	93.0	76.0-122			2.55	20
Vinyl chloride	25.0	25.8	26.4	103	105	67.0-131			2.22	20
o-Xylene	25.0	22.6	24.2	90.6	96.9	80.0-122			6.71	20
m&p-Xylenes	50.0	46.7	49.1	93.5	98.2	80.0-122			4.96	20
(S) Toluene-d8				93.6	95.9	80.0-120				
(S) Dibromofluoromethane				97.4	98.0	75.0-120				
(S) 4-Bromofluorobenzene				96.7	99.3	77.0-126				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1042551-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042551-01 11/09/18 22:32 • (MS) R3359470-4 11/10/18 03:56 • (MSD) R3359470-5 11/10/18 04:15

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	143	138	114	110	1	10.0-160			3.93	35
Acrolein	125		184	181	147	145	1	10.0-160			1.66	39
Acrylonitrile	125		140	136	112	109	1	21.0-160			3.06	32
Benzene	25.0	ND	26.7	26.3	107	105	1	17.0-158			1.19	27
Bromobenzene	25.0		24.2	24.5	97.0	97.9	1	30.0-149			0.973	28
Bromodichloromethane	25.0	ND	26.4	25.2	105	101	1	31.0-150			4.59	27



L1042551-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042551-01 11/09/18 22:32 • (MS) R3359470-4 11/10/18 03:56 • (MSD) R3359470-5 11/10/18 04:15

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	24.3	24.9	97.0	99.8	1	29.0-150			2.79	29
Bromomethane	25.0	ND	21.1	21.6	84.3	86.4	1	10.0-160			2.35	38
n-Butylbenzene	25.0	ND	26.4	27.1	105	108	1	31.0-150			2.58	30
sec-Butylbenzene	25.0	ND	24.7	25.7	98.8	103	1	33.0-155			3.84	29
tert-Butylbenzene	25.0	ND	25.7	26.5	103	106	1	34.0-153			3.16	28
Carbon tetrachloride	25.0	ND	29.3	26.8	117	107	1	23.0-159			8.95	28
Chlorobenzene	25.0	ND	26.2	26.3	105	105	1	33.0-152			0.197	27
Chlorodibromomethane	25.0	ND	25.8	25.5	103	102	1	37.0-149			1.21	27
Chloroethane	25.0	ND	30.0	29.2	120	117	1	10.0-160			2.72	30
Chloroform	25.0	ND	25.1	24.7	101	98.7	1	29.0-154			1.89	28
Chloromethane	25.0	ND	16.3	18.2	65.1	72.8	1	10.0-160			11.3	29
2-Chlorotoluene	25.0		27.7	28.5	111	114	1	32.0-153			2.84	28
4-Chlorotoluene	25.0		26.8	27.5	107	110	1	32.0-150			2.47	28
1,2-Dibromo-3-Chloropropane	25.0	ND	24.6	25.2	98.3	101	1	22.0-151			2.60	34
1,2-Dibromoethane	25.0	ND	25.9	25.2	104	101	1	34.0-147			2.88	27
Dibromomethane	25.0		26.9	26.4	107	106	1	30.0-151			1.78	27
1,2-Dichlorobenzene	25.0	ND	26.9	26.9	108	108	1	34.0-149			0.0845	28
1,3-Dichlorobenzene	25.0	ND	25.6	27.1	102	109	1	36.0-146			5.84	27
1,4-Dichlorobenzene	25.0	ND	24.1	24.2	96.3	96.6	1	35.0-142			0.363	27
Dichlorodifluoromethane	25.0	ND	35.8	33.7	143	135	1	10.0-160			6.03	29
1,1-Dichloroethane	25.0	ND	27.1	27.0	108	108	1	25.0-158			0.159	27
1,2-Dichloroethane	25.0	ND	28.4	27.6	113	110	1	29.0-151			2.88	27
1,1-Dichloroethene	25.0	ND	27.2	27.4	109	110	1	11.0-160			0.696	29
cis-1,2-Dichloroethene	25.0	ND	26.6	26.1	107	104	1	10.0-160			2.03	27
trans-1,2-Dichloroethene	25.0	ND	26.7	25.4	107	102	1	17.0-153			5.08	27
1,2-Dichloropropane	25.0	ND	27.8	27.2	111	109	1	30.0-156			2.38	27
1,1-Dichloropropene	25.0		29.0	28.3	116	113	1	25.0-158			2.50	27
1,3-Dichloropropane	25.0		25.3	25.3	101	101	1	38.0-147			0.134	27
cis-1,3-Dichloropropene	25.0	ND	26.8	26.0	107	104	1	34.0-149			2.88	28
trans-1,3-Dichloropropene	25.0	ND	26.8	26.4	107	106	1	32.0-149			1.22	28
2,2-Dichloropropane	25.0		28.0	27.5	112	110	1	24.0-152			1.92	29
Di-isopropyl ether	25.0		28.0	27.7	110	109	1	21.0-160			1.38	28
Ethylbenzene	25.0	ND	26.0	25.9	104	104	1	30.0-155			0.122	27
Hexachloro-1,3-butadiene	25.0		23.6	25.6	94.4	102	1	20.0-154			8.07	34
Isopropylbenzene	25.0	ND	25.5	26.4	102	105	1	28.0-157			3.17	27
p-Isopropyltoluene	25.0	ND	26.2	27.5	105	110	1	30.0-154			4.77	29
2-Butanone (MEK)	125	ND	147	138	118	110	1	10.0-160			6.57	32
Methylene Chloride	25.0	ND	25.6	25.0	102	100	1	23.0-144			2.41	28
4-Methyl-2-pentanone (MIBK)	125	ND	138	137	111	110	1	29.0-160			0.971	29
Methyl tert-butyl ether	25.0	ND	26.4	25.8	106	103	1	28.0-150			2.37	29

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



L1042551-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042551-01 11/09/18 22:32 • (MS) R3359470-4 11/10/18 03:56 • (MSD) R3359470-5 11/10/18 04:15

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 %
Naphthalene	25.0	ND	23.0	24.0	92.0	95.8	1	12.0-156			4.08	35
n-Propylbenzene	25.0	ND	27.1	28.0	109	112	1	31.0-154			3.21	28
Styrene	25.0	ND	27.4	28.3	110	113	1	33.0-155			3.28	28
1,1,1,2-Tetrachloroethane	25.0		25.1	25.7	100	103	1	36.0-151			2.44	29
1,1,2,2-Tetrachloroethane	25.0	ND	25.0	25.5	100	102	1	33.0-150			1.88	28
Tetrachloroethene	25.0	ND	26.9	27.0	108	108	1	10.0-160			0.359	27
Toluene	25.0	ND	24.8	24.3	97.1	95.2	1	26.0-154			1.98	28
1,1,2-Trichlorotrifluoroethane	25.0	ND	30.5	28.5	122	114	1	23.0-160			6.99	30
1,2,3-Trichlorobenzene	25.0	ND	24.9	26.5	99.7	106	1	17.0-150			6.05	36
1,2,4-Trichlorobenzene	25.0	ND	23.2	24.1	92.6	96.2	1	24.0-150			3.82	33
1,1,1-Trichloroethane	25.0	ND	28.3	26.9	113	107	1	23.0-160			5.35	28
1,1,2-Trichloroethane	25.0	ND	25.8	25.2	103	101	1	35.0-147			2.25	27
Trichloroethene	25.0	ND	26.9	26.3	107	105	1	10.0-160			2.00	25
Trichlorofluoromethane	25.0	ND	32.5	31.9	130	128	1	17.0-160			1.81	31
1,2,3-Trichloropropane	25.0		26.2	26.9	105	108	1	34.0-151			2.86	29
1,2,3-Trimethylbenzene	25.0		25.6	26.2	102	105	1	32.0-149			2.56	28
1,2,4-Trimethylbenzene	25.0	ND	25.8	26.3	103	105	1	26.0-154			1.93	27
1,3,5-Trimethylbenzene	25.0	ND	25.1	26.1	100	104	1	28.0-153			4.10	27
Vinyl chloride	25.0	ND	29.1	29.1	116	117	1	10.0-160			0.0314	27
o-Xylene	25.0	ND	25.7	25.2	103	101	1	45.0-144			2.16	26
m&p-Xylenes	50.0	ND	52.2	52.8	104	106	1	43.0-146			1.18	26
(S) Toluene-d8					95.1	95.5		80.0-120				
(S) Dibromofluoromethane					103	98.5		75.0-120				
(S) 4-Bromofluorobenzene					98.2	101		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) R3359030-1 11/12/18 12:13

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>	74.0			52.0-156

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

(LCS) R3359030-2 11/12/18 12:33 • (LCSD) R3359030-3 11/12/18 12:53

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	%	%	%			%	%
Diesel Range Organics (DRO)	750	807	799	108	107	50.0-150			0.996	20
Residual Range Organics (RRO)	750	718	713	95.7	95.1	50.0-150			0.699	20
<i>(S) o-Terphenyl</i>				101	97.0	52.0-156				

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3359574-3 11/14/18 00:46

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	0.0350	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	117			31.0-160
(S) 2-Fluorobiphenyl	117			48.0-148
(S) p-Terphenyl-d14	101			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) R3359574-1 11/14/18 00:05 • (LCSD) R3359574-2 11/14/18 00:26

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	2.41	114	120	67.0-150			5.11	20
Acenaphthene	2.00	2.22	2.25	111	112	65.0-138			1.34	20
Acenaphthylene	2.00	2.33	2.35	117	117	66.0-140			0.855	20
Benzo(a)anthracene	2.00	2.08	2.16	104	108	61.0-140			3.77	20
Benzo(a)pyrene	2.00	1.71	1.87	85.5	93.5	60.0-143			8.94	20
Benzo(b)fluoranthene	2.00	1.81	2.02	90.5	101	58.0-141			11.0	20
Benzo(g,h,i)perylene	2.00	1.32	1.43	66.0	71.5	52.0-153			8.00	20
Benzo(k)fluoranthene	2.00	1.64	1.71	82.0	85.5	58.0-148			4.18	20
Chrysene	2.00	2.05	2.20	102	110	64.0-144			7.06	20
Dibenz(a,h)anthracene	2.00	1.32	1.44	66.0	72.0	52.0-155			8.70	20
Fluoranthene	2.00	2.47	2.50	123	125	69.0-153			1.21	20



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

(LCS) R3359574-1 11/14/18 00:05 • (LCSD) R3359574-2 11/14/18 00:26

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	2.24	110	112	64.0-136			1.80	20
Indeno(1,2,3-cd)pyrene	2.00	1.38	1.52	69.0	76.0	54.0-153			9.66	20
Naphthalene	2.00	2.18	2.24	109	112	61.0-137			2.71	20
Phenanthrene	2.00	2.22	2.26	111	113	62.0-137			1.79	20
Pyrene	2.00	2.13	2.18	106	109	60.0-142			2.32	20
1-Methylnaphthalene	2.00	2.71	2.71	135	135	66.0-142			0.000	20
2-Methylnaphthalene	2.00	2.48	2.46	124	123	62.0-136			0.810	20
2-Chloronaphthalene	2.00	2.24	2.23	112	111	64.0-140			0.447	20
<i>(S) Nitrobenzene-d5</i>				114	121	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				119	120	48.0-148				
<i>(S) p-Terphenyl-d14</i>				94.5	102	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

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.
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.

## 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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	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

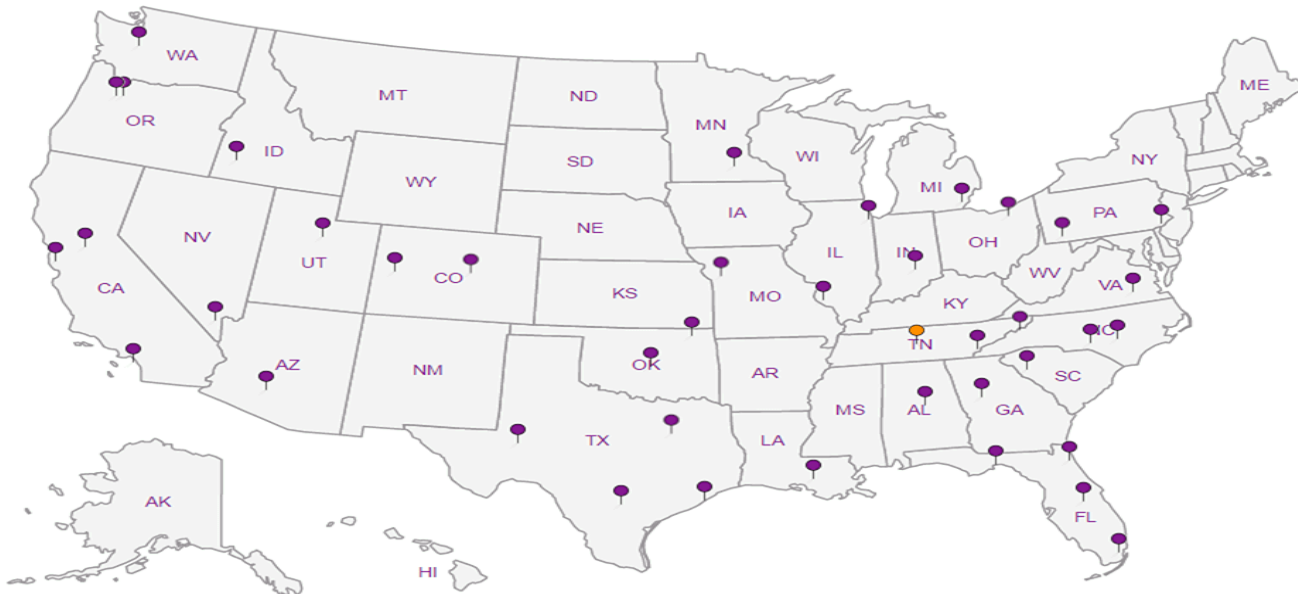
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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

3201 1 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](mailto:RyanHultgren@kennedyjenks.com),  
[KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com)

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

City/State:  
Collected: **Wishram, WA**

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

Client Project #  
**1896120 00**  
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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
WMW-14-20181107	Grab	GW	-	11/7/18	0920	8
WMW-15-20181107	↓	GW	↓	↓	1050	8
WMW-16-20181107	↓	GW	↓	↓	1200	13
WMW-17-20181107	↓	GW	↓	↓	1000 12 13	13
WMW-18-20181107	↓	GW	↓	↓	0820 9 10 11	13
D-2-20181107	↓	GW	↓	↓	1030 12 13	13
TB-02-20181107	-	GW	-	11/7/18	-	1
		GW				
		GW				
		GW				

Analysis / Container / Preservative	Pres Chk
Dissolved As 250mlHDPE-HNO3 + Total As	< 2
Dissolved Fe, Mn 250mlHDPE-HNO3	< 2
Full List V8260C 40mlAmb-HCl	< 2
NH3, NO2NO3 250mlHDPE-H2SO4	< 2
NWTPHDXLVI w/ SGT 40mlAmb-HCl-BT	< 2
NWTPHDXLVINO SGT 40mlAmb-HCl-BT	< 2
NWTPHGX 40mlAmb HCl	< 2
PAHSIMLVID 40mlAmb-NoPres-WT	< 2
RSK175 40mlAmb HCl	< 2
Sulfate 125mlHDPE-NoPres + Sulfide	> 1/2

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# **L1042805**  
Table #  
Acctnum: **BNSF1KEN**  
Template: **T142471**  
Prelogin: **P678758**  
TSR: **134 - Mark W. Beasley**  
PB:  
Shipped Via: **FedEx Ground**

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: **Analyte WMW-17 & WMW-18 for dissolved & total AS. Dissolved samples are field filtered.**

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **4510 1660 5032**

Relinquished by: (Signature)  
*[Signature]*

Date: **11/8/18** Time: **1000**

Received by: (Signature)  
**FedEx**

Trip Blank Received:  Yes  No  
 HCl / MeOH  
TBR

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  
VGA Zero HeadSpace:  Y  N  
Preservation Correct/Checked:  Y  N  
**RAD SCREEN: <0.5 mR/hr**

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp: **0.1** °C Bottles Received: **7475**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature)  
*[Signature]*

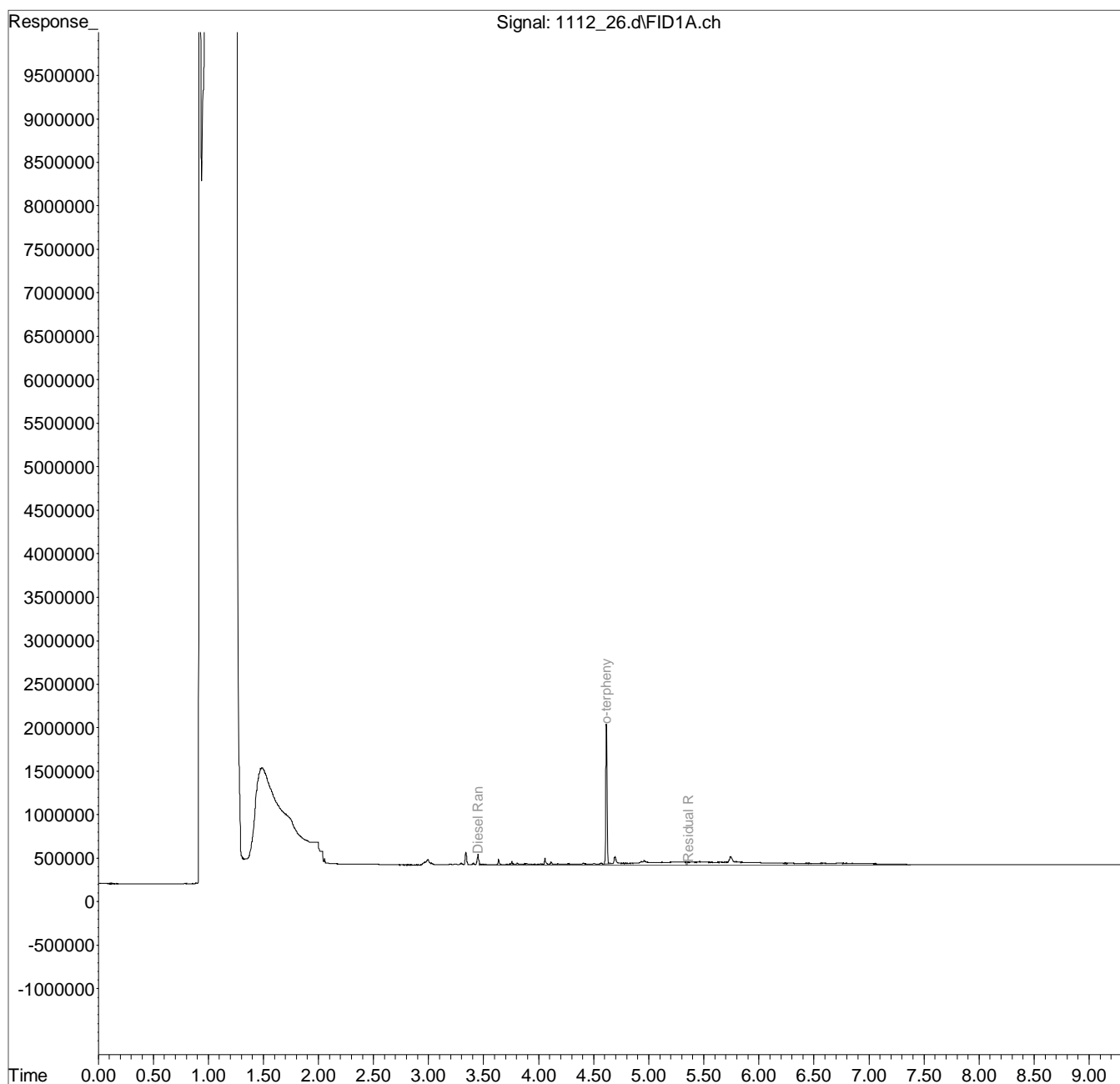
Date: **11/9/18** Time: **845**

Hold: Condition: **NCF / OK**

Data Path : C:\msdchem\1\data\111218\  
Data File : 1112\_26.d  
Signal(s) : FID1A.ch  
Acq On : 12 Nov 2018 6:34 pm  
Operator : 773  
Sample : L1042805-01 1x WG1194932  
Misc : M.I.s on ranges are corrections  
ALS Vial : 19 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 13 07:55:13 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

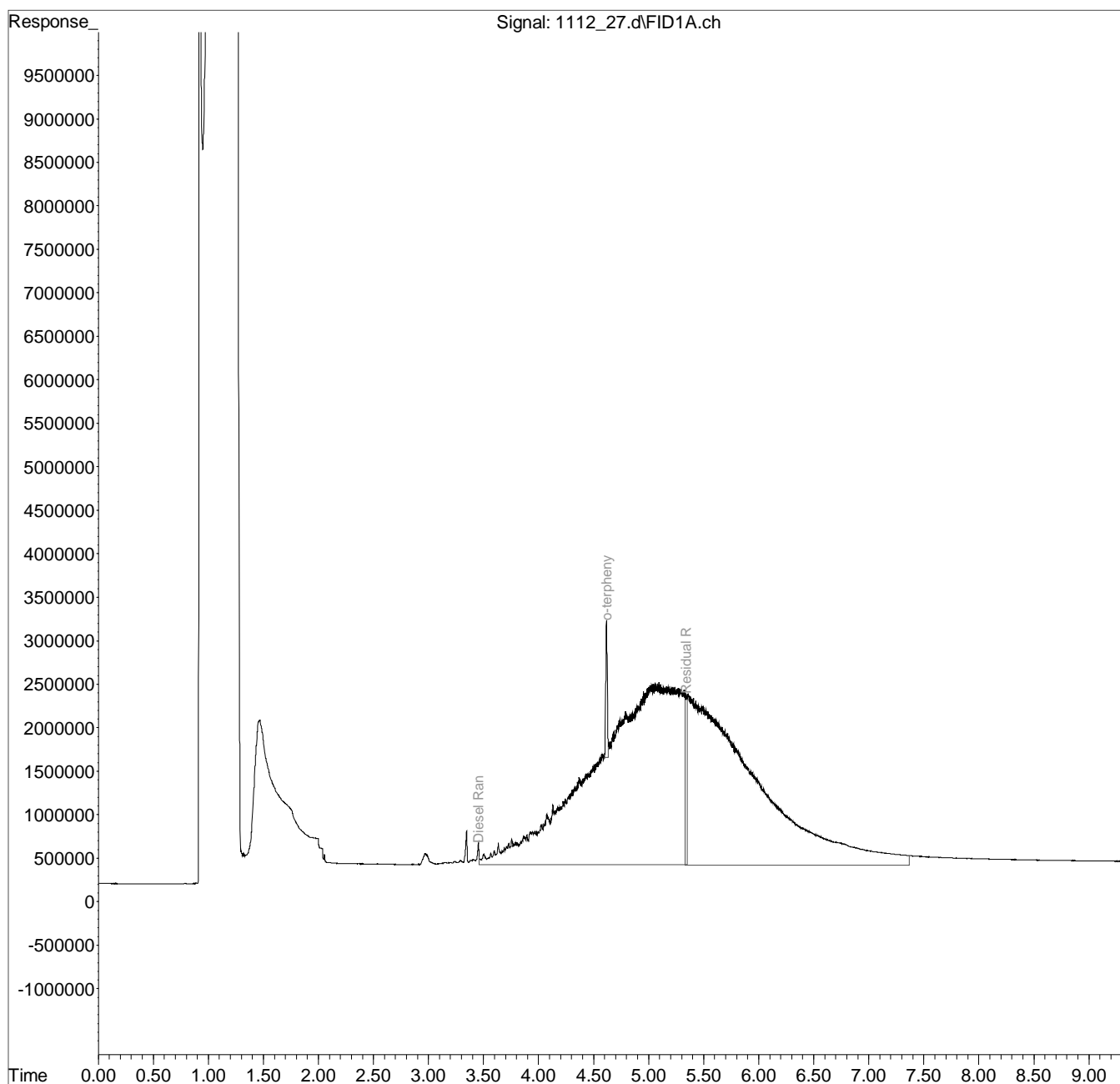
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111218\  
Data File : 1112\_27.d  
Signal(s) : FID1A.ch  
Acq On : 12 Nov 2018 6:54 pm  
Operator : 773  
Sample : L1042805-02 1x WG1194932  
Misc : M.I.s on ranges are corrections  
ALS Vial : 20 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 13 07:56:43 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

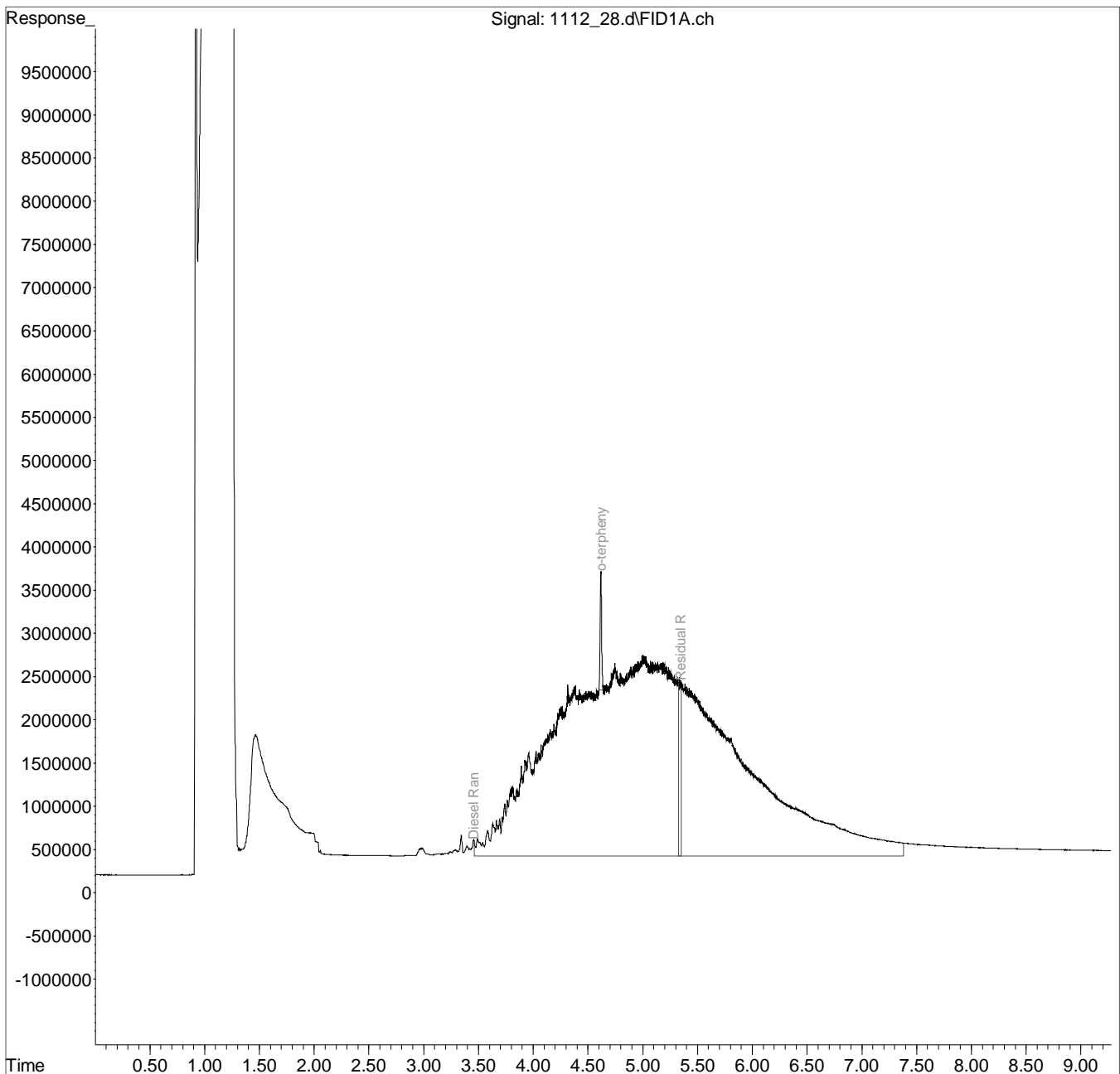
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111218\  
 Data File : 1112\_28.d  
 Signal(s) : FID1A.ch  
 Acq On : 12 Nov 2018 7:14 pm  
 Operator : 773  
 Sample : L1042805-03 1x WG1194932  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 21 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Nov 13 07:57:29 2018  
 Quant Method : C:\msdchem\1\methods\EP27K08R.M  
 Quant Title :  
 QLast Update : Thu Nov 08 10:38:59 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

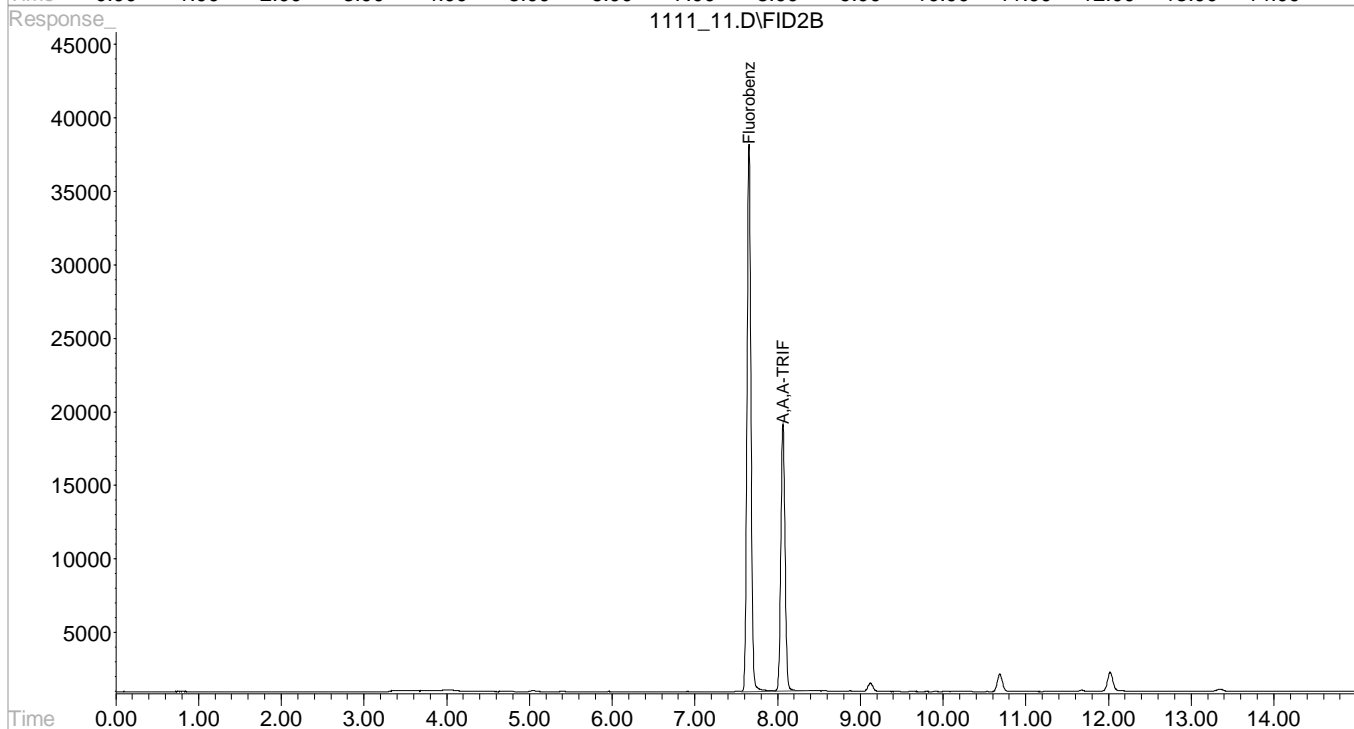
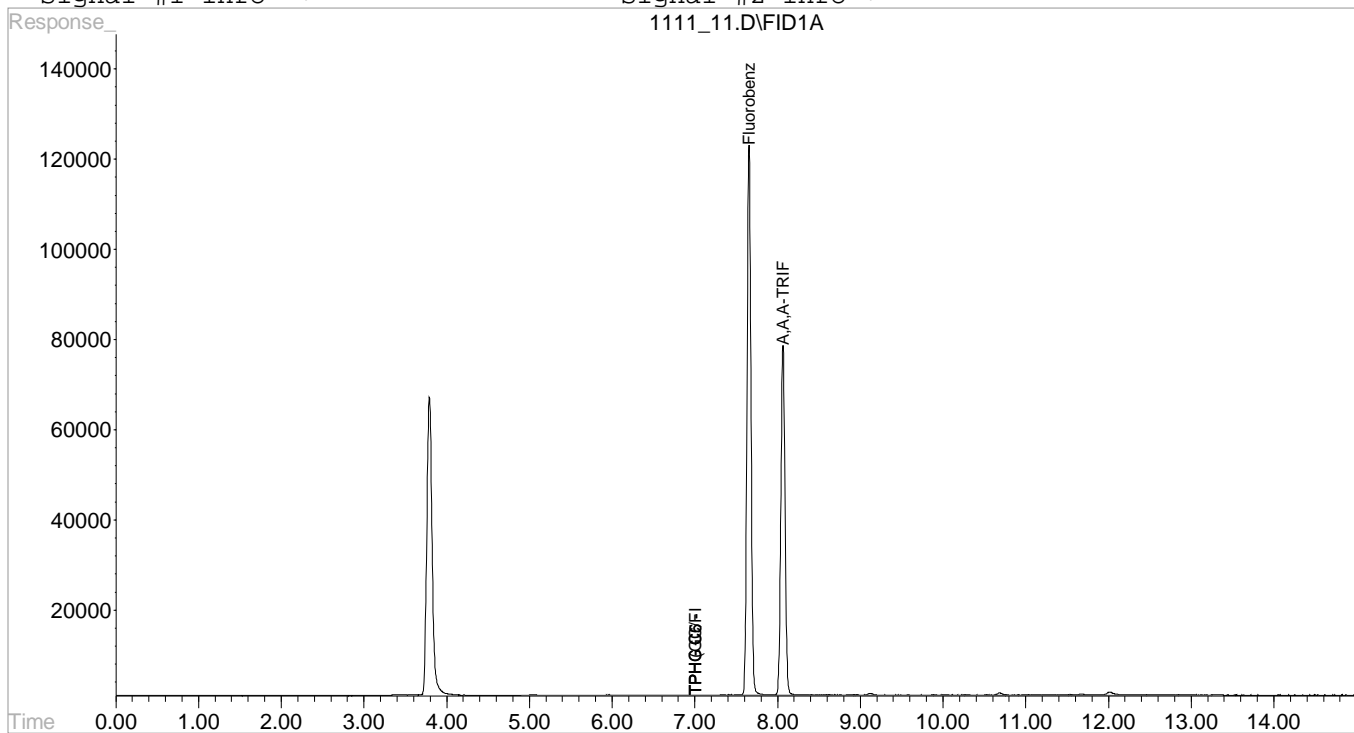
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\111118\1111\_11.D\FID1A.CH Vial: 11  
Signal #2 : C:\HPCHEM\1\DATA\111118\1111\_11.D\FID2B.CH  
Acq On : 11 Nov 2018 6:09 pm Operator: 605  
Sample : L1042805-03 1x WG1194883 Inst : VOCGC5  
Misc : WATER Multiplr: 1.00  
IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
Quant Time: Nov 13 10:32 2018 Quant Results File: BG05J29R.RES

Quant Method : C:\HPCHEM\1\METHODS\BG05J29R.M (Chemstation Integrator)  
Title : BTEX/GRO VOCGC04  
Last Update : Tue Oct 30 10:29:42 2018  
Response via : Single Level Calibration  
DataAcq Meth : VGC5-1.M

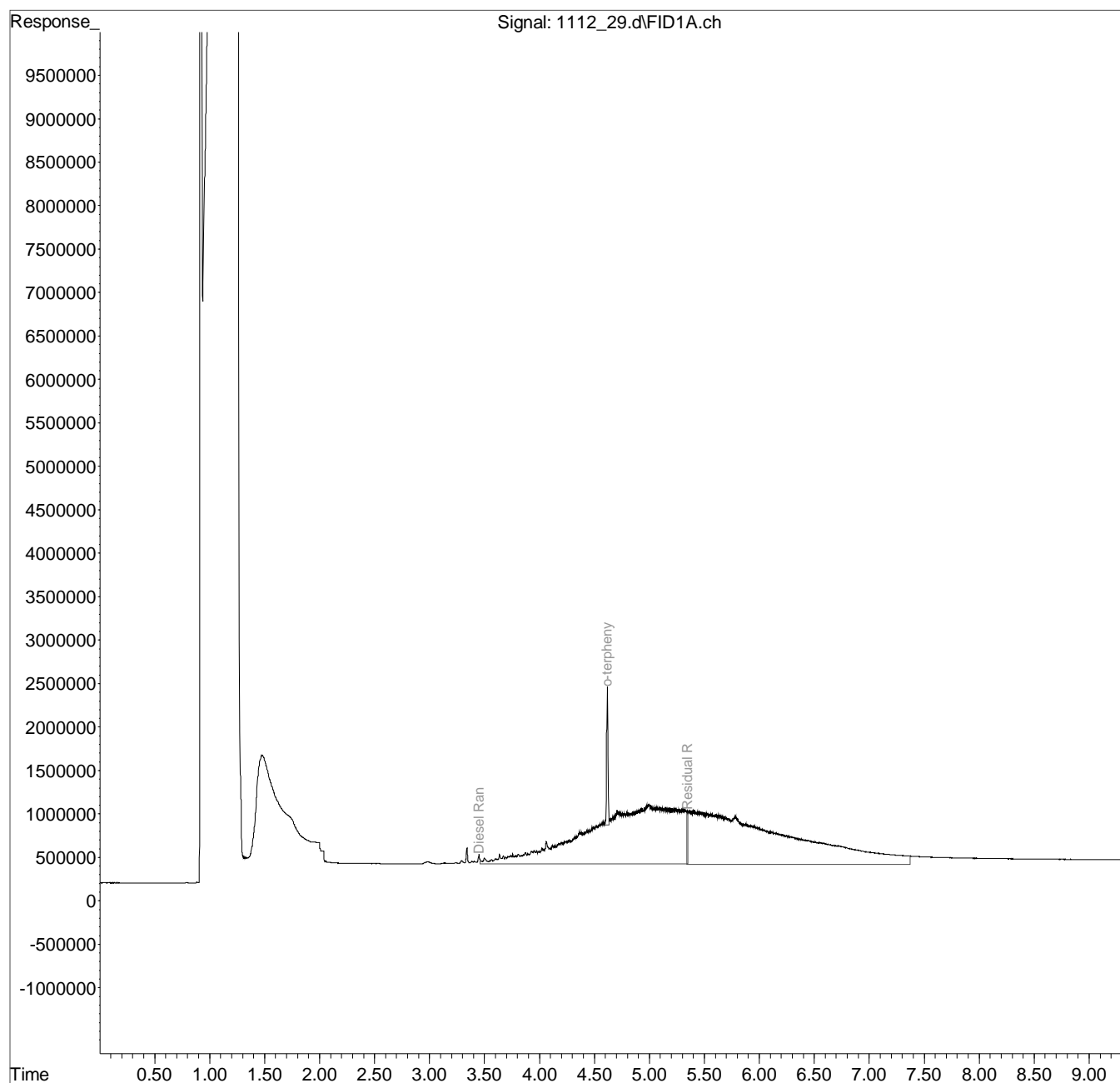
Volume Inj. :  
Signal #1 Phase : Signal #2 Phase:  
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\111218\  
Data File : 1112\_29.d  
Signal(s) : FID1A.ch  
Acq On : 12 Nov 2018 7:35 pm  
Operator : 773  
Sample : L1042805-04 1x WG1194932  
Misc : M.I.s on ranges are corrections  
ALS Vial : 22 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 13 07:58:15 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M

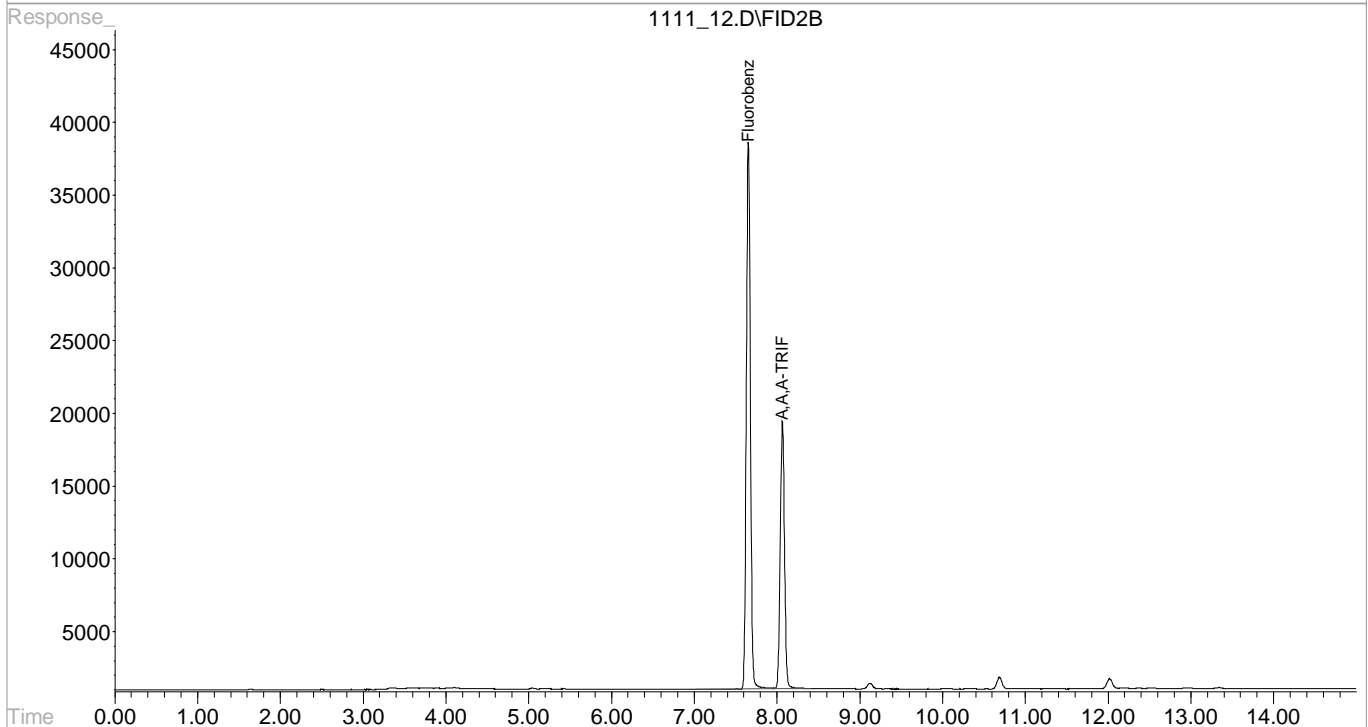
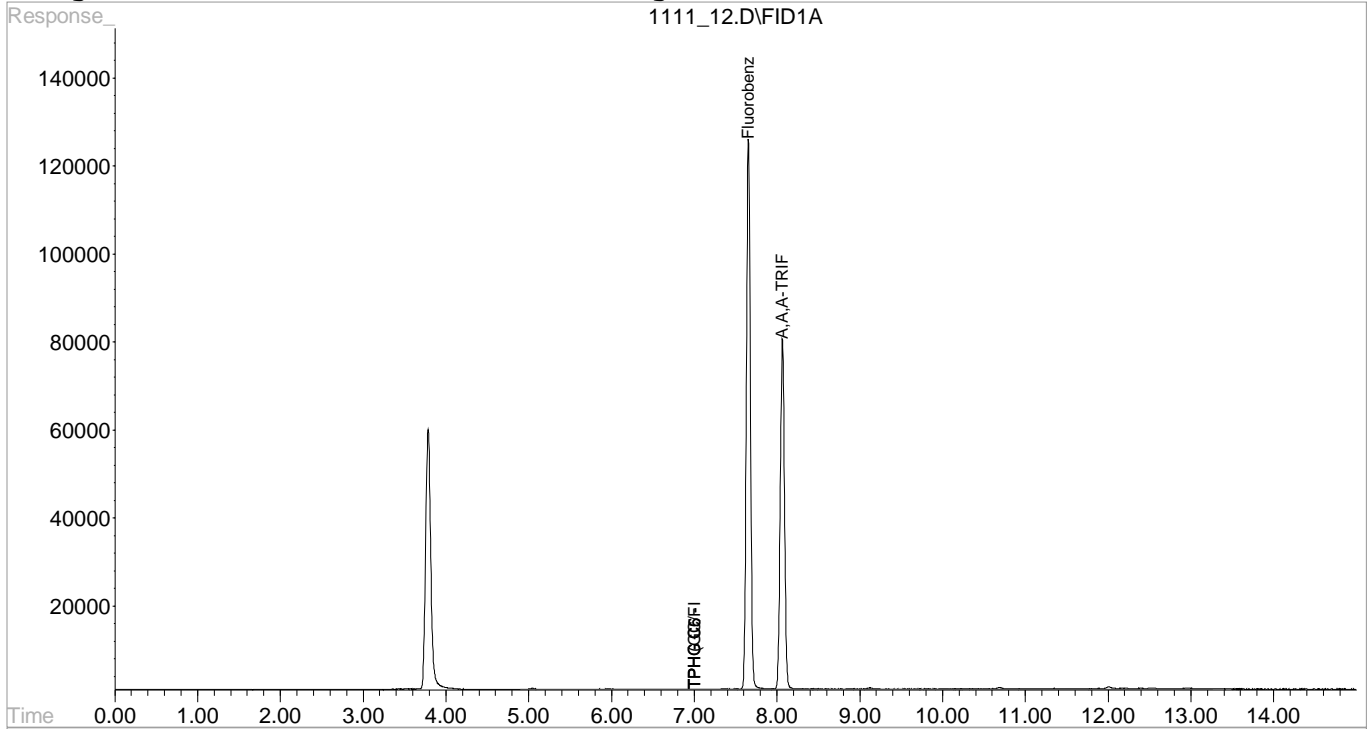




Signal #1 : C:\HPCHEM\1\DATA\111118\1111\_12.D\FID1A.CH Vial: 12  
Signal #2 : C:\HPCHEM\1\DATA\111118\1111\_12.D\FID2B.CH  
Acq On : 11 Nov 2018 6:30 pm Operator: 605  
Sample : L1042805-04 1x WG1194883 Inst : VOCGC5  
Misc : WATER Multiplr: 1.00  
IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
Quant Time: Nov 13 10:32 2018 Quant Results File: BG05J29R.RES

Quant Method : C:\HPCHEM\1\METHODS\BG05J29R.M (Chemstation Integrator)  
Title : BTEX/GRO VOCGC04  
Last Update : Tue Oct 30 10:29:42 2018  
Response via : Single Level Calibration  
DataAcq Meth : VGC5-1.M

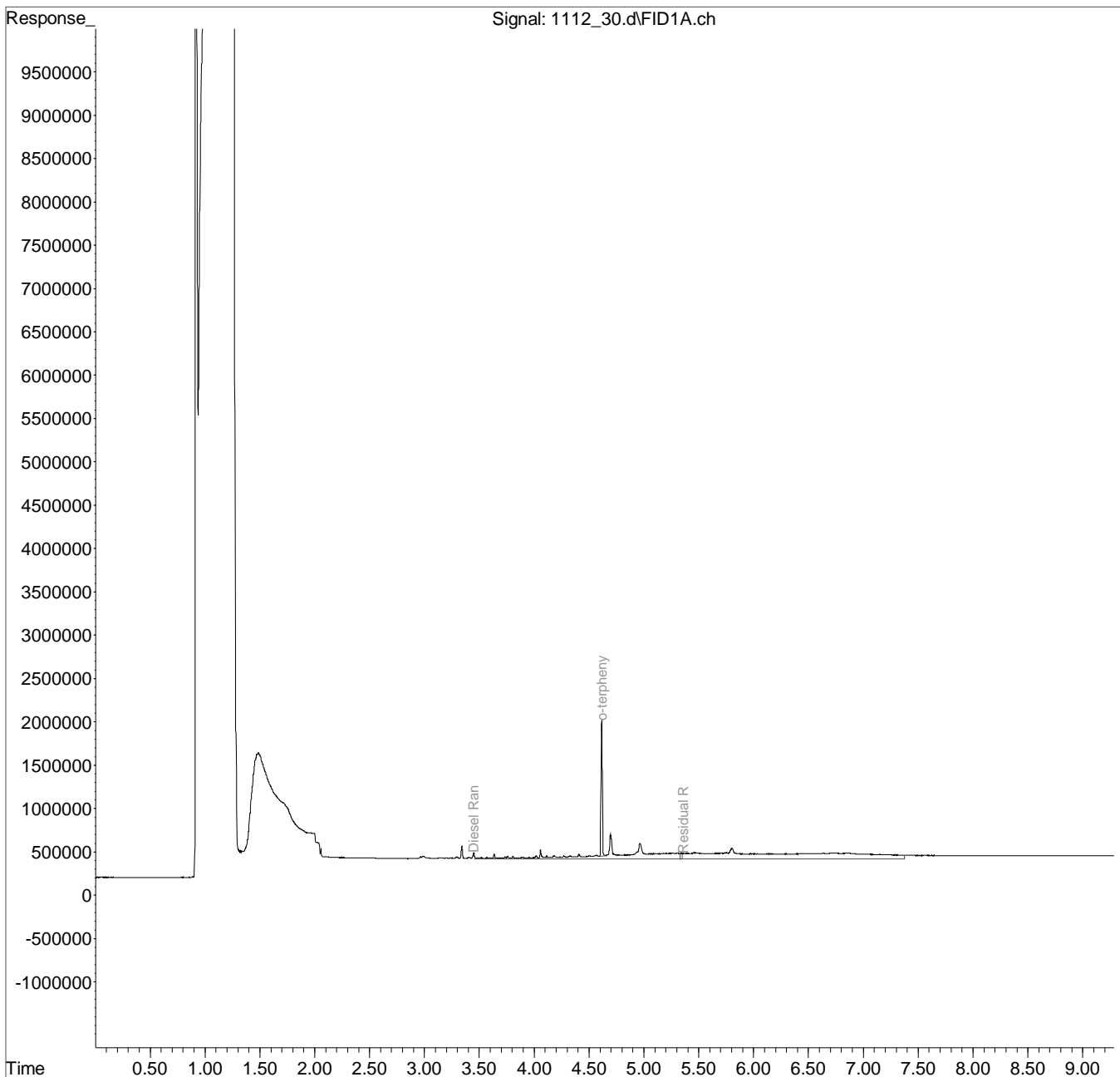
Volume Inj. :  
Signal #1 Phase : Signal #2 Phase:  
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\111218\  
Data File : 1112\_30.d  
Signal(s) : FID1A.ch  
Acq On : 12 Nov 2018 7:55 pm  
Operator : 773  
Sample : L1042805-05 1x WG1194932  
Misc : M.I.s on ranges are corrections  
ALS Vial : 23 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 13 07:58:44 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

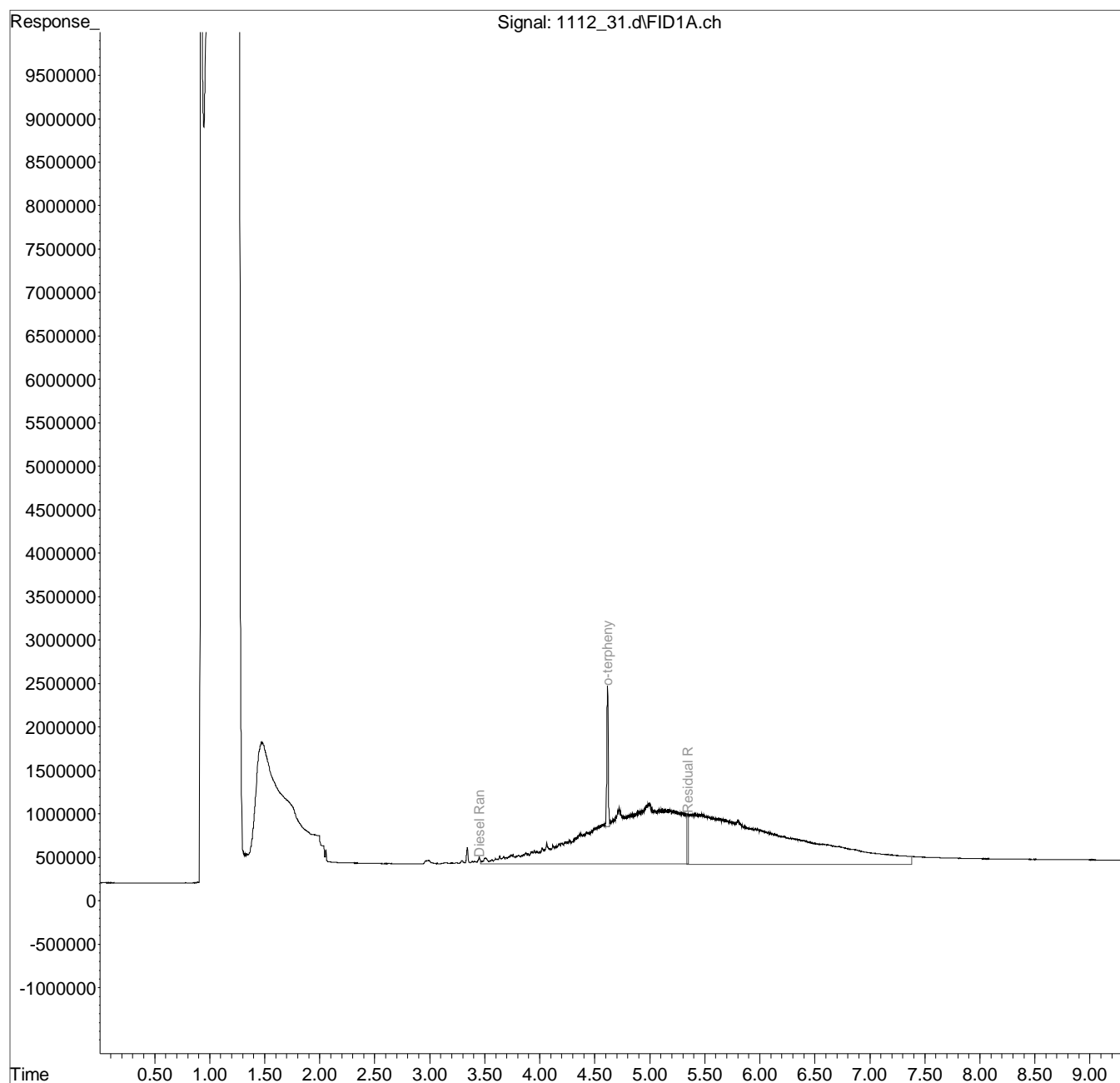
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111218\  
Data File : 1112\_31.d  
Signal(s) : FID1A.ch  
Acq On : 12 Nov 2018 8:15 pm  
Operator : 773  
Sample : L1042805-06 1x WG1194932  
Misc : M.I.s on ranges are corrections  
ALS Vial : 24 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 13 07:59:18 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

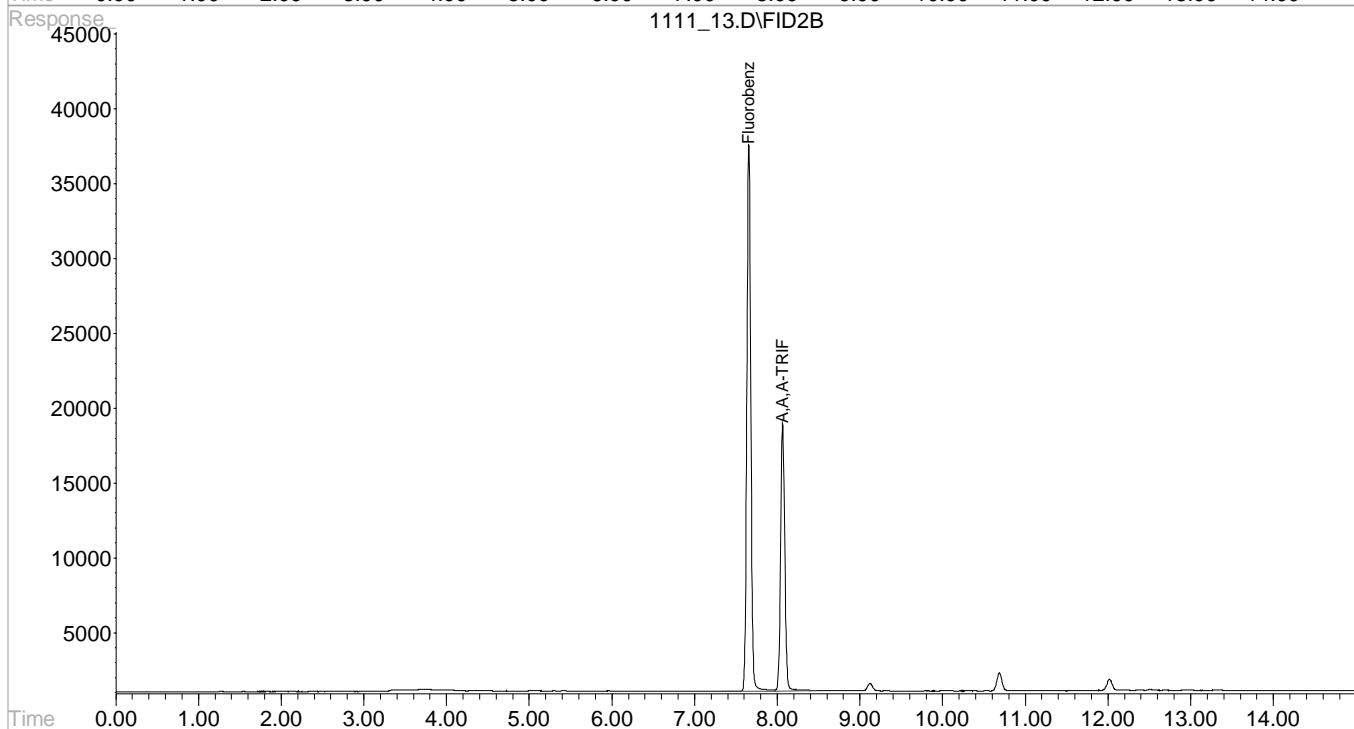
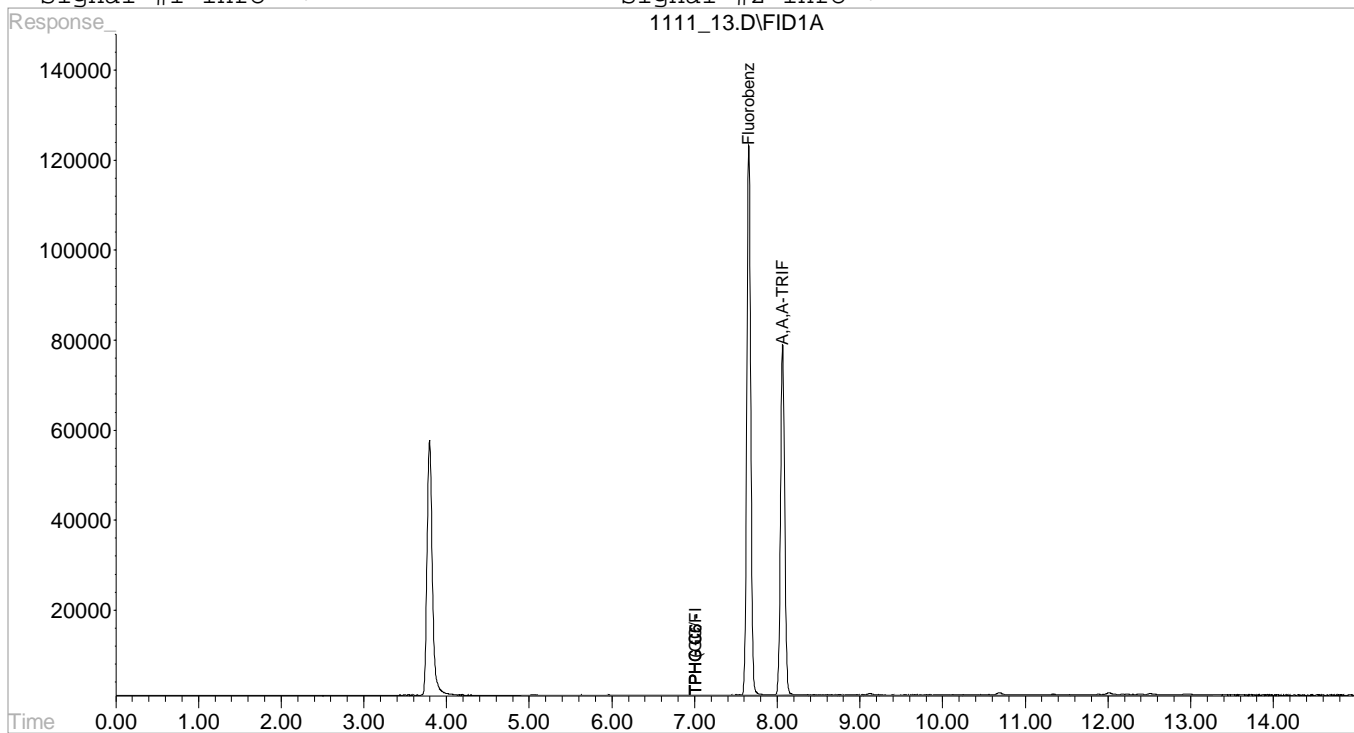
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Signal #1 : C:\HPCHEM\1\DATA\111118\1111\_13.D\FID1A.CH Vial: 13  
Signal #2 : C:\HPCHEM\1\DATA\111118\1111\_13.D\FID2B.CH  
Acq On : 11 Nov 2018 6:50 pm Operator: 605  
Sample : L1042805-06 1x WG1194883 Inst : VOCGC5  
Misc : WATER Multiplr: 1.00  
IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
Quant Time: Nov 13 10:32 2018 Quant Results File: BG05J29R.RES

Quant Method : C:\HPCHEM\1\METHODS\BG05J29R.M (Chemstation Integrator)  
Title : BTEX/GRO VOCGC04  
Last Update : Tue Oct 30 10:29:42 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 :



November 21, 2018

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1042954  
Samples Received: 11/09/2018  
Project Number: 1896120.05  
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.



<b>Cp: Cover Page</b>	<b>1</b>
<b>Tc: Table of Contents</b>	<b>2</b>
<b>Ss: Sample Summary</b>	<b>3</b>
<b>Cn: Case Narrative</b>	<b>7</b>
<b>Sr: Sample Results</b>	<b>8</b>
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WMW-20-20181106 L1042954-02	9
WMW-21-20181106 L1042954-03	10
WMW-22-20181106 L1042954-04	12
WMW-23-20181106 L1042954-05	14
WMW-24-20181106 L1042954-06	15
WMW-26-20181106 L1042954-07	18
WMW-27-20181106 L1042954-08	21
WMW-28-20181106 L1042954-09	24
WMW-29-20181106 L1042954-10	27
WMW-30-20181106 L1042954-11	30
WMW-31-20181106 L1042954-12	33
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Volatile Organic Compounds (GC/MS) by Method 8260C	52
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	61
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<b>Al: Accreditations &amp; Locations</b>	<b>65</b>
<b>Sc: Sample Chain of Custody</b>	<b>66</b>

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

# SAMPLE SUMMARY



## WMW-19-20181107 L1042954-01 GW

Collected by  
K. Teague  
Collected date/time  
11/07/18 08:05  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:12	11/14/18 14:12	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 11:46	11/15/18 11:46	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194830	1	11/11/18 14:51	11/11/18 14:51	TH
Wet Chemistry by Method 9056A	WG1194398	1	11/10/18 17:41	11/10/18 17:41	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 20:42	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 11:54	11/12/18 11:54	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194591	1	11/10/18 19:17	11/10/18 19:17	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/16/18 04:13	SHG

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

## WMW-20-20181106 L1042954-02 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 16:50  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:14	11/14/18 14:14	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 11:49	11/15/18 11:49	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194830	1	11/11/18 14:51	11/11/18 14:51	TH
Wet Chemistry by Method 9056A	WG1194398	1	11/10/18 17:57	11/10/18 17:57	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 20:47	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 12:00	11/12/18 12:00	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194591	1	11/10/18 19:38	11/10/18 19:38	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/16/18 04:34	SHG

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-21-20181106 L1042954-03 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 15:20  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:15	11/14/18 14:15	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 11:51	11/15/18 11:51	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194830	1	11/11/18 14:51	11/11/18 14:51	TH
Wet Chemistry by Method 9056A	WG1194398	1	11/10/18 18:14	11/10/18 18:14	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 20:51	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 12:02	11/12/18 12:02	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194591	1	11/10/18 20:00	11/10/18 20:00	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/16/18 04:54	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1199142	1	11/12/18 16:45	11/20/18 15:16	SHG

## WMW-22-20181106 L1042954-04 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 13:50  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:22	11/14/18 14:22	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 11:58	11/15/18 11:58	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:29	11/11/18 14:29	TH
Wet Chemistry by Method 9056A	WG1194398	1	11/10/18 18:30	11/10/18 18:30	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 20:56	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 12:08	11/12/18 12:08	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194591	1	11/10/18 20:21	11/10/18 20:21	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/16/18 05:15	SHG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1194933	1	11/13/18 13:16	11/14/18 09:33	SHG

# SAMPLE SUMMARY

## WMW-23-20181106 L1042954-05 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 11:30  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:23	11/14/18 14:23	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 12:00	11/15/18 12:00	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:29	11/11/18 14:29	TH
Wet Chemistry by Method 9056A	WG1194398	1	11/10/18 19:19	11/10/18 19:19	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 21:01	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 12:16	11/12/18 12:16	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194591	1	11/10/18 20:43	11/10/18 20:43	JAH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/16/18 05:35	SHG

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-24-20181106 L1042954-06 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 10:55  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:25	11/14/18 14:25	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 12:01	11/15/18 12:01	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:29	11/11/18 14:29	TH
Wet Chemistry by Method 9056A	WG1194398	1	11/10/18 19:36	11/10/18 19:36	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 21:05	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 12:23	11/12/18 12:23	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194869	1	11/11/18 11:33	11/11/18 11:33	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/13/18 15:49	TH

## WMW-26-20181106 L1042954-07 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 07:30  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:27	11/14/18 14:27	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 12:03	11/15/18 12:03	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:30	11/11/18 14:30	TH
Wet Chemistry by Method 9056A	WG1194398	1	11/10/18 20:25	11/10/18 20:25	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 21:26	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 13:24	11/12/18 13:24	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194869	1	11/11/18 11:52	11/11/18 11:52	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/13/18 16:09	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1194933	1	11/13/18 13:16	11/14/18 09:53	SHG

## WMW-27-20181106 L1042954-08 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 13:00  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:28	11/14/18 14:28	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 12:04	11/15/18 12:04	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:30	11/11/18 14:30	TH
Wet Chemistry by Method 9056A	WG1194398	1	11/10/18 20:42	11/10/18 20:42	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 21:30	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 13:27	11/12/18 13:27	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194869	1	11/11/18 12:11	11/11/18 12:11	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/13/18 16:29	TH



# SAMPLE SUMMARY

## WMW-28-20181106 L1042954-09 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 12:00  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:30	11/14/18 14:30	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 12:06	11/15/18 12:06	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:30	11/11/18 14:30	TH
Wet Chemistry by Method 9056A	WG1194398	1	11/10/18 20:58	11/10/18 20:58	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 21:35	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 13:29	11/12/18 13:29	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194869	1	11/11/18 12:30	11/11/18 12:30	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/13/18 16:50	TH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

## WMW-29-20181106 L1042954-10 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 15:05  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:31	11/14/18 14:31	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 12:07	11/15/18 12:07	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:30	11/11/18 14:30	TH
Wet Chemistry by Method 9056A	WG1194398	1	11/10/18 21:14	11/10/18 21:14	MAJ
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 21:39	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 13:32	11/12/18 13:32	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194869	1	11/11/18 12:49	11/11/18 12:49	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/13/18 17:10	TH

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-30-20181106 L1042954-11 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 14:20  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:33	11/14/18 14:33	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 12:09	11/15/18 12:09	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:30	11/11/18 14:30	TH
Wet Chemistry by Method 9056A	WG1194539	1	11/13/18 02:04	11/13/18 02:04	ELN
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 21:44	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 13:34	11/12/18 13:34	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194869	1	11/11/18 13:07	11/11/18 13:07	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/13/18 17:30	TH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1194933	1	11/13/18 13:16	11/14/18 10:13	SHG

## WMW-31-20181106 L1042954-12 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 09:35  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:35	11/14/18 14:35	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 12:10	11/15/18 12:10	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:31	11/11/18 14:31	TH
Wet Chemistry by Method 9056A	WG1194539	1	11/13/18 02:14	11/13/18 02:14	ELN
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 21:48	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 13:36	11/12/18 13:36	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194869	1	11/11/18 13:26	11/11/18 13:26	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/13/18 17:50	TH

# SAMPLE SUMMARY



## WMW-32-20181106 L1042954-13 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 15:50  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:36	11/14/18 14:36	JER
Wet Chemistry by Method 353.2	WG1195856	2	11/15/18 12:12	11/15/18 12:12	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:31	11/11/18 14:31	TH
Wet Chemistry by Method 9056A	WG1194539	1	11/13/18 02:25	11/13/18 02:25	ELN
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 21:53	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 13:42	11/12/18 13:42	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194869	1	11/11/18 13:45	11/11/18 13:45	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/13/18 18:10	TH

1  
Cp

2  
Tc

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Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## D-1-20181106 L1042954-14 GW

Collected by  
K. Teague  
Collected date/time  
11/06/18 12:05  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 350.1	WG1195350	1	11/14/18 14:42	11/14/18 14:42	JER
Wet Chemistry by Method 353.2	WG1195856	1	11/15/18 12:19	11/15/18 12:19	JER
Wet Chemistry by Method 4500S2 D-2011	WG1194831	1	11/11/18 14:31	11/11/18 14:31	TH
Wet Chemistry by Method 9056A	WG1194539	1	11/13/18 02:58	11/13/18 02:58	ELN
Metals (ICPMS) by Method 6020B	WG1194497	1	11/13/18 13:47	11/14/18 21:58	LD
Volatile Organic Compounds (GC) by Method RSK175	WG1194494	1	11/12/18 13:46	11/12/18 13:46	MEL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1194869	1	11/11/18 14:04	11/11/18 14:04	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1195366	1	11/12/18 16:45	11/13/18 18:31	TH

## TB-01-20181107 L1042954-17 GW

Collected by  
K. Teague  
Collected date/time  
11/07/18 00:00  
Received date/time  
11/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1195898	1	11/13/18 14:45	11/13/18 14:45	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:12	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND	J6	100	1	11/15/2018 11:46	<a href="#">WG1195856</a>

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	11/11/2018 14:51	<a href="#">WG1194830</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	8560		5000	1	11/10/2018 17:41	<a href="#">WG1194398</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	712		100	1	11/14/2018 20:42	<a href="#">WG1194497</a>
Manganese,Dissolved	361		5.00	1	11/14/2018 20:42	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	45.4		10.0	1	11/12/2018 11:54	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 11:54	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 11:54	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/10/2018 19:17	<a href="#">WG1194591</a>
Toluene	ND		1.00	1	11/10/2018 19:17	<a href="#">WG1194591</a>
Ethylbenzene	ND		1.00	1	11/10/2018 19:17	<a href="#">WG1194591</a>
o-Xylene	ND		1.00	1	11/10/2018 19:17	<a href="#">WG1194591</a>
m&p-Xylene	ND		2.00	1	11/10/2018 19:17	<a href="#">WG1194591</a>
(S) Toluene-d8	103		80.0-120		11/10/2018 19:17	<a href="#">WG1194591</a>
(S) Dibromofluoromethane	98.9		75.0-120		11/10/2018 19:17	<a href="#">WG1194591</a>
(S) a,a,a-Trifluorotoluene	106		80.0-120		11/10/2018 19:17	<a href="#">WG1194591</a>
(S) 4-Bromofluorobenzene	97.6		77.0-126		11/10/2018 19:17	<a href="#">WG1194591</a>

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	11/16/2018 04:13	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	ND		250	1	11/16/2018 04:13	<a href="#">WG1195366</a>
(S) o-Terphenyl	84.7		52.0-156		11/16/2018 04:13	<a href="#">WG1195366</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:14	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/15/2018 11:49	<a href="#">WG1195856</a>

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	11/11/2018 14:51	<a href="#">WG1194830</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	10600		5000	1	11/10/2018 17:57	<a href="#">WG1194398</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	1170		100	1	11/14/2018 20:47	<a href="#">WG1194497</a>
Manganese,Dissolved	1150		5.00	1	11/14/2018 20:47	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	367		10.0	1	11/12/2018 12:00	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 12:00	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 12:00	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/10/2018 19:38	<a href="#">WG1194591</a>
Toluene	ND		1.00	1	11/10/2018 19:38	<a href="#">WG1194591</a>
Ethylbenzene	ND		1.00	1	11/10/2018 19:38	<a href="#">WG1194591</a>
o-Xylene	ND		1.00	1	11/10/2018 19:38	<a href="#">WG1194591</a>
m&p-Xylene	ND		2.00	1	11/10/2018 19:38	<a href="#">WG1194591</a>
(S) Toluene-d8	103		80.0-120		11/10/2018 19:38	<a href="#">WG1194591</a>
(S) Dibromofluoromethane	101		75.0-120		11/10/2018 19:38	<a href="#">WG1194591</a>
(S) a,a,a-Trifluorotoluene	104		80.0-120		11/10/2018 19:38	<a href="#">WG1194591</a>
(S) 4-Bromofluorobenzene	99.7		77.0-126		11/10/2018 19:38	<a href="#">WG1194591</a>

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	11/16/2018 04:34	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	274		250	1	11/16/2018 04:34	<a href="#">WG1195366</a>
(S) o-Terphenyl	82.6		52.0-156		11/16/2018 04:34	<a href="#">WG1195366</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:15	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1210		100	1	11/15/2018 11:51	<a href="#">WG1195856</a>

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	11/11/2018 14:51	<a href="#">WG1194830</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	11800		5000	1	11/10/2018 18:14	<a href="#">WG1194398</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 20:51	<a href="#">WG1194497</a>
Manganese,Dissolved	892		5.00	1	11/14/2018 20:51	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 12:02	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 12:02	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 12:02	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/10/2018 20:00	<a href="#">WG1194591</a>
Toluene	ND		1.00	1	11/10/2018 20:00	<a href="#">WG1194591</a>
Ethylbenzene	ND		1.00	1	11/10/2018 20:00	<a href="#">WG1194591</a>
o-Xylene	ND		1.00	1	11/10/2018 20:00	<a href="#">WG1194591</a>
m&p-Xylene	ND		2.00	1	11/10/2018 20:00	<a href="#">WG1194591</a>
(S) Toluene-d8	102		80.0-120		11/10/2018 20:00	<a href="#">WG1194591</a>
(S) Dibromofluoromethane	108		75.0-120		11/10/2018 20:00	<a href="#">WG1194591</a>
(S) a,a,a-Trifluorotoluene	104		80.0-120		11/10/2018 20:00	<a href="#">WG1194591</a>
(S) 4-Bromofluorobenzene	102		77.0-126		11/10/2018 20:00	<a href="#">WG1194591</a>

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	11/16/2018 04:54	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	252		250	1	11/16/2018 04:54	<a href="#">WG1195366</a>
(S) o-Terphenyl	77.9		52.0-156		11/16/2018 04:54	<a href="#">WG1195366</a>



Collected date/time: 11/06/18 15:20

L1042954

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	11/20/2018 15:16	<a href="#">WG1199142</a>
Residual Range Organics (RRO)	ND		250	1	11/20/2018 15:16	<a href="#">WG1199142</a>
<i>(S) o-Terphenyl</i>	51.1	<u>J2</u>	52.0-156		11/20/2018 15:16	<a href="#">WG1199142</a>

Sample Narrative:

L1042954-03 WG1199142: Low surrogate due to matrix

- 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	11/14/2018 14:22	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1400		100	1	11/15/2018 11:58	<a href="#">WG1195856</a>

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	11/11/2018 14:29	<a href="#">WG1194831</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	17800		5000	1	11/10/2018 18:30	<a href="#">WG1194398</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 20:56	<a href="#">WG1194497</a>
Manganese,Dissolved	ND		5.00	1	11/14/2018 20:56	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 12:08	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 12:08	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 12:08	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/10/2018 20:21	<a href="#">WG1194591</a>
Toluene	ND		1.00	1	11/10/2018 20:21	<a href="#">WG1194591</a>
Ethylbenzene	ND		1.00	1	11/10/2018 20:21	<a href="#">WG1194591</a>
o-Xylene	ND		1.00	1	11/10/2018 20:21	<a href="#">WG1194591</a>
m&p-Xylene	ND		2.00	1	11/10/2018 20:21	<a href="#">WG1194591</a>
(S) Toluene-d8	102		80.0-120		11/10/2018 20:21	<a href="#">WG1194591</a>
(S) Dibromofluoromethane	102		75.0-120		11/10/2018 20:21	<a href="#">WG1194591</a>
(S) a,a,a-Trifluorotoluene	103		80.0-120		11/10/2018 20:21	<a href="#">WG1194591</a>
(S) 4-Bromofluorobenzene	100		77.0-126		11/10/2018 20:21	<a href="#">WG1194591</a>

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	11/16/2018 05:15	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	ND		250	1	11/16/2018 05:15	<a href="#">WG1195366</a>
(S) o-Terphenyl	81.6		52.0-156		11/16/2018 05:15	<a href="#">WG1195366</a>





Collected date/time: 11/06/18 13:50

L1042954

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	J4	200	1	11/14/2018 09:33	<a href="#">WG1194933</a>
Residual Range Organics (RRO)	ND		250	1	11/14/2018 09:33	<a href="#">WG1194933</a>
<i>(S) o-Terphenyl</i>	89.2		52.0-156		11/14/2018 09:33	<a href="#">WG1194933</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:23	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	860		100	1	11/15/2018 12:00	<a href="#">WG1195856</a>

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	11/11/2018 14:29	<a href="#">WG1194831</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	17700		5000	1	11/10/2018 19:19	<a href="#">WG1194398</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 21:01	<a href="#">WG1194497</a>
Manganese,Dissolved	ND		5.00	1	11/14/2018 21:01	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 12:16	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 12:16	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 12:16	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/10/2018 20:43	<a href="#">WG1194591</a>
Toluene	ND		1.00	1	11/10/2018 20:43	<a href="#">WG1194591</a>
Ethylbenzene	ND		1.00	1	11/10/2018 20:43	<a href="#">WG1194591</a>
o-Xylene	ND		1.00	1	11/10/2018 20:43	<a href="#">WG1194591</a>
m&p-Xylene	ND		2.00	1	11/10/2018 20:43	<a href="#">WG1194591</a>
(S) Toluene-d8	102		80.0-120		11/10/2018 20:43	<a href="#">WG1194591</a>
(S) Dibromofluoromethane	101		75.0-120		11/10/2018 20:43	<a href="#">WG1194591</a>
(S) a,a,a-Trifluorotoluene	105		80.0-120		11/10/2018 20:43	<a href="#">WG1194591</a>
(S) 4-Bromofluorobenzene	101		77.0-126		11/10/2018 20:43	<a href="#">WG1194591</a>

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	11/16/2018 05:35	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	ND		250	1	11/16/2018 05:35	<a href="#">WG1195366</a>
(S) o-Terphenyl	84.2		52.0-156		11/16/2018 05:35	<a href="#">WG1195366</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:25	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2940		100	1	11/15/2018 12:01	<a href="#">WG1195856</a>

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	11/11/2018 14:29	<a href="#">WG1194831</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	34300		5000	1	11/10/2018 19:36	<a href="#">WG1194398</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 21:05	<a href="#">WG1194497</a>
Manganese,Dissolved	370		5.00	1	11/14/2018 21:05	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 12:23	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 12:23	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 12:23	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Acrolein	ND		50.0	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Acrylonitrile	ND		10.0	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Benzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Bromobenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Bromodichloromethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Bromoform	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Bromomethane	ND		5.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
n-Butylbenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
sec-Butylbenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
tert-Butylbenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Carbon tetrachloride	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Chlorobenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Chlorodibromomethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Chloroethane	ND		5.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Chloroform	ND		5.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Chloromethane	ND		2.50	1	11/11/2018 11:33	<a href="#">WG1194869</a>
2-Chlorotoluene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
4-Chlorotoluene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Dibromomethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,2-Dichlorobenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,3-Dichlorobenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,4-Dichlorobenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Dichlorodifluoromethane	ND		5.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,1-Dichloroethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,2-Dichloroethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,1-Dichloroethene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,2-Dichloropropane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,1-Dichloropropene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,3-Dichloropropane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
2,2-Dichloropropane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Di-isopropyl ether	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Ethylbenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Isopropylbenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
p-Isopropyltoluene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
2-Butanone (MEK)	ND		10.0	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Methylene Chloride	ND		5.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Methyl tert-butyl ether	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Naphthalene	ND		5.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
n-Propylbenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Styrene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Tetrachloroethene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Toluene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,1,1-Trichloroethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,1,2-Trichloroethane	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Trichloroethene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Trichlorofluoromethane	ND		5.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,2,3-Trichloropropane	ND		2.50	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
Vinyl chloride	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
o-Xylene	ND		1.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
m&p-Xylene	ND		2.00	1	11/11/2018 11:33	<a href="#">WG1194869</a>
(S) Toluene-d8	96.0		80.0-120		11/11/2018 11:33	<a href="#">WG1194869</a>
(S) Dibromofluoromethane	101		75.0-120		11/11/2018 11:33	<a href="#">WG1194869</a>
(S) 4-Bromofluorobenzene	102		77.0-126		11/11/2018 11:33	<a href="#">WG1194869</a>

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)	435		200	1	11/13/2018 15:49	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	794		250	1	11/13/2018 15:49	<a href="#">WG1195366</a>



Collected date/time: 11/06/18 10:55

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	78.9		52.0-156		11/13/2018 15:49	<a href="#">WG1195366</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:27	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	596		100	1	11/15/2018 12:03	<a href="#">WG1195856</a>

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	11/11/2018 14:30	<a href="#">WG1194831</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	26000		5000	1	11/10/2018 20:25	<a href="#">WG1194398</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	683		100	1	11/14/2018 21:26	<a href="#">WG1194497</a>
Manganese,Dissolved	2550		5.00	1	11/14/2018 21:26	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 13:24	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 13:24	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 13:24	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Acrolein	ND		50.0	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Acrylonitrile	ND		10.0	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Benzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Bromobenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Bromodichloromethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Bromoform	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Bromomethane	ND		5.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
n-Butylbenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
sec-Butylbenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
tert-Butylbenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Carbon tetrachloride	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Chlorobenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Chlorodibromomethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Chloroethane	ND		5.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Chloroform	ND		5.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Chloromethane	ND		2.50	1	11/11/2018 11:52	<a href="#">WG1194869</a>
2-Chlorotoluene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
4-Chlorotoluene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Dibromomethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,2-Dichlorobenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,3-Dichlorobenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,4-Dichlorobenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Dichlorodifluoromethane	ND		5.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,1-Dichloroethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,2-Dichloroethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,1-Dichloroethene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,2-Dichloropropane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,1-Dichloropropene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,3-Dichloropropane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
2,2-Dichloropropane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Di-isopropyl ether	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Ethylbenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Isopropylbenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
p-Isopropyltoluene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
2-Butanone (MEK)	ND		10.0	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Methylene Chloride	ND		5.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Methyl tert-butyl ether	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Naphthalene	ND		5.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
n-Propylbenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Styrene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Tetrachloroethene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Toluene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,1,1-Trichloroethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,1,2-Trichloroethane	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Trichloroethene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Trichlorofluoromethane	ND		5.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,2,3-Trichloropropane	ND		2.50	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
Vinyl chloride	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
o-Xylene	ND		1.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
m&p-Xylene	ND		2.00	1	11/11/2018 11:52	<a href="#">WG1194869</a>
(S) Toluene-d8	89.8		80.0-120		11/11/2018 11:52	<a href="#">WG1194869</a>
(S) Dibromofluoromethane	102		75.0-120		11/11/2018 11:52	<a href="#">WG1194869</a>
(S) 4-Bromofluorobenzene	102		77.0-126		11/11/2018 11:52	<a href="#">WG1194869</a>

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)	628		200	1	11/13/2018 16:09	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	1330		250	1	11/13/2018 16:09	<a href="#">WG1195366</a>



Collected date/time: 11/06/18 07:30

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	83.7		52.0-156		11/13/2018 16:09	<a href="#">WG1195366</a>

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND	J4	200	1	11/14/2018 09:53	<a href="#">WG1194933</a>
Residual Range Organics (RRO)	ND		250	1	11/14/2018 09:53	<a href="#">WG1194933</a>
(S) o-Terphenyl	89.8		52.0-156		11/14/2018 09:53	<a href="#">WG1194933</a>

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	11/14/2018 14:28	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	697		100	1	11/15/2018 12:04	<a href="#">WG1195856</a>

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	11/11/2018 14:30	<a href="#">WG1194831</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	5670		5000	1	11/10/2018 20:42	<a href="#">WG1194398</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 21:30	<a href="#">WG1194497</a>
Manganese,Dissolved	361		5.00	1	11/14/2018 21:30	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 13:27	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 13:27	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 13:27	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Acrolein	ND		50.0	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Acrylonitrile	ND		10.0	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Benzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Bromobenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Bromodichloromethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Bromoform	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Bromomethane	ND		5.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
n-Butylbenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
sec-Butylbenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
tert-Butylbenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Carbon tetrachloride	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Chlorobenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Chlorodibromomethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Chloroethane	ND		5.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Chloroform	ND		5.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Chloromethane	ND		2.50	1	11/11/2018 12:11	<a href="#">WG1194869</a>
2-Chlorotoluene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
4-Chlorotoluene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Dibromomethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,2-Dichlorobenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,3-Dichlorobenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,4-Dichlorobenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Dichlorodifluoromethane	ND		5.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,1-Dichloroethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,2-Dichloroethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,1-Dichloroethene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,2-Dichloropropane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,1-Dichloropropene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,3-Dichloropropane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
2,2-Dichloropropane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Di-isopropyl ether	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Ethylbenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Isopropylbenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
p-Isopropyltoluene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
2-Butanone (MEK)	ND		10.0	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Methylene Chloride	ND		5.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Methyl tert-butyl ether	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Naphthalene	ND		5.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
n-Propylbenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Styrene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Tetrachloroethene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Toluene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,1,1-Trichloroethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,1,2-Trichloroethane	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Trichloroethene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Trichlorofluoromethane	ND		5.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,2,3-Trichloropropane	ND		2.50	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
Vinyl chloride	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
o-Xylene	ND		1.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
m&p-Xylene	ND		2.00	1	11/11/2018 12:11	<a href="#">WG1194869</a>
(S) Toluene-d8	98.2		80.0-120		11/11/2018 12:11	<a href="#">WG1194869</a>
(S) Dibromofluoromethane	102		75.0-120		11/11/2018 12:11	<a href="#">WG1194869</a>
(S) 4-Bromofluorobenzene	106		77.0-126		11/11/2018 12:11	<a href="#">WG1194869</a>

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)	229		200	1	11/13/2018 16:29	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	371		250	1	11/13/2018 16:29	<a href="#">WG1195366</a>



Collected date/time: 11/06/18 13:00

L1042954

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	76.3		52.0-156		11/13/2018 16:29	<a href="#">WG1195366</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:30	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2410		100	1	11/15/2018 12:06	<a href="#">WG1195856</a>

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	11/11/2018 14:30	<a href="#">WG1194831</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	11000		5000	1	11/10/2018 20:58	<a href="#">WG1194398</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 21:35	<a href="#">WG1194497</a>
Manganese,Dissolved	132		5.00	1	11/14/2018 21:35	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 13:29	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 13:29	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 13:29	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Acrolein	ND		50.0	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Acrylonitrile	ND		10.0	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Benzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Bromobenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Bromodichloromethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Bromoform	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Bromomethane	ND		5.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
n-Butylbenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
sec-Butylbenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
tert-Butylbenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Carbon tetrachloride	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Chlorobenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Chlorodibromomethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Chloroethane	ND		5.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Chloroform	ND		5.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Chloromethane	ND		2.50	1	11/11/2018 12:30	<a href="#">WG1194869</a>
2-Chlorotoluene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
4-Chlorotoluene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Dibromomethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,2-Dichlorobenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,3-Dichlorobenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,4-Dichlorobenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Dichlorodifluoromethane	ND		5.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,1-Dichloroethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,2-Dichloroethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,1-Dichloroethene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,2-Dichloropropane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,1-Dichloropropene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,3-Dichloropropane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
2,2-Dichloropropane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Di-isopropyl ether	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Ethylbenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Isopropylbenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
p-Isopropyltoluene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
2-Butanone (MEK)	ND		10.0	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Methylene Chloride	ND		5.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Methyl tert-butyl ether	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Naphthalene	ND		5.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
n-Propylbenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Styrene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Tetrachloroethene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Toluene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,1,1-Trichloroethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,1,2-Trichloroethane	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Trichloroethene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Trichlorofluoromethane	ND		5.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,2,3-Trichloropropane	ND		2.50	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
Vinyl chloride	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
o-Xylene	ND		1.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
m&p-Xylene	ND		2.00	1	11/11/2018 12:30	<a href="#">WG1194869</a>
(S) Toluene-d8	92.6		80.0-120		11/11/2018 12:30	<a href="#">WG1194869</a>
(S) Dibromofluoromethane	104		75.0-120		11/11/2018 12:30	<a href="#">WG1194869</a>
(S) 4-Bromofluorobenzene	103		77.0-126		11/11/2018 12:30	<a href="#">WG1194869</a>

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	11/13/2018 16:50	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	411		250	1	11/13/2018 16:50	<a href="#">WG1195366</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	68.9		52.0-156		11/13/2018 16:50	<a href="#">WG1195366</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:31	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/15/2018 12:07	<a href="#">WG1195856</a>

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	11/11/2018 14:30	<a href="#">WG1194831</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	12200		5000	1	11/10/2018 21:14	<a href="#">WG1194398</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	600		100	1	11/14/2018 21:39	<a href="#">WG1194497</a>
Manganese,Dissolved	5570		5.00	1	11/14/2018 21:39	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	35.6		10.0	1	11/12/2018 13:32	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 13:32	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 13:32	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Acrolein	ND		50.0	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Acrylonitrile	ND		10.0	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Benzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Bromobenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Bromodichloromethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Bromoform	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Bromomethane	ND		5.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
n-Butylbenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
sec-Butylbenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
tert-Butylbenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Carbon tetrachloride	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Chlorobenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Chlorodibromomethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Chloroethane	ND		5.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Chloroform	ND		5.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Chloromethane	ND		2.50	1	11/11/2018 12:49	<a href="#">WG1194869</a>
2-Chlorotoluene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
4-Chlorotoluene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Dibromomethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,2-Dichlorobenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,3-Dichlorobenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,4-Dichlorobenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Dichlorodifluoromethane	ND		5.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,1-Dichloroethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,2-Dichloroethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,1-Dichloroethene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,2-Dichloropropane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,1-Dichloropropene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,3-Dichloropropane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
2,2-Dichloropropane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Di-isopropyl ether	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Ethylbenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Isopropylbenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
p-Isopropyltoluene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
2-Butanone (MEK)	ND		10.0	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Methylene Chloride	ND		5.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Methyl tert-butyl ether	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Naphthalene	ND		5.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
n-Propylbenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Styrene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Tetrachloroethene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Toluene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,1,1-Trichloroethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,1,2-Trichloroethane	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Trichloroethene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Trichlorofluoromethane	ND		5.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,2,3-Trichloropropane	ND		2.50	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
Vinyl chloride	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
o-Xylene	ND		1.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
m&p-Xylene	ND		2.00	1	11/11/2018 12:49	<a href="#">WG1194869</a>
(S) Toluene-d8	97.0		80.0-120		11/11/2018 12:49	<a href="#">WG1194869</a>
(S) Dibromofluoromethane	107		75.0-120		11/11/2018 12:49	<a href="#">WG1194869</a>
(S) 4-Bromofluorobenzene	101		77.0-126		11/11/2018 12:49	<a href="#">WG1194869</a>

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)	3800		200	1	11/13/2018 17:10	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	4290		250	1	11/13/2018 17:10	<a href="#">WG1195366</a>





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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	90.0		52.0-156		11/13/2018 17:10	<a href="#">WG1195366</a>

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:33	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	365		100	1	11/15/2018 12:09	<a href="#">WG1195856</a>

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	11/11/2018 14:30	<a href="#">WG1194831</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	22500		5000	1	11/13/2018 02:04	<a href="#">WG1194539</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 21:44	<a href="#">WG1194497</a>
Manganese,Dissolved	1040		5.00	1	11/14/2018 21:44	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 13:34	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 13:34	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 13:34	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Acrolein	ND		50.0	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Acrylonitrile	ND		10.0	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Benzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Bromobenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Bromodichloromethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Bromoform	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Bromomethane	ND		5.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
n-Butylbenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
sec-Butylbenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
tert-Butylbenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Carbon tetrachloride	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Chlorobenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Chlorodibromomethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Chloroethane	ND		5.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Chloroform	ND		5.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Chloromethane	ND		2.50	1	11/11/2018 13:07	<a href="#">WG1194869</a>
2-Chlorotoluene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
4-Chlorotoluene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Dibromomethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,2-Dichlorobenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,3-Dichlorobenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,4-Dichlorobenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Dichlorodifluoromethane	ND		5.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,1-Dichloroethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,2-Dichloroethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,1-Dichloroethene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,2-Dichloropropane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,1-Dichloropropene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,3-Dichloropropane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
2,2-Dichloropropane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Di-isopropyl ether	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Ethylbenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Isopropylbenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
p-Isopropyltoluene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
2-Butanone (MEK)	ND		10.0	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Methylene Chloride	ND		5.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Methyl tert-butyl ether	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Naphthalene	ND		5.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
n-Propylbenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Styrene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Tetrachloroethene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Toluene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,1,1-Trichloroethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,1,2-Trichloroethane	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Trichloroethene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Trichlorofluoromethane	ND		5.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,2,3-Trichloropropane	ND		2.50	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
Vinyl chloride	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
o-Xylene	ND		1.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
m&p-Xylene	ND		2.00	1	11/11/2018 13:07	<a href="#">WG1194869</a>
(S) Toluene-d8	95.7		80.0-120		11/11/2018 13:07	<a href="#">WG1194869</a>
(S) Dibromofluoromethane	104		75.0-120		11/11/2018 13:07	<a href="#">WG1194869</a>
(S) 4-Bromofluorobenzene	103		77.0-126		11/11/2018 13:07	<a href="#">WG1194869</a>

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	11/13/2018 17:30	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	680		250	1	11/13/2018 17:30	<a href="#">WG1195366</a>



Collected date/time: 11/06/18 14:20

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	68.9		52.0-156		11/13/2018 17:30	<a href="#">WG1195366</a>

1 Cp

2 Tc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND	J4	200	1	11/14/2018 10:13	<a href="#">WG1194933</a>
Residual Range Organics (RRO)	ND		250	1	11/14/2018 10:13	<a href="#">WG1194933</a>
(S) o-Terphenyl	87.1		52.0-156		11/14/2018 10:13	<a href="#">WG1194933</a>

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	11/14/2018 14:35	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2860		100	1	11/15/2018 12:10	<a href="#">WG1195856</a>

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	11/11/2018 14:31	<a href="#">WG1194831</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	46300		5000	1	11/13/2018 02:14	<a href="#">WG1194539</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 21:48	<a href="#">WG1194497</a>
Manganese,Dissolved	448		5.00	1	11/14/2018 21:48	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 13:36	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 13:36	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 13:36	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Acrolein	ND		50.0	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Acrylonitrile	ND		10.0	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Benzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Bromobenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Bromodichloromethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Bromoform	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Bromomethane	ND		5.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
n-Butylbenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
sec-Butylbenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
tert-Butylbenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Carbon tetrachloride	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Chlorobenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Chlorodibromomethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Chloroethane	ND		5.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Chloroform	ND		5.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Chloromethane	ND		2.50	1	11/11/2018 13:26	<a href="#">WG1194869</a>
2-Chlorotoluene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
4-Chlorotoluene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Dibromomethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,2-Dichlorobenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,3-Dichlorobenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,4-Dichlorobenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Dichlorodifluoromethane	ND		5.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,1-Dichloroethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,2-Dichloroethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,1-Dichloroethene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,2-Dichloropropane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,1-Dichloropropene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,3-Dichloropropane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
2,2-Dichloropropane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Di-isopropyl ether	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Ethylbenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Isopropylbenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
p-Isopropyltoluene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
2-Butanone (MEK)	ND		10.0	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Methylene Chloride	ND		5.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Methyl tert-butyl ether	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Naphthalene	ND		5.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
n-Propylbenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Styrene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Tetrachloroethene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Toluene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,1,1-Trichloroethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,1,2-Trichloroethane	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Trichloroethene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Trichlorofluoromethane	ND		5.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,2,3-Trichloropropane	ND		2.50	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
Vinyl chloride	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
o-Xylene	ND		1.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
m&p-Xylene	ND		2.00	1	11/11/2018 13:26	<a href="#">WG1194869</a>
(S) Toluene-d8	92.5		80.0-120		11/11/2018 13:26	<a href="#">WG1194869</a>
(S) Dibromofluoromethane	103		75.0-120		11/11/2018 13:26	<a href="#">WG1194869</a>
(S) 4-Bromofluorobenzene	102		77.0-126		11/11/2018 13:26	<a href="#">WG1194869</a>

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	11/13/2018 17:50	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	480		250	1	11/13/2018 17:50	<a href="#">WG1195366</a>



Collected date/time: 11/06/18 09:35

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	64.7		52.0-156		11/13/2018 17:50	<a href="#">WG1195366</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:36	<a href="#">WG1195350</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	6710		200	2	11/15/2018 12:12	<a href="#">WG1195856</a>

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	11/11/2018 14:31	<a href="#">WG1194831</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	49300		5000	1	11/13/2018 02:25	<a href="#">WG1194539</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 21:53	<a href="#">WG1194497</a>
Manganese,Dissolved	477		5.00	1	11/14/2018 21:53	<a href="#">WG1194497</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	79.6		10.0	1	11/12/2018 13:42	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 13:42	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 13:42	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Acrolein	ND		50.0	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Acrylonitrile	ND		10.0	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Benzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Bromobenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Bromodichloromethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Bromoform	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Bromomethane	ND		5.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
n-Butylbenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
sec-Butylbenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
tert-Butylbenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Carbon tetrachloride	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Chlorobenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Chlorodibromomethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Chloroethane	ND		5.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Chloroform	ND		5.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Chloromethane	ND		2.50	1	11/11/2018 13:45	<a href="#">WG1194869</a>
2-Chlorotoluene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
4-Chlorotoluene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>





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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Dibromomethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,2-Dichlorobenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,3-Dichlorobenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,4-Dichlorobenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Dichlorodifluoromethane	ND		5.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,1-Dichloroethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,2-Dichloroethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,1-Dichloroethene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,2-Dichloropropane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,1-Dichloropropene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,3-Dichloropropane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
2,2-Dichloropropane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Di-isopropyl ether	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Ethylbenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Isopropylbenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
p-Isopropyltoluene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
2-Butanone (MEK)	ND		10.0	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Methylene Chloride	ND		5.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Methyl tert-butyl ether	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Naphthalene	ND		5.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
n-Propylbenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Styrene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Tetrachloroethene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Toluene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,1,1-Trichloroethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,1,2-Trichloroethane	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Trichloroethene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Trichlorofluoromethane	ND		5.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,2,3-Trichloropropane	ND		2.50	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
Vinyl chloride	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
o-Xylene	ND		1.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
m&p-Xylene	ND		2.00	1	11/11/2018 13:45	<a href="#">WG1194869</a>
(S) Toluene-d8	95.3		80.0-120		11/11/2018 13:45	<a href="#">WG1194869</a>
(S) Dibromofluoromethane	106		75.0-120		11/11/2018 13:45	<a href="#">WG1194869</a>
(S) 4-Bromofluorobenzene	106		77.0-126		11/11/2018 13:45	<a href="#">WG1194869</a>

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)	245		200	1	11/13/2018 18:10	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	424		250	1	11/13/2018 18:10	<a href="#">WG1195366</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	70.0		52.0-156		11/13/2018 18:10	<a href="#">WG1195366</a>

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



## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/14/2018 14:42	<a href="#">WG1195350</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2480		100	1	11/15/2018 12:19	<a href="#">WG1195856</a>

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	11/11/2018 14:31	<a href="#">WG1194831</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	10700		5000	1	11/13/2018 02:58	<a href="#">WG1194539</a>

7 Gl

8 Al

## Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/14/2018 21:58	<a href="#">WG1194497</a>
Manganese,Dissolved	149		5.00	1	11/14/2018 21:58	<a href="#">WG1194497</a>

9 Sc

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/12/2018 13:46	<a href="#">WG1194494</a>
Ethane	ND		13.0	1	11/12/2018 13:46	<a href="#">WG1194494</a>
Ethene	ND		13.0	1	11/12/2018 13:46	<a href="#">WG1194494</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Acrolein	ND		50.0	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Acrylonitrile	ND		10.0	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Benzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Bromobenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Bromodichloromethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Bromoform	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Bromomethane	ND		5.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
n-Butylbenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
sec-Butylbenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
tert-Butylbenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Carbon tetrachloride	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Chlorobenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Chlorodibromomethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Chloroethane	ND		5.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Chloroform	ND		5.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Chloromethane	ND		2.50	1	11/11/2018 14:04	<a href="#">WG1194869</a>
2-Chlorotoluene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
4-Chlorotoluene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>



Collected date/time: 11/06/18 12:05

L1042954

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Dibromomethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,2-Dichlorobenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,3-Dichlorobenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,4-Dichlorobenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Dichlorodifluoromethane	ND		5.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,1-Dichloroethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,2-Dichloroethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,1-Dichloroethene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,2-Dichloropropane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,1-Dichloropropene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,3-Dichloropropane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
2,2-Dichloropropane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Di-isopropyl ether	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Ethylbenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Isopropylbenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
p-Isopropyltoluene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
2-Butanone (MEK)	ND		10.0	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Methylene Chloride	ND		5.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Methyl tert-butyl ether	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Naphthalene	ND		5.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
n-Propylbenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Styrene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Tetrachloroethene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Toluene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,1,1-Trichloroethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,1,2-Trichloroethane	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Trichloroethene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Trichlorofluoromethane	ND		5.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,2,3-Trichloropropane	ND		2.50	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
Vinyl chloride	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
o-Xylene	ND		1.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
m&p-Xylene	ND		2.00	1	11/11/2018 14:04	<a href="#">WG1194869</a>
(S) Toluene-d8	93.2		80.0-120		11/11/2018 14:04	<a href="#">WG1194869</a>
(S) Dibromofluoromethane	103		75.0-120		11/11/2018 14:04	<a href="#">WG1194869</a>
(S) 4-Bromofluorobenzene	102		77.0-126		11/11/2018 14:04	<a href="#">WG1194869</a>

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	11/13/2018 18:31	<a href="#">WG1195366</a>
Residual Range Organics (RRO)	587		250	1	11/13/2018 18:31	<a href="#">WG1195366</a>



Collected date/time: 11/06/18 12:05

L1042954

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	71.6		52.0-156		11/13/2018 18:31	<a href="#">WG1195366</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> 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	11/13/2018 14:45	<a href="#">WG1195898</a>
Acrolein	ND		50.0	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Acrylonitrile	ND		10.0	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Benzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Bromobenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Bromodichloromethane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Bromoform	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Bromomethane	ND		5.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
n-Butylbenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
sec-Butylbenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
tert-Butylbenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Carbon tetrachloride	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Chlorobenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Chlorodibromomethane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Chloroethane	ND		5.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Chloroform	ND		5.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Chloromethane	ND		2.50	1	11/13/2018 14:45	<a href="#">WG1195898</a>
2-Chlorotoluene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
4-Chlorotoluene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,2-Dibromoethane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Dibromomethane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,2-Dichlorobenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,3-Dichlorobenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,4-Dichlorobenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Dichlorodifluoromethane	ND		5.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,1-Dichloroethane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,2-Dichloroethane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,1-Dichloroethene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,2-Dichloropropane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,1-Dichloropropene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,3-Dichloropropane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
2,2-Dichloropropane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Di-isopropyl ether	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Ethylbenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Isopropylbenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
p-Isopropyltoluene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
2-Butanone (MEK)	ND		10.0	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Methylene Chloride	ND		5.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Methyl tert-butyl ether	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Naphthalene	ND		5.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
n-Propylbenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Styrene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Tetrachloroethene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Toluene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>

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	11/13/2018 14:45	<a href="#">WG1195898</a>
1,1,2-Trichloroethane	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Trichloroethene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Trichlorofluoromethane	ND		5.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,2,3-Trichloropropane	ND		2.50	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
Vinyl chloride	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
o-Xylene	ND		1.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
m&p-Xylene	ND		2.00	1	11/13/2018 14:45	<a href="#">WG1195898</a>
(S) Toluene-d8	92.4		80.0-120		11/13/2018 14:45	<a href="#">WG1195898</a>
(S) Dibromofluoromethane	101		75.0-120		11/13/2018 14:45	<a href="#">WG1195898</a>
(S) 4-Bromofluorobenzene	102		77.0-126		11/13/2018 14:45	<a href="#">WG1195898</a>

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



Method Blank (MB)

(MB) R3359947-1 11/14/18 14:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1042196-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1042196-01 11/14/18 14:04 • (DUP) R3359947-3 11/14/18 14:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	6890	6810	1	1.18		10

L1043231-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1043231-05 11/14/18 14:46 • (DUP) R3359947-5 11/14/18 14:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	U	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3359947-2 11/14/18 14:03

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	7880	105	90.0-110	

L1042224-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1042224-01 11/14/18 14:08 • (MS) R3359947-4 11/14/18 14:09

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	266	5050	95.7	1	90.0-110	

L1043231-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1043231-06 11/14/18 14:49 • (MS) R3359947-6 11/14/18 14:50 • (MSD) R3359947-7 11/14/18 14:52

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	613	5570	5450	99.1	96.7	1	90.0-110			2.16	10





Method Blank (MB)

(MB) R3360216-1 11/15/18 11:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1042250-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1042250-01 11/15/18 11:43 • (DUP) R3360216-3 11/15/18 11:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1710	1720	1	0.816		20

L1043074-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1043074-02 11/15/18 12:22 • (DUP) R3360216-5 11/15/18 12:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	4530	4460	1	1.58		20

Laboratory Control Sample (LCS)

(LCS) R3360216-2 11/15/18 11:39

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	3750	93.7	90.0-110	

L1042954-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1042954-01 11/15/18 11:46 • (MS) R3360216-4 11/15/18 11:48

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	ND	2170	84.6	1	90.0-110	J6

L1043074-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1043074-03 11/15/18 12:25 • (MS) R3360216-6 11/15/18 12:27 • (MSD) R3360216-7 11/15/18 12:28

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	ND	234	225	9.36	9.00	1	90.0-110	J6	J6	3.92	20



Method Blank (MB)

(MB) R3358831-1 11/11/18 14:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1042805-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1042805-04 11/11/18 14:47 • (DUP) R3358831-3 11/11/18 14:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1042954-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1042954-03 11/11/18 14:51 • (DUP) R3358831-6 11/11/18 14:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3358831-2 11/11/18 14:47

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	491	98.2	85.0-115	



Method Blank (MB)

(MB) R3358829-1 11/11/18 14:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1042639-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1042639-03 11/11/18 14:28 • (DUP) R3358829-3 11/11/18 14:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

L1043114-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1043114-06 11/11/18 14:33 • (DUP) R3358829-6 11/11/18 14:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3358829-2 11/11/18 14:28

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	513	103	85.0-115	

L1042954-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042954-12 11/11/18 14:31 • (MS) R3358829-4 11/11/18 14:31 • (MSD) R3358829-5 11/11/18 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
Sulfide	1000	ND	910	910	91.0	91.0	1	80.0-120			0.000	20



Method Blank (MB)

(MB) R3359134-1 11/10/18 12:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1042850-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1042850-04 11/10/18 14:24 • (DUP) R3359134-3 11/10/18 14:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	ND	4940	1	0.000		15

L1042954-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1042954-06 11/10/18 19:36 • (DUP) R3359134-6 11/10/18 19:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	34300	34500	1	0.485		15

Laboratory Control Sample (LCS)

(LCS) R3359134-2 11/10/18 12:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	39100	97.8	80.0-120	

L1042850-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042850-04 11/10/18 14:24 • (MS) R3359134-4 11/10/18 14:57 • (MSD) R3359134-5 11/10/18 15:13

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	55000	55100	100	100	1	80.0-120			0.252	15

L1042954-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1042954-06 11/10/18 19:36 • (MS) R3359134-7 11/10/18 20:09

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	34300	75300	82.0	1	80.0-120	



Method Blank (MB)

(MB) R3359264-1 11/12/18 17:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1043056-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1043056-07 11/13/18 05:19 • (DUP) R3359264-6 11/13/18 05:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	21200	21700	1	2.55		15

L1042988-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1042988-02 11/13/18 03:20 • (DUP) R3359264-3 11/13/18 03:31

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	50100	50900	1	1.65		15

Laboratory Control Sample (LCS)

(LCS) R3359264-2 11/12/18 17:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	40000	100	80.0-120	

L1043056-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1043056-07 11/13/18 05:19 • (MS) R3359264-7 11/13/18 05:41

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	21200	70100	97.8	1	80.0-120	

L1042988-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042988-02 11/13/18 03:20 • (MS) R3359264-4 11/13/18 03:41 • (MSD) R3359264-5 11/13/18 03:52

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	50100	98100	98600	96.0	97.0	1	80.0-120			0.474	15



Method Blank (MB)

(MB) R3359975-1 11/14/18 19:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron,Dissolved	U		15.0	100
Manganese,Dissolved	U		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) R3359975-2 11/14/18 19:37 • (LCSD) R3359975-3 11/14/18 19:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	5030	5020	101	100	80.0-120			0.129	20
Manganese,Dissolved	50.0	49.9	50.3	99.7	101	80.0-120			0.975	20

L1042805-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1042805-01 11/14/18 19:46 • (MS) R3359975-5 11/14/18 19:56 • (MSD) R3359975-6 11/14/18 20:00

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	ND	5030	4910	101	98.3	1	75.0-125			2.29	20
Manganese,Dissolved	50.0	ND	50.2	49.5	98.7	97.4	1	75.0-125			1.27	20



Method Blank (MB)

(MB) R3359032-1 11/12/18 11:37

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

L1042954-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1042954-04 11/12/18 12:08 • (DUP) R3359032-2 11/12/18 12:12

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

L1042954-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1042954-14 11/12/18 13:46 • (DUP) R3359032-3 11/12/18 13:49

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) R3359032-4 11/12/18 13:57 • (LCSD) R3359032-5 11/12/18 14:01

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	%	%	%			%	%
Methane	67.8	78.0	69.8	115	103	85.0-115			11.0	20
Ethane	129	117	111	90.5	86.3	85.0-115			4.69	20
Ethene	127	115	111	90.9	87.2	85.0-115			4.20	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3359369-3 11/10/18 12:25

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	104			80.0-120
(S) Dibromofluoromethane	100			75.0-120
(S) a,a,a-Trifluorotoluene	104			80.0-120
(S) 4-Bromofluorobenzene	102			77.0-126

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3359369-1 11/10/18 11:22 • (LCSD) R3359369-2 11/10/18 11:43

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	%	%	%			%	%
Benzene	25.0	27.1	27.1	108	108	70.0-123			0.0873	20
Ethylbenzene	25.0	28.2	27.8	113	111	79.0-123			1.42	20
Toluene	25.0	28.1	27.4	113	110	79.0-120			2.60	20
o-Xylene	25.0	28.4	28.7	114	115	80.0-122			1.02	20
m&p-Xylenes	50.0	57.3	57.3	115	115	80.0-122			0.00862	20
(S) Toluene-d8				102	101	80.0-120				
(S) Dibromofluoromethane				99.4	101	75.0-120				
(S) a,a,a-Trifluorotoluene				104	104	80.0-120				
(S) 4-Bromofluorobenzene				99.1	101	77.0-126				

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3359203-3 11/11/18 10:07

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3359203-3 11/11/18 10:07

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	95.6			80.0-120
(S) Dibromofluoromethane	103			75.0-120
(S) 4-Bromofluorobenzene	106			77.0-126

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3359203-1 11/11/18 09:10 • (LCSD) R3359203-2 11/11/18 09:29

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	%	%	%			%	%
Acetone	125	136	148	109	119	19.0-160			8.48	27
Acrolein	125	179	178	143	143	10.0-160			0.630	26
Acrylonitrile	125	137	139	109	111	55.0-149			1.68	20



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

(LCS) R3359203-1 11/11/18 09:10 • (LCSD) R3359203-2 11/11/18 09:29

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	25.6	25.8	103	103	70.0-123			0.584	20
Bromobenzene	25.0	24.1	24.2	96.4	96.7	73.0-121			0.354	20
Bromodichloromethane	25.0	25.6	25.9	103	103	75.0-120			0.908	20
Bromoform	25.0	24.9	25.1	99.8	100	68.0-132			0.471	20
Bromomethane	25.0	37.9	36.0	152	144	10.0-160			5.14	25
n-Butylbenzene	25.0	25.9	26.2	104	105	73.0-125			1.39	20
sec-Butylbenzene	25.0	23.7	23.9	94.9	95.6	75.0-125			0.724	20
tert-Butylbenzene	25.0	24.5	24.4	98.2	97.5	76.0-124			0.721	20
Carbon tetrachloride	25.0	25.3	26.7	101	107	68.0-126			5.46	20
Chlorobenzene	25.0	25.2	25.6	101	103	80.0-121			1.67	20
Chlorodibromomethane	25.0	25.8	26.0	103	104	77.0-125			0.692	20
Chloroethane	25.0	29.9	28.8	119	115	47.0-150			3.50	20
Chloroform	25.0	23.9	23.7	95.7	95.0	73.0-120			0.738	20
Chloromethane	25.0	26.8	28.3	107	113	41.0-142			5.61	20
2-Chlorotoluene	25.0	27.5	27.0	110	108	76.0-123			1.70	20
4-Chlorotoluene	25.0	25.6	26.5	102	106	75.0-122			3.49	20
1,2-Dibromo-3-Chloropropane	25.0	24.6	26.3	98.4	105	58.0-134			6.66	20
1,2-Dibromoethane	25.0	26.2	26.0	105	104	80.0-122			0.893	20
Dibromomethane	25.0	25.9	26.1	104	104	80.0-120			0.771	20
1,2-Dichlorobenzene	25.0	26.3	25.8	105	103	79.0-121			1.84	20
1,3-Dichlorobenzene	25.0	26.5	26.7	106	107	79.0-120			0.633	20
1,4-Dichlorobenzene	25.0	23.8	24.2	95.2	96.9	79.0-120			1.69	20
Dichlorodifluoromethane	25.0	30.7	30.2	123	121	51.0-149			1.50	20
1,1-Dichloroethane	25.0	25.6	25.3	102	101	70.0-126			0.837	20
1,2-Dichloroethane	25.0	27.3	26.9	109	108	70.0-128			1.35	20
1,1-Dichloroethene	25.0	24.2	24.0	96.7	95.8	71.0-124			0.899	20
cis-1,2-Dichloroethene	25.0	25.1	25.4	100	102	73.0-120			1.36	20
trans-1,2-Dichloroethene	25.0	24.7	24.9	98.7	99.6	73.0-120			0.857	20
1,2-Dichloropropane	25.0	26.5	27.4	106	110	77.0-125			3.49	20
1,1-Dichloropropene	25.0	26.7	26.6	107	106	74.0-126			0.438	20
1,3-Dichloropropane	25.0	25.7	25.1	103	100	80.0-120			2.55	20
cis-1,3-Dichloropropene	25.0	26.7	26.7	107	107	80.0-123			0.156	20
trans-1,3-Dichloropropene	25.0	26.6	26.6	106	106	78.0-124			0.0383	20
2,2-Dichloropropane	25.0	27.1	27.0	108	108	58.0-130			0.317	20
Di-isopropyl ether	25.0	25.9	26.6	104	106	58.0-138			2.66	20
Ethylbenzene	25.0	25.0	25.1	100	100	79.0-123			0.411	20
Hexachloro-1,3-butadiene	25.0	22.8	23.2	91.3	93.0	54.0-138			1.85	20
Isopropylbenzene	25.0	25.3	24.7	101	98.8	76.0-127			2.47	20
p-Isopropyltoluene	25.0	26.0	25.4	104	102	76.0-125			2.34	20
2-Butanone (MEK)	125	146	143	117	115	44.0-160			1.94	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) R3359203-1 11/11/18 09:10 • (LCSD) R3359203-2 11/11/18 09:29

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	23.9	24.3	95.8	97.0	67.0-120			1.31	20
4-Methyl-2-pentanone (MIBK)	125	134	137	108	110	68.0-142			1.84	20
Methyl tert-butyl ether	25.0	25.5	25.2	102	101	68.0-125			1.21	20
Naphthalene	25.0	23.1	23.5	92.5	94.1	54.0-135			1.71	20
n-Propylbenzene	25.0	26.7	26.5	107	106	77.0-124			0.662	20
Styrene	25.0	26.9	27.3	107	109	73.0-130			1.46	20
1,1,1,2-Tetrachloroethane	25.0	24.8	25.5	99.4	102	75.0-125			2.55	20
1,1,2,2-Tetrachloroethane	25.0	25.3	25.4	101	101	65.0-130			0.418	20
Tetrachloroethene	25.0	25.6	26.0	102	104	72.0-132			1.73	20
Toluene	25.0	23.2	23.8	92.9	95.1	79.0-120			2.29	20
1,1,2-Trichlorotrifluoroethane	25.0	26.6	26.7	106	107	69.0-132			0.398	20
1,2,3-Trichlorobenzene	25.0	25.4	25.9	101	104	50.0-138			2.08	20
1,2,4-Trichlorobenzene	25.0	23.6	24.1	94.5	96.6	57.0-137			2.15	20
1,1,1-Trichloroethane	25.0	26.0	25.8	104	103	73.0-124			0.804	20
1,1,2-Trichloroethane	25.0	24.6	25.0	98.4	99.8	80.0-120			1.45	20
Trichloroethene	25.0	25.9	26.2	103	105	78.0-124			1.18	20
Trichlorofluoromethane	25.0	29.1	29.2	117	117	59.0-147			0.0867	20
1,2,3-Trichloropropane	25.0	25.6	26.2	102	105	73.0-130			2.27	20
1,2,3-Trimethylbenzene	25.0	25.2	25.4	101	102	77.0-120			0.842	20
1,2,4-Trimethylbenzene	25.0	25.5	25.3	102	101	76.0-121			0.543	20
1,3,5-Trimethylbenzene	25.0	25.0	24.5	99.9	97.9	76.0-122			2.03	20
Vinyl chloride	25.0	26.6	27.3	106	109	67.0-131			2.67	20
o-Xylene	25.0	24.4	24.2	97.6	96.8	80.0-122			0.776	20
m&p-Xylenes	50.0	50.5	50.8	101	102	80.0-122			0.680	20
(S) Toluene-d8				94.2	94.1	80.0-120				
(S) Dibromofluoromethane				98.8	96.9	75.0-120				
(S) 4-Bromofluorobenzene				101	98.6	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) R3359610-3 11/13/18 12:37

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	0.266	U	0.256	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3359610-3 11/13/18 12:37

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	100			80.0-120
(S) Dibromofluoromethane	98.1			75.0-120
(S) 4-Bromofluorobenzene	102			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) R3359610-1 11/13/18 11:36 • (LCSD) R3359610-2 11/13/18 11:56

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	120	123	96.0	98.6	19.0-160			2.64	27
Acrolein	125	137	150	110	120	10.0-160			9.20	26
Acrylonitrile	125	122	124	97.8	99.2	55.0-149			1.42	20



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

(LCS) R3359610-1 11/13/18 11:36 • (LCSD) R3359610-2 11/13/18 11:56

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	22.6	22.7	90.5	90.6	70.0-123			0.107	20
Bromobenzene	25.0	24.9	24.9	99.6	99.5	73.0-121			0.0615	20
Bromodichloromethane	25.0	24.6	23.7	98.3	95.0	75.0-120			3.45	20
Bromoform	25.0	23.4	23.2	93.4	92.8	68.0-132			0.722	20
Bromomethane	25.0	23.9	24.2	95.5	96.9	10.0-160			1.50	25
n-Butylbenzene	25.0	24.6	24.6	98.4	98.2	73.0-125			0.185	20
sec-Butylbenzene	25.0	25.0	24.9	100	99.8	75.0-125			0.331	20
tert-Butylbenzene	25.0	25.2	24.7	101	98.8	76.0-124			2.15	20
Carbon tetrachloride	25.0	23.4	23.6	93.5	94.5	68.0-126			1.08	20
Chlorobenzene	25.0	24.7	24.3	98.7	97.3	80.0-121			1.44	20
Chlorodibromomethane	25.0	26.6	26.4	107	106	77.0-125			0.711	20
Chloroethane	25.0	22.0	22.8	88.0	91.2	47.0-150			3.59	20
Chloroform	25.0	24.9	24.5	99.6	98.1	73.0-120			1.51	20
Chloromethane	25.0	24.5	24.1	98.1	96.3	41.0-142			1.83	20
2-Chlorotoluene	25.0	24.6	24.3	98.3	97.0	76.0-123			1.28	20
4-Chlorotoluene	25.0	24.5	24.6	98.0	98.2	75.0-122			0.214	20
1,2-Dibromo-3-Chloropropane	25.0	26.0	27.4	104	109	58.0-134			5.27	20
1,2-Dibromoethane	25.0	26.5	26.4	106	106	80.0-122			0.333	20
Dibromomethane	25.0	25.0	24.4	99.9	97.6	80.0-120			2.31	20
1,2-Dichlorobenzene	25.0	24.9	25.4	99.6	102	79.0-121			2.18	20
1,3-Dichlorobenzene	25.0	26.2	25.8	105	103	79.0-120			1.46	20
1,4-Dichlorobenzene	25.0	23.7	23.5	94.7	94.1	79.0-120			0.721	20
Dichlorodifluoromethane	25.0	26.8	26.5	107	106	51.0-149			1.16	20
1,1-Dichloroethane	25.0	24.1	24.5	96.3	98.0	70.0-126			1.69	20
1,2-Dichloroethane	25.0	22.8	23.3	91.2	93.4	70.0-128			2.32	20
1,1-Dichloroethene	25.0	24.3	24.2	97.2	96.9	71.0-124			0.342	20
cis-1,2-Dichloroethene	25.0	23.6	24.0	94.4	95.8	73.0-120			1.53	20
trans-1,2-Dichloroethene	25.0	24.2	24.2	96.9	96.9	73.0-120			0.0803	20
1,2-Dichloropropane	25.0	24.1	24.2	96.4	96.8	77.0-125			0.398	20
1,1-Dichloropropene	25.0	24.9	24.4	99.5	97.7	74.0-126			1.78	20
1,3-Dichloropropane	25.0	25.0	24.7	99.9	98.8	80.0-120			1.16	20
cis-1,3-Dichloropropene	25.0	25.1	24.6	100	98.5	80.0-123			1.93	20
trans-1,3-Dichloropropene	25.0	25.0	25.8	100	103	78.0-124			3.02	20
2,2-Dichloropropane	25.0	22.9	22.5	91.6	89.9	58.0-130			1.90	20
Di-isopropyl ether	25.0	24.7	24.1	99.0	96.5	58.0-138			2.50	20
Ethylbenzene	25.0	24.0	23.5	96.0	94.0	79.0-123			2.21	20
Hexachloro-1,3-butadiene	25.0	25.9	25.6	104	102	54.0-138			1.24	20
Isopropylbenzene	25.0	25.7	26.2	103	105	76.0-127			2.07	20
p-Isopropyltoluene	25.0	24.2	23.6	96.7	94.5	76.0-125			2.31	20
2-Butanone (MEK)	125	119	123	95.3	98.4	44.0-160			3.26	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3359610-1 11/13/18 11:36 • (LCSD) R3359610-2 11/13/18 11:56

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	23.4	23.7	93.6	94.6	67.0-120			1.10	20
4-Methyl-2-pentanone (MIBK)	125	126	128	101	103	68.0-142			1.32	20
Methyl tert-butyl ether	25.0	24.5	24.4	97.9	97.6	68.0-125			0.310	20
Naphthalene	25.0	25.3	25.4	101	102	54.0-135			0.409	20
n-Propylbenzene	25.0	25.0	24.8	100	99.1	77.0-124			1.07	20
Styrene	25.0	27.2	27.4	109	110	73.0-130			0.747	20
1,1,1,2-Tetrachloroethane	25.0	25.7	25.1	103	100	75.0-125			2.15	20
1,1,2,2-Tetrachloroethane	25.0	25.8	26.6	103	106	65.0-130			2.79	20
Tetrachloroethene	25.0	24.3	24.0	97.2	95.9	72.0-132			1.33	20
Toluene	25.0	24.0	23.5	96.0	94.1	79.0-120			1.98	20
1,1,2-Trichlorotrifluoroethane	25.0	24.6	25.1	98.6	100	69.0-132			1.89	20
1,2,3-Trichlorobenzene	25.0	25.5	25.7	102	103	50.0-138			0.601	20
1,2,4-Trichlorobenzene	25.0	25.1	25.6	100	103	57.0-137			2.17	20
1,1,1-Trichloroethane	25.0	24.7	24.7	98.7	98.6	73.0-124			0.0666	20
1,1,2-Trichloroethane	25.0	24.7	24.5	98.7	98.0	80.0-120			0.699	20
Trichloroethene	25.0	24.2	23.8	96.6	95.1	78.0-124			1.61	20
Trichlorofluoromethane	25.0	22.7	22.7	90.8	90.8	59.0-147			0.0136	20
1,2,3-Trichloropropane	25.0	25.4	26.6	101	106	73.0-130			4.85	20
1,2,3-Trimethylbenzene	25.0	24.4	24.1	97.6	96.2	77.0-120			1.37	20
1,2,4-Trimethylbenzene	25.0	25.4	25.1	101	101	76.0-121			0.888	20
1,3,5-Trimethylbenzene	25.0	23.9	23.9	95.6	95.7	76.0-122			0.134	20
Vinyl chloride	25.0	25.8	25.4	103	101	67.0-131			1.79	20
o-Xylene	25.0	26.0	25.4	104	102	80.0-122			2.15	20
m&p-Xylenes	50.0	48.9	48.3	97.9	96.6	80.0-122			1.28	20
(S) Toluene-d8				101	101	80.0-120				
(S) Dibromofluoromethane				101	99.7	75.0-120				
(S) 4-Bromofluorobenzene				104	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) R3359680-1 11/13/18 10:05

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>	68.0			52.0-156

Method Blank (MB)

(MB) R3360861-1 11/17/18 10:54

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>	83.5			52.0-156

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

(LCS) R3359680-2 11/13/18 10:25 • (LCSD) R3359680-3 11/13/18 10:45

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	821	840	109	112	50.0-150			2.29	20
Residual Range Organics (RRO)	750	670	689	89.3	91.9	50.0-150			2.80	20
<i>(S) o-Terphenyl</i>				91.5	90.5	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) R3359835-1 11/13/18 19:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	110	<u>J</u>	66.7	200
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	88.0			52.0-156

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

(LCS) R3359835-2 11/13/18 20:13 • (LCSD) R3359835-3 11/13/18 20:33

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	1150	1110	153	148	50.0-150	<u>J4</u>		3.54	20
Residual Range Organics (RRO)	750	739	738	98.5	98.4	50.0-150			0.135	20
<i>(S) o-Terphenyl</i>				114	111	52.0-156				

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3361713-1 11/20/18 13:16

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>	55.5			52.0-156

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

(LCS) R3361713-2 11/20/18 13:36 • (LCSD) R3361713-3 11/20/18 13:56

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	774	789	103	105	50.0-150			1.92	20
Residual Range Organics (RRO)	750	577	588	76.9	78.4	50.0-150			1.89	20
<i>(S) o-Terphenyl</i>				89.0	87.5	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.
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.
J2	Surrogate recovery limits have been exceeded; values are outside lower 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 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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	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

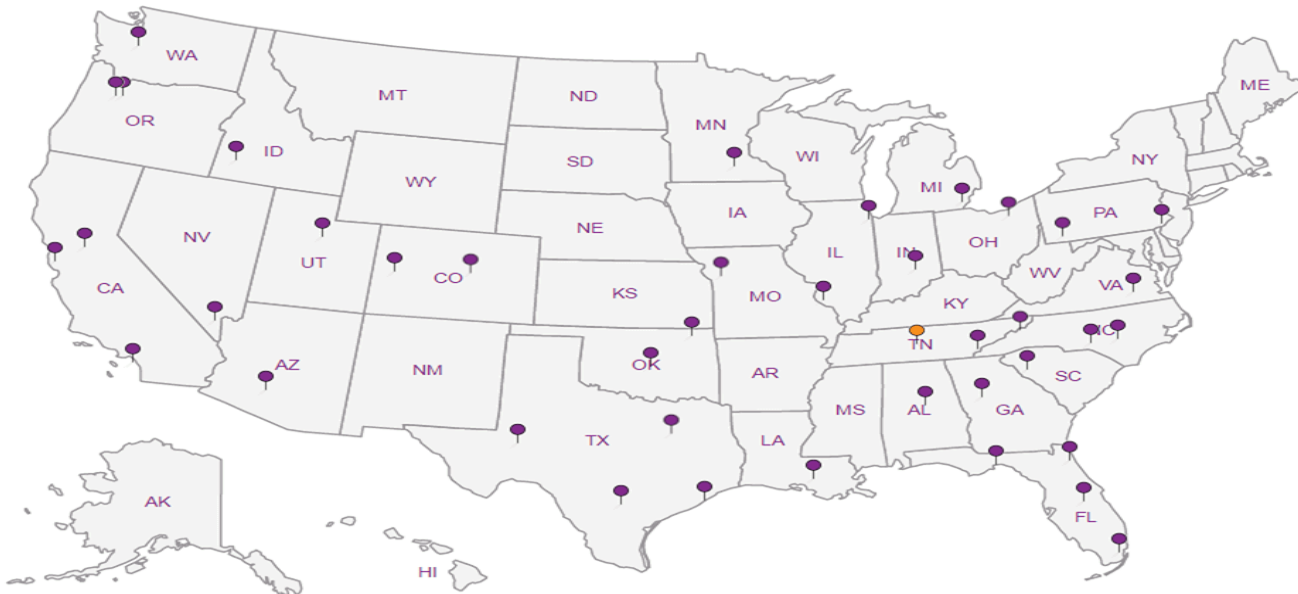
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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

Analysis / Container / Preservative

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



Report to:  
**Ryan Hultgren**

Email To: [RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com),  
[KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com)

Project Description: **BNSF - Wishram Rail yard, WA**

City/State Collected: **Wishram, WA**

Phone: **253-835-6400**

Client Project #

**1896120-05**

Lab Project #

**BNSF1KEN-WISHRAM**

Fax:

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

No. of Cntrs

Immediately Packed on Ice  N  X

L# **L1042954**

**E023**

Acctnum: **BNSF1KEN**

Template: **T142471**

Prelogin: **P678758**

TSR: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Disolved As 250mlHDPE-HNO3	Disolved Fe, Mn 250mlHDPE-HNO3	Full List V8260C 40mlAmb-HCl	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVI w/SGT 40mlAmb-HCl-BT	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres + Sulfide	Remarks	Sample # (lab only)
WMW-19-20181107	Grab	GW	-	11/7/18	0805	11	X	X		X		X			X	X		-01
WMW-20-20181106		GW		11/6/18	1650	11	X	X		X		X			X	X		02
WMW-21-20181106		GW		11/6/18	1520	13	X	X		X	X	X			X	X		03
WMW-22-20181106		GW		11/6/18	1350	13	X	X		X	X	X			X	X		04
WMW-23-20181106		GW		11/6/18	1130	11	X	X		X		X			X	X		05
WMW-24-20181106		GW		11/6/18	1055	11		X	X	X		X			X	X		06
WMW-26-20181106		GW		11/6/18	0730	13		X	X	X	X	X			X	X		07
WMW-27-20181106		GW		11/6/18	1300	11		X	X	X		X			X	X		08
WMW-28-20181106		GW		11/6/18	1200	11		X	X	X		X			X	X		09
WMW-29-20181106		GW		11/6/18	1505	11		X	X	X		X			X	X		10

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: **Analyze all for Sulfide. Diss metals field filtered.**

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **4510 1660 5610 / 5021**

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Sample Receipt Checklist  
 CQC Seal Present/Intact:  Y  N  
 CQC 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  
 Preservative Present/Checked:  Y  N  
**RAD SOL. LEN. <0.5 ml/hr**

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received:  Yes  No

**1** HC/MeOH  
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: **21 °C**  
**0.60.5 hr** 1CS

Bottles Received:

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: **11/4/18**

Time: **8:45**

Hold:

Condition:

OK

861



# 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: [RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com),  
[KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com),

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

City/State  
Collected: **Wishram, WA**

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

Client Project #  
**189612005**

Lab Project #  
**BNSF1KEN-WISHRAM**

Collected by (print):  
**K. Teague**

Site/Facility ID #

P.O. #

Collected by (signature):  
*K. 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
WMW-30-20181106	Grab	GW	-	11/6/18	1420	13
WMW-31-20181106	↓	GW	↓	11/6/18	0935	11
WMW-32-20181106	↓	GW	↓	11/6/18	1550	11
D-1-20181106	↓	GW	↓	11/6/18	1205	11
TB-01-20181107		GW	↓	11/7/18	-	1
		GW				
		GW				
		GW				
		GW				
		GW				

Disolved As 250mlHDPE-HNO3	Disolved Fe, Mn 250mlHDPE-HNO3	Full List V8260C 40mlAmb-HCl	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVI w/ SGT 40mlAmb-HCl-BT	NWTPHDXLVINGSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres + Sulfide
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

L# **L1042954**  
Table #  
Acctnum: **BNSF1KEN**  
Template: **T142471**  
Prelogin: **P678758**  
TSR: **134 - Mark W. Beasley**  
PB:  
Shipped Via: **FedEX Ground**

Remarks	Sample # (lab only)
	-11
	12
	13
	14
	-17

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: **Analyze all for sulfide. Diss metals field filtered**  
pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
UPS \_\_\_\_\_ FedEx \_\_\_\_\_ Courier \_\_\_\_\_

Tracking #

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
<b>RAD SCREEN: &lt;0.5 mR/hr</b>	

Relinquished by: (Signature)  
*[Signature]*

Date: **11/8/18**  
Time: **1000**

Received by: (Signature)  
**FedEX**

Trip Blank Received:  Yes / No  
**1** HCl / MeOH  
TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received by: (Signature)

Temp: **0.1** °C  
**0.60-5.2**  
Bottles Received: **163**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received for lab by: (Signature)  
*[Signature]* **sci**

Date: **11/9/18**  
Time: **8:45**

Hold: \_\_\_\_\_  
Condition:  OK /  OK



Login #: L1042954	Client: BNSF1KEN	Date: 11/09/18	Evaluated by: Jeremy
-------------------	------------------	----------------	----------------------

**Non-Conformance (check applicable items)**

Sample Integrity	Chain of Custody Clarification	
Parameter(s) past holding time	Login Clarification Needed	<b>If Broken Container:</b>
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.	<b>If no Chain of Custody:</b>
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: Trip Blank not marked for analysis.**

Client informed by:	Call	Email	Voice Mail	Date: 11/12/18	Time: 1110
TSR Initials: MB	Client Contact:				

**Login Instructions:**

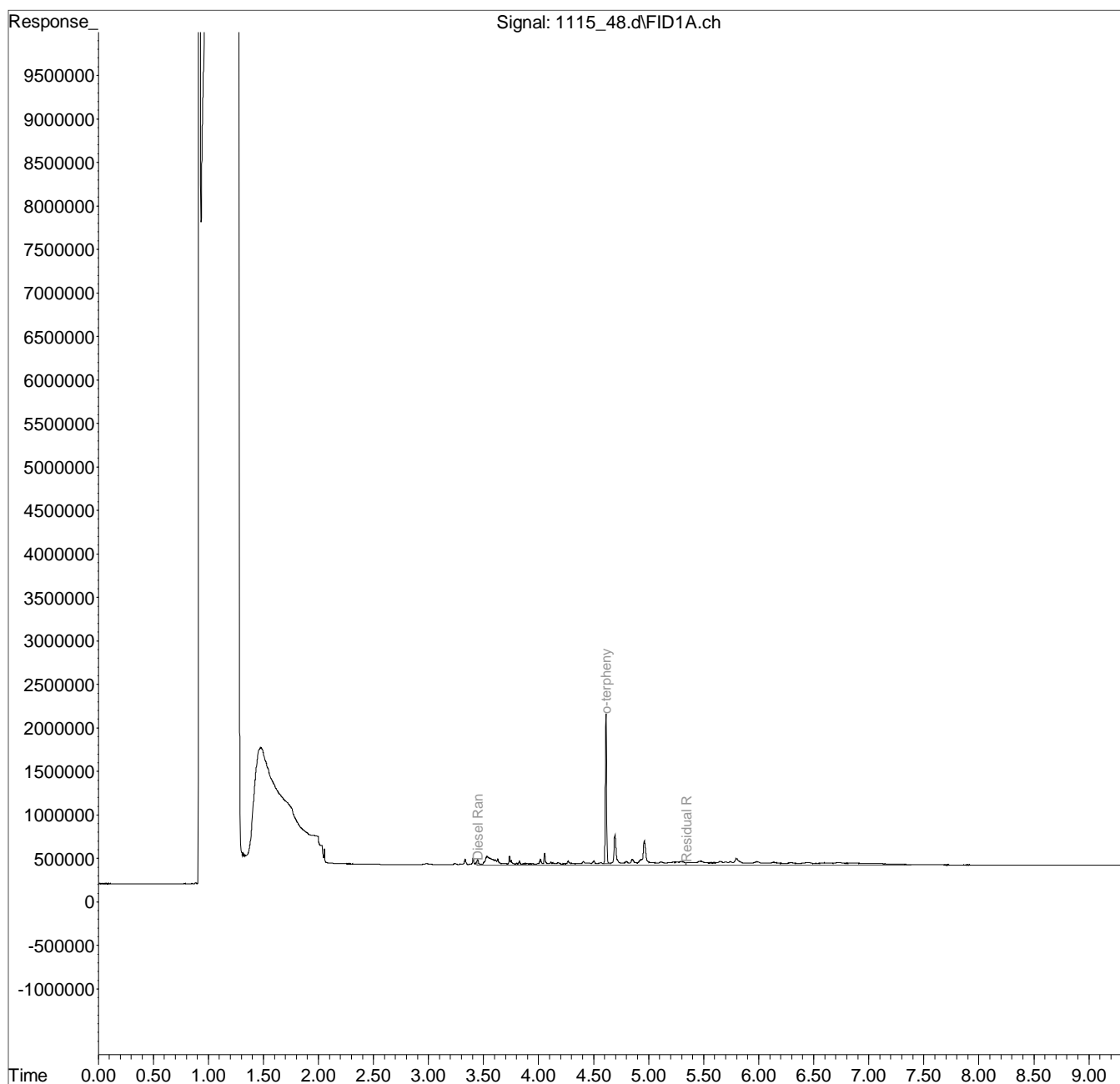
Log trip blank for V8260C



Data Path : C:\msdchem\1\data\111518\  
Data File : 1115\_48.d  
Signal(s) : FID1A.ch  
Acq On : 16 Nov 2018 4:13 am  
Operator : 773  
Sample : L1042954-01 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 21 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 16 08:14:47 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

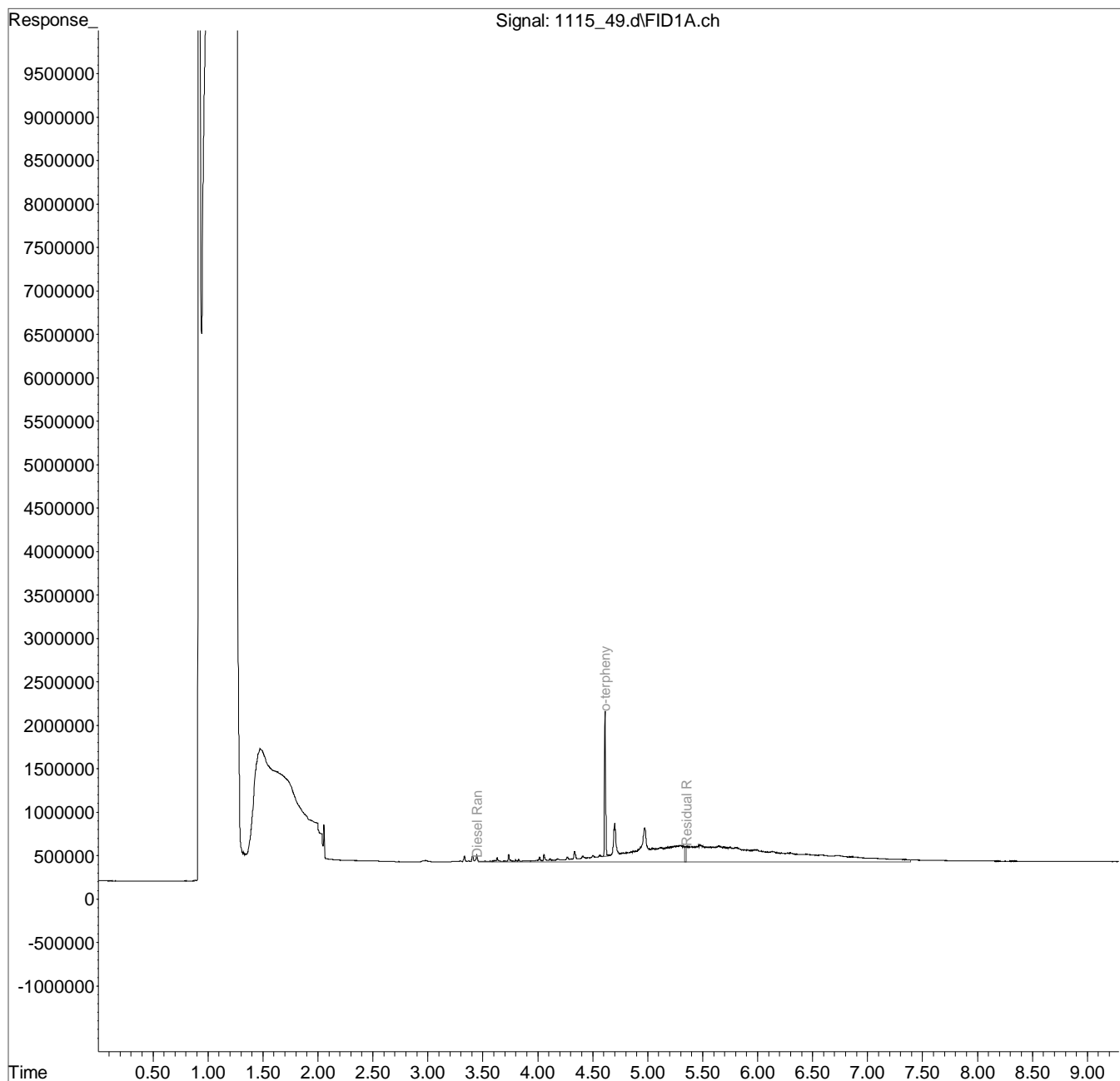
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111518\  
Data File : 1115\_49.d  
Signal(s) : FID1A.ch  
Acq On : 16 Nov 2018 4:34 am  
Operator : 773  
Sample : L1042954-02 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 22 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 16 08:15:15 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

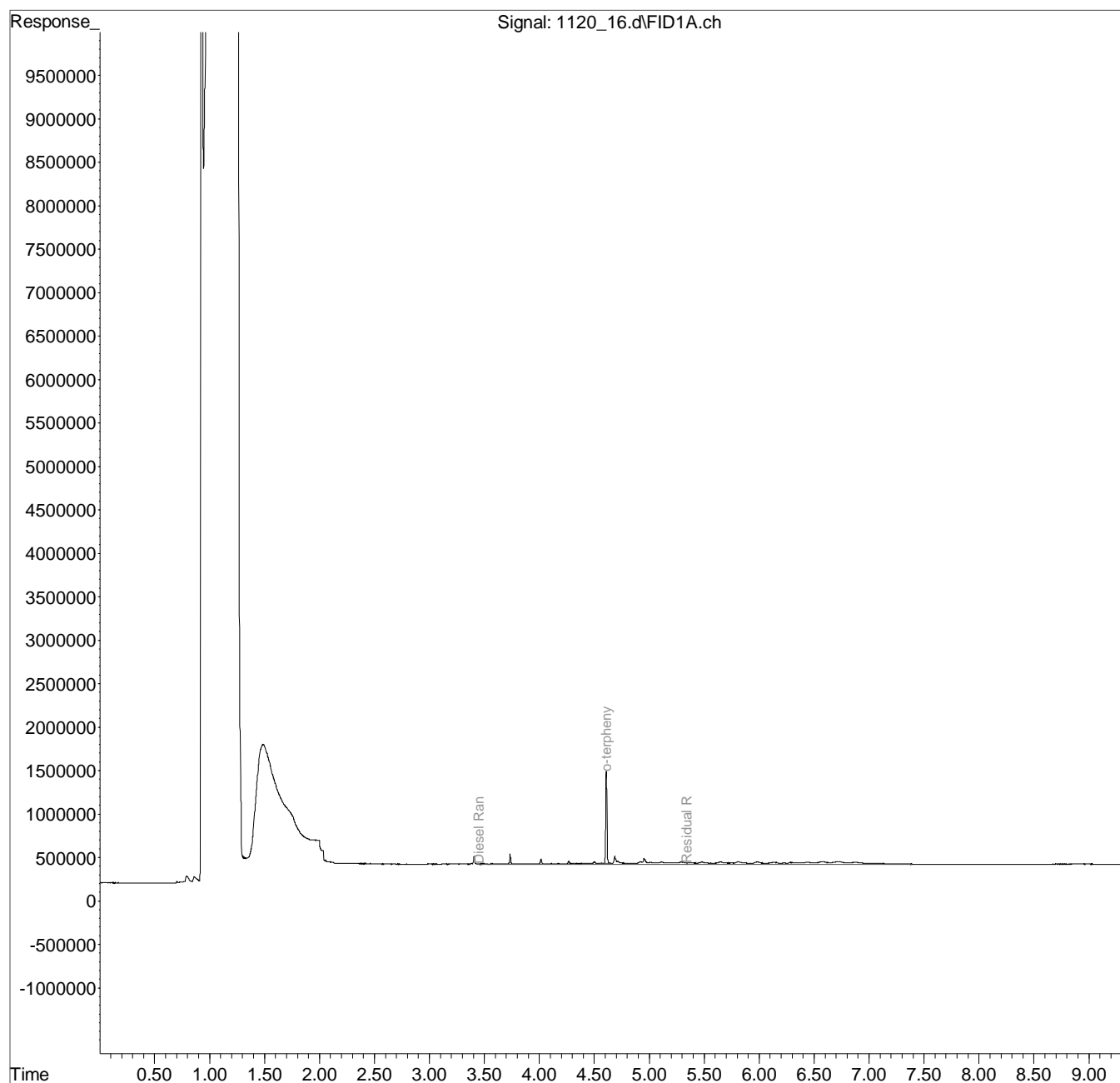
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\112018\  
Data File : 1120\_16.d  
Signal(s) : FID1A.ch  
Acq On : 20 Nov 2018 3:16 pm  
Operator : 773  
Sample : L1042954-03 1x WG1199142  
Misc : M.I.s on ranges are corrections  
ALS Vial : 25 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 20 15:42:32 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

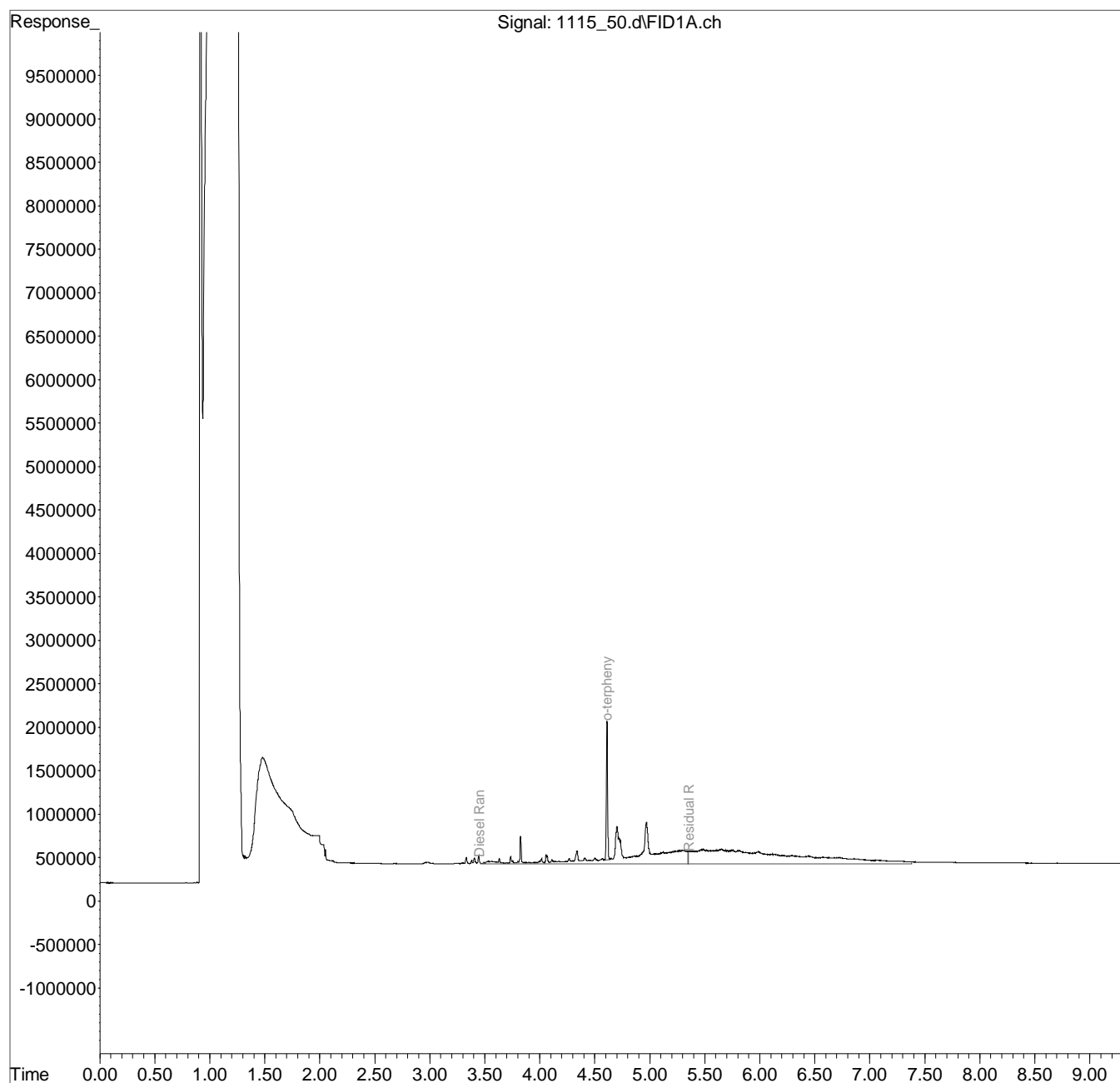
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111518\  
Data File : 1115\_50.d  
Signal(s) : FID1A.ch  
Acq On : 16 Nov 2018 4:54 am  
Operator : 773  
Sample : L1042954-03 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 23 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 16 08:15:42 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

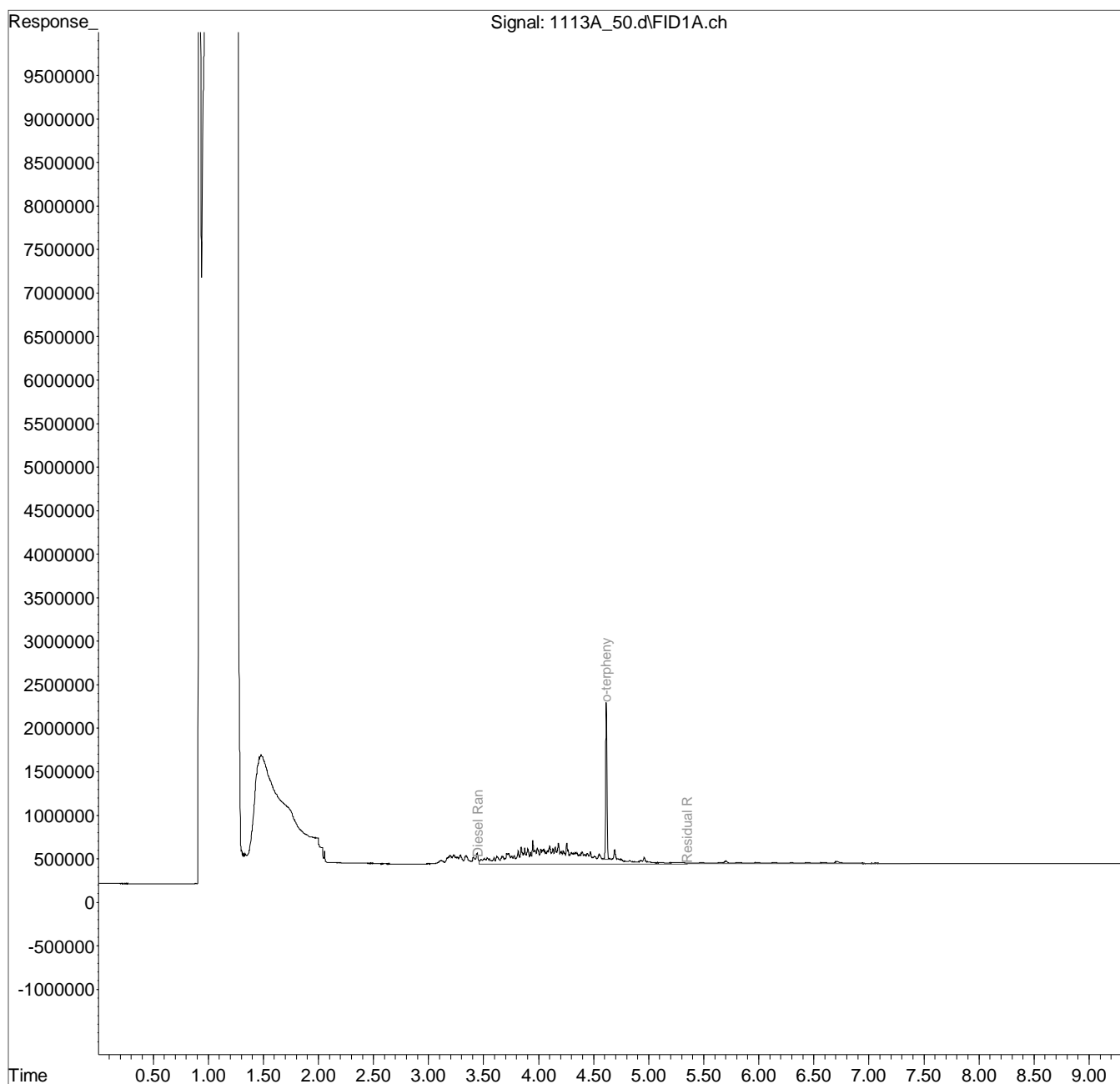
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111318A\  
Data File : 1113A\_50.d  
Signal(s) : FID1A.ch  
Acq On : 14 Nov 2018 9:33 am  
Operator : 773  
Sample : L1042954-04 1x WG1194933  
Misc : M.I.s on ranges are corrections  
ALS Vial : 9 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 14 12:57:59 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

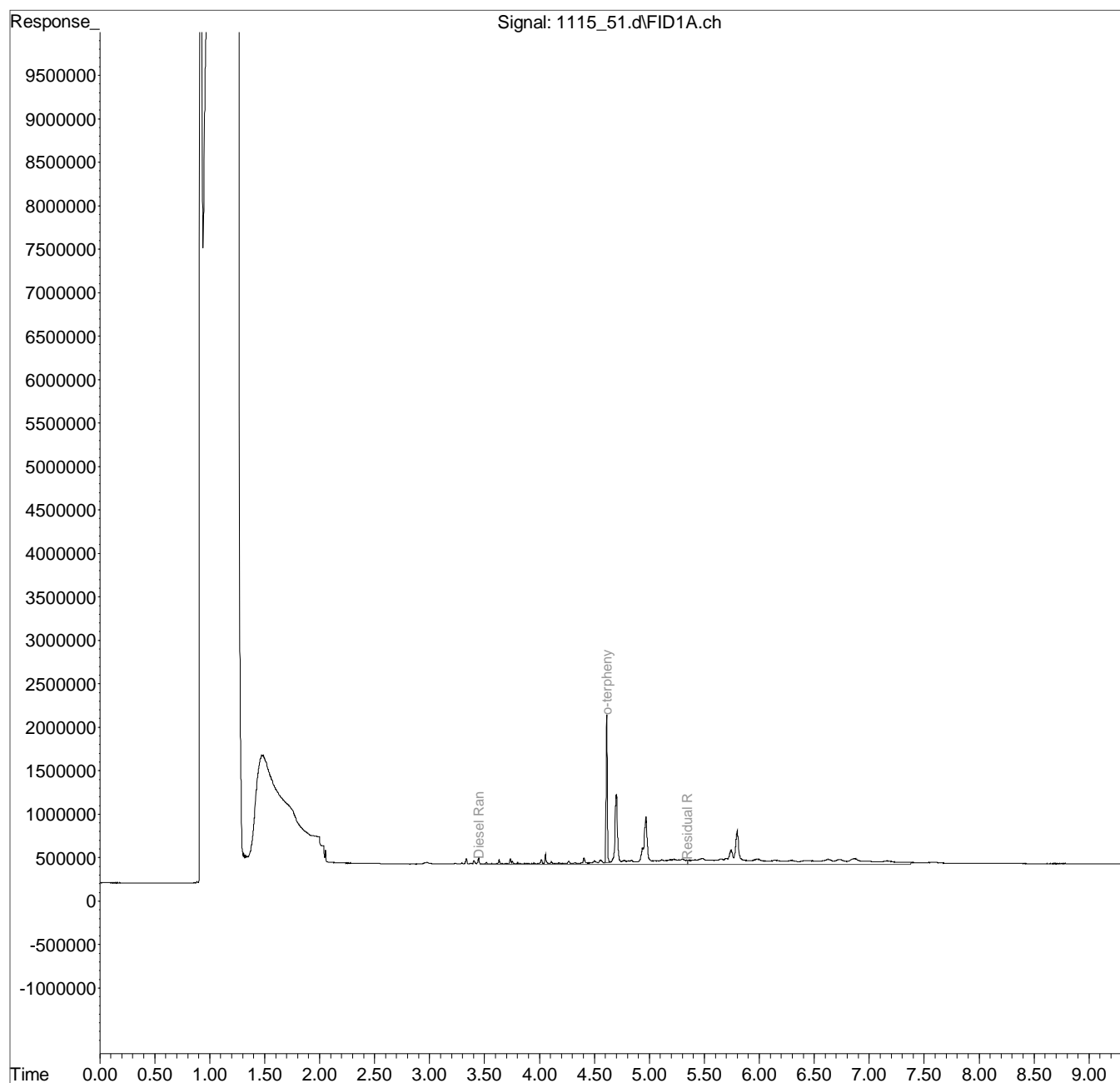
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111518\  
Data File : 1115\_51.d  
Signal(s) : FID1A.ch  
Acq On : 16 Nov 2018 5:15 am  
Operator : 773  
Sample : L1042954-04 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 24 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 16 08:16:10 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

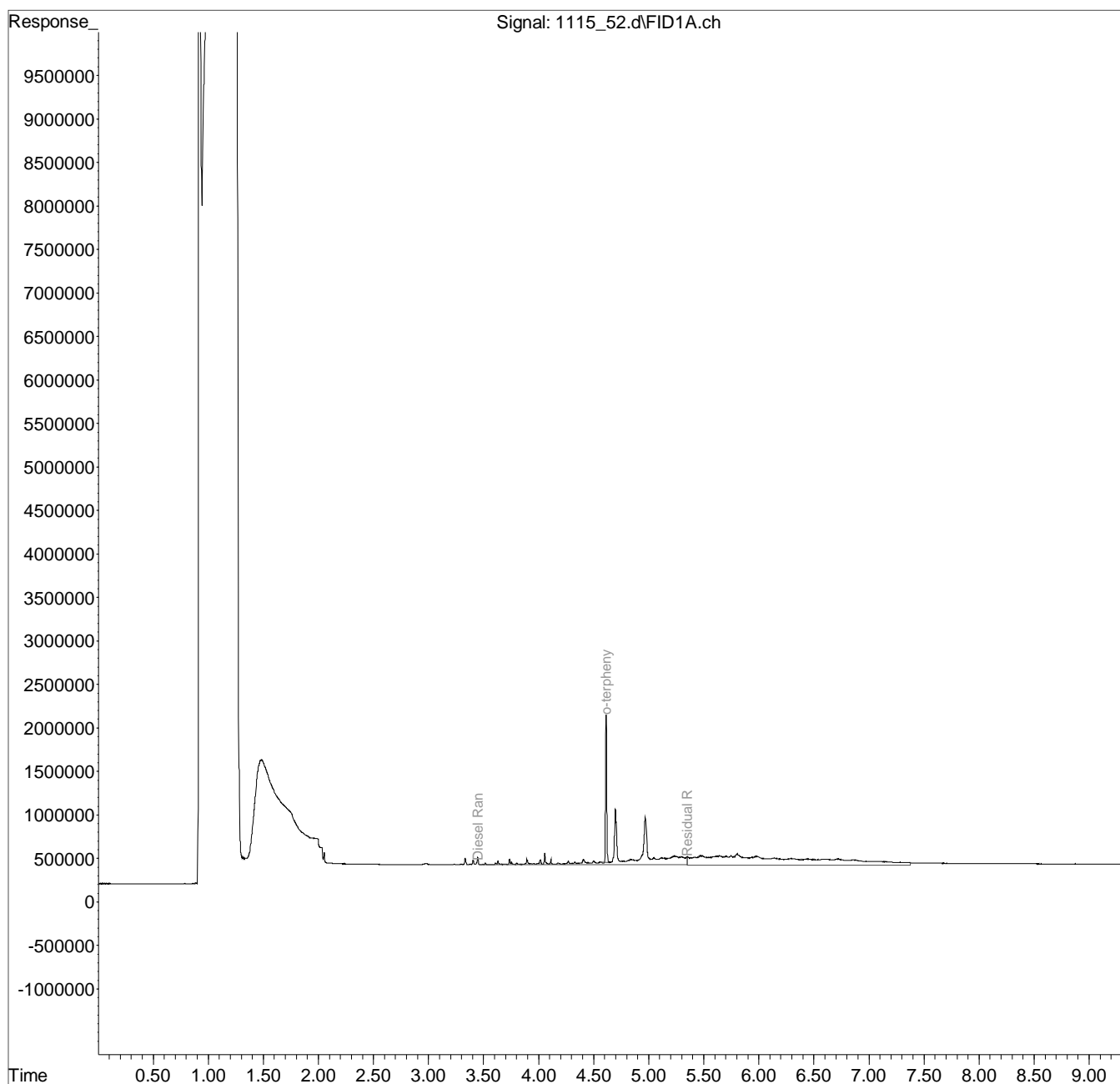
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111518\  
Data File : 1115\_52.d  
Signal(s) : FID1A.ch  
Acq On : 16 Nov 2018 5:35 am  
Operator : 773  
Sample : L1042954-05 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 25 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 16 08:16:37 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

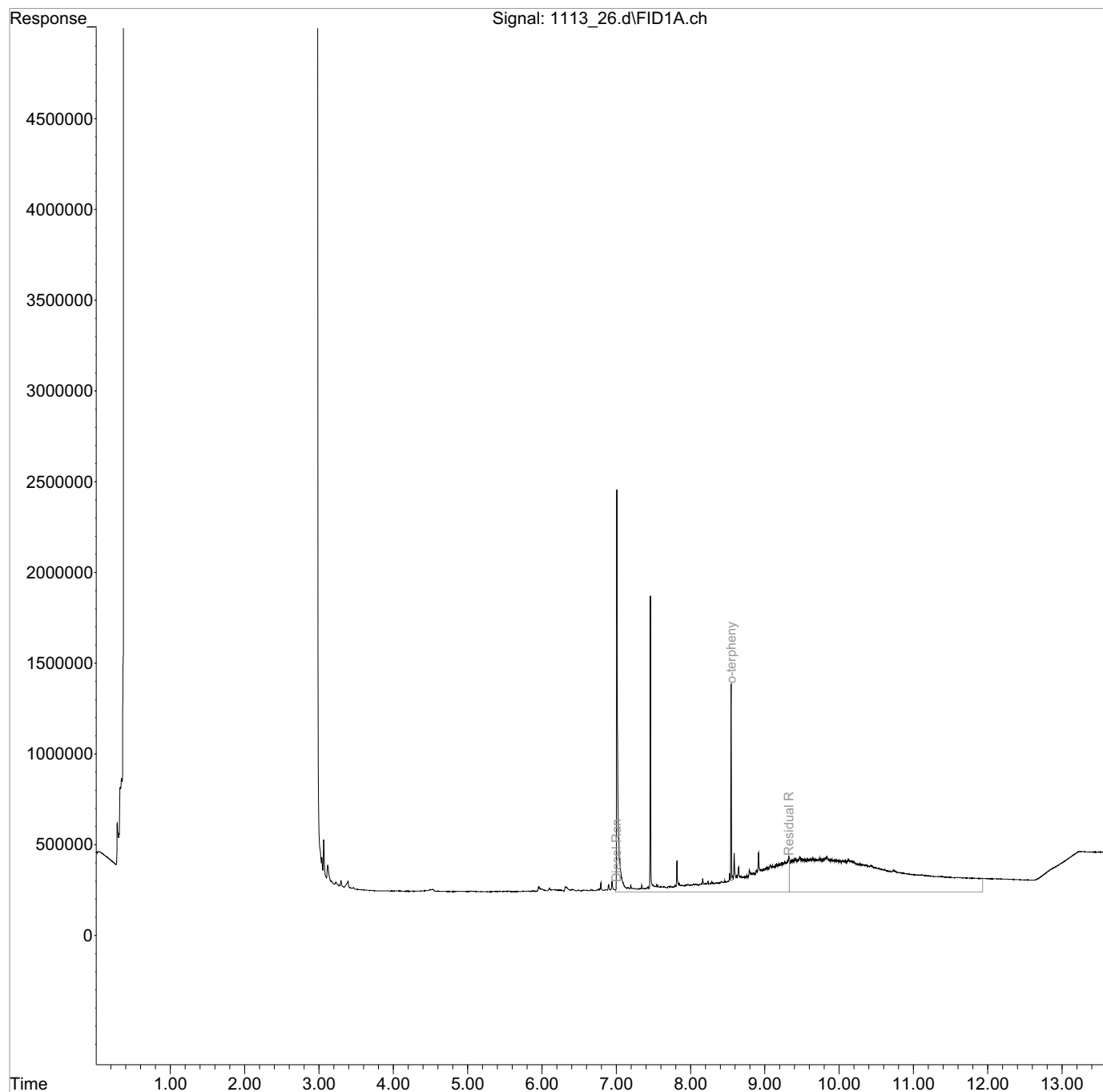
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111318\  
Data File : 1113\_26.d  
Signal(s) : FID1A.ch  
Acq On : 13 Nov 2018 3:49 pm  
Operator : 784  
Sample : L1042954-06 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 19 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 13 16:15:18 2018  
Quant Method : C:\msdchem\1\methods\EP34J24AR.M  
Quant Title :  
QLast Update : Mon Oct 29 10:36:48 2018  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

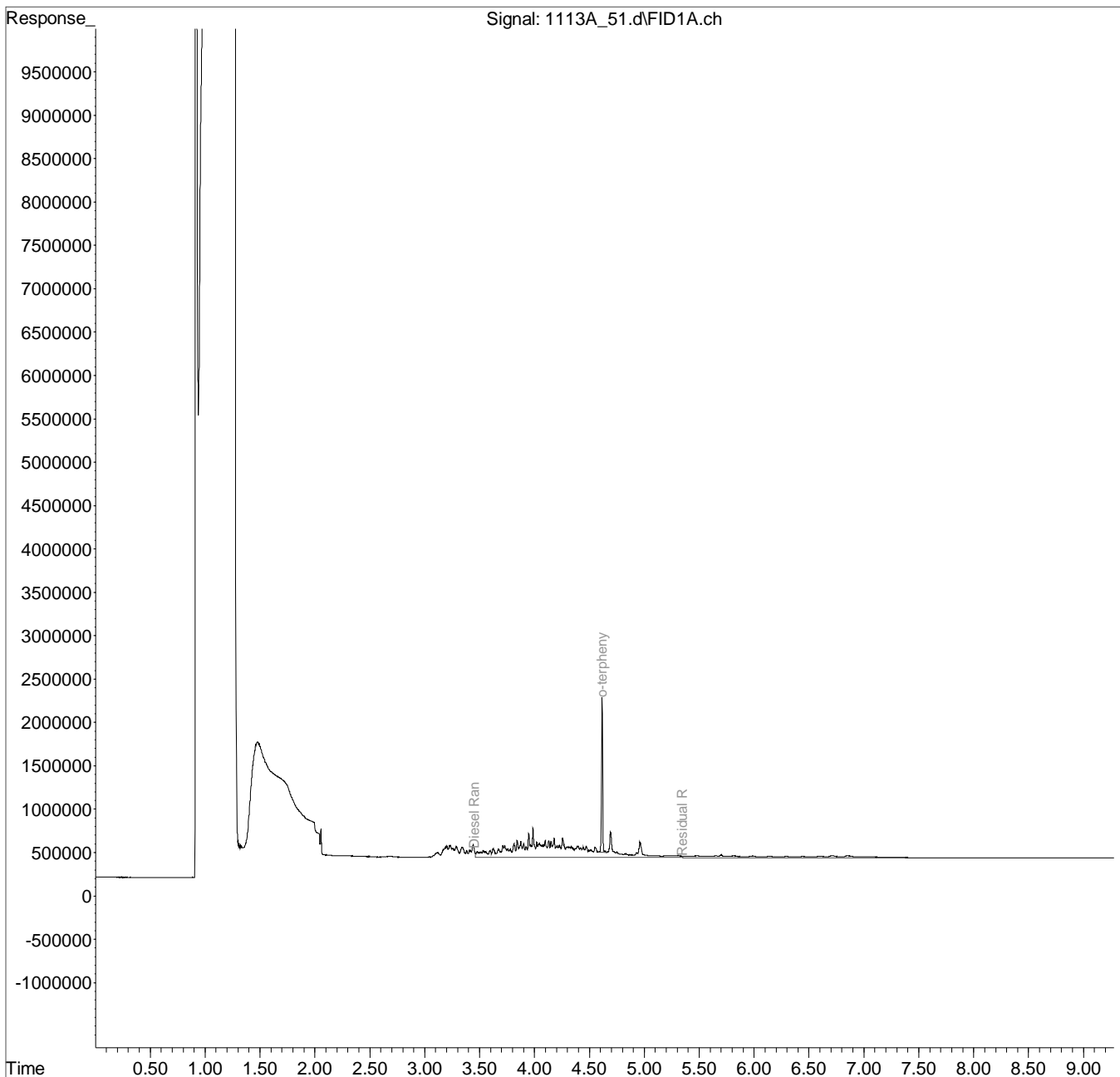




Data Path : C:\msdchem\1\data\111318A\  
 Data File : 1113A\_51.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 Nov 2018 9:53 am  
 Operator : 773  
 Sample : L1042954-07 1x WG1194933  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 10 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Nov 14 12:58:23 2018  
 Quant Method : C:\msdchem\1\methods\EP27K08R.M  
 Quant Title :  
 QLast Update : Thu Nov 08 10:38:59 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation

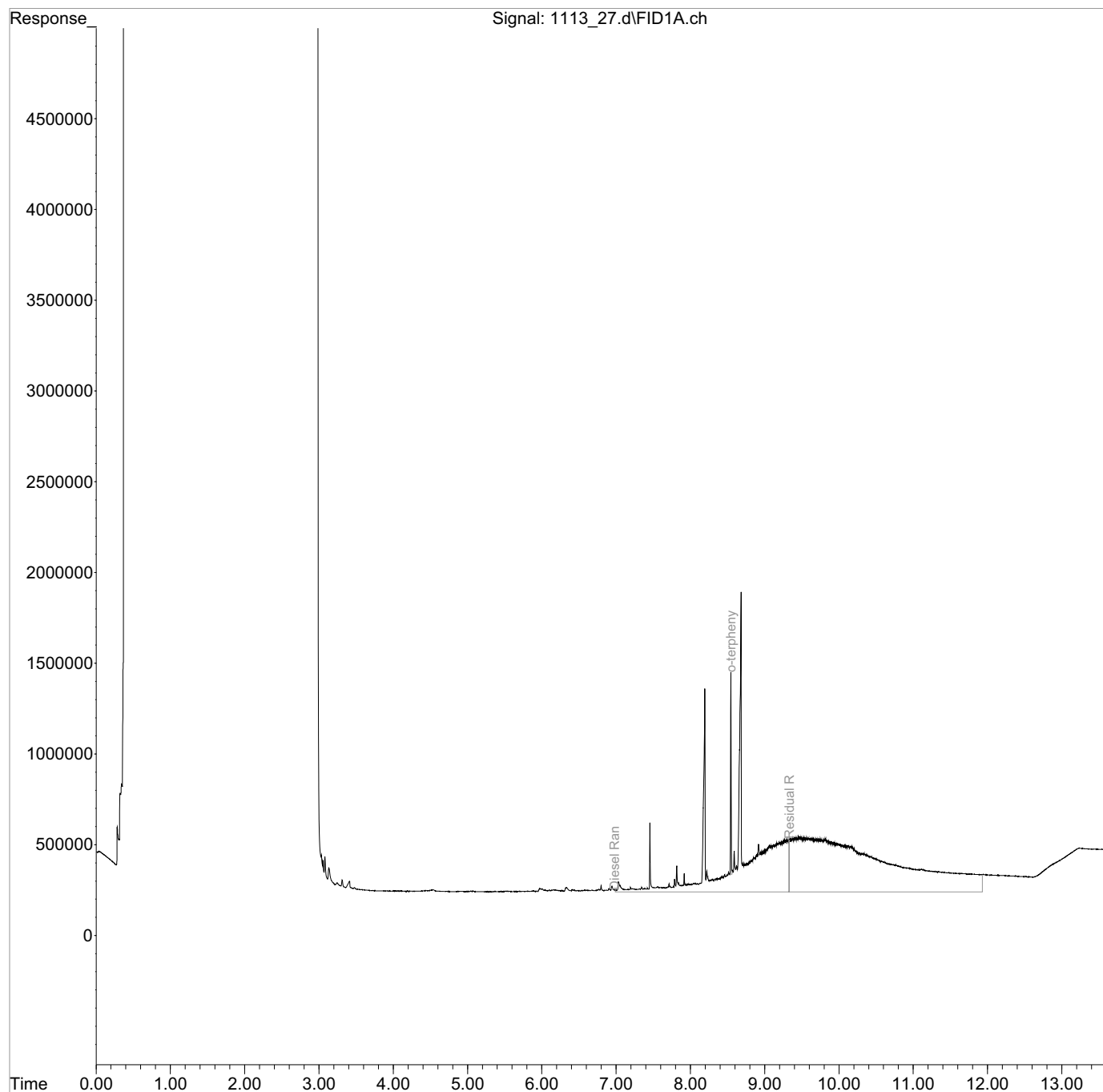
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111318\  
Data File : 1113\_27.d  
Signal(s) : FID1A.ch  
Acq On : 13 Nov 2018 4:09 pm  
Operator : 784  
Sample : L1042954-07 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 20 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 13 16:56:47 2018  
Quant Method : C:\msdchem\1\methods\EP34J24AR.M  
Quant Title :  
QLast Update : Mon Oct 29 10:36:48 2018  
Response via : Initial Calibration  
Integrator: ChemStation

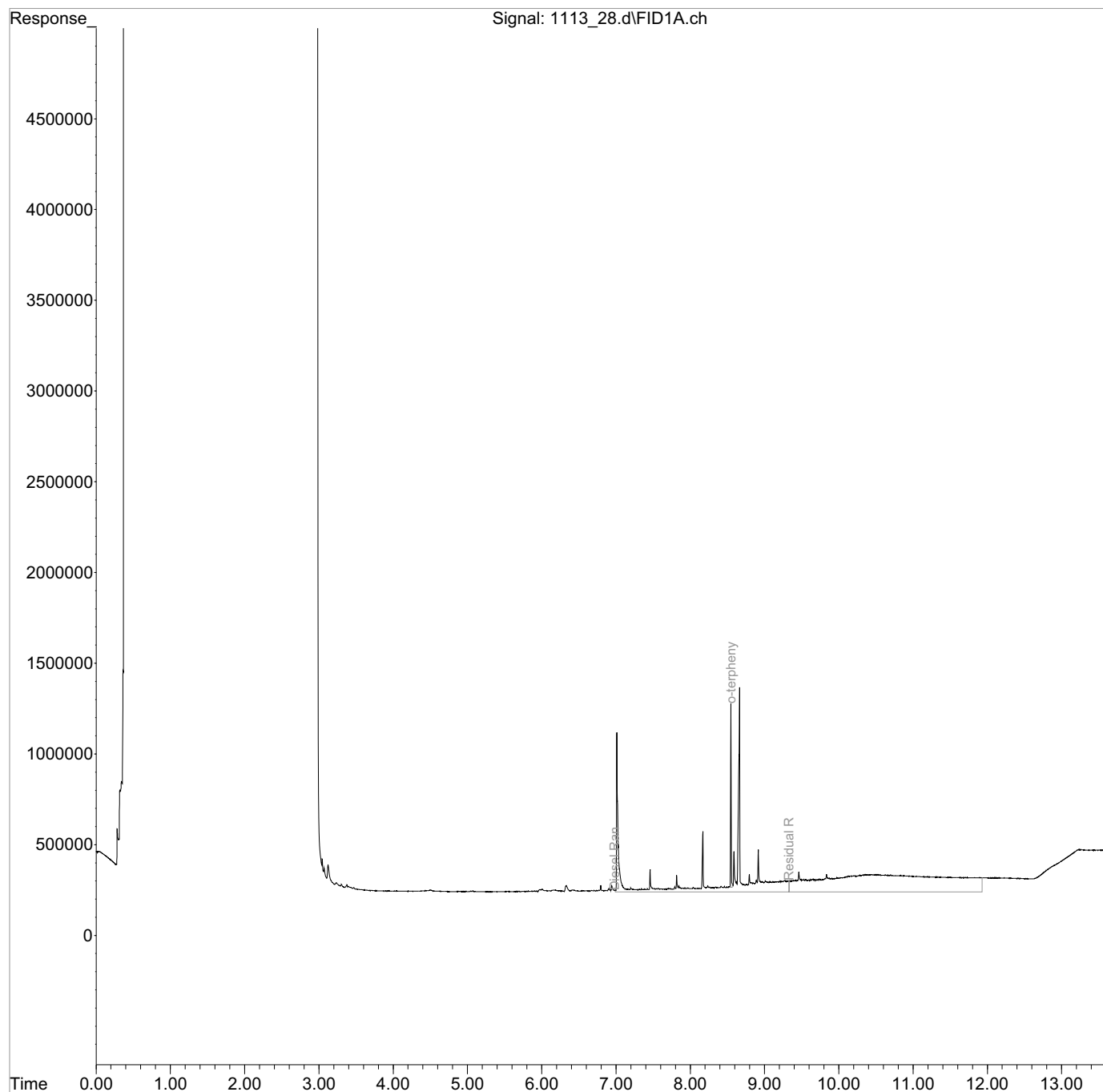
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111318\  
Data File : 1113\_28.d  
Signal(s) : FID1A.ch  
Acq On : 13 Nov 2018 4:29 pm  
Operator : 784  
Sample : L1042954-08 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 21 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 13 16:57:12 2018  
Quant Method : C:\msdchem\1\methods\EP34J24AR.M  
Quant Title :  
QLast Update : Mon Oct 29 10:36:48 2018  
Response via : Initial Calibration  
Integrator: ChemStation

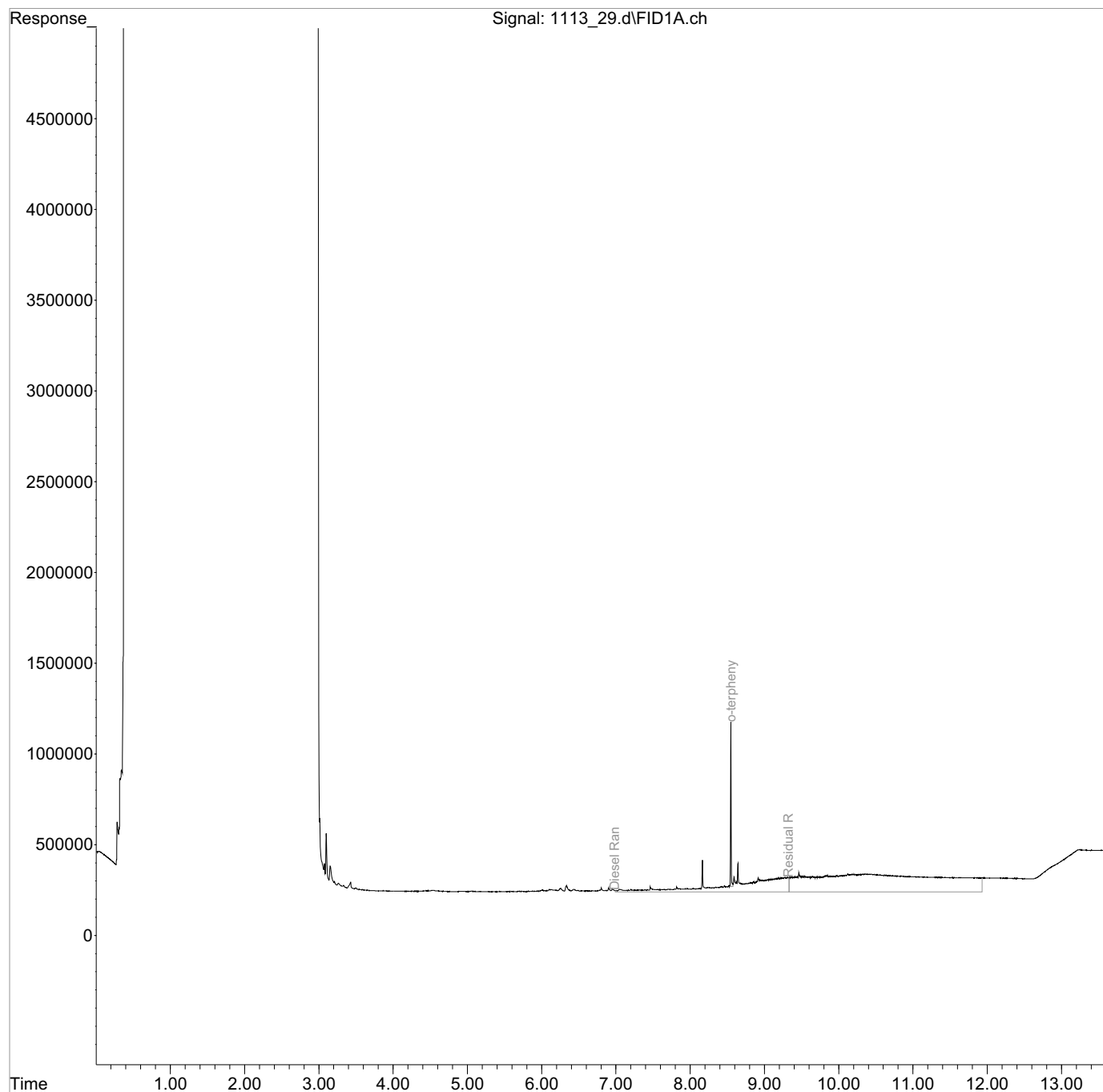
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111318\  
Data File : 1113\_29.d  
Signal(s) : FID1A.ch  
Acq On : 13 Nov 2018 4:50 pm  
Operator : 784  
Sample : L1042954-09 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 14 11:42:00 2018  
Quant Method : C:\msdchem\1\methods\EP34J24AR.M  
Quant Title :  
QLast Update : Mon Oct 29 10:36:48 2018  
Response via : Initial Calibration  
Integrator: ChemStation

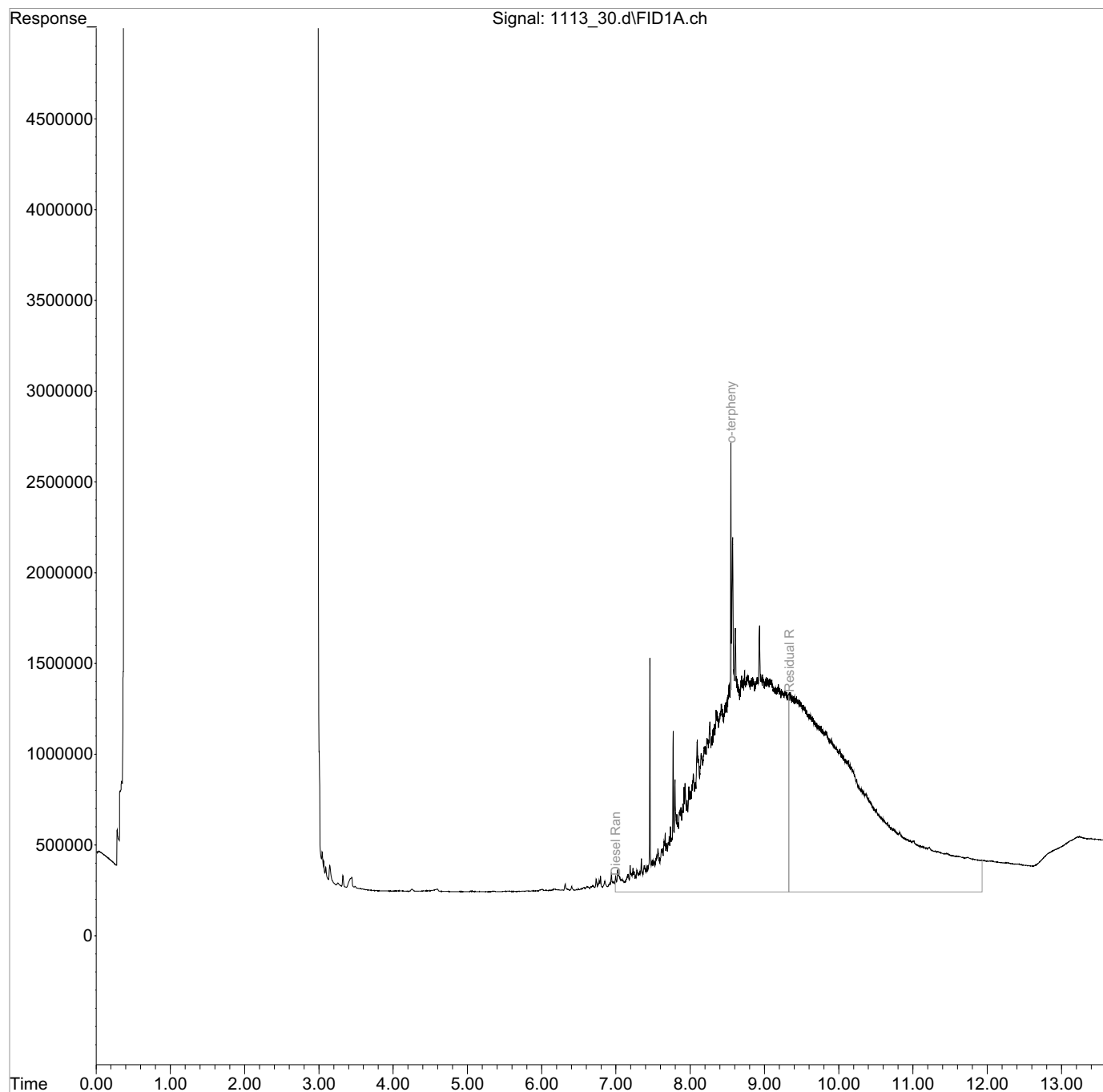
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111318\  
Data File : 1113\_30.d  
Signal(s) : FID1A.ch  
Acq On : 13 Nov 2018 5:10 pm  
Operator : 784  
Sample : L1042954-10 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 14 11:42:35 2018  
Quant Method : C:\msdchem\1\methods\EP34J24AR.M  
Quant Title :  
QLast Update : Mon Oct 29 10:36:48 2018  
Response via : Initial Calibration  
Integrator: ChemStation

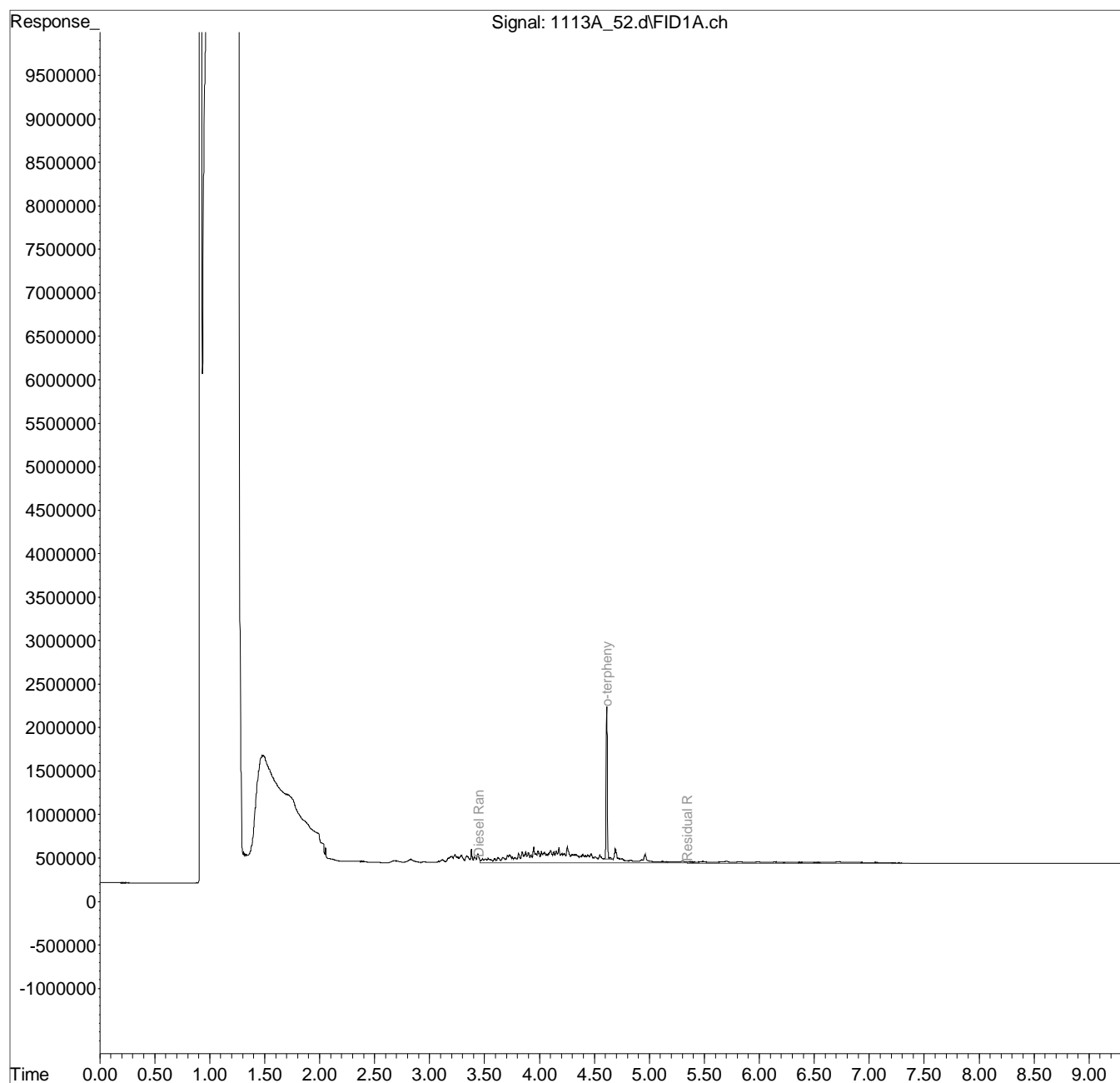
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111318A\  
Data File : 1113A\_52.d  
Signal(s) : FID1A.ch  
Acq On : 14 Nov 2018 10:13 am  
Operator : 773  
Sample : L1042954-11 1x WG1194933  
Misc : M.I.s on ranges are corrections  
ALS Vial : 11 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Nov 14 12:58:47 2018  
Quant Method : C:\msdchem\1\methods\EP27K08R.M  
Quant Title :  
QLast Update : Thu Nov 08 10:38:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation

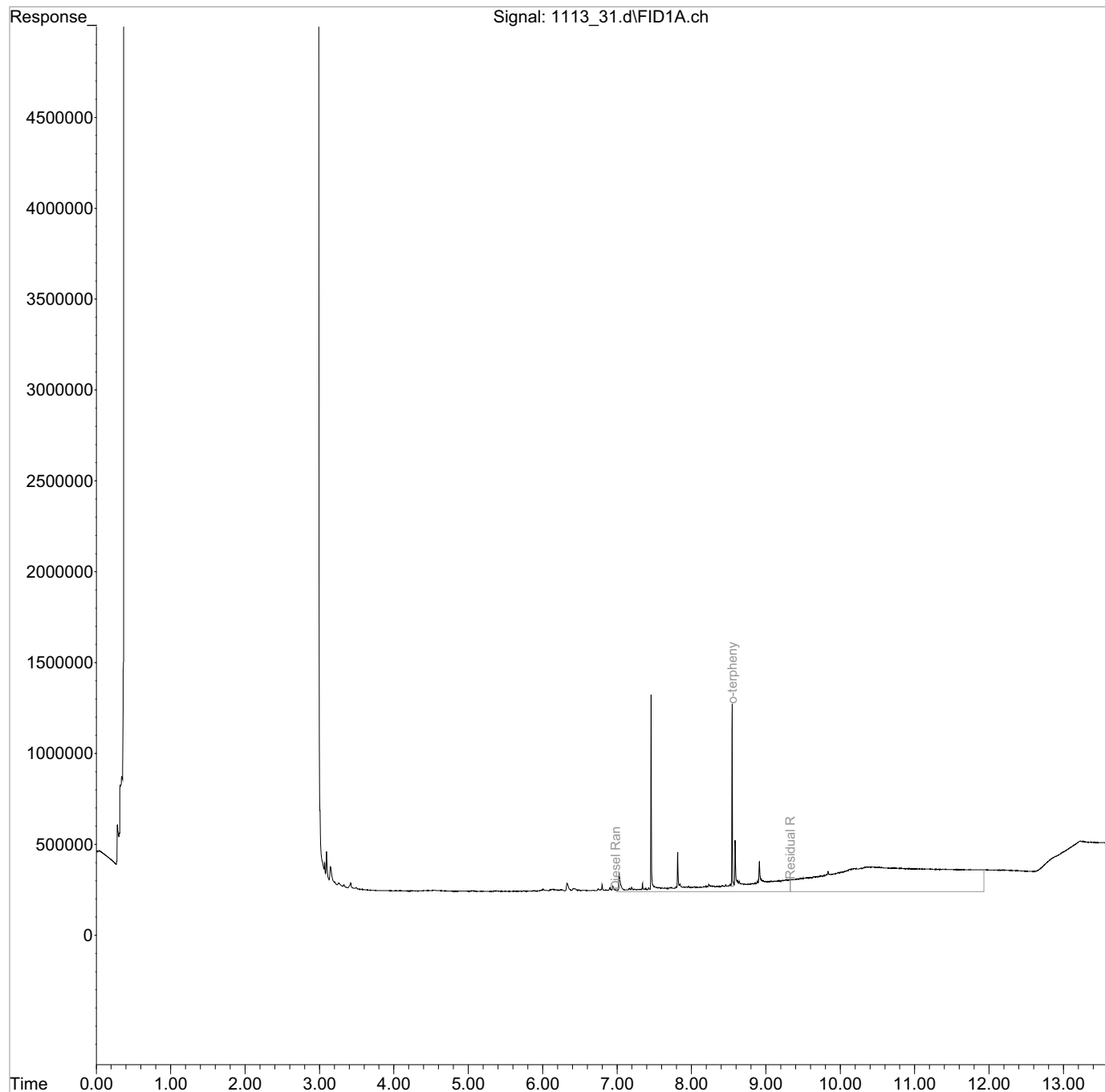
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27Z2.M



Data Path : C:\msdchem\1\data\111318\  
Data File : 1113\_31.d  
Signal(s) : FID1A.ch  
Acq On : 13 Nov 2018 5:30 pm  
Operator : 784  
Sample : L1042954-11 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 14 11:43:07 2018  
Quant Method : C:\msdchem\1\methods\EP34J24AR.M  
Quant Title :  
QLast Update : Mon Oct 29 10:36:48 2018  
Response via : Initial Calibration  
Integrator: ChemStation

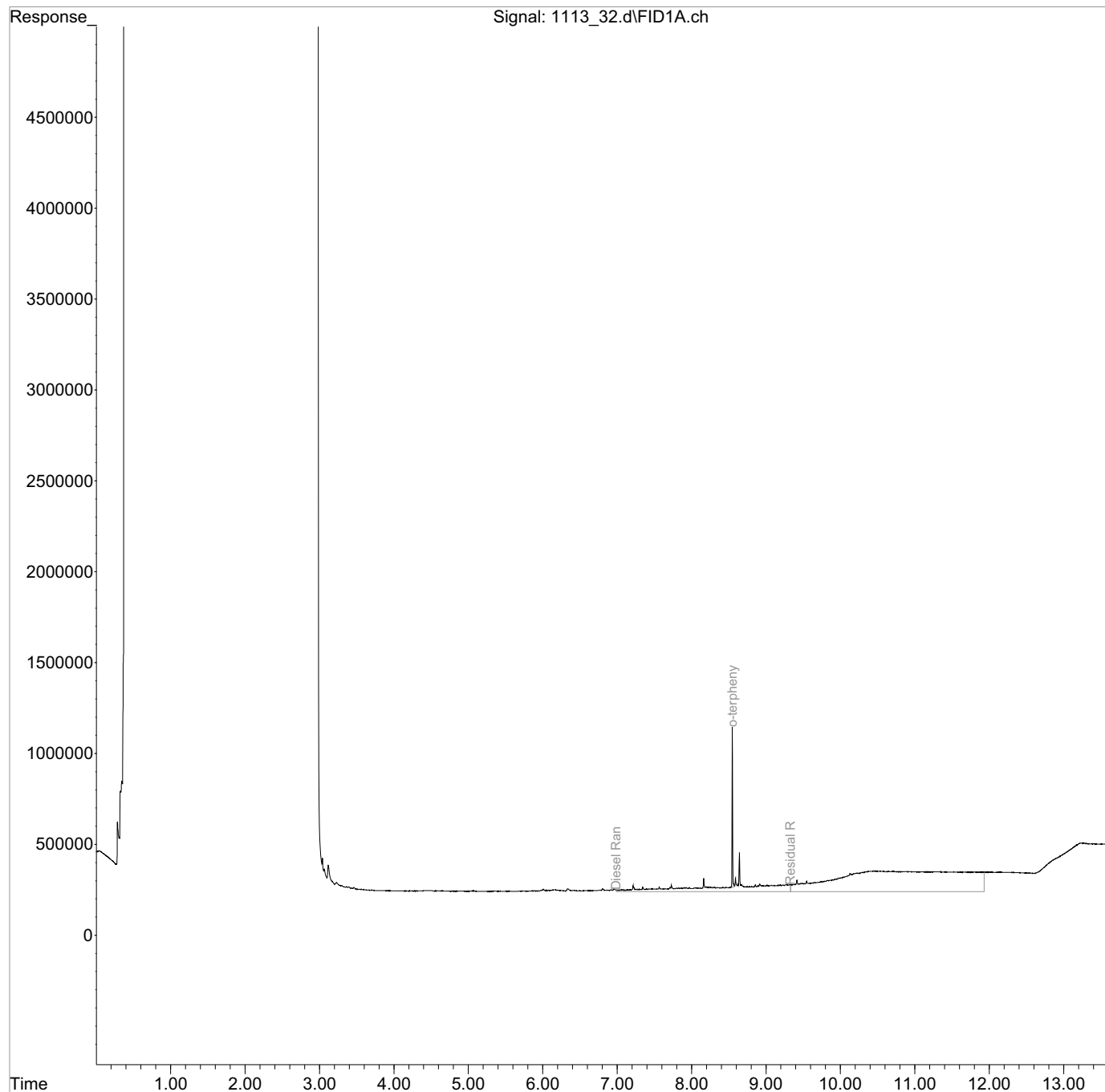
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111318\  
Data File : 1113\_32.d  
Signal(s) : FID1A.ch  
Acq On : 13 Nov 2018 5:50 pm  
Operator : 784  
Sample : L1042954-12 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 14 11:43:32 2018  
Quant Method : C:\msdchem\1\methods\EP34J24AR.M  
Quant Title :  
QLast Update : Mon Oct 29 10:36:48 2018  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

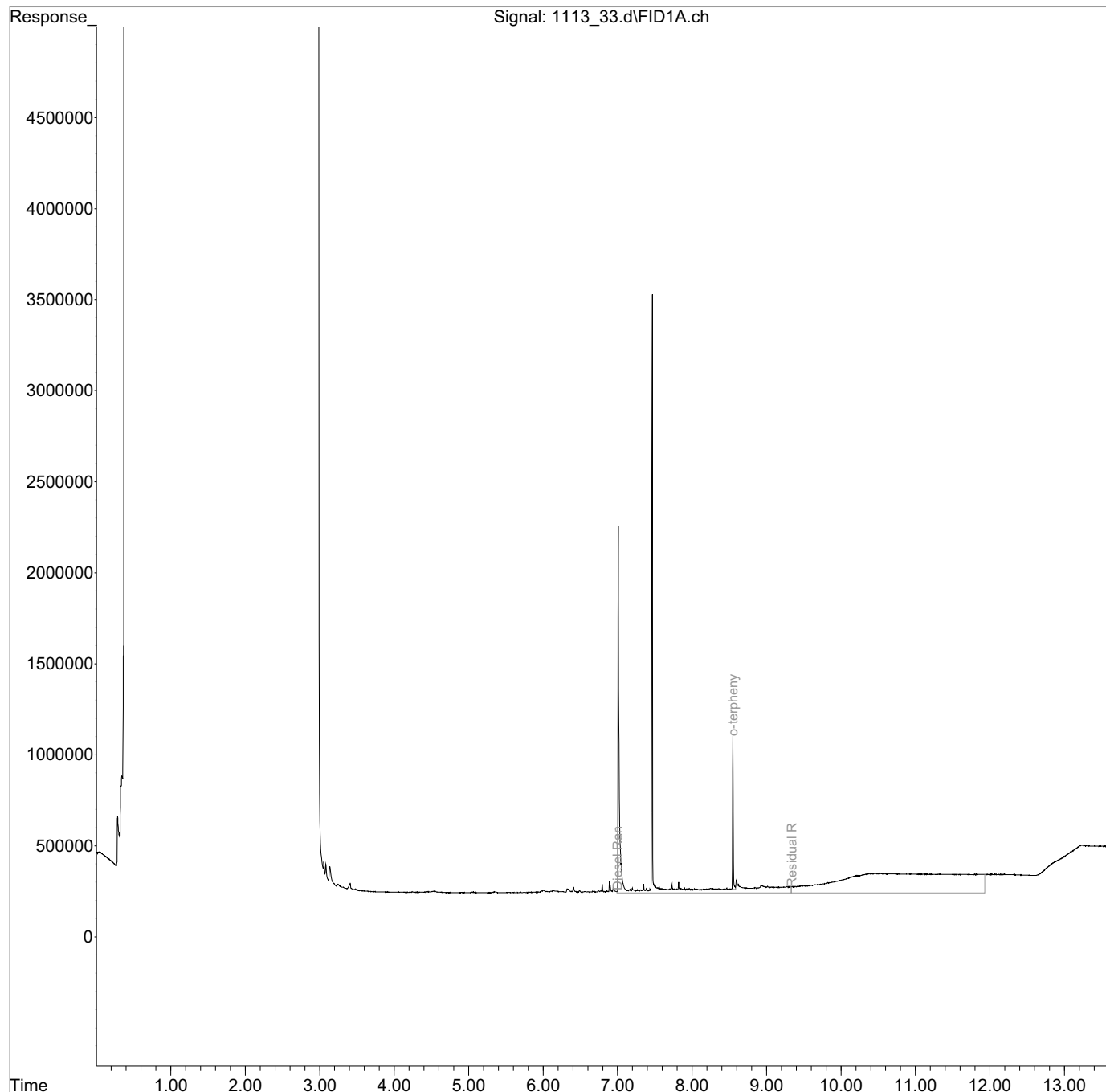




Data Path : C:\msdchem\1\data\111318\  
Data File : 1113\_33.d  
Signal(s) : FID1A.ch  
Acq On : 13 Nov 2018 6:10 pm  
Operator : 784  
Sample : L1042954-13 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 26 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 14 11:43:55 2018  
Quant Method : C:\msdchem\1\methods\EP34J24AR.M  
Quant Title :  
QLast Update : Mon Oct 29 10:36:48 2018  
Response via : Initial Calibration  
Integrator: ChemStation

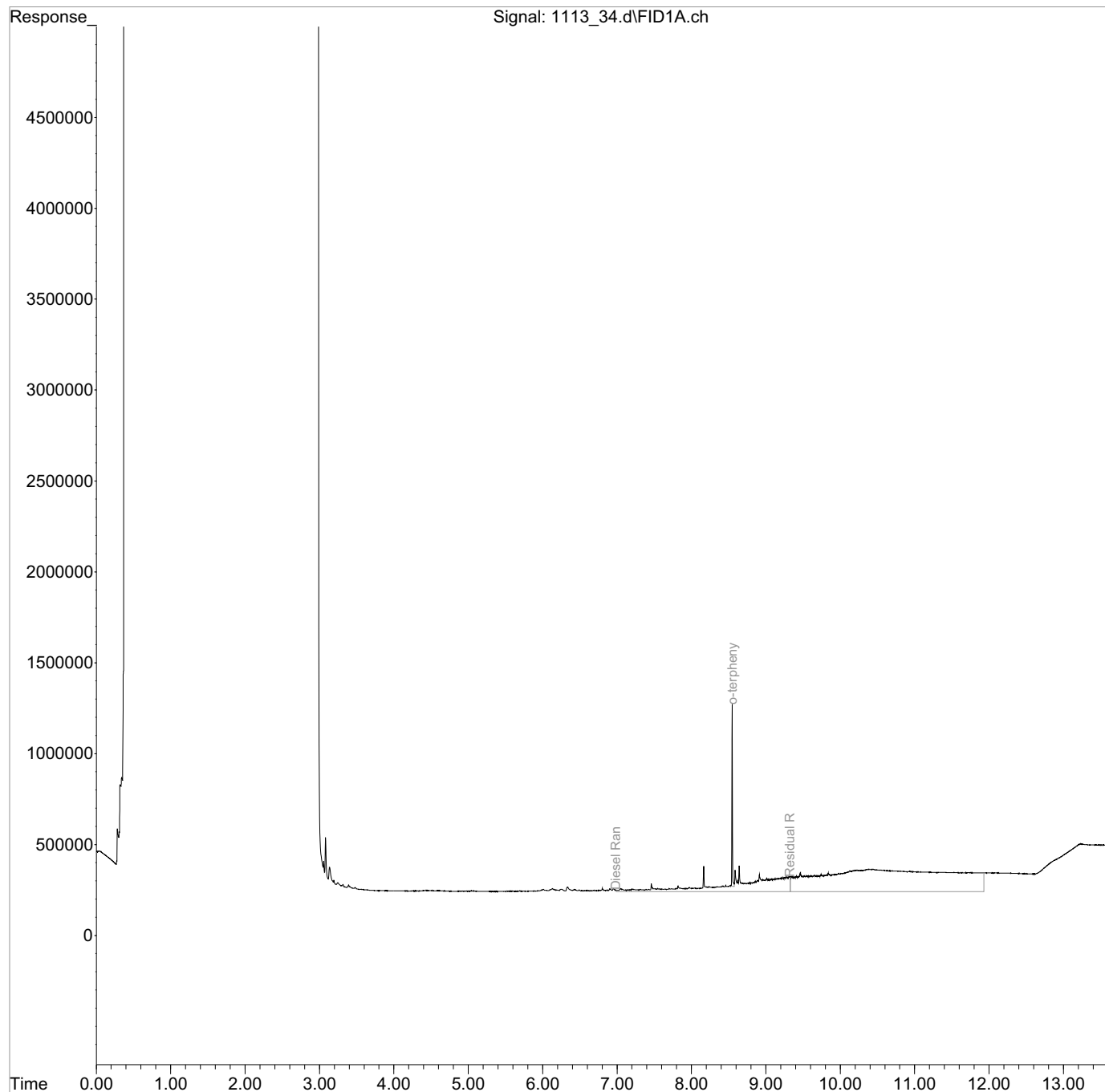
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111318\  
Data File : 1113\_34.d  
Signal(s) : FID1A.ch  
Acq On : 13 Nov 2018 6:31 pm  
Operator : 784  
Sample : L1042954-14 1x WG1195366  
Misc : M.I.s on ranges are corrections  
ALS Vial : 27 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 14 11:44:38 2018  
Quant Method : C:\msdchem\1\methods\EP34J24AR.M  
Quant Title :  
QLast Update : Mon Oct 29 10:36:48 2018  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :



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Groundwater Analytical Reports  
28 February to 1 March 2019

March 12, 2019

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1075084  
Samples Received: 03/02/2019  
Project Number: 1996120\*00  
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-28-20190228 L1075084-14	28
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1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

# SAMPLE SUMMARY

## WMW-14-20190301 L1075084-01 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 11:00  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:26	03/11/19 09:26	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:13	03/11/19 11:13	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:49	03/05/19 12:49	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 16:55	03/05/19 16:55	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 12:47	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 14:08	03/06/19 14:08	MEL	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 00:08	SHG	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-15-20190301 L1075084-02 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 10:00  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:30	03/11/19 09:30	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:16	03/11/19 11:16	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:49	03/05/19 12:49	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 17:17	03/05/19 17:17	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 12:52	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 14:10	03/06/19 14:10	MEL	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 00:29	SHG	Mt. Juliet, TN

## WMW-16-20190301 L1075084-03 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 08:50  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:31	03/11/19 09:31	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:17	03/11/19 11:17	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:49	03/05/19 12:49	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 17:28	03/05/19 17:28	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 12:57	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1244734	1	03/04/19 01:26	03/04/19 01:26	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 14:13	03/06/19 14:13	MEL	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 00:50	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	5	03/06/19 08:00	03/07/19 18:39	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1244975	1	03/05/19 07:27	03/06/19 03:45	CJR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1244975	10	03/05/19 07:27	03/06/19 14:20	DMG	Mt. Juliet, TN

## WMW-17-20190228 L1075084-04 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 17:00  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:33	03/11/19 09:33	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:19	03/11/19 11:19	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:50	03/05/19 12:50	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 17:39	03/05/19 17:39	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 13:14	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1247352	1	03/08/19 14:51	03/09/19 10:32	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1244734	1	03/04/19 01:47	03/04/19 01:47	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 14:17	03/06/19 14:17	MEL	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 01:10	SHG	Mt. Juliet, TN

# SAMPLE SUMMARY



## WMW-18-20190228 L1075084-05 GW

Collected by: K. Teague  
 Collected date/time: 03/01/19 15:00  
 Received date/time: 03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:34	03/11/19 09:34	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:20	03/11/19 11:20	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:50	03/05/19 12:50	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 17:50	03/05/19 17:50	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 12:28	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1247352	1	03/08/19 14:51	03/09/19 10:13	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 14:19	03/06/19 14:19	MEL	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 01:31	SHG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

## WMW-19-20190301 L1075084-08 GW

Collected by: K. Teague  
 Collected date/time: 03/01/19 12:00  
 Received date/time: 03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:44	03/11/19 09:44	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:31	03/11/19 11:31	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:51	03/05/19 12:51	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 18:44	03/05/19 18:44	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 13:18	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 14:22	03/06/19 14:22	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1247398	1	03/08/19 22:43	03/08/19 22:43	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 03:36	SHG	Mt. Juliet, TN

6 Qc

7 Gl

8 Al

9 Sc

## WMW-20-20190228 L1075084-09 GW

Collected by: K. Teague  
 Collected date/time: 03/01/19 14:05  
 Received date/time: 03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:45	03/11/19 09:45	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:32	03/11/19 11:32	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:52	03/05/19 12:52	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 18:55	03/05/19 18:55	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 13:23	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 14:42	03/06/19 14:42	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245078	1	03/05/19 02:43	03/05/19 02:43	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1247398	1	03/08/19 23:04	03/08/19 23:04	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 16:59	SHG	Mt. Juliet, TN

## D-1-20190228 L1075084-10 GW

Collected by: K. Teague  
 Collected date/time: 03/01/19 17:10  
 Received date/time: 03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:47	03/11/19 09:47	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:34	03/11/19 11:34	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:52	03/05/19 12:52	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 19:06	03/05/19 19:06	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 13:28	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1247352	1	03/08/19 14:51	03/09/19 10:37	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1244734	1	03/04/19 02:08	03/04/19 02:08	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 14:45	03/06/19 14:45	MEL	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 17:20	SHG	Mt. Juliet, TN

# SAMPLE SUMMARY

## WMW-24-20190228 L1075084-11 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 14:30  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:49	03/11/19 09:49	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:35	03/11/19 11:35	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:53	03/05/19 12:53	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 19:17	03/05/19 19:17	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 13:33	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 14:48	03/06/19 14:48	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245356	1	03/05/19 17:50	03/05/19 17:50	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 17:42	SHG	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-26-20190228 L1075084-12 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 07:50  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:50	03/11/19 09:50	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:37	03/11/19 11:37	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:53	03/05/19 12:53	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 19:27	03/05/19 19:27	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 13:37	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 15:33	03/06/19 15:33	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245356	1	03/05/19 18:10	03/05/19 18:10	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 18:18	SHG	Mt. Juliet, TN

## WMW-27-20190228 L1075084-13 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 17:10  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:53	03/11/19 09:53	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:38	03/11/19 11:38	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:53	03/05/19 12:53	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 19:38	03/05/19 19:38	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 13:42	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 15:05	03/06/19 15:05	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245356	1	03/05/19 18:30	03/05/19 18:30	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 23:52	SHG	Mt. Juliet, TN

## WMW-28-20190228 L1075084-14 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 15:30  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 09:57	03/11/19 09:57	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:40	03/11/19 11:40	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:53	03/05/19 12:53	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 19:49	03/05/19 19:49	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 13:47	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 15:08	03/06/19 15:08	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245356	1	03/05/19 18:50	03/05/19 18:50	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/08/19 00:11	SHG	Mt. Juliet, TN



# SAMPLE SUMMARY



## WMW-29-20190228 L1075084-15 GW

Collected by: K. Teague  
 Collected date/time: 03/01/19 09:55  
 Received date/time: 03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 10:03	03/11/19 10:03	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:41	03/11/19 11:41	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:54	03/05/19 12:54	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 20:43	03/05/19 20:43	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 13:51	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 15:10	03/06/19 15:10	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245356	5	03/05/19 19:11	03/05/19 19:11	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/08/19 00:31	SHG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

## WMW-30-20190301 L1075084-16 GW

Collected by: K. Teague  
 Collected date/time: 03/01/19 10:25  
 Received date/time: 03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 10:04	03/11/19 10:04	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:43	03/11/19 11:43	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245120	1	03/05/19 12:54	03/05/19 12:54	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 20:54	03/05/19 20:54	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 13:56	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 15:12	03/06/19 15:12	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245356	1	03/05/19 19:31	03/05/19 19:31	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/08/19 00:50	SHG	Mt. Juliet, TN

6 Qc

7 Gl

8 Al

9 Sc

## WMW-31-20190301 L1075084-17 GW

Collected by: K. Teague  
 Collected date/time: 03/01/19 08:25  
 Received date/time: 03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 10:06	03/11/19 10:06	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:44	03/11/19 11:44	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245715	1	03/06/19 11:02	03/06/19 11:02	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 21:05	03/05/19 21:05	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 14:48	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 15:15	03/06/19 15:15	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245356	1	03/05/19 19:51	03/05/19 19:51	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/08/19 01:09	SHG	Mt. Juliet, TN

## WMW-32-20190301 L1075084-18 GW

Collected by: K. Teague  
 Collected date/time: 03/01/19 09:40  
 Received date/time: 03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 10:08	03/11/19 10:08	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	5	03/11/19 12:02	03/11/19 12:02	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245715	1	03/06/19 11:02	03/06/19 11:02	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 21:16	03/05/19 21:16	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 14:52	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 15:17	03/06/19 15:17	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245356	1	03/05/19 20:11	03/05/19 20:11	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/08/19 01:28	SHG	Mt. Juliet, TN

# SAMPLE SUMMARY

## WMW-21-20190228 L1075084-19 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 13:05  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 10:09	03/11/19 10:09	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	2	03/11/19 12:04	03/11/19 12:04	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245715	1	03/06/19 11:03	03/06/19 11:03	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 21:27	03/05/19 21:27	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 14:57	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 15:19	03/06/19 15:19	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245078	1	03/05/19 03:03	03/05/19 03:03	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1247398	1	03/08/19 23:25	03/08/19 23:25	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/08/19 01:47	SHG	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-22-20190228 L1075084-20 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 11:40  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 10:11	03/11/19 10:11	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	1	03/11/19 11:55	03/11/19 11:55	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245715	1	03/06/19 11:04	03/06/19 11:04	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 21:38	03/05/19 21:38	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 15:02	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 15:24	03/06/19 15:24	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245078	1	03/05/19 03:22	03/05/19 03:22	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1247398	1	03/08/19 23:46	03/08/19 23:46	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/08/19 02:07	SHG	Mt. Juliet, TN

## WMW-23-20190228 L1075084-21 GW

Collected by  
K. Teague  
Collected date/time  
03/01/19 09:35  
Received date/time  
03/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1246345	1	03/11/19 10:12	03/11/19 10:12	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1246347	2	03/11/19 12:05	03/11/19 12:05	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1245715	1	03/06/19 11:04	03/06/19 11:04	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245154	1	03/05/19 21:49	03/05/19 21:49	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1244547	1	03/05/19 09:01	03/07/19 15:07	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1245466	1	03/06/19 15:30	03/06/19 15:30	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1245078	1	03/05/19 03:41	03/05/19 03:41	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1247398	1	03/09/19 00:08	03/09/19 00:08	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1244956	1	03/06/19 08:00	03/07/19 07:34	SHG	Mt. Juliet, TN



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

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 09:26	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	204		100	1	03/11/2019 11:13	<a href="#">WG1246347</a>

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	03/05/2019 12:49	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	11900		5000	1	03/05/2019 16:55	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 12:47	<a href="#">WG1244547</a>
Manganese,Dissolved	ND		5.00	1	03/07/2019 12:47	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/06/2019 14:08	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 14:08	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 14:08	<a href="#">WG1245466</a>

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	03/07/2019 00:08	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	ND		250	1	03/07/2019 00:08	<a href="#">WG1244956</a>
(S) o-Terphenyl	85.8		52.0-156		03/07/2019 00:08	<a href="#">WG1244956</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 09:30	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	217		100	1	03/11/2019 11:16	<a href="#">WG1246347</a>

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	03/05/2019 12:49	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	16800		5000	1	03/05/2019 17:17	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 12:52	<a href="#">WG1244547</a>
Manganese,Dissolved	618		5.00	1	03/07/2019 12:52	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	176		10.0	1	03/06/2019 14:10	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 14:10	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 14:10	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2800		200	1	03/07/2019 00:29	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	2680		250	1	03/07/2019 00:29	<a href="#">WG1244956</a>
(S) o-Terphenyl	94.2		52.0-156		03/07/2019 00:29	<a href="#">WG1244956</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	202		100	1	03/11/2019 09:31	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	564		100	1	03/11/2019 11:17	<a href="#">WG1246347</a>

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	03/05/2019 12:49	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	5800		5000	1	03/05/2019 17:28	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 12:57	<a href="#">WG1244547</a>
Manganese,Dissolved	508		5.00	1	03/07/2019 12:57	<a href="#">WG1244547</a>

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	03/04/2019 01:26	<a href="#">WG1244734</a>
(S) a,a,a-Trifluorotoluene(FID)	97.3		78.0-120		03/04/2019 01:26	<a href="#">WG1244734</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	1460		10.0	1	03/06/2019 14:13	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 14:13	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 14:13	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5750		1000	5	03/07/2019 18:39	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	2750		250	1	03/07/2019 00:50	<a href="#">WG1244956</a>
(S) o-Terphenyl	91.6		52.0-156		03/07/2019 18:39	<a href="#">WG1244956</a>
(S) o-Terphenyl	90.5		52.0-156		03/07/2019 00:50	<a href="#">WG1244956</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Acenaphthene	0.144		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Acenaphthylene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Benzo(a)anthracene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Benzo(a)pyrene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Benzo(g,h,i)perylene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Benzo(k)fluoranthene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Chrysene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Dibenz(a,h)anthracene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Fluoranthene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Fluorene	0.0841		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Naphthalene	ND		2.50	10	03/06/2019 14:20	<a href="#">WG1244975</a>
Phenanthrene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
Pyrene	ND		0.0500	1	03/06/2019 03:45	<a href="#">WG1244975</a>
1-Methylnaphthalene	ND		2.50	10	03/06/2019 14:20	<a href="#">WG1244975</a>
2-Methylnaphthalene	ND		2.50	10	03/06/2019 14:20	<a href="#">WG1244975</a>
2-Chloronaphthalene	ND		0.250	1	03/06/2019 03:45	<a href="#">WG1244975</a>
(S) Nitrobenzene-d5	0.000	<u>J2</u>	31.0-160		03/06/2019 03:45	<a href="#">WG1244975</a>
(S) Nitrobenzene-d5	86.8		31.0-160		03/06/2019 14:20	<a href="#">WG1244975</a>
(S) 2-Fluorobiphenyl	93.7		48.0-148		03/06/2019 14:20	<a href="#">WG1244975</a>
(S) 2-Fluorobiphenyl	96.3		48.0-148		03/06/2019 03:45	<a href="#">WG1244975</a>
(S) p-Terphenyl-d14	71.6		37.0-146		03/06/2019 14:20	<a href="#">WG1244975</a>
(S) p-Terphenyl-d14	93.2		37.0-146		03/06/2019 03:45	<a href="#">WG1244975</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

L1075084-03 WG1244975: IS/SURR failed on lower dilution.



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	260		100	1	03/11/2019 09:33	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	03/11/2019 11:19	<a href="#">WG1246347</a>

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	03/05/2019 12:50	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	03/05/2019 17:39	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	11.1		2.00	1	03/09/2019 10:32	<a href="#">WG1247352</a>
Arsenic,Dissolved	11.5		2.00	1	03/07/2019 13:14	<a href="#">WG1244547</a>
Iron,Dissolved	ND		100	1	03/07/2019 13:14	<a href="#">WG1244547</a>
Manganese,Dissolved	1370		5.00	1	03/07/2019 13:14	<a href="#">WG1244547</a>

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	03/04/2019 01:47	<a href="#">WG1244734</a>
(S) a,a,a-Trifluorotoluene(FID)	97.7		78.0-120		03/04/2019 01:47	<a href="#">WG1244734</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	1430		10.0	1	03/06/2019 14:17	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 14:17	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 14:17	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1590		200	1	03/07/2019 01:10	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	1850		250	1	03/07/2019 01:10	<a href="#">WG1244956</a>
(S) o-Terphenyl	93.2		52.0-156		03/07/2019 01:10	<a href="#">WG1244956</a>





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 09:34	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1550	J6	100	1	03/11/2019 11:20	<a href="#">WG1246347</a>

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	03/05/2019 12:50	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	22200		5000	1	03/05/2019 17:50	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	12.4		2.00	1	03/09/2019 10:13	<a href="#">WG1247352</a>
Arsenic,Dissolved	12.2		2.00	1	03/07/2019 12:28	<a href="#">WG1244547</a>
Iron,Dissolved	ND		100	1	03/07/2019 12:28	<a href="#">WG1244547</a>
Manganese,Dissolved	48.1		5.00	1	03/07/2019 12:28	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	60.9		10.0	1	03/06/2019 14:19	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 14:19	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 14:19	<a href="#">WG1245466</a>

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	03/07/2019 01:31	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	342		250	1	03/07/2019 01:31	<a href="#">WG1244956</a>
(S) o-Terphenyl	90.0		52.0-156		03/07/2019 01:31	<a href="#">WG1244956</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 09:44	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	183		100	1	03/11/2019 11:31	<a href="#">WG1246347</a>

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	03/05/2019 12:51	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	11500		5000	1	03/05/2019 18:44	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 13:18	<a href="#">WG1244547</a>
Manganese,Dissolved	230		5.00	1	03/07/2019 13:18	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	34.2		10.0	1	03/06/2019 14:22	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 14:22	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 14:22	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/08/2019 22:43	<a href="#">WG1247398</a>
Toluene	ND		1.00	1	03/08/2019 22:43	<a href="#">WG1247398</a>
Ethylbenzene	ND		1.00	1	03/08/2019 22:43	<a href="#">WG1247398</a>
o-Xylene	ND		1.00	1	03/08/2019 22:43	<a href="#">WG1247398</a>
m&p-Xylene	ND		2.00	1	03/08/2019 22:43	<a href="#">WG1247398</a>
(S) Toluene-d8	101		80.0-120		03/08/2019 22:43	<a href="#">WG1247398</a>
(S) a,a,a-Trifluorotoluene	108		80.0-120		03/08/2019 22:43	<a href="#">WG1247398</a>
(S) 4-Bromofluorobenzene	98.6		77.0-126		03/08/2019 22:43	<a href="#">WG1247398</a>
(S) 1,2-Dichloroethane-d4	117		70.0-130		03/08/2019 22:43	<a href="#">WG1247398</a>

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	03/07/2019 03:36	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	ND		250	1	03/07/2019 03:36	<a href="#">WG1244956</a>
(S) o-Terphenyl	86.3		52.0-156		03/07/2019 03:36	<a href="#">WG1244956</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 09:45	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	137		100	1	03/11/2019 11:32	<a href="#">WG1246347</a>

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	03/05/2019 12:52	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	12200		5000	1	03/05/2019 18:55	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 13:23	<a href="#">WG1244547</a>
Manganese,Dissolved	1450		5.00	1	03/07/2019 13:23	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	282		10.0	1	03/06/2019 14:42	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 14:42	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 14:42	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/08/2019 23:04	<a href="#">WG1247398</a>
Toluene	ND		1.00	1	03/08/2019 23:04	<a href="#">WG1247398</a>
Ethylbenzene	ND		1.00	1	03/05/2019 02:43	<a href="#">WG1245078</a>
o-Xylene	ND		1.00	1	03/05/2019 02:43	<a href="#">WG1245078</a>
m&p-Xylene	ND		2.00	1	03/05/2019 02:43	<a href="#">WG1245078</a>
(S) Toluene-d8	99.1		80.0-120		03/05/2019 02:43	<a href="#">WG1245078</a>
(S) Toluene-d8	101		80.0-120		03/08/2019 23:04	<a href="#">WG1247398</a>
(S) a,a,a-Trifluorotoluene	101		80.0-120		03/05/2019 02:43	<a href="#">WG1245078</a>
(S) a,a,a-Trifluorotoluene	109		80.0-120		03/08/2019 23:04	<a href="#">WG1247398</a>
(S) 4-Bromofluorobenzene	93.8		77.0-126		03/05/2019 02:43	<a href="#">WG1245078</a>
(S) 4-Bromofluorobenzene	97.0		77.0-126		03/08/2019 23:04	<a href="#">WG1247398</a>
(S) 1,2-Dichloroethane-d4	79.5		70.0-130		03/05/2019 02:43	<a href="#">WG1245078</a>
(S) 1,2-Dichloroethane-d4	118		70.0-130		03/08/2019 23:04	<a href="#">WG1247398</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	251		200	1	03/07/2019 16:59	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	493		250	1	03/07/2019 16:59	<a href="#">WG1244956</a>



Collected date/time: 03/01/19 14:05

L1075084

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	90.5		52.0-156		03/07/2019 16:59	<a href="#">WG1244956</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	198		100	1	03/11/2019 09:47	<a href="#">WG1246345</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	03/11/2019 11:34	<a href="#">WG1246347</a>

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	03/05/2019 12:52	<a href="#">WG1245120</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	03/05/2019 19:06	<a href="#">WG1245154</a>

7 Gl

8 Al

## Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	8.53		2.00	1	03/09/2019 10:37	<a href="#">WG1247352</a>
Arsenic,Dissolved	9.26		2.00	1	03/07/2019 13:28	<a href="#">WG1244547</a>
Iron,Dissolved	ND		100	1	03/07/2019 13:28	<a href="#">WG1244547</a>
Manganese,Dissolved	1310		5.00	1	03/07/2019 13:28	<a href="#">WG1244547</a>

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	03/04/2019 02:08	<a href="#">WG1244734</a>
(S) a,a,a-Trifluorotoluene(FID)	97.5		78.0-120		03/04/2019 02:08	<a href="#">WG1244734</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	165		10.0	1	03/06/2019 14:45	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 14:45	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 14:45	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1380		200	1	03/07/2019 17:20	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	1560		250	1	03/07/2019 17:20	<a href="#">WG1244956</a>
(S) o-Terphenyl	95.8		52.0-156		03/07/2019 17:20	<a href="#">WG1244956</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 09:49	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3900		100	1	03/11/2019 11:35	<a href="#">WG1246347</a>

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	03/05/2019 12:53	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	29500		5000	1	03/05/2019 19:17	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 13:33	<a href="#">WG1244547</a>
Manganese,Dissolved	134		5.00	1	03/07/2019 13:33	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	58.7		10.0	1	03/06/2019 14:48	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 14:48	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 14:48	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Acrolein	ND		50.0	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Acrylonitrile	ND		10.0	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Benzene	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Bromobenzene	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Bromodichloromethane	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Bromoform	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Bromomethane	ND		5.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
n-Butylbenzene	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
sec-Butylbenzene	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
tert-Butylbenzene	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Carbon tetrachloride	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Chlorobenzene	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Chlorodibromomethane	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Chloroethane	ND		5.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Chloroform	ND		5.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
Chloromethane	ND		2.50	1	03/05/2019 17:50	<a href="#">WG1245356</a>
2-Chlorotoluene	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
4-Chlorotoluene	ND		1.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/05/2019 17:50	<a href="#">WG1245356</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	03/05/2019 17:50	WG1245356
Dibromomethane	ND		1.00	1	03/05/2019 17:50	WG1245356
1,2-Dichlorobenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
1,3-Dichlorobenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
1,4-Dichlorobenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
Dichlorodifluoromethane	ND		5.00	1	03/05/2019 17:50	WG1245356
1,1-Dichloroethane	ND		1.00	1	03/05/2019 17:50	WG1245356
1,2-Dichloroethane	ND		1.00	1	03/05/2019 17:50	WG1245356
1,1-Dichloroethene	ND		1.00	1	03/05/2019 17:50	WG1245356
cis-1,2-Dichloroethene	ND		1.00	1	03/05/2019 17:50	WG1245356
trans-1,2-Dichloroethene	ND		1.00	1	03/05/2019 17:50	WG1245356
1,2-Dichloropropane	ND		1.00	1	03/05/2019 17:50	WG1245356
1,1-Dichloropropene	ND		1.00	1	03/05/2019 17:50	WG1245356
1,3-Dichloropropane	ND		1.00	1	03/05/2019 17:50	WG1245356
cis-1,3-Dichloropropene	ND		1.00	1	03/05/2019 17:50	WG1245356
trans-1,3-Dichloropropene	ND		1.00	1	03/05/2019 17:50	WG1245356
2,2-Dichloropropane	ND		1.00	1	03/05/2019 17:50	WG1245356
Di-isopropyl ether	ND		1.00	1	03/05/2019 17:50	WG1245356
Ethylbenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
Hexachloro-1,3-butadiene	ND		1.00	1	03/05/2019 17:50	WG1245356
Isopropylbenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
p-Isopropyltoluene	ND		1.00	1	03/05/2019 17:50	WG1245356
2-Butanone (MEK)	ND		10.0	1	03/05/2019 17:50	WG1245356
Methylene Chloride	ND		5.00	1	03/05/2019 17:50	WG1245356
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/05/2019 17:50	WG1245356
Methyl tert-butyl ether	ND		1.00	1	03/05/2019 17:50	WG1245356
Naphthalene	ND		5.00	1	03/05/2019 17:50	WG1245356
n-Propylbenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
Styrene	ND		1.00	1	03/05/2019 17:50	WG1245356
1,1,1,2-Tetrachloroethane	ND		1.00	1	03/05/2019 17:50	WG1245356
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/05/2019 17:50	WG1245356
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/05/2019 17:50	WG1245356
Tetrachloroethene	ND		1.00	1	03/05/2019 17:50	WG1245356
Toluene	ND		1.00	1	03/05/2019 17:50	WG1245356
1,2,3-Trichlorobenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
1,2,4-Trichlorobenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
1,1,1-Trichloroethane	ND		1.00	1	03/05/2019 17:50	WG1245356
1,1,2-Trichloroethane	ND		1.00	1	03/05/2019 17:50	WG1245356
Trichloroethene	ND		1.00	1	03/05/2019 17:50	WG1245356
Trichlorofluoromethane	ND		5.00	1	03/05/2019 17:50	WG1245356
1,2,3-Trichloropropane	ND		2.50	1	03/05/2019 17:50	WG1245356
1,2,4-Trimethylbenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
1,2,3-Trimethylbenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
1,3,5-Trimethylbenzene	ND		1.00	1	03/05/2019 17:50	WG1245356
Vinyl chloride	ND		1.00	1	03/05/2019 17:50	WG1245356
o-Xylene	ND		1.00	1	03/05/2019 17:50	WG1245356
m&p-Xylene	ND		2.00	1	03/05/2019 17:50	WG1245356
(S) Toluene-d8	107		80.0-120		03/05/2019 17:50	WG1245356
(S) 4-Bromofluorobenzene	104		77.0-126		03/05/2019 17:50	WG1245356
(S) 1,2-Dichloroethane-d4	104		70.0-130		03/05/2019 17:50	WG1245356

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)	213		200	1	03/07/2019 17:42	WG1244956
Residual Range Organics (RRO)	739		250	1	03/07/2019 17:42	WG1244956



Collected date/time: 03/01/19 14:30

L1075084

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	88.9		52.0-156		03/07/2019 17:42	<a href="#">WG1244956</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 09:50	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2380		100	1	03/11/2019 11:37	<a href="#">WG1246347</a>

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	03/05/2019 12:53	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	21500		5000	1	03/05/2019 19:27	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 13:37	<a href="#">WG1244547</a>
Manganese,Dissolved	7.77		5.00	1	03/07/2019 13:37	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	25.1		10.0	1	03/06/2019 15:33	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 15:33	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 15:33	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Acrolein	ND		50.0	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Acrylonitrile	ND		10.0	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Benzene	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Bromobenzene	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Bromodichloromethane	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Bromoform	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Bromomethane	ND		5.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
n-Butylbenzene	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
sec-Butylbenzene	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
tert-Butylbenzene	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Carbon tetrachloride	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Chlorobenzene	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Chlorodibromomethane	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Chloroethane	ND		5.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Chloroform	ND		5.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
Chloromethane	ND		2.50	1	03/05/2019 18:10	<a href="#">WG1245356</a>
2-Chlorotoluene	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
4-Chlorotoluene	ND		1.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/05/2019 18:10	<a href="#">WG1245356</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	03/05/2019 18:10	WG1245356
Dibromomethane	ND		1.00	1	03/05/2019 18:10	WG1245356
1,2-Dichlorobenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
1,3-Dichlorobenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
1,4-Dichlorobenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
Dichlorodifluoromethane	ND		5.00	1	03/05/2019 18:10	WG1245356
1,1-Dichloroethane	ND		1.00	1	03/05/2019 18:10	WG1245356
1,2-Dichloroethane	ND		1.00	1	03/05/2019 18:10	WG1245356
1,1-Dichloroethene	ND		1.00	1	03/05/2019 18:10	WG1245356
cis-1,2-Dichloroethene	ND		1.00	1	03/05/2019 18:10	WG1245356
trans-1,2-Dichloroethene	ND		1.00	1	03/05/2019 18:10	WG1245356
1,2-Dichloropropane	ND		1.00	1	03/05/2019 18:10	WG1245356
1,1-Dichloropropene	ND		1.00	1	03/05/2019 18:10	WG1245356
1,3-Dichloropropane	ND		1.00	1	03/05/2019 18:10	WG1245356
cis-1,3-Dichloropropene	ND		1.00	1	03/05/2019 18:10	WG1245356
trans-1,3-Dichloropropene	ND		1.00	1	03/05/2019 18:10	WG1245356
2,2-Dichloropropane	ND		1.00	1	03/05/2019 18:10	WG1245356
Di-isopropyl ether	ND		1.00	1	03/05/2019 18:10	WG1245356
Ethylbenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
Hexachloro-1,3-butadiene	ND		1.00	1	03/05/2019 18:10	WG1245356
Isopropylbenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
p-Isopropyltoluene	ND		1.00	1	03/05/2019 18:10	WG1245356
2-Butanone (MEK)	ND		10.0	1	03/05/2019 18:10	WG1245356
Methylene Chloride	ND		5.00	1	03/05/2019 18:10	WG1245356
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/05/2019 18:10	WG1245356
Methyl tert-butyl ether	ND		1.00	1	03/05/2019 18:10	WG1245356
Naphthalene	ND		5.00	1	03/05/2019 18:10	WG1245356
n-Propylbenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
Styrene	ND		1.00	1	03/05/2019 18:10	WG1245356
1,1,1,2-Tetrachloroethane	ND		1.00	1	03/05/2019 18:10	WG1245356
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/05/2019 18:10	WG1245356
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/05/2019 18:10	WG1245356
Tetrachloroethene	ND		1.00	1	03/05/2019 18:10	WG1245356
Toluene	ND		1.00	1	03/05/2019 18:10	WG1245356
1,2,3-Trichlorobenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
1,2,4-Trichlorobenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
1,1,1-Trichloroethane	ND		1.00	1	03/05/2019 18:10	WG1245356
1,1,2-Trichloroethane	ND		1.00	1	03/05/2019 18:10	WG1245356
Trichloroethene	ND		1.00	1	03/05/2019 18:10	WG1245356
Trichlorofluoromethane	ND		5.00	1	03/05/2019 18:10	WG1245356
1,2,3-Trichloropropane	ND		2.50	1	03/05/2019 18:10	WG1245356
1,2,4-Trimethylbenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
1,2,3-Trimethylbenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
1,3,5-Trimethylbenzene	ND		1.00	1	03/05/2019 18:10	WG1245356
Vinyl chloride	ND		1.00	1	03/05/2019 18:10	WG1245356
o-Xylene	ND		1.00	1	03/05/2019 18:10	WG1245356
m&p-Xylene	ND		2.00	1	03/05/2019 18:10	WG1245356
(S) Toluene-d8	106		80.0-120		03/05/2019 18:10	WG1245356
(S) 4-Bromofluorobenzene	101		77.0-126		03/05/2019 18:10	WG1245356
(S) 1,2-Dichloroethane-d4	101		70.0-130		03/05/2019 18:10	WG1245356

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)	464		200	1	03/07/2019 18:18	WG1244956
Residual Range Organics (RRO)	1060		250	1	03/07/2019 18:18	WG1244956



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	92.6		52.0-156		03/07/2019 18:18	<a href="#">WG1244956</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 09:53	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1190		100	1	03/11/2019 11:38	<a href="#">WG1246347</a>

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	03/05/2019 12:53	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	03/05/2019 19:38	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	298		100	1	03/07/2019 13:42	<a href="#">WG1244547</a>
Manganese,Dissolved	140		5.00	1	03/07/2019 13:42	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	32.7		10.0	1	03/06/2019 15:05	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 15:05	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 15:05	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Acrolein	ND		50.0	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Acrylonitrile	ND		10.0	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Benzene	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Bromobenzene	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Bromodichloromethane	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Bromoform	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Bromomethane	ND		5.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
n-Butylbenzene	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
sec-Butylbenzene	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
tert-Butylbenzene	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Carbon tetrachloride	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Chlorobenzene	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Chlorodibromomethane	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Chloroethane	ND		5.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Chloroform	ND		5.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
Chloromethane	ND		2.50	1	03/05/2019 18:30	<a href="#">WG1245356</a>
2-Chlorotoluene	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
4-Chlorotoluene	ND		1.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/05/2019 18:30	<a href="#">WG1245356</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	03/05/2019 18:30	WG1245356
Dibromomethane	ND		1.00	1	03/05/2019 18:30	WG1245356
1,2-Dichlorobenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
1,3-Dichlorobenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
1,4-Dichlorobenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
Dichlorodifluoromethane	ND		5.00	1	03/05/2019 18:30	WG1245356
1,1-Dichloroethane	ND		1.00	1	03/05/2019 18:30	WG1245356
1,2-Dichloroethane	ND		1.00	1	03/05/2019 18:30	WG1245356
1,1-Dichloroethene	ND		1.00	1	03/05/2019 18:30	WG1245356
cis-1,2-Dichloroethene	ND		1.00	1	03/05/2019 18:30	WG1245356
trans-1,2-Dichloroethene	ND		1.00	1	03/05/2019 18:30	WG1245356
1,2-Dichloropropane	ND		1.00	1	03/05/2019 18:30	WG1245356
1,1-Dichloropropene	ND		1.00	1	03/05/2019 18:30	WG1245356
1,3-Dichloropropane	ND		1.00	1	03/05/2019 18:30	WG1245356
cis-1,3-Dichloropropene	ND		1.00	1	03/05/2019 18:30	WG1245356
trans-1,3-Dichloropropene	ND		1.00	1	03/05/2019 18:30	WG1245356
2,2-Dichloropropane	ND		1.00	1	03/05/2019 18:30	WG1245356
Di-isopropyl ether	ND		1.00	1	03/05/2019 18:30	WG1245356
Ethylbenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
Hexachloro-1,3-butadiene	ND		1.00	1	03/05/2019 18:30	WG1245356
Isopropylbenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
p-Isopropyltoluene	ND		1.00	1	03/05/2019 18:30	WG1245356
2-Butanone (MEK)	ND		10.0	1	03/05/2019 18:30	WG1245356
Methylene Chloride	ND		5.00	1	03/05/2019 18:30	WG1245356
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/05/2019 18:30	WG1245356
Methyl tert-butyl ether	ND		1.00	1	03/05/2019 18:30	WG1245356
Naphthalene	ND		5.00	1	03/05/2019 18:30	WG1245356
n-Propylbenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
Styrene	ND		1.00	1	03/05/2019 18:30	WG1245356
1,1,1,2-Tetrachloroethane	ND		1.00	1	03/05/2019 18:30	WG1245356
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/05/2019 18:30	WG1245356
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/05/2019 18:30	WG1245356
Tetrachloroethene	ND		1.00	1	03/05/2019 18:30	WG1245356
Toluene	ND		1.00	1	03/05/2019 18:30	WG1245356
1,2,3-Trichlorobenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
1,2,4-Trichlorobenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
1,1,1-Trichloroethane	ND		1.00	1	03/05/2019 18:30	WG1245356
1,1,2-Trichloroethane	ND		1.00	1	03/05/2019 18:30	WG1245356
Trichloroethene	ND		1.00	1	03/05/2019 18:30	WG1245356
Trichlorofluoromethane	ND		5.00	1	03/05/2019 18:30	WG1245356
1,2,3-Trichloropropane	ND		2.50	1	03/05/2019 18:30	WG1245356
1,2,4-Trimethylbenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
1,2,3-Trimethylbenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
1,3,5-Trimethylbenzene	ND		1.00	1	03/05/2019 18:30	WG1245356
Vinyl chloride	ND		1.00	1	03/05/2019 18:30	WG1245356
o-Xylene	ND		1.00	1	03/05/2019 18:30	WG1245356
m&p-Xylene	ND		2.00	1	03/05/2019 18:30	WG1245356
(S) Toluene-d8	107		80.0-120		03/05/2019 18:30	WG1245356
(S) 4-Bromofluorobenzene	104		77.0-126		03/05/2019 18:30	WG1245356
(S) 1,2-Dichloroethane-d4	101		70.0-130		03/05/2019 18:30	WG1245356

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	03/07/2019 23:52	WG1244956
Residual Range Organics (RRO)	334		250	1	03/07/2019 23:52	WG1244956



Collected date/time: 03/01/19 17:10

L1075084

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	84.7		52.0-156		03/07/2019 23:52	<a href="#">WG1244956</a>

- 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	03/11/2019 09:57	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2700		100	1	03/11/2019 11:40	<a href="#">WG1246347</a>

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	03/05/2019 12:53	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	5910		5000	1	03/05/2019 19:49	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 13:47	<a href="#">WG1244547</a>
Manganese,Dissolved	5.12		5.00	1	03/07/2019 13:47	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/06/2019 15:08	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 15:08	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 15:08	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Acrolein	ND		50.0	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Acrylonitrile	ND		10.0	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Benzene	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Bromobenzene	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Bromodichloromethane	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Bromoform	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Bromomethane	ND		5.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
n-Butylbenzene	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
sec-Butylbenzene	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
tert-Butylbenzene	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Carbon tetrachloride	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Chlorobenzene	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Chlorodibromomethane	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Chloroethane	ND		5.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Chloroform	ND		5.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
Chloromethane	ND		2.50	1	03/05/2019 18:50	<a href="#">WG1245356</a>
2-Chlorotoluene	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
4-Chlorotoluene	ND		1.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/05/2019 18:50	<a href="#">WG1245356</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	03/05/2019 18:50	WG1245356
Dibromomethane	ND		1.00	1	03/05/2019 18:50	WG1245356
1,2-Dichlorobenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
1,3-Dichlorobenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
1,4-Dichlorobenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
Dichlorodifluoromethane	ND		5.00	1	03/05/2019 18:50	WG1245356
1,1-Dichloroethane	ND		1.00	1	03/05/2019 18:50	WG1245356
1,2-Dichloroethane	ND		1.00	1	03/05/2019 18:50	WG1245356
1,1-Dichloroethene	ND		1.00	1	03/05/2019 18:50	WG1245356
cis-1,2-Dichloroethene	ND		1.00	1	03/05/2019 18:50	WG1245356
trans-1,2-Dichloroethene	ND		1.00	1	03/05/2019 18:50	WG1245356
1,2-Dichloropropane	ND		1.00	1	03/05/2019 18:50	WG1245356
1,1-Dichloropropene	ND		1.00	1	03/05/2019 18:50	WG1245356
1,3-Dichloropropane	ND		1.00	1	03/05/2019 18:50	WG1245356
cis-1,3-Dichloropropene	ND		1.00	1	03/05/2019 18:50	WG1245356
trans-1,3-Dichloropropene	ND		1.00	1	03/05/2019 18:50	WG1245356
2,2-Dichloropropane	ND		1.00	1	03/05/2019 18:50	WG1245356
Di-isopropyl ether	ND		1.00	1	03/05/2019 18:50	WG1245356
Ethylbenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
Hexachloro-1,3-butadiene	ND		1.00	1	03/05/2019 18:50	WG1245356
Isopropylbenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
p-Isopropyltoluene	ND		1.00	1	03/05/2019 18:50	WG1245356
2-Butanone (MEK)	ND		10.0	1	03/05/2019 18:50	WG1245356
Methylene Chloride	ND		5.00	1	03/05/2019 18:50	WG1245356
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/05/2019 18:50	WG1245356
Methyl tert-butyl ether	ND		1.00	1	03/05/2019 18:50	WG1245356
Naphthalene	ND		5.00	1	03/05/2019 18:50	WG1245356
n-Propylbenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
Styrene	ND		1.00	1	03/05/2019 18:50	WG1245356
1,1,1,2-Tetrachloroethane	ND		1.00	1	03/05/2019 18:50	WG1245356
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/05/2019 18:50	WG1245356
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/05/2019 18:50	WG1245356
Tetrachloroethene	ND		1.00	1	03/05/2019 18:50	WG1245356
Toluene	ND		1.00	1	03/05/2019 18:50	WG1245356
1,2,3-Trichlorobenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
1,2,4-Trichlorobenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
1,1,1-Trichloroethane	ND		1.00	1	03/05/2019 18:50	WG1245356
1,1,2-Trichloroethane	ND		1.00	1	03/05/2019 18:50	WG1245356
Trichloroethene	ND		1.00	1	03/05/2019 18:50	WG1245356
Trichlorofluoromethane	ND		5.00	1	03/05/2019 18:50	WG1245356
1,2,3-Trichloropropane	ND		2.50	1	03/05/2019 18:50	WG1245356
1,2,4-Trimethylbenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
1,2,3-Trimethylbenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
1,3,5-Trimethylbenzene	ND		1.00	1	03/05/2019 18:50	WG1245356
Vinyl chloride	ND		1.00	1	03/05/2019 18:50	WG1245356
o-Xylene	ND		1.00	1	03/05/2019 18:50	WG1245356
m&p-Xylene	ND		2.00	1	03/05/2019 18:50	WG1245356
(S) Toluene-d8	107		80.0-120		03/05/2019 18:50	WG1245356
(S) 4-Bromofluorobenzene	104		77.0-126		03/05/2019 18:50	WG1245356
(S) 1,2-Dichloroethane-d4	104		70.0-130		03/05/2019 18:50	WG1245356

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	03/08/2019 00:11	WG1244956
Residual Range Organics (RRO)	ND		250	1	03/08/2019 00:11	WG1244956





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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	90.0		52.0-156		03/08/2019 00:11	<a href="#">WG1244956</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 10:03	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	280		100	1	03/11/2019 11:41	<a href="#">WG1246347</a>

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	03/05/2019 12:54	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	13900		5000	1	03/05/2019 20:43	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 13:51	<a href="#">WG1244547</a>
Manganese,Dissolved	4500		5.00	1	03/07/2019 13:51	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	17.8		10.0	1	03/06/2019 15:10	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 15:10	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 15:10	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		250	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Acrolein	ND		250	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Acrylonitrile	ND		50.0	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Benzene	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Bromobenzene	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Bromodichloromethane	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Bromoform	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Bromomethane	ND		25.0	5	03/05/2019 19:11	<a href="#">WG1245356</a>
n-Butylbenzene	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
sec-Butylbenzene	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
tert-Butylbenzene	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Carbon tetrachloride	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Chlorobenzene	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Chlorodibromomethane	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Chloroethane	ND		25.0	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Chloroform	ND		25.0	5	03/05/2019 19:11	<a href="#">WG1245356</a>
Chloromethane	ND		12.5	5	03/05/2019 19:11	<a href="#">WG1245356</a>
2-Chlorotoluene	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
4-Chlorotoluene	ND		5.00	5	03/05/2019 19:11	<a href="#">WG1245356</a>
1,2-Dibromo-3-Chloropropane	ND		25.0	5	03/05/2019 19:11	<a href="#">WG1245356</a>



Collected date/time: 03/01/19 09:55

L1075084

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		5.00	5	03/05/2019 19:11	WG1245356
Dibromomethane	ND		5.00	5	03/05/2019 19:11	WG1245356
1,2-Dichlorobenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
1,3-Dichlorobenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
1,4-Dichlorobenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
Dichlorodifluoromethane	ND		25.0	5	03/05/2019 19:11	WG1245356
1,1-Dichloroethane	ND		5.00	5	03/05/2019 19:11	WG1245356
1,2-Dichloroethane	ND		5.00	5	03/05/2019 19:11	WG1245356
1,1-Dichloroethene	ND		5.00	5	03/05/2019 19:11	WG1245356
cis-1,2-Dichloroethene	ND		5.00	5	03/05/2019 19:11	WG1245356
trans-1,2-Dichloroethene	ND		5.00	5	03/05/2019 19:11	WG1245356
1,2-Dichloropropane	ND		5.00	5	03/05/2019 19:11	WG1245356
1,1-Dichloropropene	ND		5.00	5	03/05/2019 19:11	WG1245356
1,3-Dichloropropane	ND		5.00	5	03/05/2019 19:11	WG1245356
cis-1,3-Dichloropropene	ND		5.00	5	03/05/2019 19:11	WG1245356
trans-1,3-Dichloropropene	ND		5.00	5	03/05/2019 19:11	WG1245356
2,2-Dichloropropane	ND		5.00	5	03/05/2019 19:11	WG1245356
Di-isopropyl ether	ND		5.00	5	03/05/2019 19:11	WG1245356
Ethylbenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
Hexachloro-1,3-butadiene	ND		5.00	5	03/05/2019 19:11	WG1245356
Isopropylbenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
p-Isopropyltoluene	ND		5.00	5	03/05/2019 19:11	WG1245356
2-Butanone (MEK)	ND		50.0	5	03/05/2019 19:11	WG1245356
Methylene Chloride	ND		25.0	5	03/05/2019 19:11	WG1245356
4-Methyl-2-pentanone (MIBK)	ND		50.0	5	03/05/2019 19:11	WG1245356
Methyl tert-butyl ether	ND		5.00	5	03/05/2019 19:11	WG1245356
Naphthalene	ND		25.0	5	03/05/2019 19:11	WG1245356
n-Propylbenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
Styrene	ND		5.00	5	03/05/2019 19:11	WG1245356
1,1,1,2-Tetrachloroethane	ND		5.00	5	03/05/2019 19:11	WG1245356
1,1,2,2-Tetrachloroethane	ND		5.00	5	03/05/2019 19:11	WG1245356
1,1,2-Trichlorotrifluoroethane	ND		5.00	5	03/05/2019 19:11	WG1245356
Tetrachloroethene	ND		5.00	5	03/05/2019 19:11	WG1245356
Toluene	ND		5.00	5	03/05/2019 19:11	WG1245356
1,2,3-Trichlorobenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
1,2,4-Trichlorobenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
1,1,1-Trichloroethane	ND		5.00	5	03/05/2019 19:11	WG1245356
1,1,2-Trichloroethane	ND		5.00	5	03/05/2019 19:11	WG1245356
Trichloroethene	ND		5.00	5	03/05/2019 19:11	WG1245356
Trichlorofluoromethane	ND		25.0	5	03/05/2019 19:11	WG1245356
1,2,3-Trichloropropane	ND		12.5	5	03/05/2019 19:11	WG1245356
1,2,4-Trimethylbenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
1,2,3-Trimethylbenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
1,3,5-Trimethylbenzene	ND		5.00	5	03/05/2019 19:11	WG1245356
Vinyl chloride	ND		5.00	5	03/05/2019 19:11	WG1245356
o-Xylene	ND		5.00	5	03/05/2019 19:11	WG1245356
m&p-Xylene	ND		10.0	5	03/05/2019 19:11	WG1245356
(S) Toluene-d8	108		80.0-120		03/05/2019 19:11	WG1245356
(S) 4-Bromofluorobenzene	106		77.0-126		03/05/2019 19:11	WG1245356
(S) 1,2-Dichloroethane-d4	101		70.0-130		03/05/2019 19:11	WG1245356

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

L1075084-15 WG1245356: Lowest possible dilution due to sample foaming.



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2800		200	1	03/08/2019 00:31	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	3450		250	1	03/08/2019 00:31	<a href="#">WG1244956</a>
<i>(S) o-Terphenyl</i>	93.2		52.0-156		03/08/2019 00:31	<a href="#">WG1244956</a>

- 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	03/11/2019 10:04	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2940		100	1	03/11/2019 11:43	<a href="#">WG1246347</a>

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	03/05/2019 12:54	<a href="#">WG1245120</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	21200		5000	1	03/05/2019 20:54	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 13:56	<a href="#">WG1244547</a>
Manganese,Dissolved	10.2		5.00	1	03/07/2019 13:56	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/06/2019 15:12	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 15:12	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 15:12	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Acrolein	ND		50.0	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Acrylonitrile	ND		10.0	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Benzene	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Bromobenzene	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Bromodichloromethane	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Bromoform	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Bromomethane	ND		5.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
n-Butylbenzene	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
sec-Butylbenzene	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
tert-Butylbenzene	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Carbon tetrachloride	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Chlorobenzene	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Chlorodibromomethane	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Chloroethane	ND		5.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Chloroform	ND		5.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
Chloromethane	ND		2.50	1	03/05/2019 19:31	<a href="#">WG1245356</a>
2-Chlorotoluene	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
4-Chlorotoluene	ND		1.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/05/2019 19:31	<a href="#">WG1245356</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	03/05/2019 19:31	WG1245356
Dibromomethane	ND		1.00	1	03/05/2019 19:31	WG1245356
1,2-Dichlorobenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
1,3-Dichlorobenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
1,4-Dichlorobenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
Dichlorodifluoromethane	ND		5.00	1	03/05/2019 19:31	WG1245356
1,1-Dichloroethane	ND		1.00	1	03/05/2019 19:31	WG1245356
1,2-Dichloroethane	ND		1.00	1	03/05/2019 19:31	WG1245356
1,1-Dichloroethene	ND		1.00	1	03/05/2019 19:31	WG1245356
cis-1,2-Dichloroethene	ND		1.00	1	03/05/2019 19:31	WG1245356
trans-1,2-Dichloroethene	ND		1.00	1	03/05/2019 19:31	WG1245356
1,2-Dichloropropane	ND		1.00	1	03/05/2019 19:31	WG1245356
1,1-Dichloropropene	ND		1.00	1	03/05/2019 19:31	WG1245356
1,3-Dichloropropane	ND		1.00	1	03/05/2019 19:31	WG1245356
cis-1,3-Dichloropropene	ND		1.00	1	03/05/2019 19:31	WG1245356
trans-1,3-Dichloropropene	ND		1.00	1	03/05/2019 19:31	WG1245356
2,2-Dichloropropane	ND		1.00	1	03/05/2019 19:31	WG1245356
Di-isopropyl ether	ND		1.00	1	03/05/2019 19:31	WG1245356
Ethylbenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
Hexachloro-1,3-butadiene	ND		1.00	1	03/05/2019 19:31	WG1245356
Isopropylbenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
p-Isopropyltoluene	ND		1.00	1	03/05/2019 19:31	WG1245356
2-Butanone (MEK)	ND		10.0	1	03/05/2019 19:31	WG1245356
Methylene Chloride	ND		5.00	1	03/05/2019 19:31	WG1245356
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/05/2019 19:31	WG1245356
Methyl tert-butyl ether	ND		1.00	1	03/05/2019 19:31	WG1245356
Naphthalene	ND		5.00	1	03/05/2019 19:31	WG1245356
n-Propylbenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
Styrene	ND		1.00	1	03/05/2019 19:31	WG1245356
1,1,1,2-Tetrachloroethane	ND		1.00	1	03/05/2019 19:31	WG1245356
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/05/2019 19:31	WG1245356
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/05/2019 19:31	WG1245356
Tetrachloroethene	ND		1.00	1	03/05/2019 19:31	WG1245356
Toluene	ND		1.00	1	03/05/2019 19:31	WG1245356
1,2,3-Trichlorobenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
1,2,4-Trichlorobenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
1,1,1-Trichloroethane	ND		1.00	1	03/05/2019 19:31	WG1245356
1,1,2-Trichloroethane	ND		1.00	1	03/05/2019 19:31	WG1245356
Trichloroethene	ND		1.00	1	03/05/2019 19:31	WG1245356
Trichlorofluoromethane	ND		5.00	1	03/05/2019 19:31	WG1245356
1,2,3-Trichloropropane	ND		2.50	1	03/05/2019 19:31	WG1245356
1,2,4-Trimethylbenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
1,2,3-Trimethylbenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
1,3,5-Trimethylbenzene	ND		1.00	1	03/05/2019 19:31	WG1245356
Vinyl chloride	ND		1.00	1	03/05/2019 19:31	WG1245356
o-Xylene	ND		1.00	1	03/05/2019 19:31	WG1245356
m&p-Xylene	ND		2.00	1	03/05/2019 19:31	WG1245356
(S) Toluene-d8	108		80.0-120		03/05/2019 19:31	WG1245356
(S) 4-Bromofluorobenzene	105		77.0-126		03/05/2019 19:31	WG1245356
(S) 1,2-Dichloroethane-d4	102		70.0-130		03/05/2019 19:31	WG1245356

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)	207		200	1	03/08/2019 00:50	WG1244956
Residual Range Organics (RRO)	493		250	1	03/08/2019 00:50	WG1244956



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	86.3		52.0-156		03/08/2019 00:50	<a href="#">WG1244956</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 10:06	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2880		100	1	03/11/2019 11:44	<a href="#">WG1246347</a>

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	03/06/2019 11:02	<a href="#">WG1245715</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	27900		5000	1	03/05/2019 21:05	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 14:48	<a href="#">WG1244547</a>
Manganese,Dissolved	147		5.00	1	03/07/2019 14:48	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/06/2019 15:15	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 15:15	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 15:15	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Acrolein	ND		50.0	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Acrylonitrile	ND		10.0	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Benzene	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Bromobenzene	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Bromodichloromethane	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Bromoform	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Bromomethane	ND		5.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
n-Butylbenzene	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
sec-Butylbenzene	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
tert-Butylbenzene	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Carbon tetrachloride	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Chlorobenzene	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Chlorodibromomethane	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Chloroethane	ND		5.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Chloroform	ND		5.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
Chloromethane	ND		2.50	1	03/05/2019 19:51	<a href="#">WG1245356</a>
2-Chlorotoluene	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
4-Chlorotoluene	ND		1.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/05/2019 19:51	<a href="#">WG1245356</a>





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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	03/05/2019 19:51	WG1245356
Dibromomethane	ND		1.00	1	03/05/2019 19:51	WG1245356
1,2-Dichlorobenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
1,3-Dichlorobenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
1,4-Dichlorobenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
Dichlorodifluoromethane	ND		5.00	1	03/05/2019 19:51	WG1245356
1,1-Dichloroethane	ND		1.00	1	03/05/2019 19:51	WG1245356
1,2-Dichloroethane	ND		1.00	1	03/05/2019 19:51	WG1245356
1,1-Dichloroethene	ND		1.00	1	03/05/2019 19:51	WG1245356
cis-1,2-Dichloroethene	ND		1.00	1	03/05/2019 19:51	WG1245356
trans-1,2-Dichloroethene	ND		1.00	1	03/05/2019 19:51	WG1245356
1,2-Dichloropropane	ND		1.00	1	03/05/2019 19:51	WG1245356
1,1-Dichloropropene	ND		1.00	1	03/05/2019 19:51	WG1245356
1,3-Dichloropropane	ND		1.00	1	03/05/2019 19:51	WG1245356
cis-1,3-Dichloropropene	ND		1.00	1	03/05/2019 19:51	WG1245356
trans-1,3-Dichloropropene	ND		1.00	1	03/05/2019 19:51	WG1245356
2,2-Dichloropropane	ND		1.00	1	03/05/2019 19:51	WG1245356
Di-isopropyl ether	ND		1.00	1	03/05/2019 19:51	WG1245356
Ethylbenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
Hexachloro-1,3-butadiene	ND		1.00	1	03/05/2019 19:51	WG1245356
Isopropylbenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
p-Isopropyltoluene	ND		1.00	1	03/05/2019 19:51	WG1245356
2-Butanone (MEK)	ND		10.0	1	03/05/2019 19:51	WG1245356
Methylene Chloride	ND		5.00	1	03/05/2019 19:51	WG1245356
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/05/2019 19:51	WG1245356
Methyl tert-butyl ether	ND		1.00	1	03/05/2019 19:51	WG1245356
Naphthalene	ND		5.00	1	03/05/2019 19:51	WG1245356
n-Propylbenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
Styrene	ND		1.00	1	03/05/2019 19:51	WG1245356
1,1,1,2-Tetrachloroethane	ND		1.00	1	03/05/2019 19:51	WG1245356
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/05/2019 19:51	WG1245356
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/05/2019 19:51	WG1245356
Tetrachloroethene	ND		1.00	1	03/05/2019 19:51	WG1245356
Toluene	ND		1.00	1	03/05/2019 19:51	WG1245356
1,2,3-Trichlorobenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
1,2,4-Trichlorobenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
1,1,1-Trichloroethane	ND		1.00	1	03/05/2019 19:51	WG1245356
1,1,2-Trichloroethane	ND		1.00	1	03/05/2019 19:51	WG1245356
Trichloroethene	ND		1.00	1	03/05/2019 19:51	WG1245356
Trichlorofluoromethane	ND		5.00	1	03/05/2019 19:51	WG1245356
1,2,3-Trichloropropane	ND		2.50	1	03/05/2019 19:51	WG1245356
1,2,4-Trimethylbenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
1,2,3-Trimethylbenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
1,3,5-Trimethylbenzene	ND		1.00	1	03/05/2019 19:51	WG1245356
Vinyl chloride	ND		1.00	1	03/05/2019 19:51	WG1245356
o-Xylene	ND		1.00	1	03/05/2019 19:51	WG1245356
m&p-Xylene	ND		2.00	1	03/05/2019 19:51	WG1245356
(S) Toluene-d8	108		80.0-120		03/05/2019 19:51	WG1245356
(S) 4-Bromofluorobenzene	106		77.0-126		03/05/2019 19:51	WG1245356
(S) 1,2-Dichloroethane-d4	102		70.0-130		03/05/2019 19:51	WG1245356

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	03/08/2019 01:09	WG1244956
Residual Range Organics (RRO)	ND		250	1	03/08/2019 01:09	WG1244956



Collected date/time: 03/01/19 08:25

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	87.4		52.0-156		03/08/2019 01:09	<a href="#">WG1244956</a>

- 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	03/11/2019 10:08	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	15100		500	5	03/11/2019 12:02	<a href="#">WG1246347</a>

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	03/06/2019 11:02	<a href="#">WG1245715</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	17100		5000	1	03/05/2019 21:16	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 14:52	<a href="#">WG1244547</a>
Manganese,Dissolved	ND		5.00	1	03/07/2019 14:52	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/06/2019 15:17	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 15:17	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 15:17	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Acrolein	ND		50.0	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Acrylonitrile	ND		10.0	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Benzene	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Bromobenzene	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Bromodichloromethane	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Bromoform	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Bromomethane	ND		5.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
n-Butylbenzene	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
sec-Butylbenzene	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
tert-Butylbenzene	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Carbon tetrachloride	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Chlorobenzene	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Chlorodibromomethane	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Chloroethane	ND		5.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Chloroform	ND		5.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
Chloromethane	ND		2.50	1	03/05/2019 20:11	<a href="#">WG1245356</a>
2-Chlorotoluene	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
4-Chlorotoluene	ND		1.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/05/2019 20:11	<a href="#">WG1245356</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	03/05/2019 20:11	WG1245356
Dibromomethane	ND		1.00	1	03/05/2019 20:11	WG1245356
1,2-Dichlorobenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
1,3-Dichlorobenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
1,4-Dichlorobenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
Dichlorodifluoromethane	ND		5.00	1	03/05/2019 20:11	WG1245356
1,1-Dichloroethane	ND		1.00	1	03/05/2019 20:11	WG1245356
1,2-Dichloroethane	ND		1.00	1	03/05/2019 20:11	WG1245356
1,1-Dichloroethene	ND		1.00	1	03/05/2019 20:11	WG1245356
cis-1,2-Dichloroethene	ND		1.00	1	03/05/2019 20:11	WG1245356
trans-1,2-Dichloroethene	ND		1.00	1	03/05/2019 20:11	WG1245356
1,2-Dichloropropane	ND		1.00	1	03/05/2019 20:11	WG1245356
1,1-Dichloropropene	ND		1.00	1	03/05/2019 20:11	WG1245356
1,3-Dichloropropane	ND		1.00	1	03/05/2019 20:11	WG1245356
cis-1,3-Dichloropropene	ND		1.00	1	03/05/2019 20:11	WG1245356
trans-1,3-Dichloropropene	ND		1.00	1	03/05/2019 20:11	WG1245356
2,2-Dichloropropane	ND		1.00	1	03/05/2019 20:11	WG1245356
Di-isopropyl ether	ND		1.00	1	03/05/2019 20:11	WG1245356
Ethylbenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
Hexachloro-1,3-butadiene	ND		1.00	1	03/05/2019 20:11	WG1245356
Isopropylbenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
p-Isopropyltoluene	ND		1.00	1	03/05/2019 20:11	WG1245356
2-Butanone (MEK)	ND		10.0	1	03/05/2019 20:11	WG1245356
Methylene Chloride	ND		5.00	1	03/05/2019 20:11	WG1245356
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/05/2019 20:11	WG1245356
Methyl tert-butyl ether	ND		1.00	1	03/05/2019 20:11	WG1245356
Naphthalene	ND		5.00	1	03/05/2019 20:11	WG1245356
n-Propylbenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
Styrene	ND		1.00	1	03/05/2019 20:11	WG1245356
1,1,1,2-Tetrachloroethane	ND		1.00	1	03/05/2019 20:11	WG1245356
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/05/2019 20:11	WG1245356
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/05/2019 20:11	WG1245356
Tetrachloroethene	ND		1.00	1	03/05/2019 20:11	WG1245356
Toluene	ND		1.00	1	03/05/2019 20:11	WG1245356
1,2,3-Trichlorobenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
1,2,4-Trichlorobenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
1,1,1-Trichloroethane	ND		1.00	1	03/05/2019 20:11	WG1245356
1,1,2-Trichloroethane	ND		1.00	1	03/05/2019 20:11	WG1245356
Trichloroethene	ND		1.00	1	03/05/2019 20:11	WG1245356
Trichlorofluoromethane	ND		5.00	1	03/05/2019 20:11	WG1245356
1,2,3-Trichloropropane	ND		2.50	1	03/05/2019 20:11	WG1245356
1,2,4-Trimethylbenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
1,2,3-Trimethylbenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
1,3,5-Trimethylbenzene	ND		1.00	1	03/05/2019 20:11	WG1245356
Vinyl chloride	ND		1.00	1	03/05/2019 20:11	WG1245356
o-Xylene	ND		1.00	1	03/05/2019 20:11	WG1245356
m&p-Xylene	ND		2.00	1	03/05/2019 20:11	WG1245356
(S) Toluene-d8	108		80.0-120		03/05/2019 20:11	WG1245356
(S) 4-Bromofluorobenzene	104		77.0-126		03/05/2019 20:11	WG1245356
(S) 1,2-Dichloroethane-d4	102		70.0-130		03/05/2019 20:11	WG1245356

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	03/08/2019 01:28	WG1244956
Residual Range Organics (RRO)	261		250	1	03/08/2019 01:28	WG1244956



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	84.7		52.0-156		03/08/2019 01:28	<a href="#">WG1244956</a>

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	03/11/2019 10:09	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3340		200	2	03/11/2019 12:04	<a href="#">WG1246347</a>

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	03/06/2019 11:03	<a href="#">WG1245715</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	16000		5000	1	03/05/2019 21:27	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 14:57	<a href="#">WG1244547</a>
Manganese,Dissolved	152		5.00	1	03/07/2019 14:57	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	18.1		10.0	1	03/06/2019 15:19	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 15:19	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 15:19	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/08/2019 23:25	<a href="#">WG1247398</a>
Toluene	ND		1.00	1	03/08/2019 23:25	<a href="#">WG1247398</a>
Ethylbenzene	ND		1.00	1	03/05/2019 03:03	<a href="#">WG1245078</a>
o-Xylene	ND		1.00	1	03/05/2019 03:03	<a href="#">WG1245078</a>
m&p-Xylene	ND		2.00	1	03/05/2019 03:03	<a href="#">WG1245078</a>
(S) Toluene-d8	97.1		80.0-120		03/05/2019 03:03	<a href="#">WG1245078</a>
(S) Toluene-d8	102		80.0-120		03/08/2019 23:25	<a href="#">WG1247398</a>
(S) a,a,a-Trifluorotoluene	100		80.0-120		03/05/2019 03:03	<a href="#">WG1245078</a>
(S) a,a,a-Trifluorotoluene	108		80.0-120		03/08/2019 23:25	<a href="#">WG1247398</a>
(S) 4-Bromofluorobenzene	91.2		77.0-126		03/05/2019 03:03	<a href="#">WG1245078</a>
(S) 4-Bromofluorobenzene	98.3		77.0-126		03/08/2019 23:25	<a href="#">WG1247398</a>
(S) 1,2-Dichloroethane-d4	81.4		70.0-130		03/05/2019 03:03	<a href="#">WG1245078</a>
(S) 1,2-Dichloroethane-d4	115		70.0-130		03/08/2019 23:25	<a href="#">WG1247398</a>

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	03/08/2019 01:47	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	ND		250	1	03/08/2019 01:47	<a href="#">WG1244956</a>



Collected date/time: 03/01/19 13:05

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	86.3		52.0-156		03/08/2019 01:47	<a href="#">WG1244956</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	03/11/2019 10:11	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2830		100	1	03/11/2019 11:55	<a href="#">WG1246347</a>

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	03/06/2019 11:04	<a href="#">WG1245715</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	40300		5000	1	03/05/2019 21:38	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 15:02	<a href="#">WG1244547</a>
Manganese,Dissolved	14.5		5.00	1	03/07/2019 15:02	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/06/2019 15:24	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 15:24	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 15:24	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/08/2019 23:46	<a href="#">WG1247398</a>
Toluene	ND		1.00	1	03/08/2019 23:46	<a href="#">WG1247398</a>
Ethylbenzene	ND		1.00	1	03/05/2019 03:22	<a href="#">WG1245078</a>
o-Xylene	ND		1.00	1	03/05/2019 03:22	<a href="#">WG1245078</a>
m&p-Xylene	ND		2.00	1	03/05/2019 03:22	<a href="#">WG1245078</a>
(S) Toluene-d8	97.7		80.0-120		03/05/2019 03:22	<a href="#">WG1245078</a>
(S) Toluene-d8	101		80.0-120		03/08/2019 23:46	<a href="#">WG1247398</a>
(S) a,a,a-Trifluorotoluene	99.0		80.0-120		03/05/2019 03:22	<a href="#">WG1245078</a>
(S) a,a,a-Trifluorotoluene	106		80.0-120		03/08/2019 23:46	<a href="#">WG1247398</a>
(S) 4-Bromofluorobenzene	92.9		77.0-126		03/05/2019 03:22	<a href="#">WG1245078</a>
(S) 4-Bromofluorobenzene	96.7		77.0-126		03/08/2019 23:46	<a href="#">WG1247398</a>
(S) 1,2-Dichloroethane-d4	81.5		70.0-130		03/05/2019 03:22	<a href="#">WG1245078</a>
(S) 1,2-Dichloroethane-d4	120		70.0-130		03/08/2019 23:46	<a href="#">WG1247398</a>

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	03/08/2019 02:07	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	ND		250	1	03/08/2019 02:07	<a href="#">WG1244956</a>





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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	85.3		52.0-156		03/08/2019 02:07	<a href="#">WG1244956</a>

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	03/11/2019 10:12	<a href="#">WG1246345</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	6120		200	2	03/11/2019 12:05	<a href="#">WG1246347</a>

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	03/06/2019 11:04	<a href="#">WG1245715</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	34900		5000	1	03/05/2019 21:49	<a href="#">WG1245154</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	03/07/2019 15:07	<a href="#">WG1244547</a>
Manganese,Dissolved	60.0		5.00	1	03/07/2019 15:07	<a href="#">WG1244547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	03/06/2019 15:30	<a href="#">WG1245466</a>
Ethane	ND		13.0	1	03/06/2019 15:30	<a href="#">WG1245466</a>
Ethene	ND		13.0	1	03/06/2019 15:30	<a href="#">WG1245466</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	03/09/2019 00:08	<a href="#">WG1247398</a>
Toluene	ND		1.00	1	03/09/2019 00:08	<a href="#">WG1247398</a>
Ethylbenzene	ND		1.00	1	03/05/2019 03:41	<a href="#">WG1245078</a>
o-Xylene	ND		1.00	1	03/05/2019 03:41	<a href="#">WG1245078</a>
m&p-Xylene	ND		2.00	1	03/05/2019 03:41	<a href="#">WG1245078</a>
(S) Toluene-d8	97.5		80.0-120		03/05/2019 03:41	<a href="#">WG1245078</a>
(S) Toluene-d8	100		80.0-120		03/09/2019 00:08	<a href="#">WG1247398</a>
(S) a,a,a-Trifluorotoluene	99.3		80.0-120		03/05/2019 03:41	<a href="#">WG1245078</a>
(S) a,a,a-Trifluorotoluene	109		80.0-120		03/09/2019 00:08	<a href="#">WG1247398</a>
(S) 4-Bromofluorobenzene	93.6		77.0-126		03/05/2019 03:41	<a href="#">WG1245078</a>
(S) 4-Bromofluorobenzene	94.8		77.0-126		03/09/2019 00:08	<a href="#">WG1247398</a>
(S) 1,2-Dichloroethane-d4	82.3		70.0-130		03/05/2019 03:41	<a href="#">WG1245078</a>
(S) 1,2-Dichloroethane-d4	118		70.0-130		03/09/2019 00:08	<a href="#">WG1247398</a>

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	03/07/2019 07:34	<a href="#">WG1244956</a>
Residual Range Organics (RRO)	255		250	1	03/07/2019 07:34	<a href="#">WG1244956</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	84.2		52.0-156		03/07/2019 07:34	<a href="#">WG1244956</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3390368-1 03/11/19 09:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1075084-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-01 03/11/19 09:26 • (DUP) R3390368-3 03/11/19 09:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1075084-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-12 03/11/19 09:50 • (DUP) R3390368-6 03/11/19 09:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3390368-2 03/11/19 09:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	7330	97.7	90.0-110	

L1075084-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075084-05 03/11/19 09:34 • (MS) R3390368-4 03/11/19 09:36 • (MSD) R3390368-5 03/11/19 09:42

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	5040	4980	99.9	98.8	1	90.0-110			1.14	10

L1075084-13 Original Sample (OS) • Matrix Spike (MS)

(OS) L1075084-13 03/11/19 09:53 • (MS) R3390368-7 03/11/19 09:55

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4810	96.2	1	90.0-110	



Method Blank (MB)

(MB) R3390454-1 03/11/19 11:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1075084-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-01 03/11/19 11:13 • (DUP) R3390454-3 03/11/19 11:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	204	204	1	0.000		20

L1075084-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-20 03/11/19 11:55 • (DUP) R3390454-6 03/11/19 11:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	2830	2750	1	2.65		20

Laboratory Control Sample (LCS)

(LCS) R3390454-2 03/11/19 11:11

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	4000	100	90.0-110	

L1075084-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075084-05 03/11/19 11:20 • (MS) R3390454-4 03/11/19 11:22 • (MSD) R3390454-5 03/11/19 11:23

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	1550	3640	3780	83.4	89.1	1	90.0-110	J6	J6	3.86	20

L1075084-21 Original Sample (OS) • Matrix Spike (MS)

(OS) L1075084-21 03/11/19 11:58 • (MS) R3390454-7 03/11/19 11:59

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	6080	8980	116	1	90.0-110	E J5



Method Blank (MB)

(MB) R3388787-1 03/05/19 12:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1074651-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1074651-10 03/05/19 12:45 • (DUP) R3388787-3 03/05/19 12:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

L1075084-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-08 03/05/19 12:51 • (DUP) R3388787-6 03/05/19 12:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3388787-2 03/05/19 12:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	458	91.6	85.0-115	

L1075084-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075084-05 03/05/19 12:50 • (MS) R3388787-4 03/05/19 12:50 • (MSD) R3388787-5 03/05/19 12:51

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	822	874	82.2	87.4	1	80.0-120			6.13	20



Method Blank (MB)

(MB) R3389117-1 03/06/19 11:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1075084-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-17 03/06/19 11:02 • (DUP) R3389117-3 03/06/19 11:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3389117-2 03/06/19 11:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	430	86.0	85.0-115	

L1075084-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075084-18 03/06/19 11:02 • (MS) R3389117-4 03/06/19 11:03 • (MSD) R3389117-5 03/06/19 11:03

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	899	910	89.9	91.0	1	80.0-120			1.22	20



Method Blank (MB)

(MB) R3388992-1 03/05/19 16:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1075084-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-01 03/05/19 16:55 • (DUP) R3388992-3 03/05/19 17:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	11900	12100	1	1.46		15

L1075084-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-14 03/05/19 19:49 • (DUP) R3388992-6 03/05/19 20:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	5910	5900	1	0.178		15

Laboratory Control Sample (LCS)

(LCS) R3388992-2 03/05/19 16:20

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	42000	105	80.0-120	

L1075084-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075084-05 03/05/19 17:50 • (MS) R3388992-4 03/05/19 18:01 • (MSD) R3388992-5 03/05/19 18:33

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	22200	72200	71300	99.9	98.3	1	80.0-120			1.14	15

L1075084-14 Original Sample (OS) • Matrix Spike (MS)

(OS) L1075084-14 03/05/19 19:49 • (MS) R3388992-7 03/05/19 20:11

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	5910	55300	98.8	1	80.0-120	





Method Blank (MB)

(MB) R3389623-1 03/07/19 12:14

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
Manganese,Dissolved	0.442	J	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) R3389623-2 03/07/19 12:19 • (LCSD) R3389623-3 03/07/19 12:23

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	49.9	50.9	99.7	102	80.0-120			2.01	20
Iron,Dissolved	500	515	522	103	104	80.0-120			1.39	20
Manganese,Dissolved	50.0	50.3	50.0	101	100	80.0-120			0.478	20

L1075084-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075084-05 03/07/19 12:28 • (MS) R3389623-5 03/07/19 12:38 • (MSD) R3389623-6 03/07/19 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	50.0	12.2	60.8	61.9	97.1	99.4	1	75.0-125			1.85	20
Iron,Dissolved	500	ND	520	502	104	100	1	75.0-125			3.55	20
Manganese,Dissolved	50.0	48.1	95.5	96.4	94.9	96.7	1	75.0-125			0.932	20



Method Blank (MB)

(MB) R3390135-1 03/09/19 09:59

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		0.250	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3390135-2 03/09/19 10:04 • (LCSD) R3390135-3 03/09/19 10:09

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	43.6	45.5	87.2	91.0	80.0-120			4.18	20

<sup>7</sup> Gl

<sup>8</sup> Al

L1075084-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075084-05 03/09/19 10:13 • (MS) R3390135-5 03/09/19 10:23 • (MSD) R3390135-6 03/09/19 10:27

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	12.4	56.5	58.1	88.3	91.3	1	75.0-125			2.66	20

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3390202-3 03/04/19 01:04

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)	96.4			78.0-120

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) R3390202-1 03/04/19 00:00 • (LCSD) R3390202-2 03/04/19 00:21

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 %
Gasoline Range Organics-NWTPH	5500	5490	5350	99.8	97.3	70.0-124			2.54	20
(S) a,a,a-Trifluorotoluene(FID)				115	115	78.0-120				

L1075075-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075075-01 03/04/19 06:46 • (MS) R3390202-4 03/04/19 07:08 • (MSD) R3390202-5 03/04/19 07:29

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 %
Gasoline Range Organics-NWTPH	5500	36.9	2890	2480	51.9	44.5	1	10.0-155			15.2	21
(S) a,a,a-Trifluorotoluene(FID)					101	101		78.0-120				



Method Blank (MB)

(MB) R3389265-1 03/06/19 14:06

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

L1075084-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-01 03/06/19 14:08 • (DUP) R3389265-2 03/06/19 15:02

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

L1075084-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-21 03/06/19 15:30 • (DUP) R3389265-3 03/06/19 15:36

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) R3389265-4 03/06/19 15:42 • (LCSD) R3389265-5 03/06/19 15:46

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	%	%	%			%	%
Methane	67.8	71.1	73.5	105	108	85.0-115			3.42	20
Ethane	129	117	118	90.6	91.7	85.0-115			1.10	20
Ethene	127	118	114	93.1	89.5	85.0-115			3.95	20



Method Blank (MB)

(MB) R3390013-2 03/04/19 22:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylbenzene	U		0.384	1.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	97.1			80.0-120
(S) a,a,a-Trifluorotoluene	99.0			80.0-120
(S) 4-Bromofluorobenzene	92.6			77.0-126
(S) 1,2-Dichloroethane-d4	82.9			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3390013-1 03/04/19 21:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Ethylbenzene	25.0	21.8	87.0	79.0-123	
o-Xylene	25.0	22.1	88.6	80.0-122	
m&p-Xylenes	50.0	44.5	88.9	80.0-122	
(S) Toluene-d8			95.8	80.0-120	
(S) a,a,a-Trifluorotoluene			99.8	80.0-120	
(S) 4-Bromofluorobenzene			92.8	77.0-126	
(S) 1,2-Dichloroethane-d4			87.6	70.0-130	

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3389083-2 03/05/19 13:02

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3389083-2 03/05/19 13:02

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	106			80.0-120
(S) 4-Bromofluorobenzene	104			77.0-126
(S) 1,2-Dichloroethane-d4	102			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3389083-1 03/05/19 12:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	102	82.0	19.0-160	
Acrolein	125	124	99.1	10.0-160	
Acrylonitrile	125	122	97.8	55.0-149	



Laboratory Control Sample (LCS)

(LCS) R3389083-1 03/05/19 12:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	25.0	23.7	94.6	70.0-123	
Bromobenzene	25.0	23.2	92.8	73.0-121	
Bromodichloromethane	25.0	23.2	92.8	75.0-120	
Bromoform	25.0	28.0	112	68.0-132	
Bromomethane	25.0	23.4	93.6	10.0-160	
n-Butylbenzene	25.0	23.4	93.6	73.0-125	
sec-Butylbenzene	25.0	23.8	95.2	75.0-125	
tert-Butylbenzene	25.0	24.4	97.7	76.0-124	
Carbon tetrachloride	25.0	25.7	103	68.0-126	
Chlorobenzene	25.0	23.7	94.8	80.0-121	
Chlorodibromomethane	25.0	25.6	102	77.0-125	
Chloroethane	25.0	21.7	86.7	47.0-150	
Chloroform	25.0	22.8	91.0	73.0-120	
Chloromethane	25.0	23.9	95.4	41.0-142	
2-Chlorotoluene	25.0	23.3	93.2	76.0-123	
4-Chlorotoluene	25.0	23.2	92.9	75.0-122	
1,2-Dibromo-3-Chloropropane	25.0	25.9	104	58.0-134	
1,2-Dibromoethane	25.0	24.2	96.7	80.0-122	
Dibromomethane	25.0	24.0	95.9	80.0-120	
1,2-Dichlorobenzene	25.0	24.1	96.3	79.0-121	
1,3-Dichlorobenzene	25.0	23.5	94.0	79.0-120	
1,4-Dichlorobenzene	25.0	23.0	92.1	79.0-120	
Dichlorodifluoromethane	25.0	23.6	94.3	51.0-149	
1,1-Dichloroethane	25.0	23.4	93.6	70.0-126	
1,2-Dichloroethane	25.0	22.9	91.5	70.0-128	
1,1-Dichloroethene	25.0	28.9	116	71.0-124	
cis-1,2-Dichloroethene	25.0	23.4	93.5	73.0-120	
trans-1,2-Dichloroethene	25.0	24.1	96.6	73.0-120	
1,2-Dichloropropane	25.0	23.7	94.6	77.0-125	
1,1-Dichloropropene	25.0	23.5	94.1	74.0-126	
1,3-Dichloropropane	25.0	24.1	96.3	80.0-120	
cis-1,3-Dichloropropene	25.0	22.9	91.6	80.0-123	
trans-1,3-Dichloropropene	25.0	24.4	97.4	78.0-124	
2,2-Dichloropropane	25.0	28.7	115	58.0-130	
Di-isopropyl ether	25.0	25.3	101	58.0-138	
Ethylbenzene	25.0	24.1	96.2	79.0-123	
Hexachloro-1,3-butadiene	25.0	27.9	112	54.0-138	
Isopropylbenzene	25.0	25.2	101	76.0-127	
p-Isopropyltoluene	25.0	24.3	97.2	76.0-125	
2-Butanone (MEK)	125	122	97.5	44.0-160	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Laboratory Control Sample (LCS)

(LCS) R3389083-1 03/05/19 12:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methylene Chloride	25.0	24.7	98.8	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	124	99.3	68.0-142	
Methyl tert-butyl ether	25.0	25.5	102	68.0-125	
Naphthalene	25.0	25.6	102	54.0-135	
n-Propylbenzene	25.0	23.0	92.0	77.0-124	
Styrene	25.0	25.9	104	73.0-130	
1,1,1,2-Tetrachloroethane	25.0	24.6	98.5	75.0-125	
1,1,2,2-Tetrachloroethane	25.0	22.5	90.1	65.0-130	
o-Xylene	25.0	24.0	96.0	80.0-122	
m&p-Xylenes	50.0	48.7	97.4	80.0-122	
Tetrachloroethene	25.0	24.0	96.1	72.0-132	
Toluene	25.0	24.4	97.7	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	27.1	109	69.0-132	
1,2,3-Trichlorobenzene	25.0	25.9	103	50.0-138	
1,2,4-Trichlorobenzene	25.0	26.5	106	57.0-137	
1,1,1-Trichloroethane	25.0	24.5	97.9	73.0-124	
1,1,2-Trichloroethane	25.0	23.2	92.9	80.0-120	
Trichloroethene	25.0	24.3	97.2	78.0-124	
Trichlorofluoromethane	25.0	24.9	99.5	59.0-147	
1,2,3-Trichloropropane	25.0	21.9	87.6	73.0-130	
1,2,3-Trimethylbenzene	25.0	23.2	92.6	77.0-120	
1,2,4-Trimethylbenzene	25.0	22.9	91.8	76.0-121	
1,3,5-Trimethylbenzene	25.0	23.7	95.0	76.0-122	
Vinyl chloride	25.0	22.7	90.6	67.0-131	
<i>(S) Toluene-d8</i>			104	80.0-120	
<i>(S) 4-Bromofluorobenzene</i>			103	77.0-126	
<i>(S) 1,2-Dichloroethane-d4</i>			111	70.0-130	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3390357-3 03/08/19 20:14

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	101			80.0-120
(S) a,a,a-Trifluorotoluene	110			80.0-120
(S) 4-Bromofluorobenzene	96.1			77.0-126
(S) 1,2-Dichloroethane-d4	116			70.0-130

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) R3390357-1 03/08/19 19:10 • (LCSD) R3390357-2 03/08/19 19:31

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	%	%	%			%	%
Benzene	25.0	22.3	22.2	89.1	88.7	70.0-123			0.422	20
Ethylbenzene	25.0	20.8	20.6	83.2	82.2	79.0-123			1.19	20
o-Xylene	25.0	21.2	20.8	84.8	83.4	80.0-122			1.74	20
m&p-Xylenes	50.0	43.5	41.9	86.9	83.8	80.0-122			3.70	20
Toluene	25.0	20.3	19.9	81.4	79.4	79.0-120			2.41	20
(S) Toluene-d8				96.3	97.0	80.0-120				
(S) a,a,a-Trifluorotoluene				107	106	80.0-120				
(S) 4-Bromofluorobenzene				99.3	99.0	77.0-126				
(S) 1,2-Dichloroethane-d4				118	119	70.0-130				



Method Blank (MB)

(MB) R3389385-1 03/06/19 23:06

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	85.0			52.0-156

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

(LCS) R3389385-2 03/06/19 23:27 • (LCSD) R3389385-3 03/06/19 23:48

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	883	885	118	118	50.0-150			0.226	20
Residual Range Organics (RRO)	750	740	744	98.7	99.2	50.0-150			0.539	20
(S) o-Terphenyl				93.5	95.0	52.0-156				

L1075084-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075084-05 03/07/19 01:31 • (MS) R3389385-4 03/07/19 01:52 • (MSD) R3389385-5 03/07/19 02:13

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	1090	1030	119	111	1	50.0-150			5.66	20
Residual Range Organics (RRO)	750	342	1100	1030	101	91.7	1	50.0-150			6.57	20
(S) o-Terphenyl					95.5	93.0		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) R3389051-3 03/05/19 21:53

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	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	98.0			31.0-160
(S) 2-Fluorobiphenyl	95.0			48.0-148
(S) p-Terphenyl-d14	88.5			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3389051-1 03/05/19 21:12 • (LCSD) R3389051-2 03/05/19 21:32

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 %
Anthracene	2.00	1.88	1.91	94.0	95.5	67.0-150			1.58	20
Acenaphthene	2.00	2.03	1.89	102	94.5	65.0-138			7.14	20
Acenaphthylene	2.00	1.94	1.81	97.0	90.5	66.0-140			6.93	20
Benzo(a)anthracene	2.00	1.83	1.79	91.5	89.5	61.0-140			2.21	20
Benzo(a)pyrene	2.00	1.83	1.78	91.5	89.0	60.0-143			2.77	20
Benzo(b)fluoranthene	2.00	1.58	1.58	79.0	79.0	58.0-141			0.000	20
Benzo(g,h,i)perylene	2.00	2.17	1.86	108	93.0	52.0-153			15.4	20
Benzo(k)fluoranthene	2.00	2.06	1.99	103	99.5	58.0-148			3.46	20
Chrysene	2.00	1.97	2.02	98.5	101	64.0-144			2.51	20
Dibenz(a,h)anthracene	2.00	2.15	1.86	108	93.0	52.0-155			14.5	20
Fluoranthene	2.00	2.14	2.09	107	105	69.0-153			2.36	20



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

(LCS) R3389051-1 03/05/19 21:12 • (LCSD) R3389051-2 03/05/19 21:32

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	2.02	1.88	101	94.0	64.0-136			7.18	20
Indeno(1,2,3-cd)pyrene	2.00	2.10	1.83	105	91.5	54.0-153			13.7	20
Naphthalene	2.00	2.09	2.08	105	104	61.0-137			0.480	20
Phenanthrene	2.00	1.93	1.89	96.5	94.5	62.0-137			2.09	20
Pyrene	2.00	1.74	1.71	87.0	85.5	60.0-142			1.74	20
1-Methylnaphthalene	2.00	2.14	2.14	107	107	66.0-142			0.000	20
2-Methylnaphthalene	2.00	2.04	2.12	102	106	62.0-136			3.85	20
2-Chloronaphthalene	2.00	2.03	1.86	102	93.0	64.0-140			8.74	20
<i>(S) Nitrobenzene-d5</i>				100	102	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				103	102	48.0-148				
<i>(S) p-Terphenyl-d14</i>				89.5	87.0	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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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

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.

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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

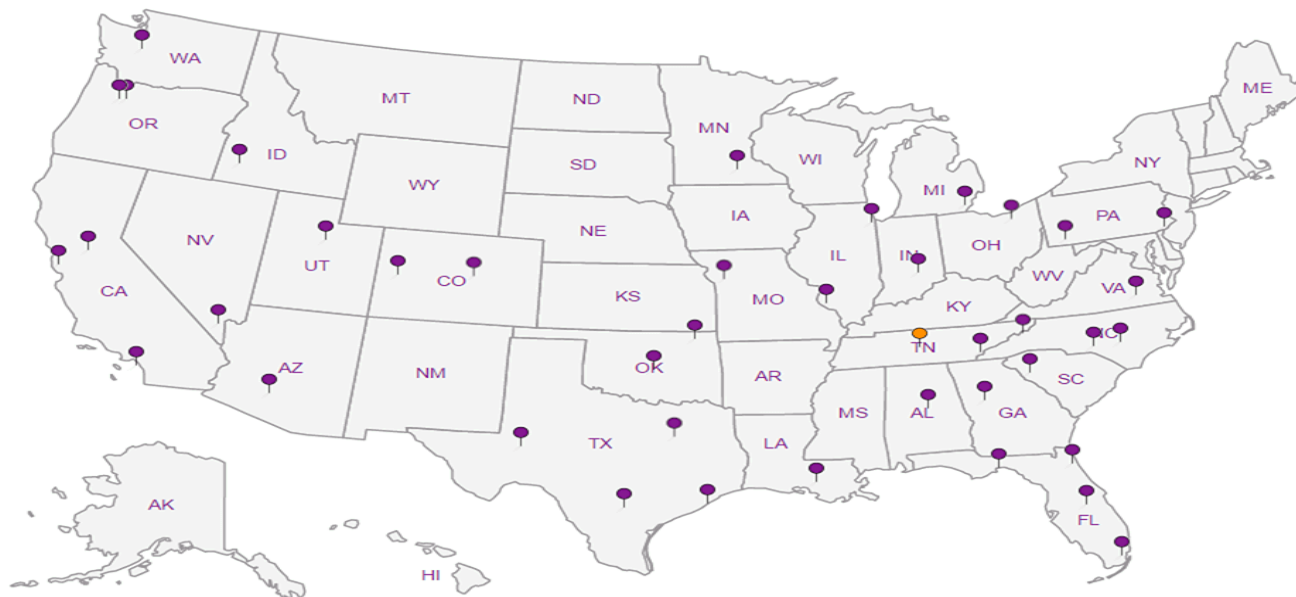
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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 1 of 3



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 #  
1996120\*00

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  
Cnts

Immediately  
Packed on Ice N    Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Dissolved As 250mlHDPE-HNO3	Dissolved Fe, Mn 250mlHDPE-HNO3	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Sulfide 125mlAmb-S-NaOH+ZnAc	Total As 250mlHDPE-HNO3	Remarks	Sample # (lab only)
WMW-14-20190301	Grab	GW	-	3/1/19	1100	8	X	X	X				X	X	X			01
WMW-15-20190301		GW	-		1000	8	X	X	X				X	X	X			02
WMW-16-20190301		GW	-		0850	12	X	X	X	X	X		X	X	X			03
WMW-17-20190228		GW	-	2/28/19	1700	11	X	X	X	X			X	X	X	X		04
WMW-18-20190228		GW	-		1500	9	X	X	X	X			X	X	X	X		05
WMW-18-20190228MS		GW	-			9	X	X	X	X			X	X	X	X		05
WMW-18-20190228MSD		GW	-			9	X	X	X	X			X	X	X	X		06
WMW-19-20190301		GW	-	3/1/19	1200	11		X	X	X			X	X	X			08
WMW-20-20190228		GW	-	2/28/19	1405	11		X	X	X			X	X	X			09
D-1-20190228		GW	-	2/28/19	1710	11	X	X	X	X	X		X	X	X	X		10

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: Lab please filter all diss. metals samples.  
Analyze WMW-20-20190228 for BTEX by 8260 also.

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
UPS FedEx Courier \_\_\_\_\_  
Tracking # 9759 5088 6916 6890 6880

Sample Receipt Checklist

COC Seal Present/Intact:	<input checked="" type="checkbox"/> NP	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
If Applicable			
VOA Zero Headspace:	<input checked="" type="checkbox"/>	Y	N
Preservation Correct/Checked:	<input checked="" type="checkbox"/>	Y	N

Relinquished by: (Signature) <u>[Signature]</u>	Date: 3/1/19	Time: 2:00	Received by: (Signature) <u>[Signature]</u>	Trip Blank Received: <input checked="" type="checkbox"/> No <u>x4</u> HCL/ MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C <u>0.8-20.6</u> Bottles Received: <u>222</u>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <u>[Signature]</u>	Date: <u>3/2/19</u> Time: <u>0845</u> Hold: Condition: NCF <u>10x</u>

L# 1075084  
M191

Acctnum: BNSF1KEN  
Template: T145675  
Prelogin: P691835  
TSR: 134 - Mark W. Beasley  
PB: 1-31-196  
Shipped Via: FedEX Ground

05 3/1



# 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,

Project Description: BNSF - Wishram Railyard, WA

City/State  
Collected: Wishram, WA

Phone: 253-835-6400  
Fax:

Client Project #  
1996120\*00

Lab Project #  
BNSF1KEN-WISHRAM

Collected by (print):  
K. Teague

Site/Facility ID #

P.O. #

Collected by (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  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Dissolved As 250mlHDPE-HNO3	Dissolved Fe, Mn 250mlHDPE-HNO3	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb/HCl Volatiles 0260	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Sulfide 125mlAmb-S-NaOH+ZnAc	Total As 250mlHDPE-HNO3
WMW-24-20190228	Grab	GW	—	2/28/19	1430	11	X	X	X	X		X	X	X		11
WMW-26-20190228		GW	—		0750	11	X	X	X	X		X	X	X		12
WMW-27-20190228		GW	—		1710	11	X	X	X	X		X	X	X	Filtered	13
WMW-28-20190228		GW	—		1530	11	X	X	X	X		X	X	X		14
WMW-29-20190228		GW	—		0955	11	X	X	X	X		X	X	X		15
WMW-30-20190301		GW	—	3/1/19	1025	11	X	X	X	X		X	X	X		16
WMW-31-20190301		GW	—		0825	11	X	X	X	X		X	X	X		17
WMW-32-20190301		GW	—		0940	11	X	X	X	X		X	X	X		18
		GW														
		GW														

L# 1075084  
Table #  
Acctnum: BNSF1KEN  
Template: T145675  
Prelogin: P691835  
TSR: 134 - Mark W. Beasley  
PB: 1-31-196  
Shipped Via: FedEx Ground  
Remarks Sample # (lab only)

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: Lab please filter all diss metals samples EXCEPT  
WMW-27-20190228 (has been field filtered + preserved).  
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: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature)  
*[Signature]*

Trip Blank Received:  Yes / No  
HCl/MeOH  
TBR  
x4

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature)

Temp: \_\_\_\_\_ °C Bottles Received: 222

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by: (Signature)  
*[Signature]*

Date: 3/2/19 Time: 0845

Hold: \_\_\_\_\_ Condition: NCF / *[Signature]*

# 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



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 Railway, WA

City/State Collected: Wishram, WA

Phone: 253-835-6400  
Fax:

Client Project #  
1996120\*00

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	No. of Cntrs	Dissolved As 250mlHDPE-HNO3	Dissolved Fe, Mn 250mlHDPE-HNO3 Lab Filter	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	<del>NWTPHDXLVINOSGT 40mlAmb-HCl-BT</del> BTEX 0260	PAHSIMLVID 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	Sulfate 125mlHDPE-NoPres	Sulfide 125mlAmb-S-NaOH+ZnAc	Total As 250mlHDPE-HNO3
WMW-21-20190228	Grab	GW	-	2/28/19	1305	11		X	X	X	X		X	X	X	
WMW-22-20190228	↓	GW	-	↓	1140	11		X	X	X	X		X	X	X	
WMW-23-20190228	↓	GW	-	↓	0935	11		X	X	X	X		X	X	X	
		GW														
		GW														
		GW														
		GW														
		GW														
		GW														

L# 1075084  
Table #  
Acctnum: BNSF1KEN  
Template: T145675  
Prelogin: P691835  
TSR: 134 - Mark W. Beasley  
PB: 1-31-196  
Shipped Via: FedEx Ground

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: Lab please filter all diss. metals samples

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: \_\_\_\_\_ Time: \_\_\_\_\_  
Relinquished by: (Signature)  
Date: \_\_\_\_\_ Time: \_\_\_\_\_  
Relinquished by: (Signature)  
Date: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_  
Date: \_\_\_\_\_ Time: \_\_\_\_\_  
Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature)  
Received by: (Signature)  
Received for lab by: (Signature)  
*[Signature]*

Trip Blank Received: Yes/No  
x4  Yes  No  
HA/MeOH TBR  
Temp: 0.8-7-0.6°C  222  
Date: 3/2/19 Time: 0845

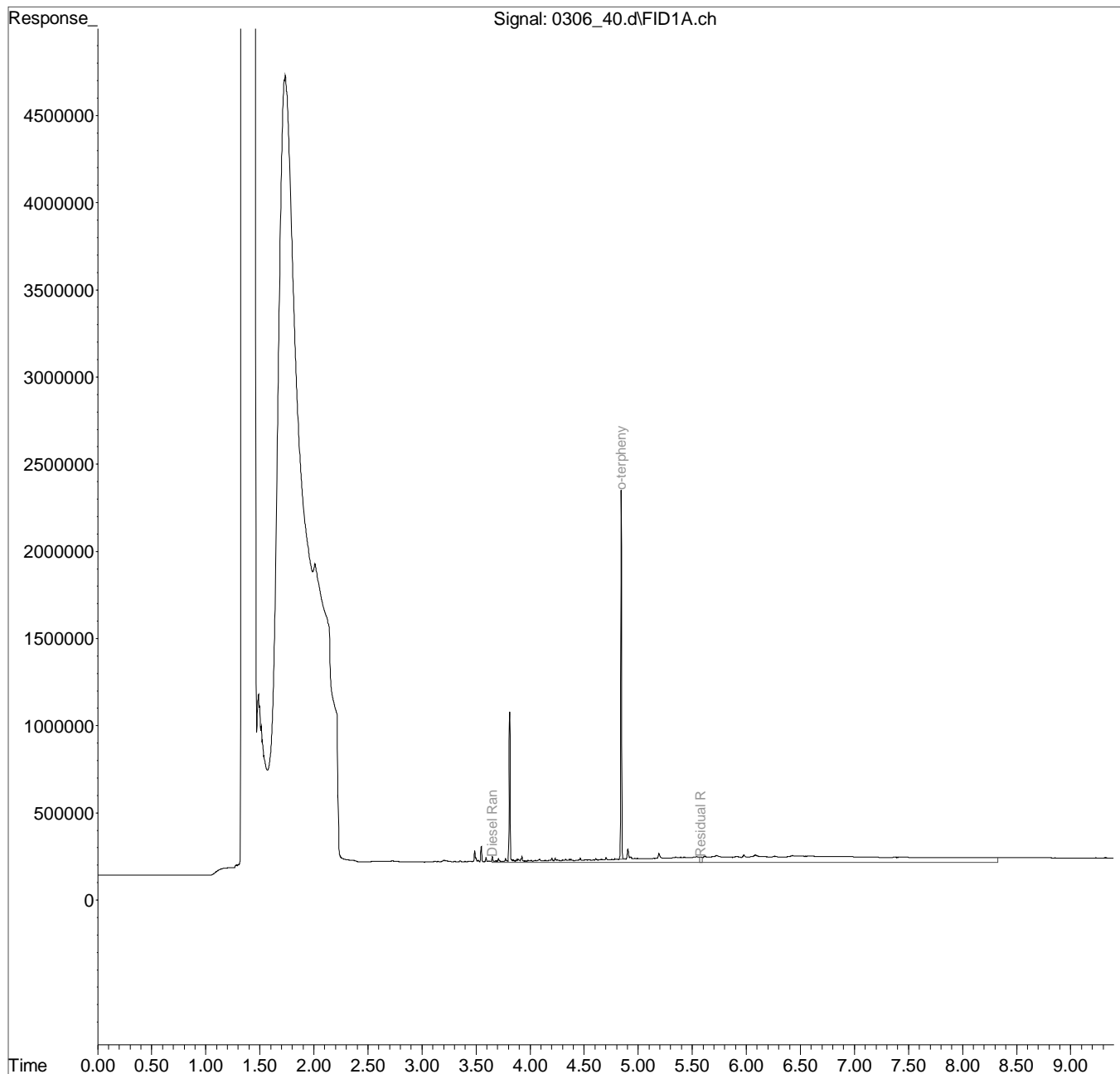
If preservation required by Login: Date/Time  
Hold: \_\_\_\_\_ Condition: NCF / OK



Data Path : C:\msdchem\1\data\030619\  
Data File : 0306 40.d  
Signal(s) : FID1A.ch  
Acq On : 7 Mar 2019 12:08 am  
Operator : 773  
Sample : L1075084-01 1x WG1244956  
Misc : M.I.s on ranges are corrections  
ALS Vial : 31 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Mar 07 08:28:34 2019  
Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
Quant Title :  
QLast Update : Sat Mar 02 12:46:22 2019  
Response via : Initial Calibration  
Integrator: ChemStation

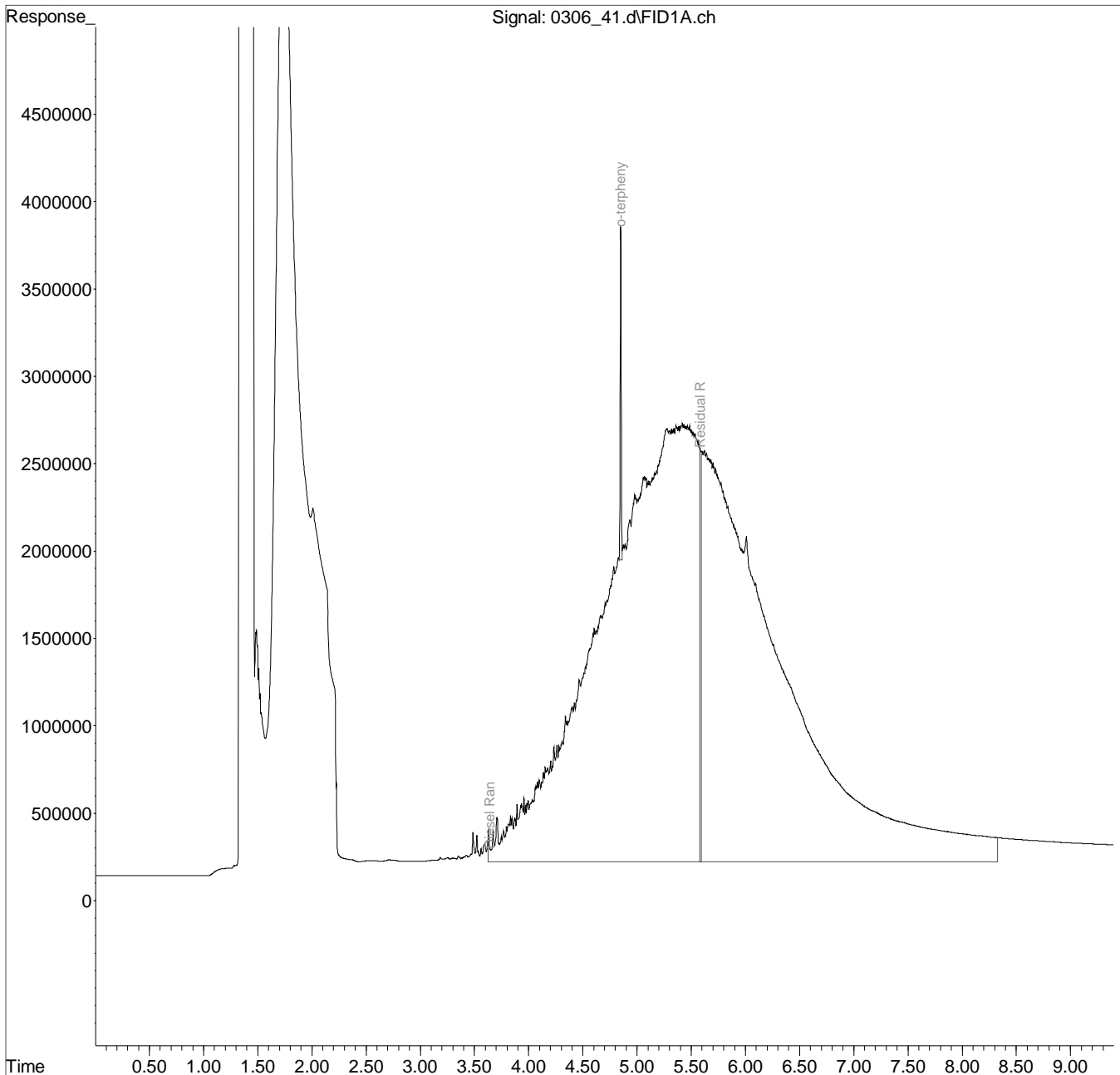
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030619\  
 Data File : 0306 41.d  
 Signal(s) : FID1A.ch  
 Acq On : 7 Mar 2019 12:29 am  
 Operator : 773  
 Sample : L1075084-02 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 32 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 07 08:29:15 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

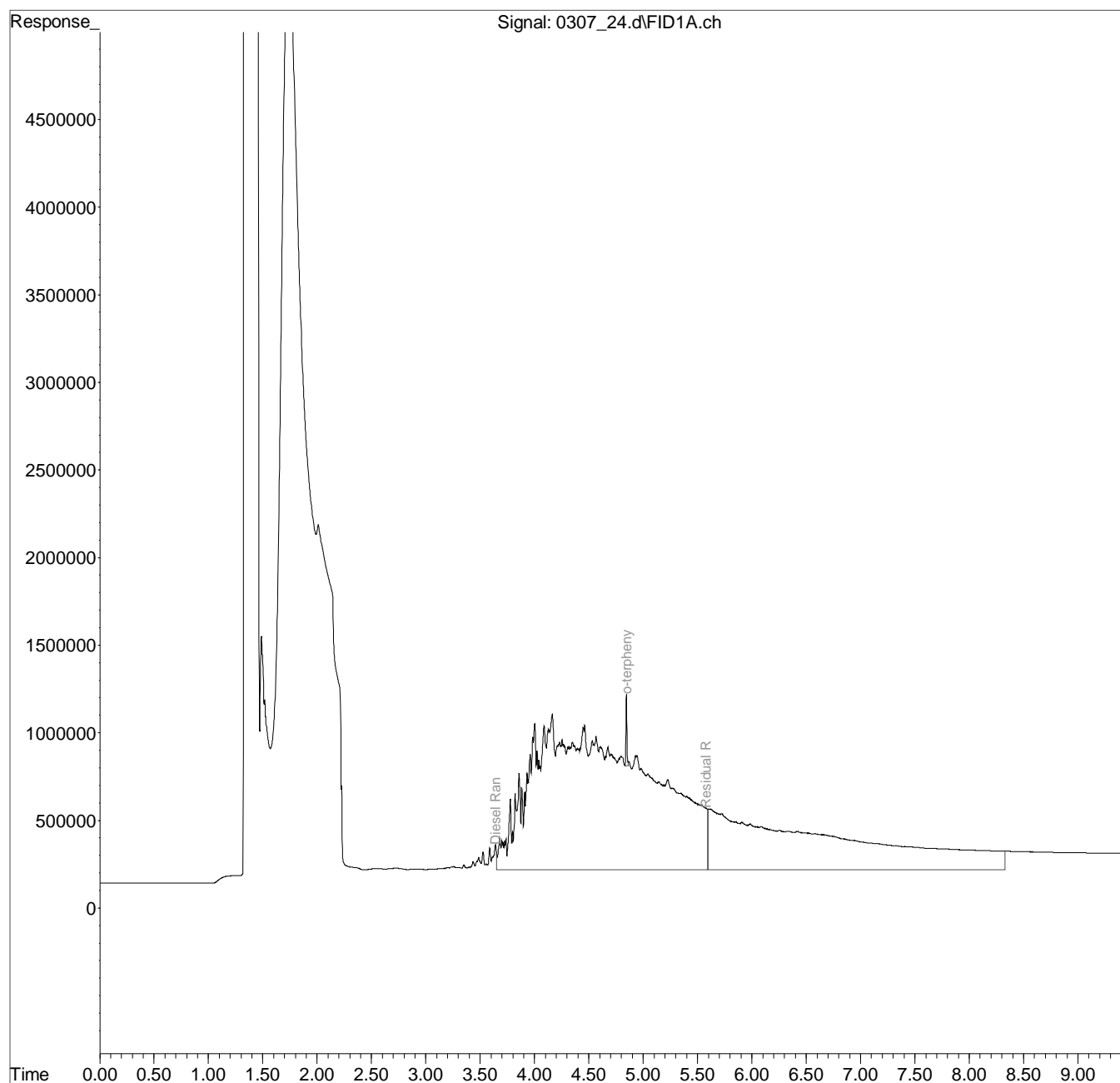
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
 Data File : 0307 24.d  
 Signal(s) : FID1A.ch  
 Acq On : 7 Mar 2019 6:39 pm  
 Operator : 773  
 Sample : L1075084-03 5x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 18 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 07 20:14:56 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

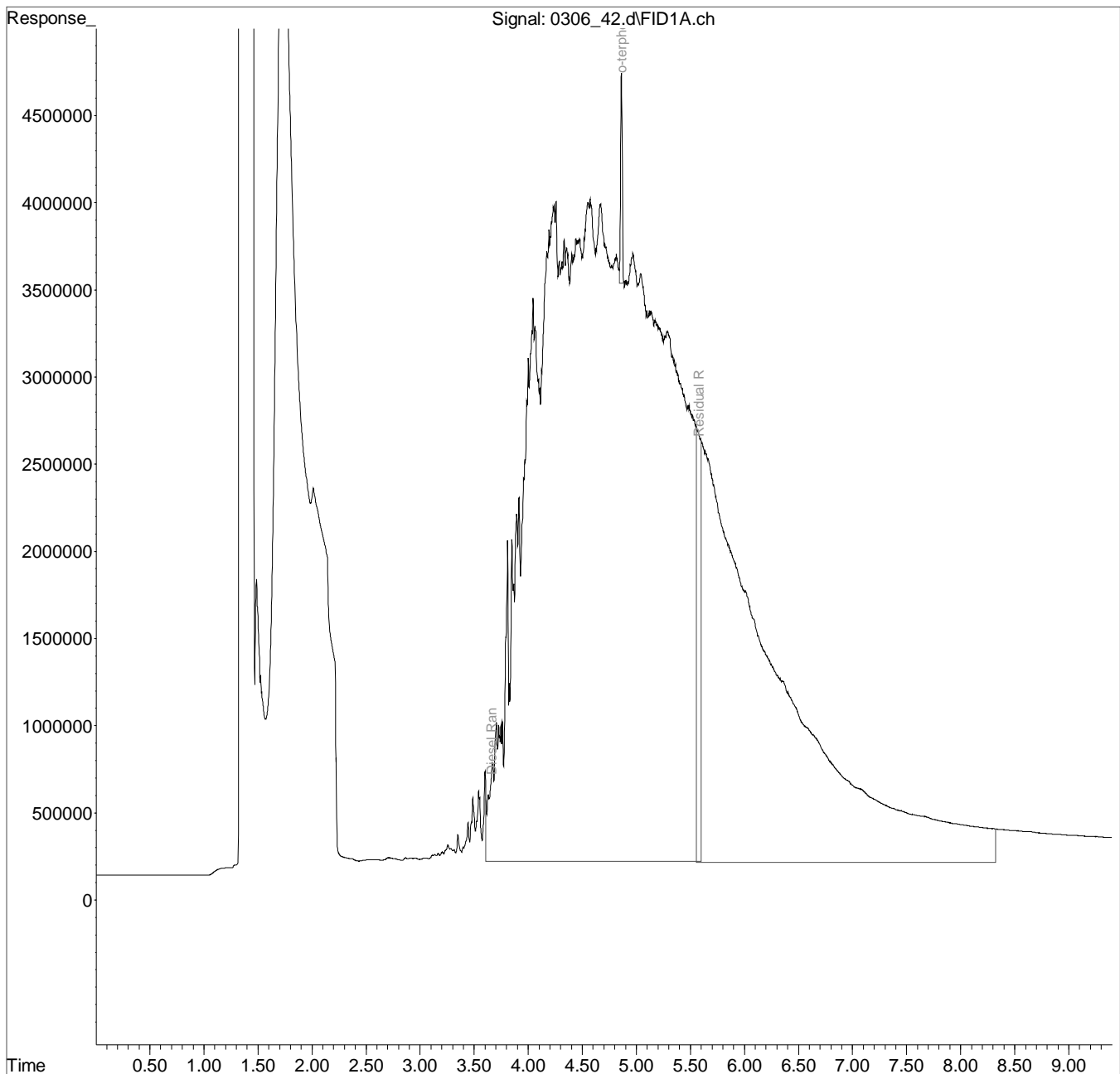
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030619\  
Data File : 0306\_42.d  
Signal(s) : FID1A.ch  
Acq On : 7 Mar 2019 12:50 am  
Operator : 773  
Sample : L1075084-03 1x WG1244956  
Misc : M.I.s on ranges are corrections  
ALS Vial : 33 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Mar 07 08:29:59 2019  
Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
Quant Title :  
QLast Update : Sat Mar 02 12:46:22 2019  
Response via : Initial Calibration  
Integrator: ChemStation

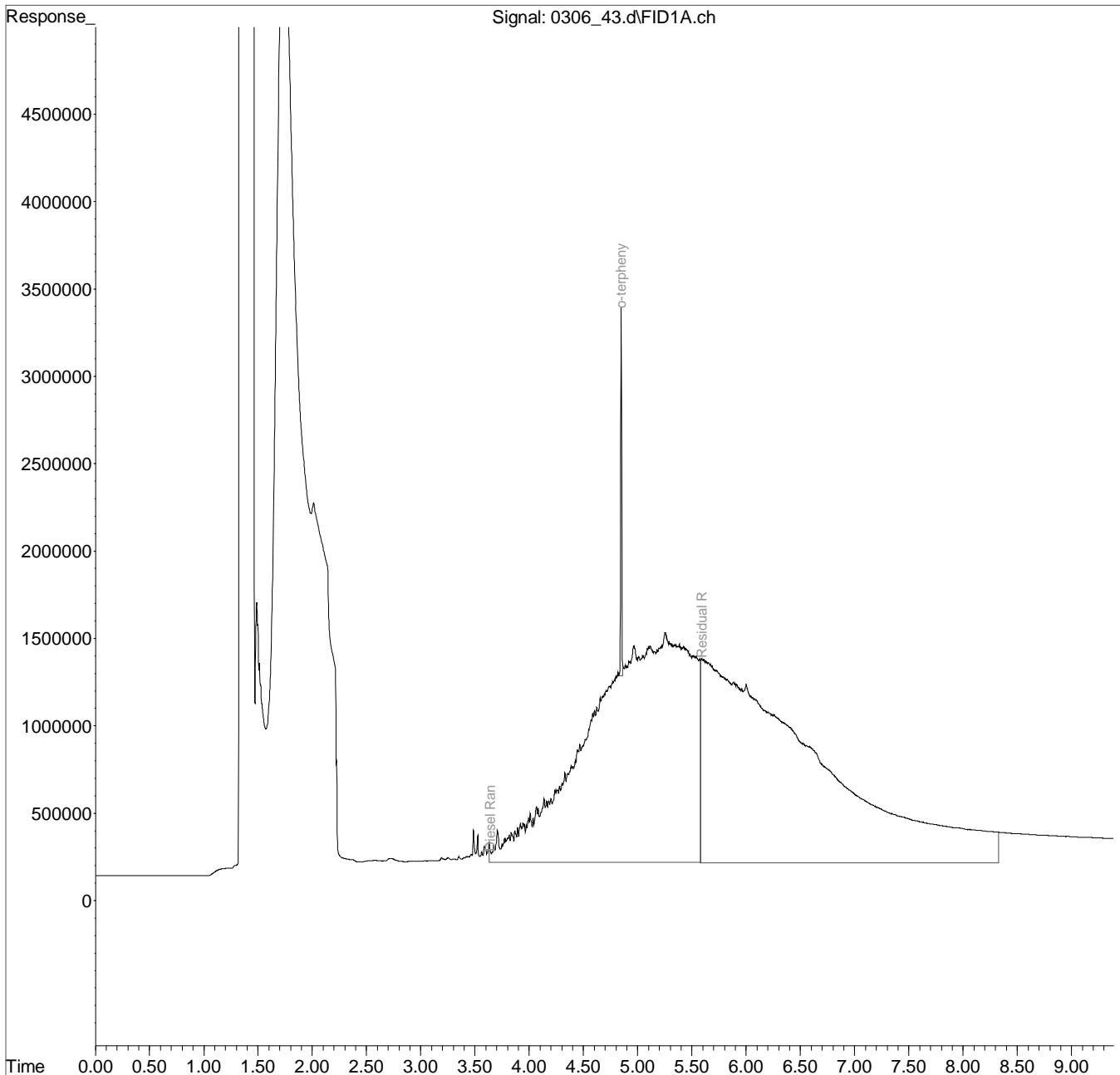
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030619\  
 Data File : 0306 43.d  
 Signal(s) : FID1A.ch  
 Acq On : 7 Mar 2019 1:10 am  
 Operator : 773  
 Sample : L1075084-04 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 34 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 07 08:30:55 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

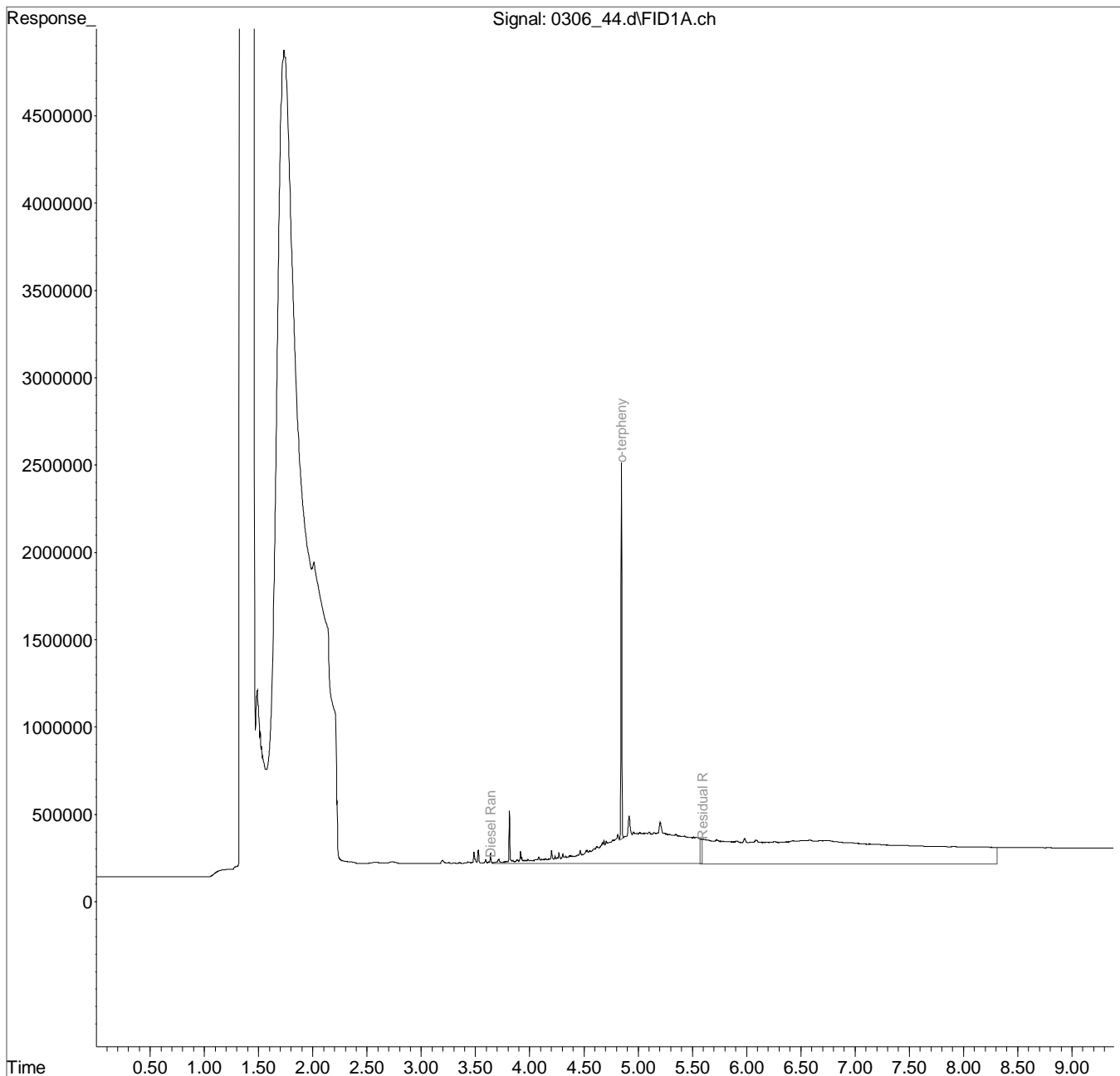
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030619\  
 Data File : 0306 44.d  
 Signal(s) : FID1A.ch  
 Acq On : 7 Mar 2019 1:31 am  
 Operator : 773  
 Sample : L1075084-05 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 35 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 07 08:31:34 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M

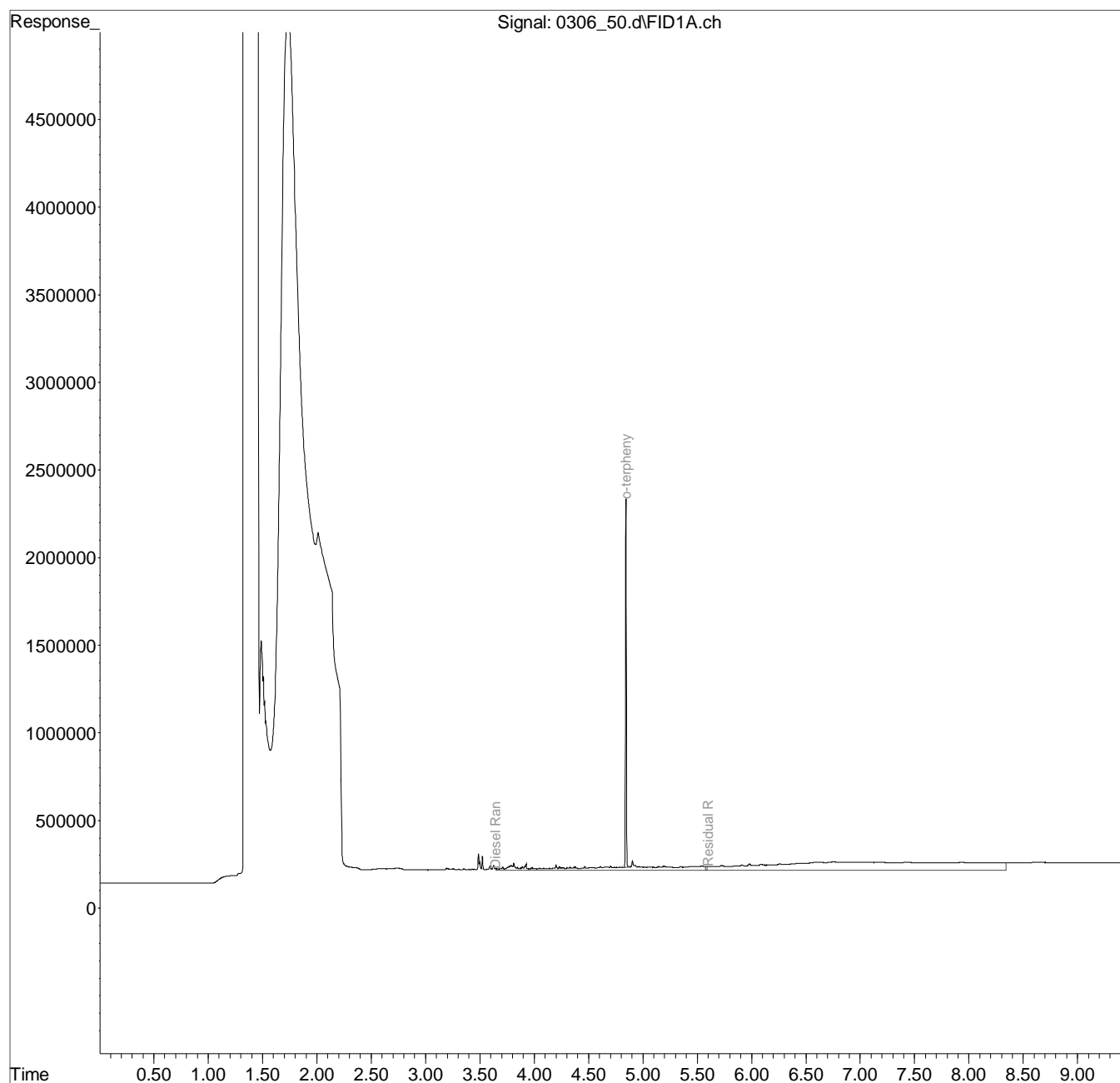




Data Path : C:\msdchem\1\data\030619\  
Data File : 0306 50.d  
Signal(s) : FID1A.ch  
Acq On : 7 Mar 2019 3:36 am  
Operator : 773  
Sample : L1075084-08 1x WG1244956  
Misc : M.I.s on ranges are corrections  
ALS Vial : 38 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Mar 07 08:35:47 2019  
Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
Quant Title :  
QLast Update : Sat Mar 02 12:46:22 2019  
Response via : Initial Calibration  
Integrator: ChemStation

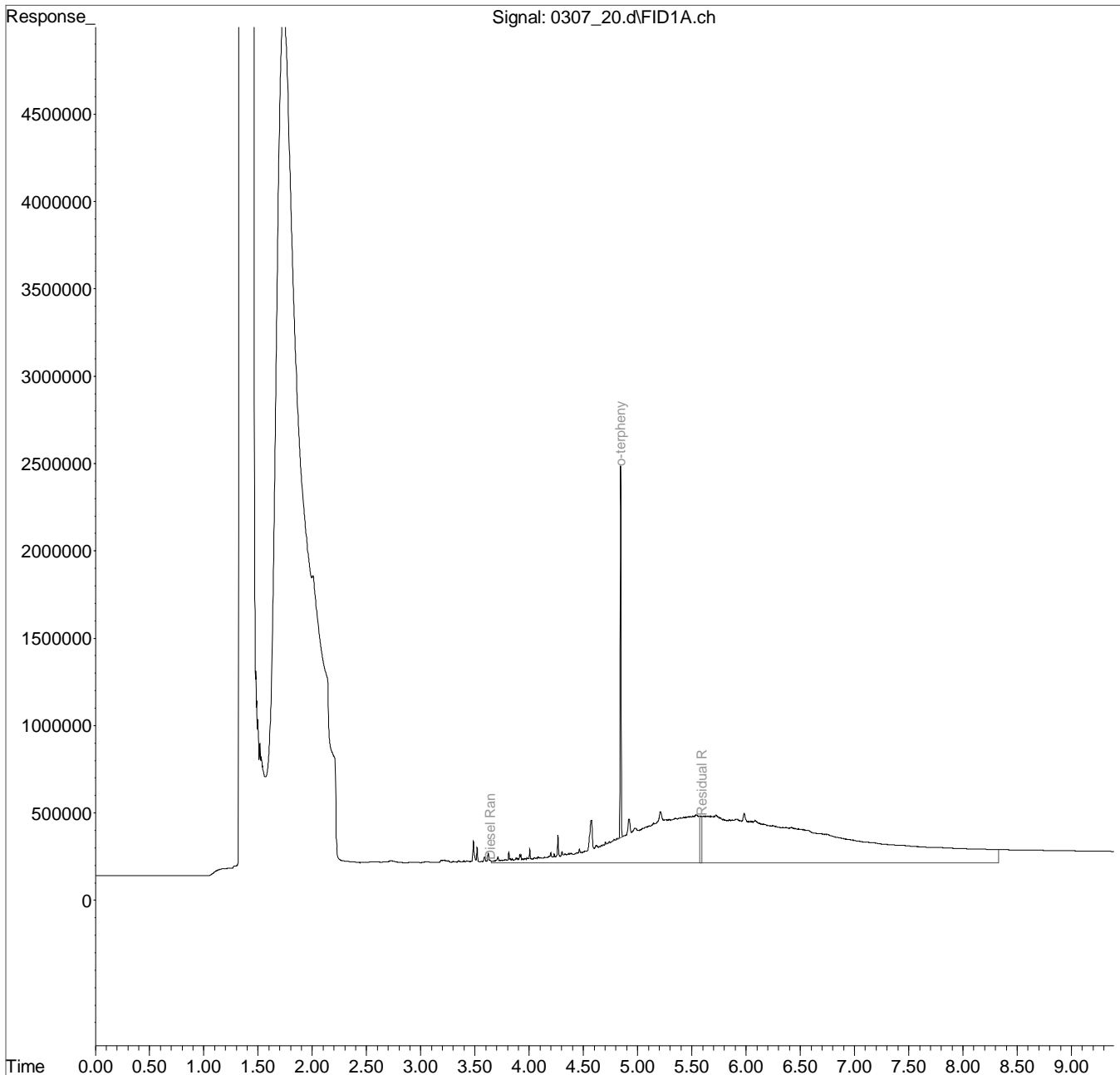
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
 Data File : 0307 20.d  
 Signal(s) : FID1A.ch  
 Acq On : 7 Mar 2019 4:59 pm  
 Operator : 773  
 Sample : L1075084-09 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 14 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 07 17:30:29 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

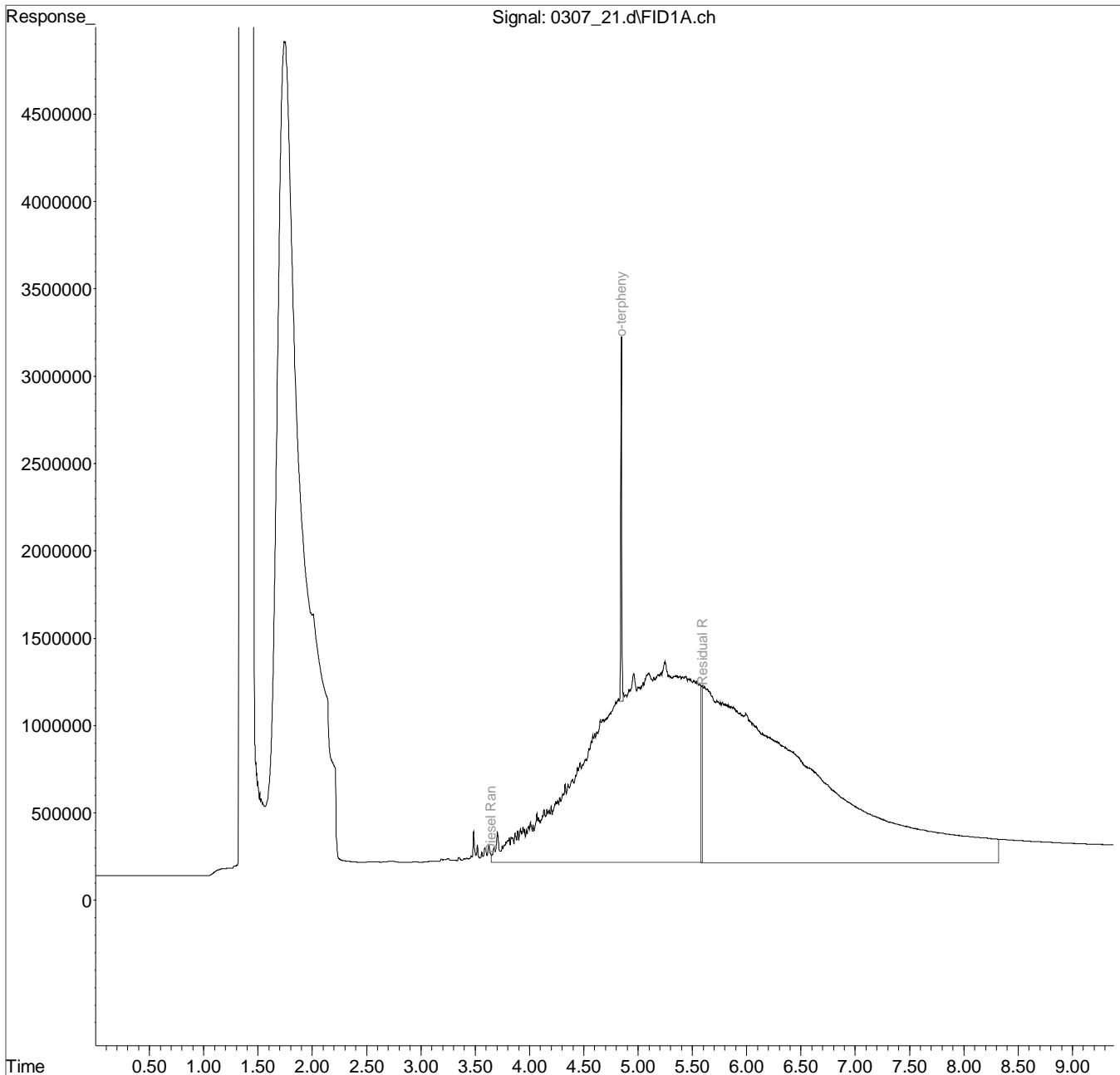
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
 Data File : 0307 21.d  
 Signal(s) : FID1A.ch  
 Acq On : 7 Mar 2019 5:20 pm  
 Operator : 773  
 Sample : L1075084-10 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 15 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 07 18:12:30 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

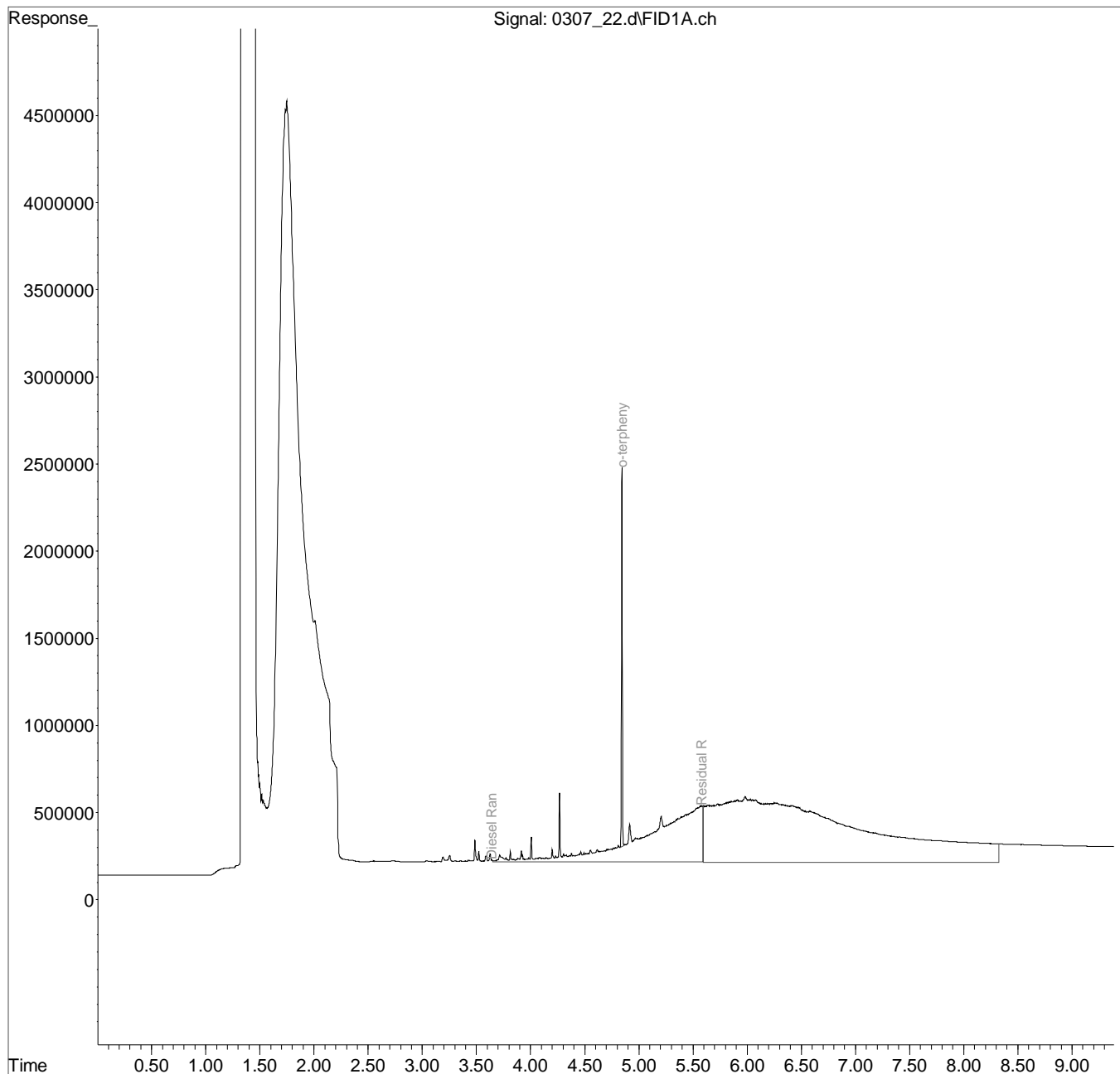
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
Data File : 0307 22.d  
Signal(s) : FID1A.ch  
Acq On : 7 Mar 2019 5:42 pm  
Operator : 773  
Sample : L1075084-11 1x WG1244956  
Misc : M.I.s on ranges are corrections  
ALS Vial : 16 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Mar 07 18:12:55 2019  
Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
Quant Title :  
QLast Update : Sat Mar 02 12:46:22 2019  
Response via : Initial Calibration  
Integrator: ChemStation

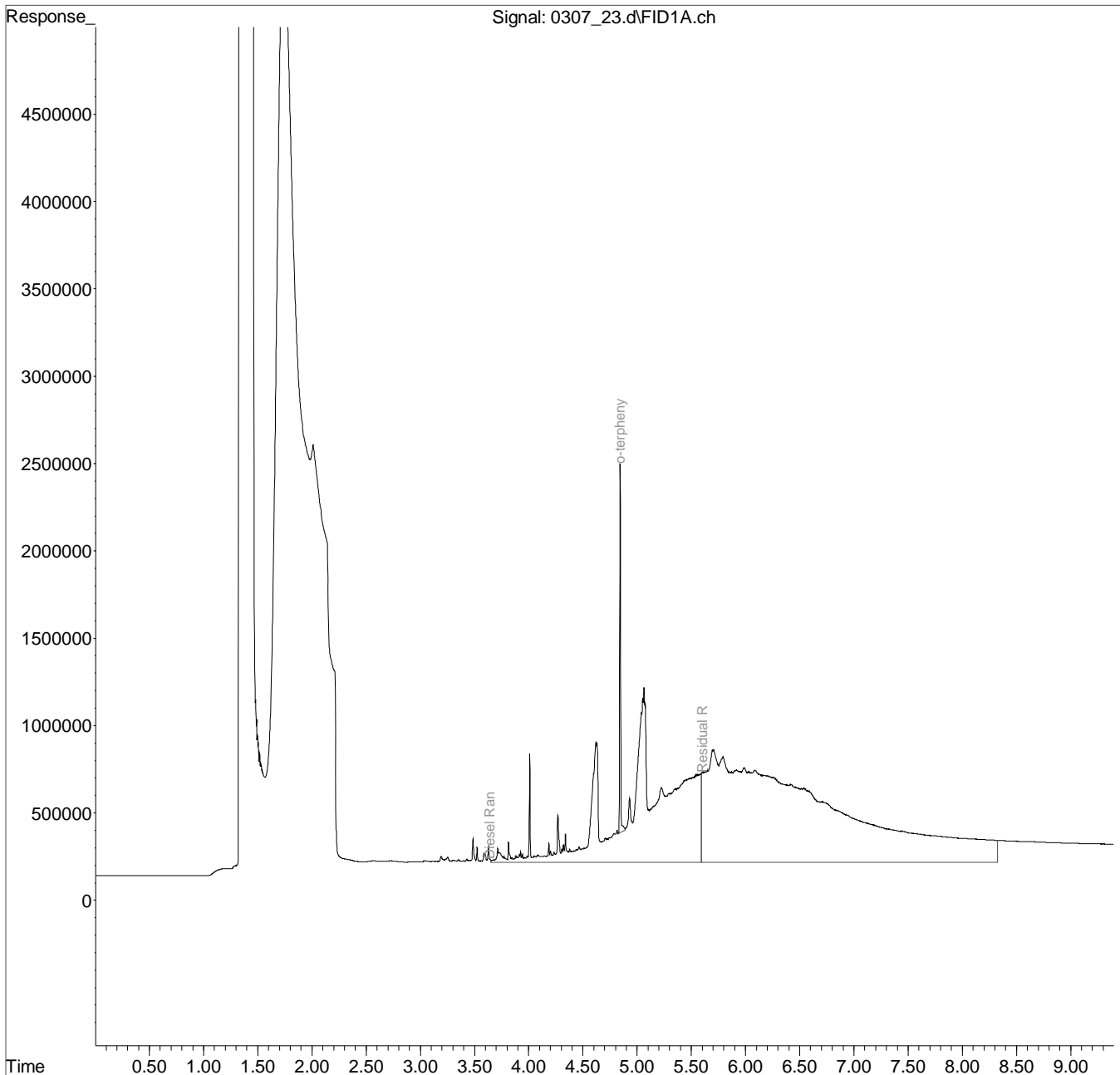
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
 Data File : 0307 23.d  
 Signal(s) : FID1A.ch  
 Acq On : 7 Mar 2019 6:18 pm  
 Operator : 773  
 Sample : L1075084-12 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 17 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 07 20:14:19 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

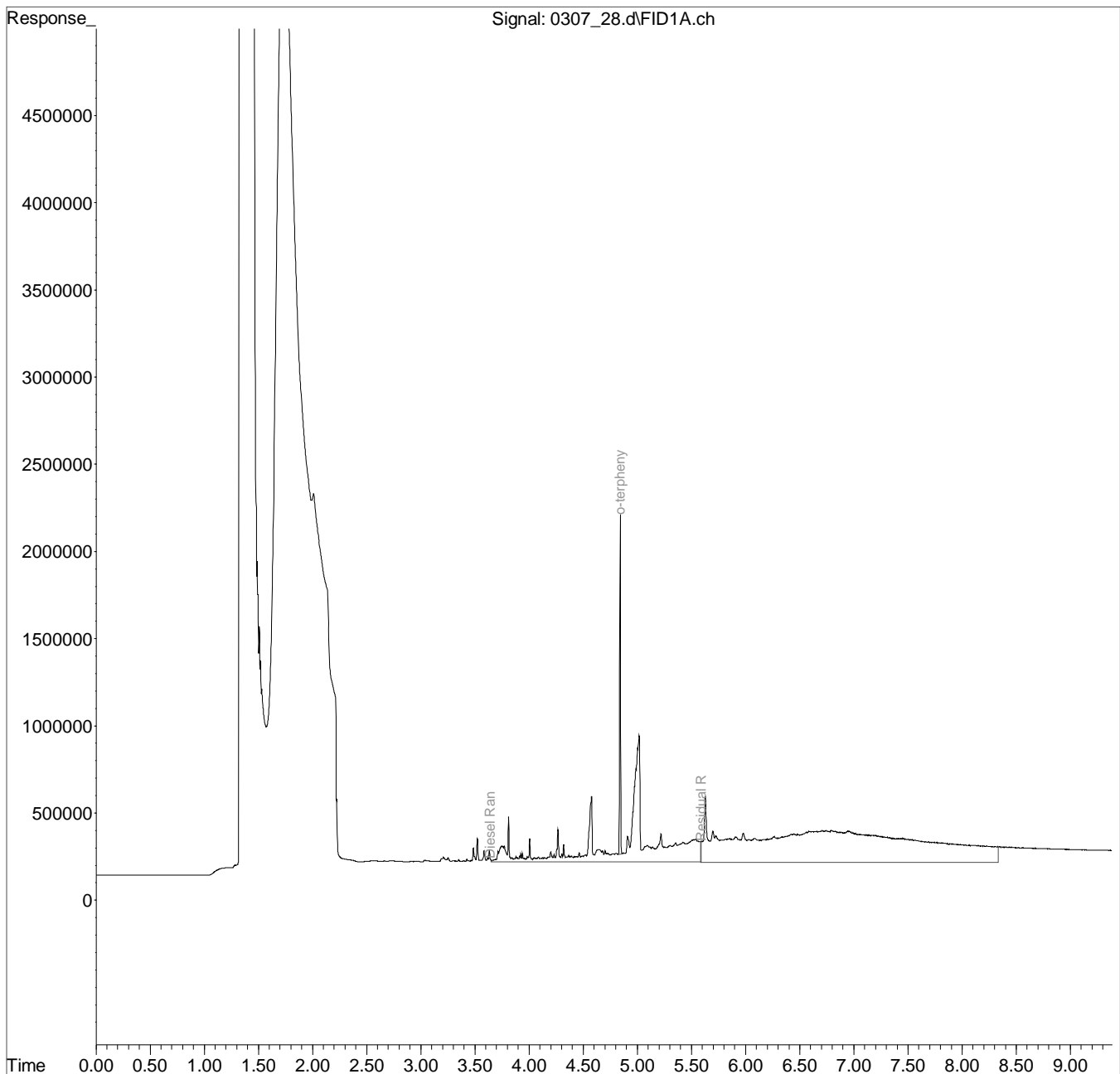
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
Data File : 0307 28.d  
Signal(s) : FID1A.ch  
Acq On : 7 Mar 2019 11:52 pm  
Operator : 773  
Sample : L1075084-13 1x WG1244956  
Misc : M.I.s on ranges are corrections  
ALS Vial : 19 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Mar 08 09:03:44 2019  
Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
Quant Title :  
QLast Update : Sat Mar 02 12:46:22 2019  
Response via : Initial Calibration  
Integrator: ChemStation

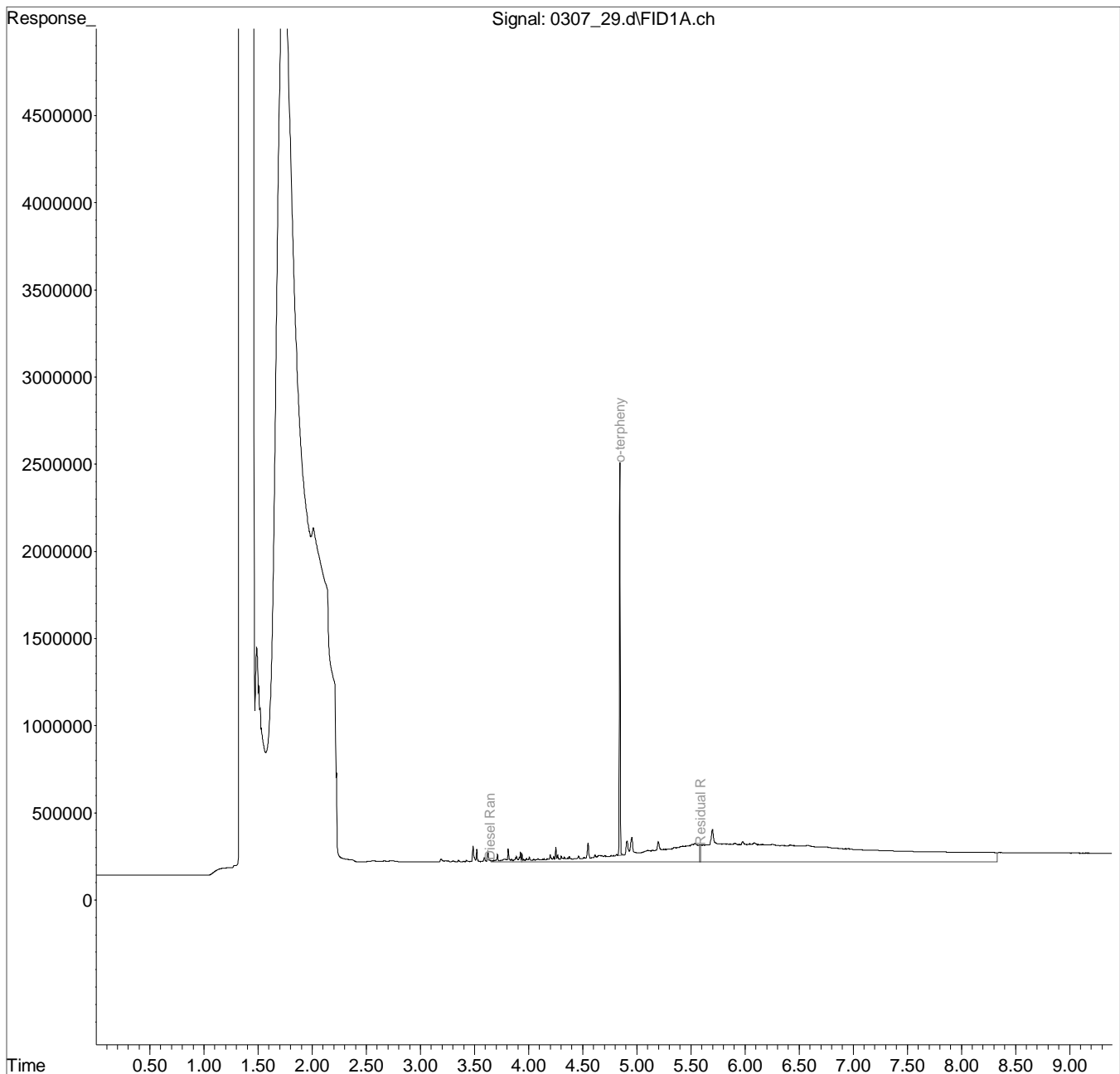
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
Data File : 0307 29.d  
Signal(s) : FID1A.ch  
Acq On : 8 Mar 2019 12:11 am  
Operator : 773  
Sample : L1075084-14 1x WG1244956  
Misc : M.I.s on ranges are corrections  
ALS Vial : 20 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Mar 08 09:04:07 2019  
Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
Quant Title :  
QLast Update : Sat Mar 02 12:46:22 2019  
Response via : Initial Calibration  
Integrator: ChemStation

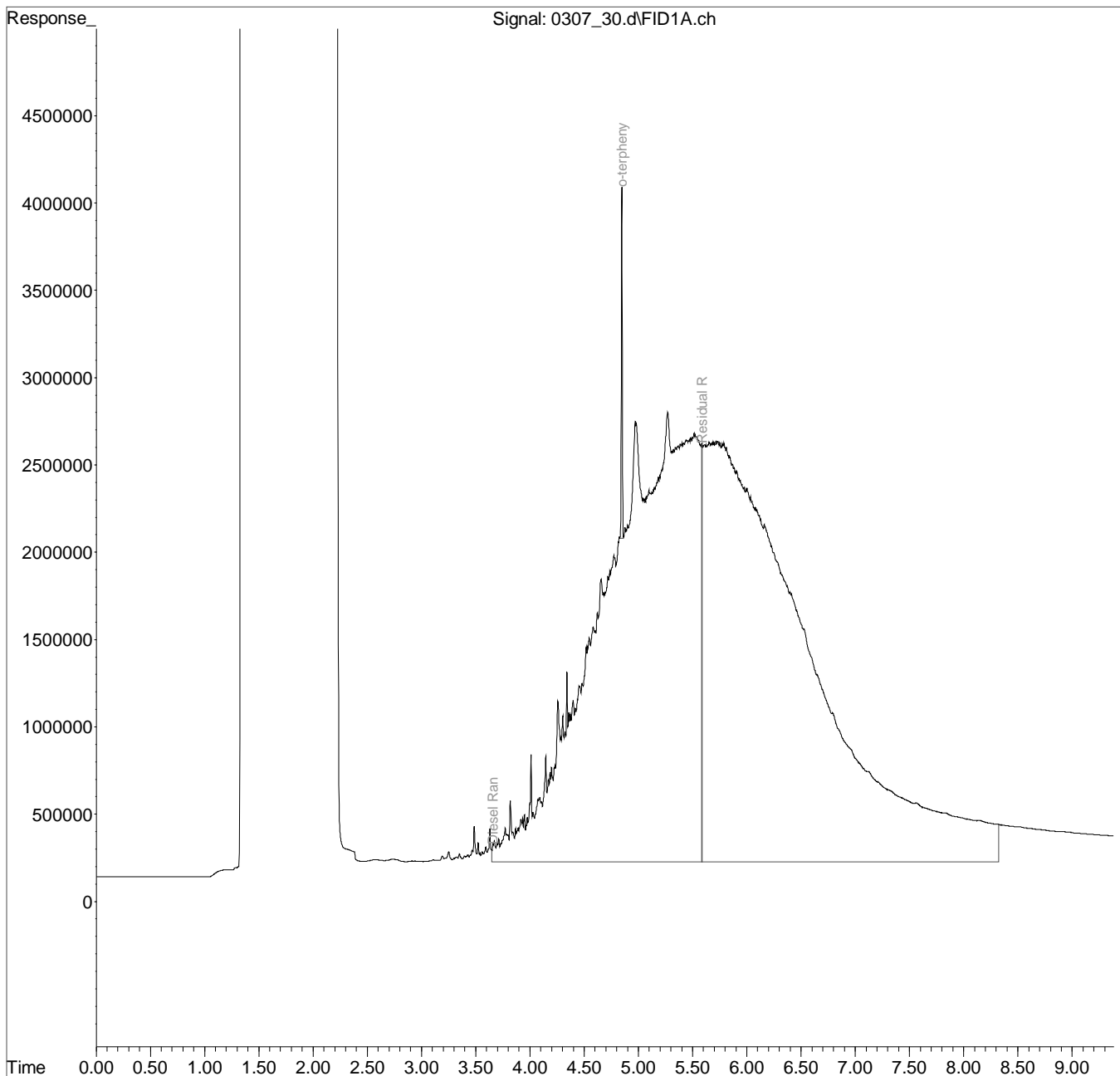
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
 Data File : 0307 30.d  
 Signal(s) : FID1A.ch  
 Acq On : 8 Mar 2019 12:31 am  
 Operator : 773  
 Sample : L1075084-15 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 21 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 08 09:04:41 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M

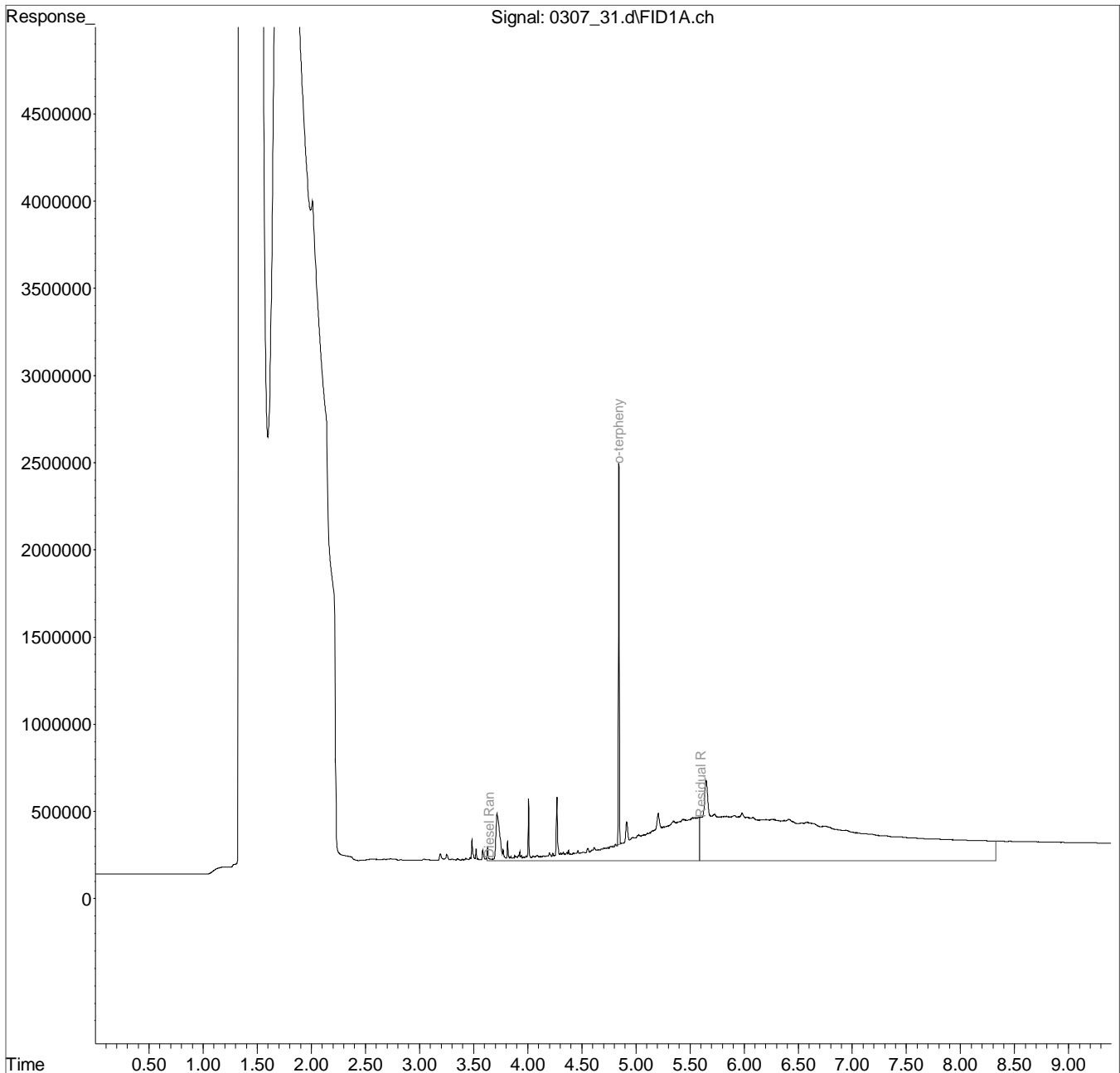




Data Path : C:\msdchem\1\data\030719\  
 Data File : 0307 31.d  
 Signal(s) : FID1A.ch  
 Acq On : 8 Mar 2019 12:50 am  
 Operator : 773  
 Sample : L1075084-16 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 22 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 08 09:05:12 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

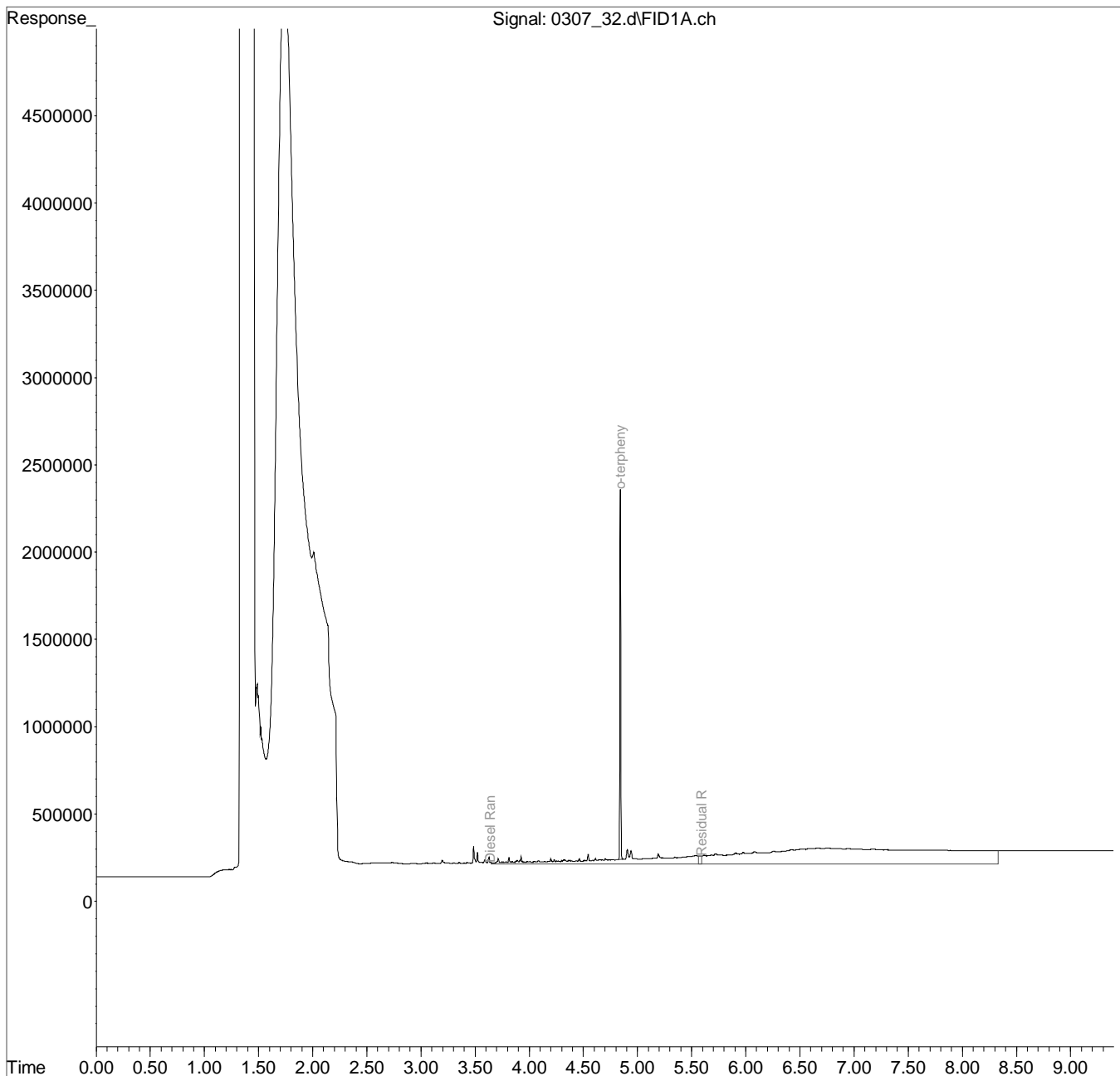
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
 Data File : 0307 32.d  
 Signal(s) : FID1A.ch  
 Acq On : 8 Mar 2019 1:09 am  
 Operator : 773  
 Sample : L1075084-17 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 23 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 08 09:05:38 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

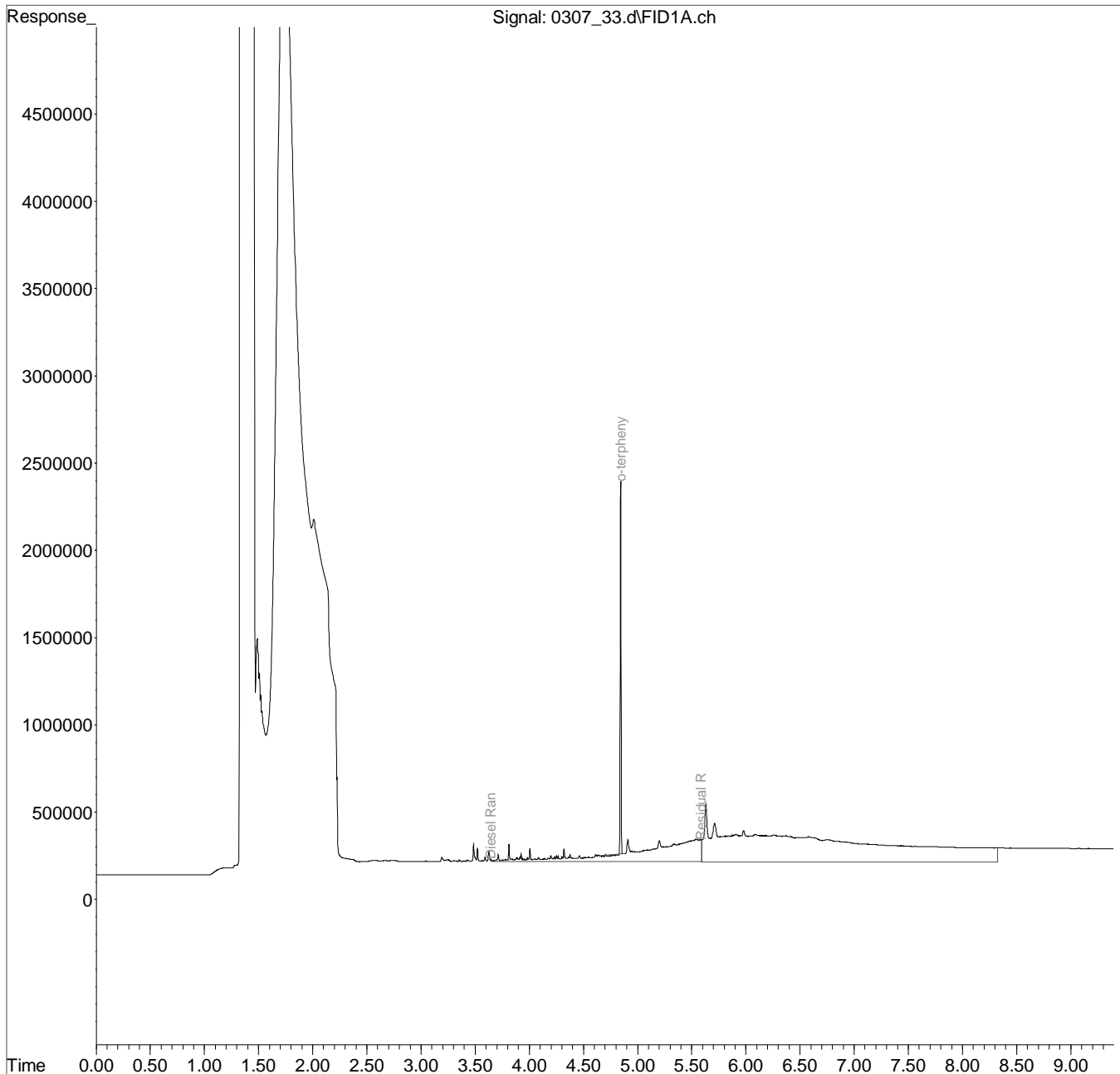
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
 Data File : 0307 33.d  
 Signal(s) : FID1A.ch  
 Acq On : 8 Mar 2019 1:28 am  
 Operator : 773  
 Sample : L1075084-18 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 24 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 08 09:06:09 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

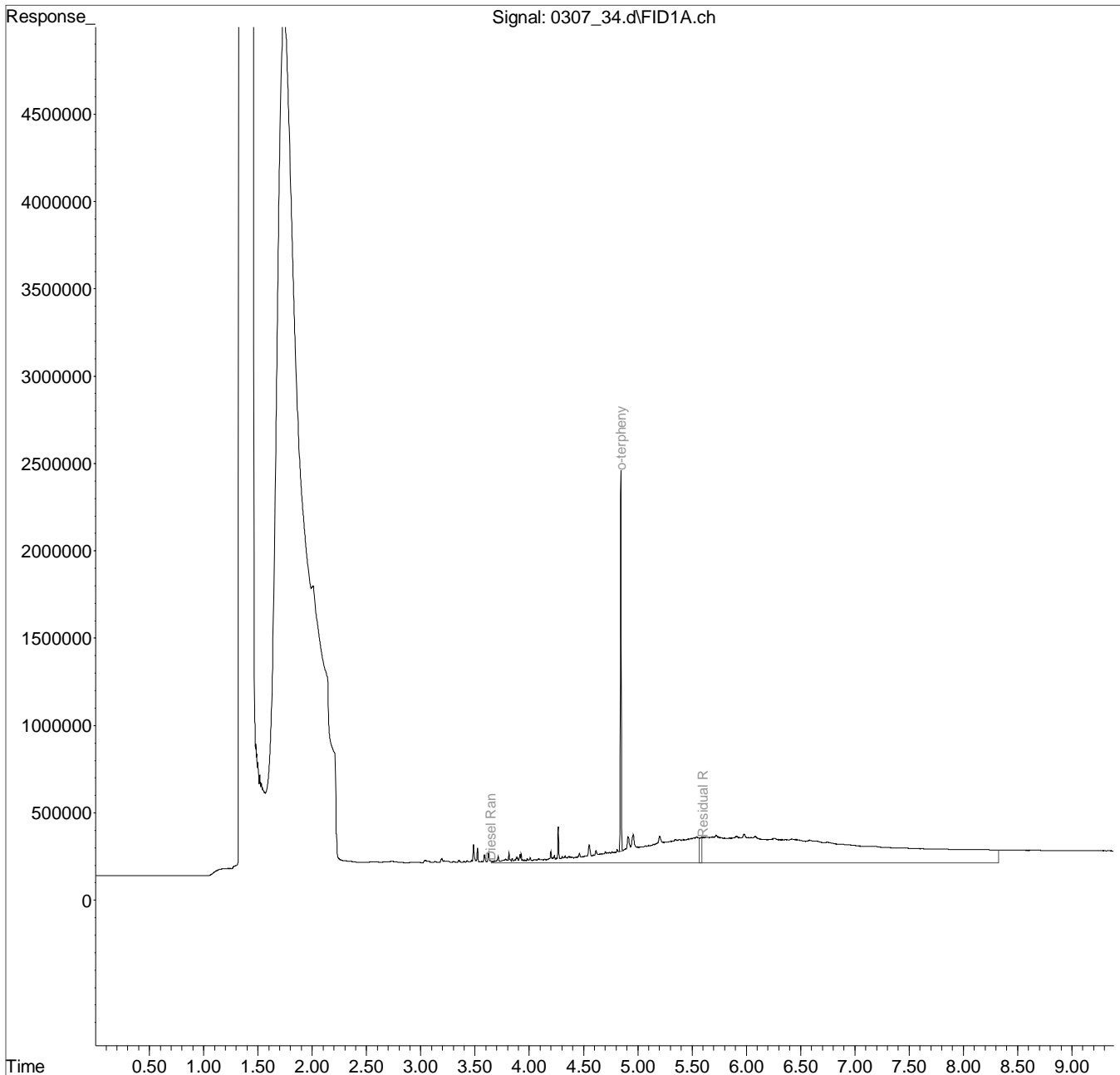
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
 Data File : 0307 34.d  
 Signal(s) : FID1A.ch  
 Acq On : 8 Mar 2019 1:47 am  
 Operator : 773  
 Sample : L1075084-19 1x WG1244956  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 25 Sample Multiplier: 1  
 InstName : SVGC27

Integration File: events.e  
 Quant Time: Mar 08 09:06:32 2019  
 Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
 Quant Title :  
 QLast Update : Sat Mar 02 12:46:22 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

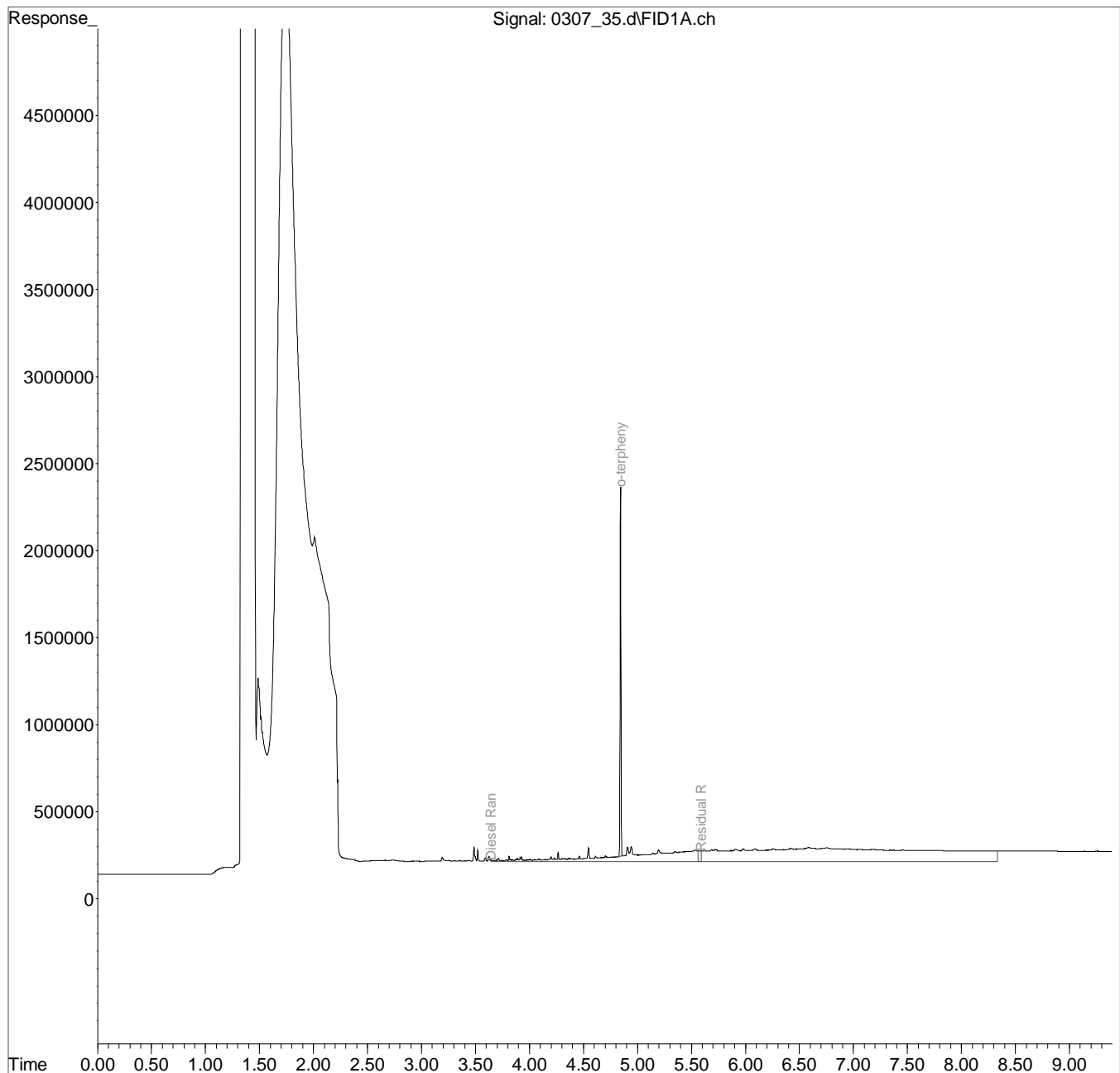
Volume Inj. :  
 Signal Phase :  
 Signal Info :  
 DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030719\  
Data File : 0307 35.d  
Signal(s) : FID1A.ch  
Acq On : 8 Mar 2019 2:07 am  
Operator : 773  
Sample : L1075084-20 1x WG1244956  
Misc : M.I.s on ranges are corrections  
ALS Vial : 26 Sample Multiplier: 1  
InstName : SVGC27

Integration File: events.e  
Quant Time: Mar 08 09:06:56 2019  
Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
Quant Title :  
QLast Update : Sat Mar 02 12:46:22 2019  
Response via : Initial Calibration  
Integrator: ChemStation

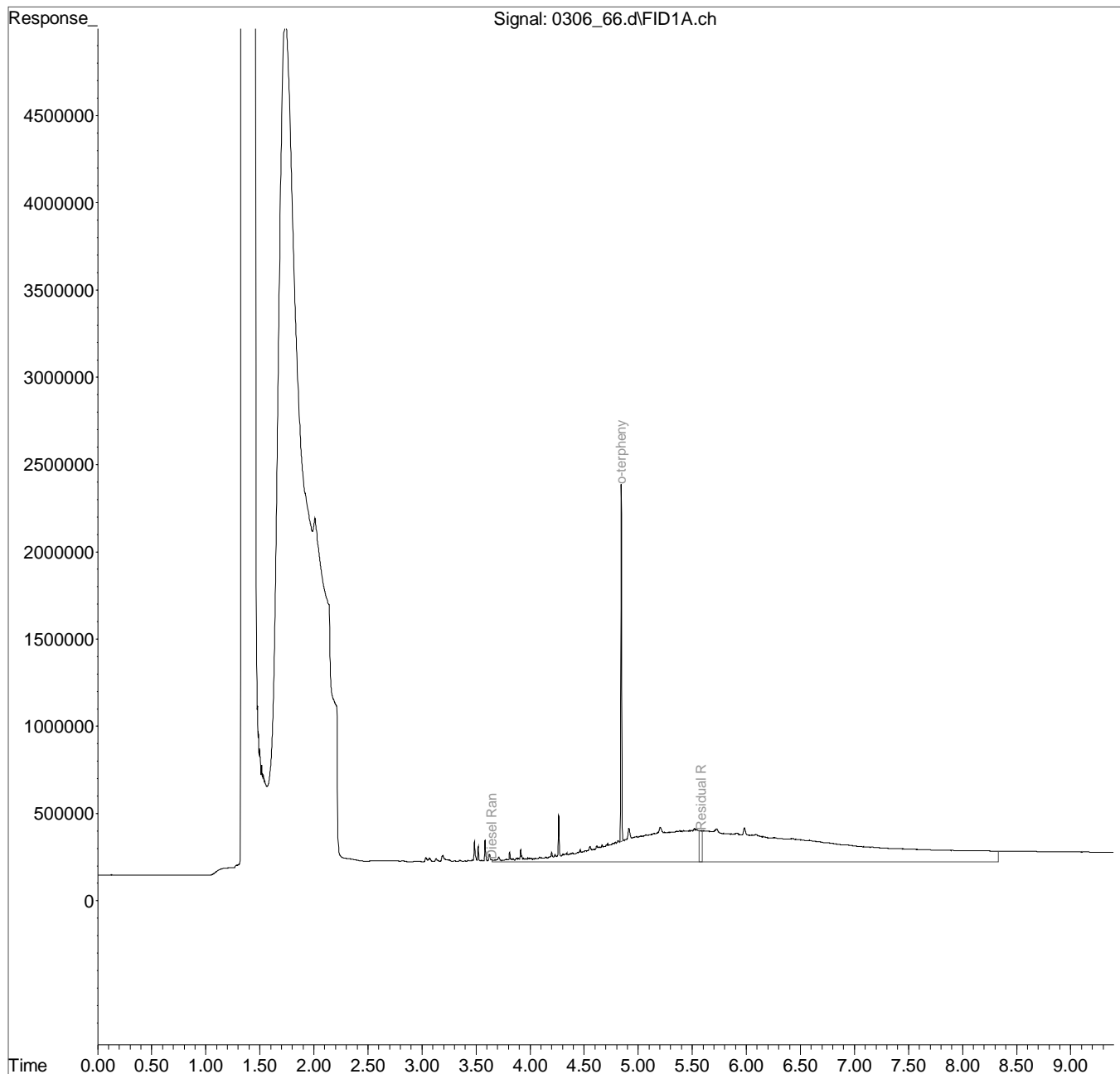
Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27.M



Data Path : C:\msdchem\1\data\030619\  
Data File : 0306 66.d  
Signal(s) : FID1A.ch  
Acq On : 7 Mar 2019 7:34 am  
Operator : 773  
Sample : L1075084-21 1x WG1244956  
Misc : M.I.s on ranges are corrections  
ALS Vial : 51 Sample Multiplier: 1  
InstName : SVGC27

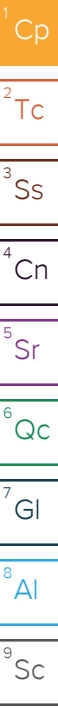
Integration File: events.e  
Quant Time: Mar 07 08:37:07 2019  
Quant Method : C:\msdchem\1\methods\EP27B28AS.M  
Quant Title :  
QLast Update : Sat Mar 02 12:46:22 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :  
DataAcq Meth:EPH27.M



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Groundwater Analytical Reports  
7 to 9 May 2019



## Kennedy/Jenks Con-BNSF Region 1

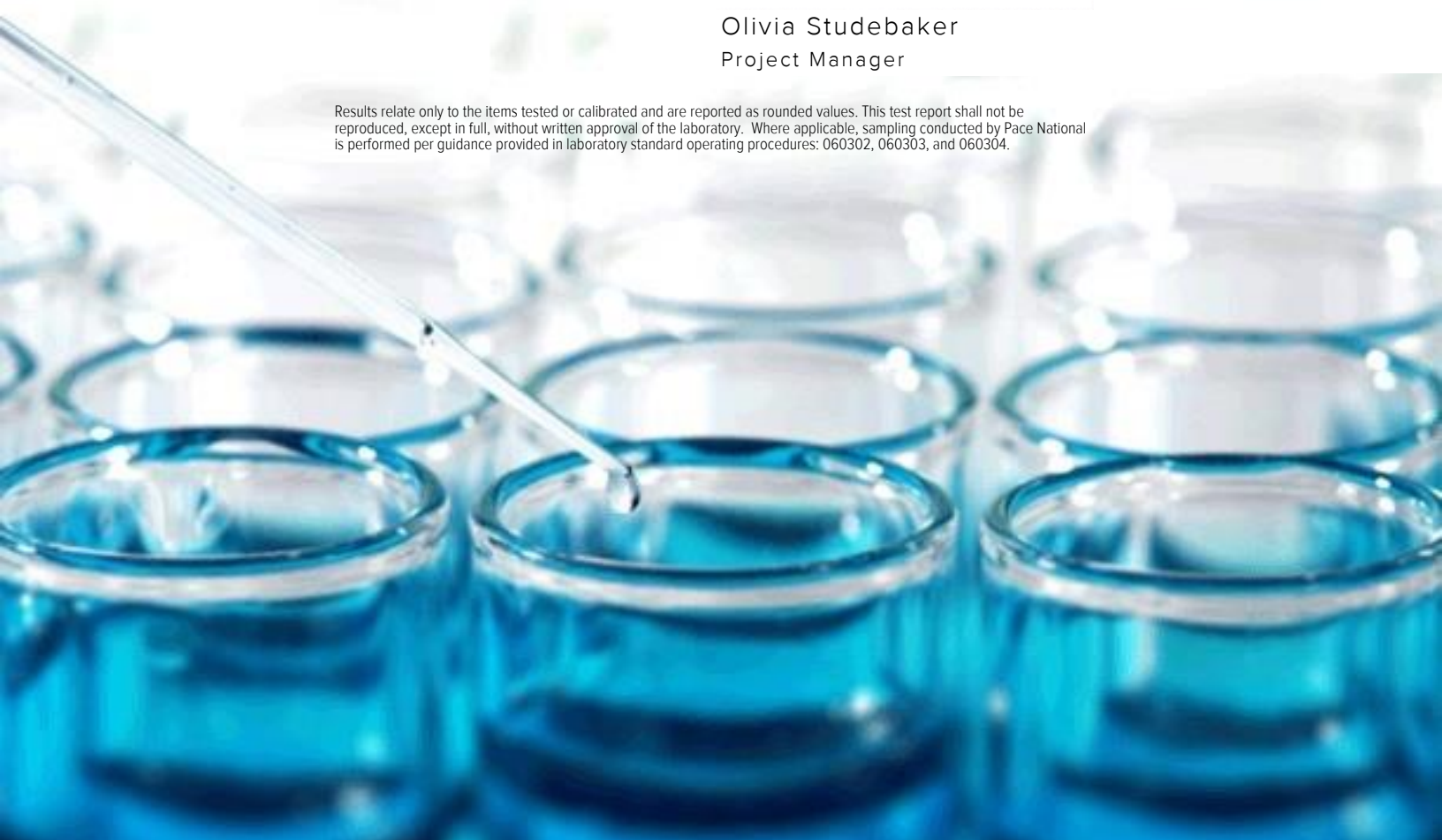
Sample Delivery Group: L1097209  
Samples Received: 05/09/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

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

Entire Report Reviewed By:

Olivia Studebaker  
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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<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# SAMPLE SUMMARY

## WMW-12-20190508 L1097209-01 GW

Collected by  
K. Teague  
Collected date/time  
05/08/19 07:45  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 10:48	05/16/19 10:48	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	10	05/16/19 15:09	05/16/19 15:09	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:30	05/10/19 17:30	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 16:03	05/13/19 16:03	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 22:18	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:17	05/13/19 11:17	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 15:41	SHG	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

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Qc

7  
Gl

8  
Al

9  
Sc

## WMW-14-20190507 L1097209-02 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 09:50  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 10:51	05/16/19 10:51	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:13	05/16/19 15:13	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:00	05/10/19 17:00	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 17:14	05/13/19 17:14	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 22:37	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:20	05/13/19 11:20	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 15:58	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 13:56	TH	Mt. Juliet, TN

## WMW-15-20190507 L1097209-03 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 11:50  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 10:56	05/16/19 10:56	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:15	05/16/19 15:15	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:01	05/10/19 17:01	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 17:32	05/13/19 17:32	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 22:41	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:22	05/13/19 11:22	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 23:24	SHG	Mt. Juliet, TN

## WMW-16-20190507 L1097209-04 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 14:05  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:02	05/16/19 11:02	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:16	05/16/19 15:16	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:03	05/10/19 17:03	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 17:50	05/13/19 17:50	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 22:46	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1279922	1	05/12/19 15:32	05/12/19 15:32	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:24	05/13/19 11:24	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 23:41	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	5	05/11/19 02:29	05/12/19 22:07	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1280920	1	05/14/19 17:51	05/15/19 01:29	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 13:16	AAT	Mt. Juliet, TN

# SAMPLE SUMMARY



## WMW-19-20190507 L1097209-05 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 09:00  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:04	05/16/19 11:04	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:24	05/16/19 15:24	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:03	05/10/19 17:03	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 18:08	05/13/19 18:08	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 23:09	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 17:01	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:29	05/13/19 11:29	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279719	1	05/11/19 16:18	05/11/19 16:18	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 16:15	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 13:38	AAT	Mt. Juliet, TN

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

## WMW-24-20190507 L1097209-06 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 15:30  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:06	05/16/19 11:06	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:25	05/16/19 15:25	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:03	05/10/19 17:03	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 19:02	05/13/19 19:02	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1278941	1	05/10/19 08:11	05/12/19 12:30	TCT	Mt. Juliet, TN
Mercury by Method 7470A	WG1278946	1	05/10/19 08:16	05/12/19 11:36	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 23:13	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 17:06	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:31	05/13/19 11:31	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279226	1	05/10/19 16:36	05/10/19 16:36	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 16:32	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 14:00	AAT	Mt. Juliet, TN

## WMW-26-20190507 L1097209-07 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 09:20  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:07	05/16/19 11:07	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:27	05/16/19 15:27	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:04	05/10/19 17:04	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 19:20	05/13/19 19:20	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1278941	1	05/10/19 08:11	05/12/19 12:32	TCT	Mt. Juliet, TN
Mercury by Method 7470A	WG1278946	1	05/10/19 08:16	05/12/19 11:43	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 23:18	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 17:10	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:34	05/13/19 11:34	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279226	1	05/10/19 16:57	05/10/19 16:57	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 16:49	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 14:18	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 14:21	AAT	Mt. Juliet, TN

## WMW-28-20190507 L1097209-08 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 12:25  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:09	05/16/19 11:09	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:28	05/16/19 15:28	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:04	05/10/19 17:04	MJA	Mt. Juliet, TN

# SAMPLE SUMMARY

## WMW-28-20190507 L1097209-08 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 12:25  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 19:38	05/13/19 19:38	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1278941	1	05/10/19 08:11	05/12/19 12:35	TCT	Mt. Juliet, TN
Mercury by Method 7470A	WG1278946	1	05/10/19 08:16	05/12/19 11:46	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 23:23	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 17:15	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:36	05/13/19 11:36	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279226	1	05/10/19 17:17	05/10/19 17:17	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 17:06	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 15:49	AAT	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## DUP-01-20190507 L1097209-09 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 12:35  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:10	05/16/19 11:10	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:30	05/16/19 15:30	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:05	05/10/19 17:05	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 19:56	05/13/19 19:56	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1278941	1	05/10/19 08:11	05/12/19 12:37	TCT	Mt. Juliet, TN
Mercury by Method 7470A	WG1278946	1	05/10/19 08:16	05/12/19 11:48	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 23:27	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 17:20	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:38	05/13/19 11:38	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279226	1	05/10/19 17:38	05/10/19 17:38	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 19:07	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 16:11	AAT	Mt. Juliet, TN

## WMW-29-20190507 L1097209-10 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 10:10  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:14	05/16/19 11:14	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:31	05/16/19 15:31	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:05	05/10/19 17:05	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 20:14	05/13/19 20:14	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1278941	1	05/10/19 08:11	05/12/19 12:39	TCT	Mt. Juliet, TN
Mercury by Method 7470A	WG1278946	1	05/10/19 08:16	05/12/19 11:51	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 23:32	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 17:38	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:48	05/13/19 11:48	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279226	1	05/10/19 17:59	05/10/19 17:59	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 19:24	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 16:33	AAT	Mt. Juliet, TN

## WMW-17-20190508 L1097209-11 GW

Collected by  
K. Teague  
Collected date/time  
05/08/19 08:20  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:17	05/16/19 11:17	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:34	05/16/19 15:34	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:06	05/10/19 17:06	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 20:32	05/13/19 20:32	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 23:36	LD	Mt. Juliet, TN

# SAMPLE SUMMARY



## WMW-17-20190508 L1097209-11 GW

Collected by: K. Teague  
 Collected date/time: 05/08/19 08:20  
 Received date/time: 05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 17:42	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1279922	1	05/12/19 15:56	05/12/19 15:56	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 11:55	05/13/19 11:55	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 19:41	SHG	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## DUP-02-20190508 L1097209-12 GW

Collected by: K. Teague  
 Collected date/time: 05/08/19 08:30  
 Received date/time: 05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:23	05/16/19 11:23	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:37	05/16/19 15:37	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:06	05/10/19 17:06	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 20:50	05/13/19 20:50	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 23:41	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 17:47	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1279922	1	05/12/19 16:20	05/12/19 16:20	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 12:00	05/13/19 12:00	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 19:58	SHG	Mt. Juliet, TN

## WMW-30-20190507 L1097209-13 GW

Collected by: K. Teague  
 Collected date/time: 05/07/19 14:00  
 Received date/time: 05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:25	05/16/19 11:25	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1282741	1	05/20/19 08:59	05/20/19 08:59	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:07	05/10/19 17:07	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 21:07	05/13/19 21:07	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1278941	1	05/10/19 08:11	05/12/19 12:42	TCT	Mt. Juliet, TN
Mercury by Method 7470A	WG1278946	1	05/10/19 08:16	05/12/19 11:58	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 23:45	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 17:52	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 12:03	05/13/19 12:03	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279719	1	05/11/19 16:38	05/11/19 16:38	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 20:15	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 14:40	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 16:54	AAT	Mt. Juliet, TN

## RMD-1-20190507 L1097209-14 GW

Collected by: K. Teague  
 Collected date/time: 05/07/19 13:05  
 Received date/time: 05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:26	05/16/19 11:26	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:46	05/16/19 15:46	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:08	05/10/19 17:08	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 21:25	05/13/19 21:25	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/15/19 23:50	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 12:06	05/13/19 12:06	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 20:32	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 15:02	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 17:16	AAT	Mt. Juliet, TN

# SAMPLE SUMMARY



## RMD-2-20190507 L1097209-15 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 15:05  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:28	05/16/19 11:28	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:48	05/16/19 15:48	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:08	05/10/19 17:08	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 21:43	05/13/19 21:43	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/16/19 00:12	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 12:09	05/13/19 12:09	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280105	10	05/13/19 13:43	05/13/19 13:43	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 23:58	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	5	05/11/19 02:29	05/12/19 22:24	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 15:24	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 17:38	AAT	Mt. Juliet, TN

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

## RMD-3-20190507 L1097209-16 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 16:20  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:29	05/16/19 11:29	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:49	05/16/19 15:49	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:09	05/10/19 17:09	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 22:37	05/13/19 22:37	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/16/19 00:16	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 12:58	05/13/19 12:58	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 20:49	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 18:00	AAT	Mt. Juliet, TN

## RMD-5-20190507 L1097209-17 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 10:45  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1281425	1	05/16/19 11:31	05/16/19 11:31	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1281636	1	05/16/19 15:51	05/16/19 15:51	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1279137	1	05/10/19 17:10	05/10/19 17:10	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1279128	1	05/13/19 22:55	05/13/19 22:55	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279582	1	05/15/19 07:13	05/16/19 00:21	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 17:56	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280098	1	05/13/19 13:01	05/13/19 13:01	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279719	1	05/11/19 16:59	05/11/19 16:59	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278954	1	05/11/19 02:29	05/11/19 21:07	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 15:47	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1278969	1	05/10/19 09:37	05/10/19 18:22	AAT	Mt. Juliet, TN

## TB-01 L1097209-19 GW

Collected by  
K. Teague  
Collected date/time  
05/07/19 10:45  
Received date/time  
05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279868	1	05/12/19 11:49	05/12/19 11:49	BMB	Mt. Juliet, TN

# SAMPLE SUMMARY



## TB-02 L1097209-20 GW

Collected by: K. Teague  
 Collected date/time: 05/07/19 10:45  
 Received date/time: 05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279868	1	05/12/19 12:10	05/12/19 12:10	BMB	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## TB-03 L1097209-21 GW

Collected by: K. Teague  
 Collected date/time: 05/07/19 10:45  
 Received date/time: 05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279868	1	05/12/19 12:31	05/12/19 12:31	BMB	Mt. Juliet, TN

4 Cn

5 Sr

## TB-04 L1097209-22 GW

Collected by: K. Teague  
 Collected date/time: 05/07/19 10:45  
 Received date/time: 05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279868	1	05/12/19 12:52	05/12/19 12:52	BMB	Mt. Juliet, TN

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.

Olivia Studebaker  
Project Manager

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/16/2019 10:48	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	28100	J6	1000	10	05/16/2019 15:09	<a href="#">WG1281636</a>

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	05/10/2019 17:30	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	37000		5000	1	05/13/2019 16:03	<a href="#">WG1279128</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/15/2019 22:18	<a href="#">WG1279582</a>
Manganese,Dissolved	ND		5.00	1	05/15/2019 22:18	<a href="#">WG1279582</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 11:17	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:17	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:17	<a href="#">WG1280098</a>

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	05/11/2019 15:41	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	ND		250	1	05/11/2019 15:41	<a href="#">WG1278954</a>
(S) o-Terphenyl	90.0		52.0-156		05/11/2019 15:41	<a href="#">WG1278954</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/16/2019 10:51	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	659		100	1	05/16/2019 15:13	<a href="#">WG1281636</a>

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	05/10/2019 17:00	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	11400		5000	1	05/13/2019 17:14	<a href="#">WG1279128</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/15/2019 22:37	<a href="#">WG1279582</a>
Manganese,Dissolved	8.55		5.00	1	05/15/2019 22:37	<a href="#">WG1279582</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 11:20	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:20	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:20	<a href="#">WG1280098</a>

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	05/11/2019 15:58	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	ND		250	1	05/11/2019 15:58	<a href="#">WG1278954</a>
(S) o-Terphenyl	87.9		52.0-156		05/11/2019 15:58	<a href="#">WG1278954</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	05/14/2019 13:56	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 13:56	<a href="#">WG1278958</a>
(S) o-Terphenyl	58.9		52.0-156		05/14/2019 13:56	<a href="#">WG1278958</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/16/2019 10:56	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	373		100	1	05/16/2019 15:15	<a href="#">WG1281636</a>

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	05/10/2019 17:01	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	19600		5000	1	05/13/2019 17:32	<a href="#">WG1279128</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	262		100	1	05/15/2019 22:41	<a href="#">WG1279582</a>
Manganese,Dissolved	562		5.00	1	05/15/2019 22:41	<a href="#">WG1279582</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	206		10.0	1	05/13/2019 11:22	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:22	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:22	<a href="#">WG1280098</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4430		200	1	05/11/2019 23:24	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	4150		250	1	05/11/2019 23:24	<a href="#">WG1278954</a>
(S) o-Terphenyl	102		52.0-156		05/11/2019 23:24	<a href="#">WG1278954</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	128	B	100	1	05/16/2019 11:02	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	146		100	1	05/16/2019 15:16	<a href="#">WG1281636</a>

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	05/10/2019 17:03	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	8110		5000	1	05/13/2019 17:50	<a href="#">WG1279128</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	1090		100	1	05/15/2019 22:46	<a href="#">WG1279582</a>
Manganese,Dissolved	611		5.00	1	05/15/2019 22:46	<a href="#">WG1279582</a>

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	05/12/2019 15:32	<a href="#">WG1279922</a>
(S) a,a,a-Trifluorotoluene(FID)	86.4		78.0-120		05/12/2019 15:32	<a href="#">WG1279922</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	995		10.0	1	05/13/2019 11:24	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:24	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:24	<a href="#">WG1280098</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	10300		1000	5	05/12/2019 22:07	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	2690		250	1	05/11/2019 23:41	<a href="#">WG1278954</a>
(S) o-Terphenyl	96.8		52.0-156		05/12/2019 22:07	<a href="#">WG1278954</a>
(S) o-Terphenyl	85.3		52.0-156		05/11/2019 23:41	<a href="#">WG1278954</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1730		200	1	05/15/2019 01:29	<a href="#">WG1280920</a>
Residual Range Organics (RRO)	ND		250	1	05/15/2019 01:29	<a href="#">WG1280920</a>
(S) o-Terphenyl	102		52.0-156		05/15/2019 01:29	<a href="#">WG1280920</a>



Collected date/time: 05/07/19 14:05

L1097209

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	05/10/2019 13:16	<a href="#">WG1278969</a>
Acenaphthene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Acenaphthylene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Chrysene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Fluoranthene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Fluorene	0.0660		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Naphthalene	ND		0.250	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Phenanthrene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
Pyrene	ND		0.0500	1	05/10/2019 13:16	<a href="#">WG1278969</a>
1-Methylnaphthalene	0.441		0.250	1	05/10/2019 13:16	<a href="#">WG1278969</a>
2-Methylnaphthalene	ND		0.250	1	05/10/2019 13:16	<a href="#">WG1278969</a>
2-Chloronaphthalene	ND		0.250	1	05/10/2019 13:16	<a href="#">WG1278969</a>
(S) Nitrobenzene-d5	135		31.0-160		05/10/2019 13:16	<a href="#">WG1278969</a>
(S) 2-Fluorobiphenyl	93.7		48.0-148		05/10/2019 13:16	<a href="#">WG1278969</a>
(S) p-Terphenyl-d14	99.5		37.0-146		05/10/2019 13:16	<a href="#">WG1278969</a>

- 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	05/16/2019 11:04	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3460		100	1	05/16/2019 15:24	<a href="#">WG1281636</a>

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	05/10/2019 17:03	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	9110		5000	1	05/13/2019 18:08	<a href="#">WG1279128</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/15/2019 23:09	<a href="#">WG1279582</a>
Lead	ND		2.00	1	05/14/2019 17:01	<a href="#">WG1279590</a>
Lead,Dissolved	ND		2.00	1	05/15/2019 23:09	<a href="#">WG1279582</a>
Manganese,Dissolved	8.45		5.00	1	05/15/2019 23:09	<a href="#">WG1279582</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 11:29	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:29	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:29	<a href="#">WG1280098</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	05/11/2019 16:18	<a href="#">WG1279719</a>
Toluene	ND		1.00	1	05/11/2019 16:18	<a href="#">WG1279719</a>
Ethylbenzene	ND		1.00	1	05/11/2019 16:18	<a href="#">WG1279719</a>
o-Xylene	ND		1.00	1	05/11/2019 16:18	<a href="#">WG1279719</a>
m&p-Xylene	ND		2.00	1	05/11/2019 16:18	<a href="#">WG1279719</a>
(S) Toluene-d8	95.2		80.0-120		05/11/2019 16:18	<a href="#">WG1279719</a>
(S) a,a,a-Trifluorotoluene	100		80.0-120		05/11/2019 16:18	<a href="#">WG1279719</a>
(S) 4-Bromofluorobenzene	102		77.0-126		05/11/2019 16:18	<a href="#">WG1279719</a>
(S) 1,2-Dichloroethane-d4	96.6		70.0-130		05/11/2019 16:18	<a href="#">WG1279719</a>

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	05/11/2019 16:15	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	ND		250	1	05/11/2019 16:15	<a href="#">WG1278954</a>
(S) o-Terphenyl	95.3		52.0-156		05/11/2019 16:15	<a href="#">WG1278954</a>



Collected date/time: 05/07/19 09:00

L1097209

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	05/10/2019 13:38	<a href="#">WG1278969</a>
Acenaphthene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Acenaphthylene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Chrysene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Fluoranthene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Fluorene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Naphthalene	ND		0.250	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Phenanthrene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
Pyrene	ND		0.0500	1	05/10/2019 13:38	<a href="#">WG1278969</a>
1-Methylnaphthalene	ND		0.250	1	05/10/2019 13:38	<a href="#">WG1278969</a>
2-Methylnaphthalene	ND		0.250	1	05/10/2019 13:38	<a href="#">WG1278969</a>
2-Chloronaphthalene	ND		0.250	1	05/10/2019 13:38	<a href="#">WG1278969</a>
(S) Nitrobenzene-d5	122		31.0-160		05/10/2019 13:38	<a href="#">WG1278969</a>
(S) 2-Fluorobiphenyl	104		48.0-148		05/10/2019 13:38	<a href="#">WG1278969</a>
(S) p-Terphenyl-d14	100		37.0-146		05/10/2019 13:38	<a href="#">WG1278969</a>

- 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	05/16/2019 11:06	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4820		100	1	05/16/2019 15:25	<a href="#">WG1281636</a>

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	05/10/2019 17:03	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	30600		5000	1	05/13/2019 19:02	<a href="#">WG1279128</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/12/2019 12:30	<a href="#">WG1278941</a>
Mercury,Dissolved	ND		0.200	1	05/12/2019 11:36	<a href="#">WG1278946</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	25.7		2.00	1	05/14/2019 17:06	<a href="#">WG1279590</a>
Arsenic,Dissolved	28.1		2.00	1	05/15/2019 23:13	<a href="#">WG1279582</a>
Barium	34.4		5.00	1	05/14/2019 17:06	<a href="#">WG1279590</a>
Barium,Dissolved	33.0		5.00	1	05/15/2019 23:13	<a href="#">WG1279582</a>
Cadmium	ND		1.00	1	05/14/2019 17:06	<a href="#">WG1279590</a>
Cadmium,Dissolved	ND		1.00	1	05/15/2019 23:13	<a href="#">WG1279582</a>
Chromium	7.58		2.00	1	05/14/2019 17:06	<a href="#">WG1279590</a>
Chromium,Dissolved	8.59		2.00	1	05/15/2019 23:13	<a href="#">WG1279582</a>
Iron,Dissolved	ND		100	1	05/15/2019 23:13	<a href="#">WG1279582</a>
Lead	ND		2.00	1	05/14/2019 17:06	<a href="#">WG1279590</a>
Lead,Dissolved	ND		2.00	1	05/15/2019 23:13	<a href="#">WG1279582</a>
Manganese,Dissolved	100		5.00	1	05/15/2019 23:13	<a href="#">WG1279582</a>
Selenium	ND		2.00	1	05/14/2019 17:06	<a href="#">WG1279590</a>
Selenium,Dissolved	ND		2.00	1	05/15/2019 23:13	<a href="#">WG1279582</a>
Silver	ND		2.00	1	05/14/2019 17:06	<a href="#">WG1279590</a>
Silver,Dissolved	ND		2.00	1	05/15/2019 23:13	<a href="#">WG1279582</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 11:31	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:31	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:31	<a href="#">WG1280098</a>



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	05/10/2019 16:36	<a href="#">WG1279226</a>
Acrolein	ND	<u>JO</u>	50.0	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Acrylonitrile	ND		10.0	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Benzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Bromobenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Bromodichloromethane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Bromoform	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Bromomethane	ND		5.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
n-Butylbenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
sec-Butylbenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
tert-Butylbenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Carbon tetrachloride	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Chlorobenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Chlorodibromomethane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Chloroethane	ND		5.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Chloroform	ND		5.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Chloromethane	ND		2.50	1	05/10/2019 16:36	<a href="#">WG1279226</a>
2-Chlorotoluene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
4-Chlorotoluene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,2-Dibromoethane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Dibromomethane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,2-Dichlorobenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,3-Dichlorobenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,4-Dichlorobenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Dichlorodifluoromethane	ND		5.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,1-Dichloroethane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,2-Dichloroethane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,1-Dichloroethene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
cis-1,2-Dichloroethene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
trans-1,2-Dichloroethene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,2-Dichloropropane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,1-Dichloropropene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,3-Dichloropropane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
cis-1,3-Dichloropropene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
trans-1,3-Dichloropropene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
2,2-Dichloropropane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Di-isopropyl ether	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Ethylbenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Hexachloro-1,3-butadiene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Isopropylbenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
p-Isopropyltoluene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
2-Butanone (MEK)	ND		10.0	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Methylene Chloride	ND		5.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Methyl tert-butyl ether	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Naphthalene	ND		5.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
n-Propylbenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Styrene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Tetrachloroethene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Toluene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,2,3-Trichlorobenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,2,4-Trichlorobenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/07/19 15:30

L1097209

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	05/10/2019 16:36	<a href="#">WG1279226</a>
1,1,2-Trichloroethane	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Trichloroethene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Trichlorofluoromethane	ND		5.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,2,3-Trichloropropane	ND		2.50	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
Vinyl chloride	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
o-Xylene	ND		1.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
m&p-Xylene	ND		2.00	1	05/10/2019 16:36	<a href="#">WG1279226</a>
(S) Toluene-d8	94.7		80.0-120		05/10/2019 16:36	<a href="#">WG1279226</a>
(S) 4-Bromofluorobenzene	114		77.0-126		05/10/2019 16:36	<a href="#">WG1279226</a>
(S) 1,2-Dichloroethane-d4	99.0		70.0-130		05/10/2019 16:36	<a href="#">WG1279226</a>

- 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)	244		200	1	05/11/2019 16:32	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	670		250	1	05/11/2019 16:32	<a href="#">WG1278954</a>
(S) o-Terphenyl	95.8		52.0-156		05/11/2019 16:32	<a href="#">WG1278954</a>

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	05/10/2019 14:00	<a href="#">WG1278969</a>
Acenaphthene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Acenaphthylene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Chrysene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Fluoranthene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Fluorene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Naphthalene	ND		0.250	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Phenanthrene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
Pyrene	ND		0.0500	1	05/10/2019 14:00	<a href="#">WG1278969</a>
1-Methylnaphthalene	ND		0.250	1	05/10/2019 14:00	<a href="#">WG1278969</a>
2-Methylnaphthalene	ND		0.250	1	05/10/2019 14:00	<a href="#">WG1278969</a>
2-Chloronaphthalene	ND		0.250	1	05/10/2019 14:00	<a href="#">WG1278969</a>
(S) Nitrobenzene-d5	123		31.0-160		05/10/2019 14:00	<a href="#">WG1278969</a>
(S) 2-Fluorobiphenyl	107		48.0-148		05/10/2019 14:00	<a href="#">WG1278969</a>
(S) p-Terphenyl-d14	96.8		37.0-146		05/10/2019 14:00	<a href="#">WG1278969</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/16/2019 11:07	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3700		100	1	05/16/2019 15:27	<a href="#">WG1281636</a>

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	05/10/2019 17:04	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	18400		5000	1	05/13/2019 19:20	<a href="#">WG1279128</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/12/2019 12:32	<a href="#">WG1278941</a>
Mercury,Dissolved	ND		0.200	1	05/12/2019 11:43	<a href="#">WG1278946</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	2.18		2.00	1	05/14/2019 17:10	<a href="#">WG1279590</a>
Arsenic,Dissolved	2.27		2.00	1	05/15/2019 23:18	<a href="#">WG1279582</a>
Barium	55.9		5.00	1	05/14/2019 17:10	<a href="#">WG1279590</a>
Barium,Dissolved	54.5		5.00	1	05/15/2019 23:18	<a href="#">WG1279582</a>
Cadmium	ND		1.00	1	05/14/2019 17:10	<a href="#">WG1279590</a>
Cadmium,Dissolved	ND		1.00	1	05/15/2019 23:18	<a href="#">WG1279582</a>
Chromium	14.0		2.00	1	05/14/2019 17:10	<a href="#">WG1279590</a>
Chromium,Dissolved	15.0		2.00	1	05/15/2019 23:18	<a href="#">WG1279582</a>
Iron,Dissolved	ND		100	1	05/15/2019 23:18	<a href="#">WG1279582</a>
Lead	ND		2.00	1	05/14/2019 17:10	<a href="#">WG1279590</a>
Lead,Dissolved	ND		2.00	1	05/15/2019 23:18	<a href="#">WG1279582</a>
Manganese,Dissolved	5.39		5.00	1	05/15/2019 23:18	<a href="#">WG1279582</a>
Selenium	ND		2.00	1	05/14/2019 17:10	<a href="#">WG1279590</a>
Selenium,Dissolved	ND		2.00	1	05/15/2019 23:18	<a href="#">WG1279582</a>
Silver	ND		2.00	1	05/14/2019 17:10	<a href="#">WG1279590</a>
Silver,Dissolved	ND		2.00	1	05/15/2019 23:18	<a href="#">WG1279582</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 11:34	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:34	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:34	<a href="#">WG1280098</a>



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	05/10/2019 16:57	<a href="#">WG1279226</a>
Acrolein	ND	<u>JO</u>	50.0	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Acrylonitrile	ND		10.0	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Benzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Bromobenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Bromodichloromethane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Bromoform	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Bromomethane	ND		5.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
n-Butylbenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
sec-Butylbenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
tert-Butylbenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Carbon tetrachloride	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Chlorobenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Chlorodibromomethane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Chloroethane	ND		5.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Chloroform	ND		5.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Chloromethane	ND		2.50	1	05/10/2019 16:57	<a href="#">WG1279226</a>
2-Chlorotoluene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
4-Chlorotoluene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,2-Dibromoethane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Dibromomethane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,2-Dichlorobenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,3-Dichlorobenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,4-Dichlorobenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Dichlorodifluoromethane	ND		5.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,1-Dichloroethane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,2-Dichloroethane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,1-Dichloroethene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
cis-1,2-Dichloroethene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
trans-1,2-Dichloroethene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,2-Dichloropropane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,1-Dichloropropene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,3-Dichloropropane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
cis-1,3-Dichloropropene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
trans-1,3-Dichloropropene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
2,2-Dichloropropane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Di-isopropyl ether	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Ethylbenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Hexachloro-1,3-butadiene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Isopropylbenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
p-Isopropyltoluene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
2-Butanone (MEK)	ND		10.0	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Methylene Chloride	ND		5.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Methyl tert-butyl ether	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Naphthalene	ND		5.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
n-Propylbenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Styrene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Tetrachloroethene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
Toluene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,2,3-Trichlorobenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>
1,2,4-Trichlorobenzene	ND		1.00	1	05/10/2019 16:57	<a href="#">WG1279226</a>

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	05/10/2019 16:57	WG1279226
1,1,2-Trichloroethane	ND		1.00	1	05/10/2019 16:57	WG1279226
Trichloroethene	ND		1.00	1	05/10/2019 16:57	WG1279226
Trichlorofluoromethane	ND		5.00	1	05/10/2019 16:57	WG1279226
1,2,3-Trichloropropane	ND		2.50	1	05/10/2019 16:57	WG1279226
1,2,4-Trimethylbenzene	ND		1.00	1	05/10/2019 16:57	WG1279226
1,2,3-Trimethylbenzene	ND		1.00	1	05/10/2019 16:57	WG1279226
1,3,5-Trimethylbenzene	ND		1.00	1	05/10/2019 16:57	WG1279226
Vinyl chloride	ND		1.00	1	05/10/2019 16:57	WG1279226
o-Xylene	ND		1.00	1	05/10/2019 16:57	WG1279226
m&p-Xylene	ND		2.00	1	05/10/2019 16:57	WG1279226
(S) Toluene-d8	94.4		80.0-120		05/10/2019 16:57	WG1279226
(S) 4-Bromofluorobenzene	111		77.0-126		05/10/2019 16:57	WG1279226
(S) 1,2-Dichloroethane-d4	104		70.0-130		05/10/2019 16:57	WG1279226

- 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)	371		200	1	05/11/2019 16:49	WG1278954
Residual Range Organics (RRO)	800		250	1	05/11/2019 16:49	WG1278954
(S) o-Terphenyl	100		52.0-156		05/11/2019 16:49	WG1278954

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	05/14/2019 14:18	WG1278958
Residual Range Organics (RRO)	ND		250	1	05/14/2019 14:18	WG1278958
(S) o-Terphenyl	61.1		52.0-156		05/14/2019 14:18	WG1278958

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Acenaphthene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Acenaphthylene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Chrysene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Fluoranthene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Fluorene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Naphthalene	ND		0.250	1	05/10/2019 14:21	WG1278969
Phenanthrene	ND		0.0500	1	05/10/2019 14:21	WG1278969
Pyrene	ND		0.0500	1	05/10/2019 14:21	WG1278969
1-Methylnaphthalene	ND		0.250	1	05/10/2019 14:21	WG1278969
2-Methylnaphthalene	ND		0.250	1	05/10/2019 14:21	WG1278969
2-Chloronaphthalene	ND		0.250	1	05/10/2019 14:21	WG1278969
(S) Nitrobenzene-d5	128		31.0-160		05/10/2019 14:21	WG1278969
(S) 2-Fluorobiphenyl	112		48.0-148		05/10/2019 14:21	WG1278969
(S) p-Terphenyl-d14	107		37.0-146		05/10/2019 14:21	WG1278969



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/16/2019 11:09	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4110		100	1	05/16/2019 15:28	<a href="#">WG1281636</a>

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	05/10/2019 17:04	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	10600		5000	1	05/13/2019 19:38	<a href="#">WG1279128</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/12/2019 12:35	<a href="#">WG1278941</a>
Mercury,Dissolved	ND		0.200	1	05/12/2019 11:46	<a href="#">WG1278946</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	6.24		2.00	1	05/14/2019 17:15	<a href="#">WG1279590</a>
Arsenic,Dissolved	6.41		2.00	1	05/15/2019 23:23	<a href="#">WG1279582</a>
Barium	22.6		5.00	1	05/14/2019 17:15	<a href="#">WG1279590</a>
Barium,Dissolved	22.3		5.00	1	05/15/2019 23:23	<a href="#">WG1279582</a>
Cadmium	ND		1.00	1	05/14/2019 17:15	<a href="#">WG1279590</a>
Cadmium,Dissolved	ND		1.00	1	05/15/2019 23:23	<a href="#">WG1279582</a>
Chromium	4.24		2.00	1	05/14/2019 17:15	<a href="#">WG1279590</a>
Chromium,Dissolved	4.30		2.00	1	05/15/2019 23:23	<a href="#">WG1279582</a>
Iron,Dissolved	ND		100	1	05/15/2019 23:23	<a href="#">WG1279582</a>
Lead	ND		2.00	1	05/14/2019 17:15	<a href="#">WG1279590</a>
Lead,Dissolved	ND		2.00	1	05/15/2019 23:23	<a href="#">WG1279582</a>
Manganese,Dissolved	ND		5.00	1	05/15/2019 23:23	<a href="#">WG1279582</a>
Selenium	ND		2.00	1	05/14/2019 17:15	<a href="#">WG1279590</a>
Selenium,Dissolved	ND		2.00	1	05/15/2019 23:23	<a href="#">WG1279582</a>
Silver	ND		2.00	1	05/14/2019 17:15	<a href="#">WG1279590</a>
Silver,Dissolved	ND		2.00	1	05/15/2019 23:23	<a href="#">WG1279582</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 11:36	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:36	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:36	<a href="#">WG1280098</a>



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	05/10/2019 17:17	WG1279226
Acrolein	ND	JO	50.0	1	05/10/2019 17:17	WG1279226
Acrylonitrile	ND		10.0	1	05/10/2019 17:17	WG1279226
Benzene	ND		1.00	1	05/10/2019 17:17	WG1279226
Bromobenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
Bromodichloromethane	ND		1.00	1	05/10/2019 17:17	WG1279226
Bromoform	ND		1.00	1	05/10/2019 17:17	WG1279226
Bromomethane	ND		5.00	1	05/10/2019 17:17	WG1279226
n-Butylbenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
sec-Butylbenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
tert-Butylbenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
Carbon tetrachloride	ND		1.00	1	05/10/2019 17:17	WG1279226
Chlorobenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
Chlorodibromomethane	ND		1.00	1	05/10/2019 17:17	WG1279226
Chloroethane	ND		5.00	1	05/10/2019 17:17	WG1279226
Chloroform	ND		5.00	1	05/10/2019 17:17	WG1279226
Chloromethane	ND		2.50	1	05/10/2019 17:17	WG1279226
2-Chlorotoluene	ND		1.00	1	05/10/2019 17:17	WG1279226
4-Chlorotoluene	ND		1.00	1	05/10/2019 17:17	WG1279226
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/10/2019 17:17	WG1279226
1,2-Dibromoethane	ND		1.00	1	05/10/2019 17:17	WG1279226
Dibromomethane	ND		1.00	1	05/10/2019 17:17	WG1279226
1,2-Dichlorobenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
1,3-Dichlorobenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
1,4-Dichlorobenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
Dichlorodifluoromethane	ND		5.00	1	05/10/2019 17:17	WG1279226
1,1-Dichloroethane	ND		1.00	1	05/10/2019 17:17	WG1279226
1,2-Dichloroethane	ND		1.00	1	05/10/2019 17:17	WG1279226
1,1-Dichloroethene	ND		1.00	1	05/10/2019 17:17	WG1279226
cis-1,2-Dichloroethene	ND		1.00	1	05/10/2019 17:17	WG1279226
trans-1,2-Dichloroethene	ND		1.00	1	05/10/2019 17:17	WG1279226
1,2-Dichloropropane	ND		1.00	1	05/10/2019 17:17	WG1279226
1,1-Dichloropropene	ND		1.00	1	05/10/2019 17:17	WG1279226
1,3-Dichloropropane	ND		1.00	1	05/10/2019 17:17	WG1279226
cis-1,3-Dichloropropene	ND		1.00	1	05/10/2019 17:17	WG1279226
trans-1,3-Dichloropropene	ND		1.00	1	05/10/2019 17:17	WG1279226
2,2-Dichloropropane	ND		1.00	1	05/10/2019 17:17	WG1279226
Di-isopropyl ether	ND		1.00	1	05/10/2019 17:17	WG1279226
Ethylbenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
Hexachloro-1,3-butadiene	ND		1.00	1	05/10/2019 17:17	WG1279226
Isopropylbenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
p-Isopropyltoluene	ND		1.00	1	05/10/2019 17:17	WG1279226
2-Butanone (MEK)	ND		10.0	1	05/10/2019 17:17	WG1279226
Methylene Chloride	ND		5.00	1	05/10/2019 17:17	WG1279226
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/10/2019 17:17	WG1279226
Methyl tert-butyl ether	ND		1.00	1	05/10/2019 17:17	WG1279226
Naphthalene	ND		5.00	1	05/10/2019 17:17	WG1279226
n-Propylbenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
Styrene	ND		1.00	1	05/10/2019 17:17	WG1279226
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/10/2019 17:17	WG1279226
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/10/2019 17:17	WG1279226
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/10/2019 17:17	WG1279226
Tetrachloroethene	ND		1.00	1	05/10/2019 17:17	WG1279226
Toluene	ND		1.00	1	05/10/2019 17:17	WG1279226
1,2,3-Trichlorobenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
1,2,4-Trichlorobenzene	ND		1.00	1	05/10/2019 17:17	WG1279226

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	05/10/2019 17:17	WG1279226
1,1,2-Trichloroethane	ND		1.00	1	05/10/2019 17:17	WG1279226
Trichloroethene	ND		1.00	1	05/10/2019 17:17	WG1279226
Trichlorofluoromethane	ND		5.00	1	05/10/2019 17:17	WG1279226
1,2,3-Trichloropropane	ND		2.50	1	05/10/2019 17:17	WG1279226
1,2,4-Trimethylbenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
1,2,3-Trimethylbenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
1,3,5-Trimethylbenzene	ND		1.00	1	05/10/2019 17:17	WG1279226
Vinyl chloride	ND		1.00	1	05/10/2019 17:17	WG1279226
o-Xylene	ND		1.00	1	05/10/2019 17:17	WG1279226
m&p-Xylene	ND		2.00	1	05/10/2019 17:17	WG1279226
(S) Toluene-d8	94.5		80.0-120		05/10/2019 17:17	WG1279226
(S) 4-Bromofluorobenzene	110		77.0-126		05/10/2019 17:17	WG1279226
(S) 1,2-Dichloroethane-d4	98.3		70.0-130		05/10/2019 17:17	WG1279226

- 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	05/11/2019 17:06	WG1278954
Residual Range Organics (RRO)	ND		250	1	05/11/2019 17:06	WG1278954
(S) o-Terphenyl	97.9		52.0-156		05/11/2019 17:06	WG1278954

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Acenaphthene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Acenaphthylene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Chrysene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Fluoranthene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Fluorene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Naphthalene	ND		0.250	1	05/10/2019 15:49	WG1278969
Phenanthrene	ND		0.0500	1	05/10/2019 15:49	WG1278969
Pyrene	ND		0.0500	1	05/10/2019 15:49	WG1278969
1-Methylnaphthalene	ND		0.250	1	05/10/2019 15:49	WG1278969
2-Methylnaphthalene	ND		0.250	1	05/10/2019 15:49	WG1278969
2-Chloronaphthalene	ND		0.250	1	05/10/2019 15:49	WG1278969
(S) Nitrobenzene-d5	123		31.0-160		05/10/2019 15:49	WG1278969
(S) 2-Fluorobiphenyl	107		48.0-148		05/10/2019 15:49	WG1278969
(S) p-Terphenyl-d14	103		37.0-146		05/10/2019 15:49	WG1278969



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/16/2019 11:10	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4020		100	1	05/16/2019 15:30	<a href="#">WG1281636</a>

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	05/10/2019 17:05	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	10500		5000	1	05/13/2019 19:56	<a href="#">WG1279128</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/12/2019 12:37	<a href="#">WG1278941</a>
Mercury,Dissolved	ND		0.200	1	05/12/2019 11:48	<a href="#">WG1278946</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	5.71		2.00	1	05/14/2019 17:20	<a href="#">WG1279590</a>
Arsenic,Dissolved	6.63		2.00	1	05/15/2019 23:27	<a href="#">WG1279582</a>
Barium	22.0		5.00	1	05/14/2019 17:20	<a href="#">WG1279590</a>
Barium,Dissolved	22.1		5.00	1	05/15/2019 23:27	<a href="#">WG1279582</a>
Cadmium	ND		1.00	1	05/14/2019 17:20	<a href="#">WG1279590</a>
Cadmium,Dissolved	ND		1.00	1	05/15/2019 23:27	<a href="#">WG1279582</a>
Chromium	4.13		2.00	1	05/14/2019 17:20	<a href="#">WG1279590</a>
Chromium,Dissolved	4.35		2.00	1	05/15/2019 23:27	<a href="#">WG1279582</a>
Iron,Dissolved	ND		100	1	05/15/2019 23:27	<a href="#">WG1279582</a>
Lead	ND		2.00	1	05/14/2019 17:20	<a href="#">WG1279590</a>
Lead,Dissolved	ND		2.00	1	05/15/2019 23:27	<a href="#">WG1279582</a>
Manganese,Dissolved	ND		5.00	1	05/15/2019 23:27	<a href="#">WG1279582</a>
Selenium	ND		2.00	1	05/14/2019 17:20	<a href="#">WG1279590</a>
Selenium,Dissolved	ND		2.00	1	05/15/2019 23:27	<a href="#">WG1279582</a>
Silver	ND		2.00	1	05/14/2019 17:20	<a href="#">WG1279590</a>
Silver,Dissolved	ND		2.00	1	05/15/2019 23:27	<a href="#">WG1279582</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 11:38	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:38	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:38	<a href="#">WG1280098</a>



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	05/10/2019 17:38	WG1279226
Acrolein	ND	JO	50.0	1	05/10/2019 17:38	WG1279226
Acrylonitrile	ND		10.0	1	05/10/2019 17:38	WG1279226
Benzene	ND		1.00	1	05/10/2019 17:38	WG1279226
Bromobenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
Bromodichloromethane	ND		1.00	1	05/10/2019 17:38	WG1279226
Bromoform	ND		1.00	1	05/10/2019 17:38	WG1279226
Bromomethane	ND		5.00	1	05/10/2019 17:38	WG1279226
n-Butylbenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
sec-Butylbenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
tert-Butylbenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
Carbon tetrachloride	ND		1.00	1	05/10/2019 17:38	WG1279226
Chlorobenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
Chlorodibromomethane	ND		1.00	1	05/10/2019 17:38	WG1279226
Chloroethane	ND		5.00	1	05/10/2019 17:38	WG1279226
Chloroform	ND		5.00	1	05/10/2019 17:38	WG1279226
Chloromethane	ND		2.50	1	05/10/2019 17:38	WG1279226
2-Chlorotoluene	ND		1.00	1	05/10/2019 17:38	WG1279226
4-Chlorotoluene	ND		1.00	1	05/10/2019 17:38	WG1279226
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/10/2019 17:38	WG1279226
1,2-Dibromoethane	ND		1.00	1	05/10/2019 17:38	WG1279226
Dibromomethane	ND		1.00	1	05/10/2019 17:38	WG1279226
1,2-Dichlorobenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
1,3-Dichlorobenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
1,4-Dichlorobenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
Dichlorodifluoromethane	ND		5.00	1	05/10/2019 17:38	WG1279226
1,1-Dichloroethane	ND		1.00	1	05/10/2019 17:38	WG1279226
1,2-Dichloroethane	ND		1.00	1	05/10/2019 17:38	WG1279226
1,1-Dichloroethene	ND		1.00	1	05/10/2019 17:38	WG1279226
cis-1,2-Dichloroethene	ND		1.00	1	05/10/2019 17:38	WG1279226
trans-1,2-Dichloroethene	ND		1.00	1	05/10/2019 17:38	WG1279226
1,2-Dichloropropane	ND		1.00	1	05/10/2019 17:38	WG1279226
1,1-Dichloropropene	ND		1.00	1	05/10/2019 17:38	WG1279226
1,3-Dichloropropane	ND		1.00	1	05/10/2019 17:38	WG1279226
cis-1,3-Dichloropropene	ND		1.00	1	05/10/2019 17:38	WG1279226
trans-1,3-Dichloropropene	ND		1.00	1	05/10/2019 17:38	WG1279226
2,2-Dichloropropane	ND		1.00	1	05/10/2019 17:38	WG1279226
Di-isopropyl ether	ND		1.00	1	05/10/2019 17:38	WG1279226
Ethylbenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
Hexachloro-1,3-butadiene	ND		1.00	1	05/10/2019 17:38	WG1279226
Isopropylbenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
p-Isopropyltoluene	ND		1.00	1	05/10/2019 17:38	WG1279226
2-Butanone (MEK)	ND		10.0	1	05/10/2019 17:38	WG1279226
Methylene Chloride	ND		5.00	1	05/10/2019 17:38	WG1279226
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/10/2019 17:38	WG1279226
Methyl tert-butyl ether	ND		1.00	1	05/10/2019 17:38	WG1279226
Naphthalene	ND		5.00	1	05/10/2019 17:38	WG1279226
n-Propylbenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
Styrene	ND		1.00	1	05/10/2019 17:38	WG1279226
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/10/2019 17:38	WG1279226
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/10/2019 17:38	WG1279226
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/10/2019 17:38	WG1279226
Tetrachloroethene	ND		1.00	1	05/10/2019 17:38	WG1279226
Toluene	ND		1.00	1	05/10/2019 17:38	WG1279226
1,2,3-Trichlorobenzene	ND		1.00	1	05/10/2019 17:38	WG1279226
1,2,4-Trichlorobenzene	ND		1.00	1	05/10/2019 17:38	WG1279226

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	
1,1,1-Trichloroethane	ND		1.00	1	05/10/2019 17:38	<a href="#">WG1279226</a>
1,1,2-Trichloroethane	ND		1.00	1	05/10/2019 17:38	<a href="#">WG1279226</a>
Trichloroethene	ND		1.00	1	05/10/2019 17:38	<a href="#">WG1279226</a>
Trichlorofluoromethane	ND		5.00	1	05/10/2019 17:38	<a href="#">WG1279226</a>
1,2,3-Trichloropropane	ND		2.50	1	05/10/2019 17:38	<a href="#">WG1279226</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/10/2019 17:38	<a href="#">WG1279226</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/10/2019 17:38	<a href="#">WG1279226</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/10/2019 17:38	<a href="#">WG1279226</a>
Vinyl chloride	ND		1.00	1	05/10/2019 17:38	<a href="#">WG1279226</a>
o-Xylene	ND		1.00	1	05/10/2019 17:38	<a href="#">WG1279226</a>
m&p-Xylene	ND		2.00	1	05/10/2019 17:38	<a href="#">WG1279226</a>
(S) Toluene-d8	90.3		80.0-120		05/10/2019 17:38	<a href="#">WG1279226</a>
(S) 4-Bromofluorobenzene	109		77.0-126		05/10/2019 17:38	<a href="#">WG1279226</a>
(S) 1,2-Dichloroethane-d4	106		70.0-130		05/10/2019 17:38	<a href="#">WG1279226</a>

- 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	05/11/2019 19:07	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	ND		250	1	05/11/2019 19:07	<a href="#">WG1278954</a>
(S) o-Terphenyl	98.4		52.0-156		05/11/2019 19:07	<a href="#">WG1278954</a>

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	05/10/2019 16:11	<a href="#">WG1278969</a>
Acenaphthene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Acenaphthylene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Chrysene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Fluoranthene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Fluorene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Naphthalene	ND		0.250	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Phenanthrene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
Pyrene	ND		0.0500	1	05/10/2019 16:11	<a href="#">WG1278969</a>
1-Methylnaphthalene	ND		0.250	1	05/10/2019 16:11	<a href="#">WG1278969</a>
2-Methylnaphthalene	ND		0.250	1	05/10/2019 16:11	<a href="#">WG1278969</a>
2-Chloronaphthalene	ND		0.250	1	05/10/2019 16:11	<a href="#">WG1278969</a>
(S) Nitrobenzene-d5	121		31.0-160		05/10/2019 16:11	<a href="#">WG1278969</a>
(S) 2-Fluorobiphenyl	106		48.0-148		05/10/2019 16:11	<a href="#">WG1278969</a>
(S) p-Terphenyl-d14	102		37.0-146		05/10/2019 16:11	<a href="#">WG1278969</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/16/2019 11:14	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	449		100	1	05/16/2019 15:31	<a href="#">WG1281636</a>

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	05/10/2019 17:05	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	16600		5000	1	05/13/2019 20:14	<a href="#">WG1279128</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/12/2019 12:39	<a href="#">WG1278941</a>
Mercury,Dissolved	ND		0.200	1	05/12/2019 11:51	<a href="#">WG1278946</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	2.14		2.00	1	05/14/2019 17:38	<a href="#">WG1279590</a>
Arsenic,Dissolved	ND		2.00	1	05/15/2019 23:32	<a href="#">WG1279582</a>
Barium	129		5.00	1	05/14/2019 17:38	<a href="#">WG1279590</a>
Barium,Dissolved	127		5.00	1	05/15/2019 23:32	<a href="#">WG1279582</a>
Cadmium	ND		1.00	1	05/14/2019 17:38	<a href="#">WG1279590</a>
Cadmium,Dissolved	ND		1.00	1	05/15/2019 23:32	<a href="#">WG1279582</a>
Chromium	ND		2.00	1	05/14/2019 17:38	<a href="#">WG1279590</a>
Chromium,Dissolved	ND		2.00	1	05/15/2019 23:32	<a href="#">WG1279582</a>
Iron,Dissolved	ND		100	1	05/15/2019 23:32	<a href="#">WG1279582</a>
Lead	ND		2.00	1	05/14/2019 17:38	<a href="#">WG1279590</a>
Lead,Dissolved	ND		2.00	1	05/15/2019 23:32	<a href="#">WG1279582</a>
Manganese,Dissolved	4100		5.00	1	05/15/2019 23:32	<a href="#">WG1279582</a>
Selenium	ND		2.00	1	05/14/2019 17:38	<a href="#">WG1279590</a>
Selenium,Dissolved	ND		2.00	1	05/15/2019 23:32	<a href="#">WG1279582</a>
Silver	ND		2.00	1	05/14/2019 17:38	<a href="#">WG1279590</a>
Silver,Dissolved	ND		2.00	1	05/15/2019 23:32	<a href="#">WG1279582</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 11:48	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:48	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:48	<a href="#">WG1280098</a>



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	05/10/2019 17:59	<a href="#">WG1279226</a>
Acrolein	ND	<u>JO</u>	50.0	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Acrylonitrile	ND		10.0	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Benzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Bromobenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Bromodichloromethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Bromoform	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Bromomethane	ND		5.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
n-Butylbenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
sec-Butylbenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
tert-Butylbenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Carbon tetrachloride	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Chlorobenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Chlorodibromomethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Chloroethane	ND		5.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Chloroform	ND		5.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Chloromethane	ND		2.50	1	05/10/2019 17:59	<a href="#">WG1279226</a>
2-Chlorotoluene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
4-Chlorotoluene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,2-Dibromoethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Dibromomethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,2-Dichlorobenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,3-Dichlorobenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,4-Dichlorobenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Dichlorodifluoromethane	ND		5.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,1-Dichloroethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,2-Dichloroethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,1-Dichloroethene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
cis-1,2-Dichloroethene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
trans-1,2-Dichloroethene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,2-Dichloropropane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,1-Dichloropropene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,3-Dichloropropane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
cis-1,3-Dichloropropene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
trans-1,3-Dichloropropene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
2,2-Dichloropropane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Di-isopropyl ether	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Ethylbenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Hexachloro-1,3-butadiene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Isopropylbenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
p-Isopropyltoluene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
2-Butanone (MEK)	ND		10.0	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Methylene Chloride	ND		5.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Methyl tert-butyl ether	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Naphthalene	ND		5.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
n-Propylbenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Styrene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Tetrachloroethene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Toluene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,2,3-Trichlorobenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,2,4-Trichlorobenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>

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	
1,1,1-Trichloroethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,1,2-Trichloroethane	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Trichloroethene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Trichlorofluoromethane	ND		5.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,2,3-Trichloropropane	ND		2.50	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
Vinyl chloride	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
o-Xylene	ND		1.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
m&p-Xylene	ND		2.00	1	05/10/2019 17:59	<a href="#">WG1279226</a>
(S) Toluene-d8	91.4		80.0-120		05/10/2019 17:59	<a href="#">WG1279226</a>
(S) 4-Bromofluorobenzene	104		77.0-126		05/10/2019 17:59	<a href="#">WG1279226</a>
(S) 1,2-Dichloroethane-d4	101		70.0-130		05/10/2019 17:59	<a href="#">WG1279226</a>

- 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)	3440		200	1	05/11/2019 19:24	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	3970		250	1	05/11/2019 19:24	<a href="#">WG1278954</a>
(S) o-Terphenyl	104		52.0-156		05/11/2019 19:24	<a href="#">WG1278954</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Anthracene	0.0789		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Acenaphthene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Acenaphthylene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Chrysene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Fluoranthene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Fluorene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Naphthalene	ND		0.250	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Phenanthrene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
Pyrene	ND		0.0500	1	05/10/2019 16:33	<a href="#">WG1278969</a>
1-Methylnaphthalene	ND		0.250	1	05/10/2019 16:33	<a href="#">WG1278969</a>
2-Methylnaphthalene	ND		0.250	1	05/10/2019 16:33	<a href="#">WG1278969</a>
2-Chloronaphthalene	ND		0.250	1	05/10/2019 16:33	<a href="#">WG1278969</a>
(S) Nitrobenzene-d5	125		31.0-160		05/10/2019 16:33	<a href="#">WG1278969</a>
(S) 2-Fluorobiphenyl	108		48.0-148		05/10/2019 16:33	<a href="#">WG1278969</a>
(S) p-Terphenyl-d14	102		37.0-146		05/10/2019 16:33	<a href="#">WG1278969</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	216	B	100	1	05/16/2019 11:17	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	05/16/2019 15:34	<a href="#">WG1281636</a>

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	05/10/2019 17:06	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	9440		5000	1	05/13/2019 20:32	<a href="#">WG1279128</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	15.6		2.00	1	05/14/2019 17:42	<a href="#">WG1279590</a>
Arsenic,Dissolved	17.2		2.00	1	05/15/2019 23:36	<a href="#">WG1279582</a>
Iron,Dissolved	1150		100	1	05/15/2019 23:36	<a href="#">WG1279582</a>
Manganese,Dissolved	1330		5.00	1	05/15/2019 23:36	<a href="#">WG1279582</a>

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	05/12/2019 15:56	<a href="#">WG1279922</a>
(S) a,a,a-Trifluorotoluene(FID)	85.7		78.0-120		05/12/2019 15:56	<a href="#">WG1279922</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	703		10.0	1	05/13/2019 11:55	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 11:55	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 11:55	<a href="#">WG1280098</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2000		200	1	05/11/2019 19:41	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	2200		250	1	05/11/2019 19:41	<a href="#">WG1278954</a>
(S) o-Terphenyl	97.4		52.0-156		05/11/2019 19:41	<a href="#">WG1278954</a>





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	223	B	100	1	05/16/2019 11:23	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4490		100	1	05/16/2019 15:37	<a href="#">WG1281636</a>

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	05/10/2019 17:06	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	9330		5000	1	05/13/2019 20:50	<a href="#">WG1279128</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	14.0		2.00	1	05/14/2019 17:47	<a href="#">WG1279590</a>
Arsenic,Dissolved	18.3		2.00	1	05/15/2019 23:41	<a href="#">WG1279582</a>
Iron,Dissolved	1180		100	1	05/15/2019 23:41	<a href="#">WG1279582</a>
Manganese,Dissolved	1390		5.00	1	05/15/2019 23:41	<a href="#">WG1279582</a>

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	05/12/2019 16:20	<a href="#">WG1279922</a>
(S) a,a,a-Trifluorotoluene(FID)	85.8		78.0-120		05/12/2019 16:20	<a href="#">WG1279922</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	804		10.0	1	05/13/2019 12:00	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 12:00	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 12:00	<a href="#">WG1280098</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2030		200	1	05/11/2019 19:58	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	2250		250	1	05/11/2019 19:58	<a href="#">WG1278954</a>
(S) o-Terphenyl	103		52.0-156		05/11/2019 19:58	<a href="#">WG1278954</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/16/2019 11:25	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4210	J6	100	1	05/20/2019 08:59	<a href="#">WG1282741</a>

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	05/10/2019 17:07	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	22400		5000	1	05/13/2019 21:07	<a href="#">WG1279128</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/12/2019 12:42	<a href="#">WG1278941</a>
Mercury,Dissolved	ND		0.200	1	05/12/2019 11:58	<a href="#">WG1278946</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.48		2.00	1	05/14/2019 17:52	<a href="#">WG1279590</a>
Arsenic,Dissolved	3.61		2.00	1	05/15/2019 23:45	<a href="#">WG1279582</a>
Barium	45.5		5.00	1	05/14/2019 17:52	<a href="#">WG1279590</a>
Barium,Dissolved	42.4		5.00	1	05/15/2019 23:45	<a href="#">WG1279582</a>
Cadmium	ND		1.00	1	05/14/2019 17:52	<a href="#">WG1279590</a>
Cadmium,Dissolved	ND		1.00	1	05/15/2019 23:45	<a href="#">WG1279582</a>
Chromium	2.35		2.00	1	05/14/2019 17:52	<a href="#">WG1279590</a>
Chromium,Dissolved	2.27		2.00	1	05/15/2019 23:45	<a href="#">WG1279582</a>
Iron,Dissolved	ND		100	1	05/15/2019 23:45	<a href="#">WG1279582</a>
Lead	ND		2.00	1	05/14/2019 17:52	<a href="#">WG1279590</a>
Lead,Dissolved	ND		2.00	1	05/15/2019 23:45	<a href="#">WG1279582</a>
Manganese,Dissolved	25.0		5.00	1	05/15/2019 23:45	<a href="#">WG1279582</a>
Selenium	ND		2.00	1	05/14/2019 17:52	<a href="#">WG1279590</a>
Selenium,Dissolved	ND		2.00	1	05/15/2019 23:45	<a href="#">WG1279582</a>
Silver	ND		2.00	1	05/14/2019 17:52	<a href="#">WG1279590</a>
Silver,Dissolved	ND		2.00	1	05/15/2019 23:45	<a href="#">WG1279582</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 12:03	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 12:03	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 12:03	<a href="#">WG1280098</a>



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	05/11/2019 16:38	WG1279719
Acrolein	ND		50.0	1	05/11/2019 16:38	WG1279719
Acrylonitrile	ND		10.0	1	05/11/2019 16:38	WG1279719
Benzene	ND		1.00	1	05/11/2019 16:38	WG1279719
Bromobenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
Bromodichloromethane	ND		1.00	1	05/11/2019 16:38	WG1279719
Bromoform	ND		1.00	1	05/11/2019 16:38	WG1279719
Bromomethane	ND		5.00	1	05/11/2019 16:38	WG1279719
n-Butylbenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
sec-Butylbenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
tert-Butylbenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
Carbon tetrachloride	ND		1.00	1	05/11/2019 16:38	WG1279719
Chlorobenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
Chlorodibromomethane	ND		1.00	1	05/11/2019 16:38	WG1279719
Chloroethane	ND		5.00	1	05/11/2019 16:38	WG1279719
Chloroform	ND		5.00	1	05/11/2019 16:38	WG1279719
Chloromethane	ND		2.50	1	05/11/2019 16:38	WG1279719
2-Chlorotoluene	ND		1.00	1	05/11/2019 16:38	WG1279719
4-Chlorotoluene	ND		1.00	1	05/11/2019 16:38	WG1279719
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/11/2019 16:38	WG1279719
1,2-Dibromoethane	ND		1.00	1	05/11/2019 16:38	WG1279719
Dibromomethane	ND		1.00	1	05/11/2019 16:38	WG1279719
1,2-Dichlorobenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
1,3-Dichlorobenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
1,4-Dichlorobenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
Dichlorodifluoromethane	ND		5.00	1	05/11/2019 16:38	WG1279719
1,1-Dichloroethane	ND		1.00	1	05/11/2019 16:38	WG1279719
1,2-Dichloroethane	ND		1.00	1	05/11/2019 16:38	WG1279719
1,1-Dichloroethene	ND		1.00	1	05/11/2019 16:38	WG1279719
cis-1,2-Dichloroethene	ND		1.00	1	05/11/2019 16:38	WG1279719
trans-1,2-Dichloroethene	ND		1.00	1	05/11/2019 16:38	WG1279719
1,2-Dichloropropane	ND		1.00	1	05/11/2019 16:38	WG1279719
1,1-Dichloropropene	ND		1.00	1	05/11/2019 16:38	WG1279719
1,3-Dichloropropane	ND		1.00	1	05/11/2019 16:38	WG1279719
cis-1,3-Dichloropropene	ND		1.00	1	05/11/2019 16:38	WG1279719
trans-1,3-Dichloropropene	ND		1.00	1	05/11/2019 16:38	WG1279719
2,2-Dichloropropane	ND		1.00	1	05/11/2019 16:38	WG1279719
Di-isopropyl ether	ND		1.00	1	05/11/2019 16:38	WG1279719
Ethylbenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
Hexachloro-1,3-butadiene	ND		1.00	1	05/11/2019 16:38	WG1279719
Isopropylbenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
p-Isopropyltoluene	ND		1.00	1	05/11/2019 16:38	WG1279719
2-Butanone (MEK)	ND		10.0	1	05/11/2019 16:38	WG1279719
Methylene Chloride	ND		5.00	1	05/11/2019 16:38	WG1279719
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/11/2019 16:38	WG1279719
Methyl tert-butyl ether	ND		1.00	1	05/11/2019 16:38	WG1279719
Naphthalene	ND		5.00	1	05/11/2019 16:38	WG1279719
n-Propylbenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
Styrene	ND		1.00	1	05/11/2019 16:38	WG1279719
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/11/2019 16:38	WG1279719
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/11/2019 16:38	WG1279719
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/11/2019 16:38	WG1279719
Tetrachloroethene	ND		1.00	1	05/11/2019 16:38	WG1279719
Toluene	ND		1.00	1	05/11/2019 16:38	WG1279719
1,2,3-Trichlorobenzene	ND		1.00	1	05/11/2019 16:38	WG1279719
1,2,4-Trichlorobenzene	ND		1.00	1	05/11/2019 16:38	WG1279719

- 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	
1,1,1-Trichloroethane	ND		1.00	1	05/11/2019 16:38	<a href="#">WG1279719</a>
1,1,2-Trichloroethane	ND		1.00	1	05/11/2019 16:38	<a href="#">WG1279719</a>
Trichloroethene	ND		1.00	1	05/11/2019 16:38	<a href="#">WG1279719</a>
Trichlorofluoromethane	ND		5.00	1	05/11/2019 16:38	<a href="#">WG1279719</a>
1,2,3-Trichloropropane	ND		2.50	1	05/11/2019 16:38	<a href="#">WG1279719</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/11/2019 16:38	<a href="#">WG1279719</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/11/2019 16:38	<a href="#">WG1279719</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/11/2019 16:38	<a href="#">WG1279719</a>
Vinyl chloride	ND		1.00	1	05/11/2019 16:38	<a href="#">WG1279719</a>
o-Xylene	ND		1.00	1	05/11/2019 16:38	<a href="#">WG1279719</a>
m&p-Xylene	ND		2.00	1	05/11/2019 16:38	<a href="#">WG1279719</a>
(S) Toluene-d8	96.5		80.0-120		05/11/2019 16:38	<a href="#">WG1279719</a>
(S) 4-Bromofluorobenzene	113		77.0-126		05/11/2019 16:38	<a href="#">WG1279719</a>
(S) 1,2-Dichloroethane-d4	95.7		70.0-130		05/11/2019 16:38	<a href="#">WG1279719</a>

- 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)	349		200	1	05/11/2019 20:15	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	1100		250	1	05/11/2019 20:15	<a href="#">WG1278954</a>
(S) o-Terphenyl	99.5		52.0-156		05/11/2019 20:15	<a href="#">WG1278954</a>

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	05/14/2019 14:40	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 14:40	<a href="#">WG1278958</a>
(S) o-Terphenyl	54.2		52.0-156		05/14/2019 14:40	<a href="#">WG1278958</a>

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	05/10/2019 16:54	<a href="#">WG1278969</a>
Acenaphthene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Acenaphthylene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Chrysene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Fluoranthene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Fluorene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Naphthalene	ND		0.250	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Phenanthrene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
Pyrene	ND		0.0500	1	05/10/2019 16:54	<a href="#">WG1278969</a>
1-Methylnaphthalene	ND		0.250	1	05/10/2019 16:54	<a href="#">WG1278969</a>
2-Methylnaphthalene	ND		0.250	1	05/10/2019 16:54	<a href="#">WG1278969</a>
2-Chloronaphthalene	ND		0.250	1	05/10/2019 16:54	<a href="#">WG1278969</a>
(S) Nitrobenzene-d5	124		31.0-160		05/10/2019 16:54	<a href="#">WG1278969</a>
(S) 2-Fluorobiphenyl	106		48.0-148		05/10/2019 16:54	<a href="#">WG1278969</a>
(S) p-Terphenyl-d14	101		37.0-146		05/10/2019 16:54	<a href="#">WG1278969</a>



## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	306	B	100	1	05/16/2019 11:26	<a href="#">WG1281425</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	05/16/2019 15:46	<a href="#">WG1281636</a>

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	05/10/2019 17:08	<a href="#">WG1279137</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	05/13/2019 21:25	<a href="#">WG1279128</a>

7 Gl

8 Al

## Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	3170		100	1	05/15/2019 23:50	<a href="#">WG1279582</a>
Manganese,Dissolved	2290		5.00	1	05/15/2019 23:50	<a href="#">WG1279582</a>

9 Sc

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	6080		10.0	1	05/13/2019 12:06	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 12:06	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 12:06	<a href="#">WG1280098</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5980		200	1	05/11/2019 20:32	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	3240		250	1	05/11/2019 20:32	<a href="#">WG1278954</a>
(S) o-Terphenyl	121		52.0-156		05/11/2019 20:32	<a href="#">WG1278954</a>

## Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	456		200	1	05/14/2019 15:02	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 15:02	<a href="#">WG1278958</a>
(S) o-Terphenyl	85.8		52.0-156		05/14/2019 15:02	<a href="#">WG1278958</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Acenaphthene	0.947		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Acenaphthylene	0.103		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Chrysene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Fluoranthene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Fluorene	1.35		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Naphthalene	1.25		0.250	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Phenanthrene	0.0676		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
Pyrene	ND		0.0500	1	05/10/2019 17:16	<a href="#">WG1278969</a>
1-Methylnaphthalene	13.9		0.250	1	05/10/2019 17:16	<a href="#">WG1278969</a>
2-Methylnaphthalene	0.912		0.250	1	05/10/2019 17:16	<a href="#">WG1278969</a>
2-Chloronaphthalene	ND		0.250	1	05/10/2019 17:16	<a href="#">WG1278969</a>
<i>(S)</i> Nitrobenzene-d5	110		31.0-160		05/10/2019 17:16	<a href="#">WG1278969</a>
<i>(S)</i> 2-Fluorobiphenyl	98.9		48.0-148		05/10/2019 17:16	<a href="#">WG1278969</a>
<i>(S)</i> p-Terphenyl-d14	95.8		37.0-146		05/10/2019 17:16	<a href="#">WG1278969</a>

- 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	178	B	100	1	05/16/2019 11:28	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	05/16/2019 15:48	<a href="#">WG1281636</a>

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	05/10/2019 17:08	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	05/13/2019 21:43	<a href="#">WG1279128</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	5190		100	1	05/16/2019 00:12	<a href="#">WG1279582</a>
Manganese,Dissolved	3010		5.00	1	05/16/2019 00:12	<a href="#">WG1279582</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	7130		100	10	05/13/2019 13:43	<a href="#">WG1280105</a>
Ethane	ND		13.0	1	05/13/2019 12:09	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 12:09	<a href="#">WG1280098</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	8630		200	1	05/11/2019 23:58	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	4930		1250	5	05/12/2019 22:24	<a href="#">WG1278954</a>
(S) o-Terphenyl	112		52.0-156		05/11/2019 23:58	<a href="#">WG1278954</a>
(S) o-Terphenyl	116		52.0-156		05/12/2019 22:24	<a href="#">WG1278954</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	206		200	1	05/14/2019 15:24	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 15:24	<a href="#">WG1278958</a>
(S) o-Terphenyl	78.4		52.0-156		05/14/2019 15:24	<a href="#">WG1278958</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Acenaphthene	0.142		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Acenaphthylene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Chrysene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Fluoranthene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Fluorene	0.343		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Naphthalene	ND		0.250	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Phenanthrene	ND		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
Pyrene	0.0714		0.0500	1	05/10/2019 17:38	<a href="#">WG1278969</a>
1-Methylnaphthalene	ND		0.250	1	05/10/2019 17:38	<a href="#">WG1278969</a>
2-Methylnaphthalene	ND		0.250	1	05/10/2019 17:38	<a href="#">WG1278969</a>
2-Chloronaphthalene	ND		0.250	1	05/10/2019 17:38	<a href="#">WG1278969</a>
(S) Nitrobenzene-d5	121		31.0-160		05/10/2019 17:38	<a href="#">WG1278969</a>
(S) 2-Fluorobiphenyl	101		48.0-148		05/10/2019 17:38	<a href="#">WG1278969</a>
(S) p-Terphenyl-d14	94.2		37.0-146		05/10/2019 17:38	<a href="#">WG1278969</a>

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	05/16/2019 11:29	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	05/16/2019 15:49	<a href="#">WG1281636</a>

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	05/10/2019 17:09	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	21700		5000	1	05/13/2019 22:37	<a href="#">WG1279128</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	611		100	1	05/16/2019 00:16	<a href="#">WG1279582</a>
Manganese,Dissolved	683		5.00	1	05/16/2019 00:16	<a href="#">WG1279582</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 12:58	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 12:58	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 12:58	<a href="#">WG1280098</a>

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	05/11/2019 20:49	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	ND		250	1	05/11/2019 20:49	<a href="#">WG1278954</a>
(S) o-Terphenyl	101		52.0-156		05/11/2019 20:49	<a href="#">WG1278954</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Acenaphthene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Acenaphthylene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Chrysene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Fluoranthene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Fluorene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Naphthalene	ND		0.250	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Phenanthrene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
Pyrene	ND		0.0500	1	05/10/2019 18:00	<a href="#">WG1278969</a>
1-Methylnaphthalene	ND		0.250	1	05/10/2019 18:00	<a href="#">WG1278969</a>
2-Methylnaphthalene	ND		0.250	1	05/10/2019 18:00	<a href="#">WG1278969</a>
2-Chloronaphthalene	ND		0.250	1	05/10/2019 18:00	<a href="#">WG1278969</a>
(S) Nitrobenzene-d5	124		31.0-160		05/10/2019 18:00	<a href="#">WG1278969</a>
(S) 2-Fluorobiphenyl	105		48.0-148		05/10/2019 18:00	<a href="#">WG1278969</a>
(S) p-Terphenyl-d14	100		37.0-146		05/10/2019 18:00	<a href="#">WG1278969</a>

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	05/16/2019 11:31	<a href="#">WG1281425</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	926		100	1	05/16/2019 15:51	<a href="#">WG1281636</a>

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	05/10/2019 17:10	<a href="#">WG1279137</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	40300		5000	1	05/13/2019 22:55	<a href="#">WG1279128</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/16/2019 00:21	<a href="#">WG1279582</a>
Lead	ND		2.00	1	05/14/2019 17:56	<a href="#">WG1279590</a>
Lead,Dissolved	ND		2.00	1	05/16/2019 00:21	<a href="#">WG1279582</a>
Manganese,Dissolved	630		5.00	1	05/16/2019 00:21	<a href="#">WG1279582</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/13/2019 13:01	<a href="#">WG1280098</a>
Ethane	ND		13.0	1	05/13/2019 13:01	<a href="#">WG1280098</a>
Ethene	ND		13.0	1	05/13/2019 13:01	<a href="#">WG1280098</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	05/11/2019 16:59	<a href="#">WG1279719</a>
Toluene	ND		1.00	1	05/11/2019 16:59	<a href="#">WG1279719</a>
Ethylbenzene	ND		1.00	1	05/11/2019 16:59	<a href="#">WG1279719</a>
o-Xylene	ND		1.00	1	05/11/2019 16:59	<a href="#">WG1279719</a>
m&p-Xylene	ND		2.00	1	05/11/2019 16:59	<a href="#">WG1279719</a>
(S) Toluene-d8	97.8		80.0-120		05/11/2019 16:59	<a href="#">WG1279719</a>
(S) a,a,a-Trifluorotoluene	97.3		80.0-120		05/11/2019 16:59	<a href="#">WG1279719</a>
(S) 4-Bromofluorobenzene	110		77.0-126		05/11/2019 16:59	<a href="#">WG1279719</a>
(S) 1,2-Dichloroethane-d4	96.7		70.0-130		05/11/2019 16:59	<a href="#">WG1279719</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1420		200	1	05/11/2019 21:07	<a href="#">WG1278954</a>
Residual Range Organics (RRO)	927		250	1	05/11/2019 21:07	<a href="#">WG1278954</a>
(S) o-Terphenyl	103		52.0-156		05/11/2019 21:07	<a href="#">WG1278954</a>



Collected date/time: 05/07/19 10:45

L1097209

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	05/14/2019 15:47	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 15:47	<a href="#">WG1278958</a>
<i>(S) o-Terphenyl</i>	70.0		52.0-156		05/14/2019 15:47	<a href="#">WG1278958</a>

1 Cp

2 Tc

3 Ss

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	05/10/2019 18:22	<a href="#">WG1278969</a>
Acenaphthene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Acenaphthylene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Benzo(a)anthracene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Benzo(a)pyrene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Chrysene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Fluoranthene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Fluorene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Naphthalene	ND		0.250	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Phenanthrene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
Pyrene	ND		0.0500	1	05/10/2019 18:22	<a href="#">WG1278969</a>
1-Methylnaphthalene	ND		0.250	1	05/10/2019 18:22	<a href="#">WG1278969</a>
2-Methylnaphthalene	ND		0.250	1	05/10/2019 18:22	<a href="#">WG1278969</a>
2-Chloronaphthalene	ND		0.250	1	05/10/2019 18:22	<a href="#">WG1278969</a>
<i>(S) Nitrobenzene-d5</i>	121		31.0-160		05/10/2019 18:22	<a href="#">WG1278969</a>
<i>(S) 2-Fluorobiphenyl</i>	102		48.0-148		05/10/2019 18:22	<a href="#">WG1278969</a>
<i>(S) p-Terphenyl-d14</i>	97.9		37.0-146		05/10/2019 18:22	<a href="#">WG1278969</a>

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/07/19 10:45

L1097209

## 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	05/12/2019 11:49	<a href="#">WG1279868</a>
Acrolein	ND	<u>JO</u>	50.0	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Acrylonitrile	ND		10.0	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Benzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Bromobenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Bromodichloromethane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Bromoform	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Bromomethane	ND		5.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
n-Butylbenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
sec-Butylbenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
tert-Butylbenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Carbon tetrachloride	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Chlorobenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Chlorodibromomethane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Chloroethane	ND		5.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Chloroform	ND		5.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Chloromethane	ND		2.50	1	05/12/2019 11:49	<a href="#">WG1279868</a>
2-Chlorotoluene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
4-Chlorotoluene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,2-Dibromoethane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Dibromomethane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,2-Dichlorobenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,3-Dichlorobenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,4-Dichlorobenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Dichlorodifluoromethane	ND		5.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,1-Dichloroethane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,2-Dichloroethane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,1-Dichloroethene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
cis-1,2-Dichloroethene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
trans-1,2-Dichloroethene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,2-Dichloropropane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,1-Dichloropropene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,3-Dichloropropane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
cis-1,3-Dichloropropene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
trans-1,3-Dichloropropene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
2,2-Dichloropropane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Di-isopropyl ether	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Ethylbenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Hexachloro-1,3-butadiene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Isopropylbenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
p-Isopropyltoluene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
2-Butanone (MEK)	ND		10.0	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Methylene Chloride	ND		5.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Methyl tert-butyl ether	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Naphthalene	ND		5.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
n-Propylbenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Styrene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Tetrachloroethene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Toluene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,2,3-Trichlorobenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,2,4-Trichlorobenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/07/19 10:45

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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	05/12/2019 11:49	<a href="#">WG1279868</a>
1,1,2-Trichloroethane	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Trichloroethene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Trichlorofluoromethane	ND		5.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,2,3-Trichloropropane	ND		2.50	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
Vinyl chloride	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
o-Xylene	ND		1.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
m&p-Xylene	ND		2.00	1	05/12/2019 11:49	<a href="#">WG1279868</a>
(S) Toluene-d8	96.4		80.0-120		05/12/2019 11:49	<a href="#">WG1279868</a>
(S) 4-Bromofluorobenzene	97.6		77.0-126		05/12/2019 11:49	<a href="#">WG1279868</a>
(S) 1,2-Dichloroethane-d4	93.1		70.0-130		05/12/2019 11:49	<a href="#">WG1279868</a>

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



Collected date/time: 05/07/19 10:45

L1097209

## 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	05/12/2019 12:10	<a href="#">WG1279868</a>
Acrolein	ND	<u>JO</u>	50.0	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Acrylonitrile	ND		10.0	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Benzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Bromobenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Bromodichloromethane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Bromoform	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Bromomethane	ND		5.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
n-Butylbenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
sec-Butylbenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
tert-Butylbenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Carbon tetrachloride	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Chlorobenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Chlorodibromomethane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Chloroethane	ND		5.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Chloroform	ND		5.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Chloromethane	ND		2.50	1	05/12/2019 12:10	<a href="#">WG1279868</a>
2-Chlorotoluene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
4-Chlorotoluene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,2-Dibromoethane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Dibromomethane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,2-Dichlorobenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,3-Dichlorobenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,4-Dichlorobenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Dichlorodifluoromethane	ND		5.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,1-Dichloroethane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,2-Dichloroethane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,1-Dichloroethene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
cis-1,2-Dichloroethene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
trans-1,2-Dichloroethene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,2-Dichloropropane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,1-Dichloropropene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,3-Dichloropropane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
cis-1,3-Dichloropropene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
trans-1,3-Dichloropropene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
2,2-Dichloropropane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Di-isopropyl ether	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Ethylbenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Hexachloro-1,3-butadiene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Isopropylbenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
p-Isopropyltoluene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
2-Butanone (MEK)	ND		10.0	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Methylene Chloride	ND		5.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Methyl tert-butyl ether	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Naphthalene	ND		5.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
n-Propylbenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Styrene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Tetrachloroethene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Toluene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,2,3-Trichlorobenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,2,4-Trichlorobenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/07/19 10:45

L1097209

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	05/12/2019 12:10	<a href="#">WG1279868</a>
1,1,2-Trichloroethane	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Trichloroethene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Trichlorofluoromethane	ND		5.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,2,3-Trichloropropane	ND		2.50	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
Vinyl chloride	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
o-Xylene	ND		1.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
m&p-Xylene	ND		2.00	1	05/12/2019 12:10	<a href="#">WG1279868</a>
(S) Toluene-d8	97.0		80.0-120		05/12/2019 12:10	<a href="#">WG1279868</a>
(S) 4-Bromofluorobenzene	95.3		77.0-126		05/12/2019 12:10	<a href="#">WG1279868</a>
(S) 1,2-Dichloroethane-d4	91.5		70.0-130		05/12/2019 12:10	<a href="#">WG1279868</a>

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





Collected date/time: 05/07/19 10:45

L1097209

## 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	05/12/2019 12:31	<a href="#">WG1279868</a>
Acrolein	ND	<u>JO</u>	50.0	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Acrylonitrile	ND		10.0	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Benzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Bromobenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Bromodichloromethane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Bromoform	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Bromomethane	ND		5.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
n-Butylbenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
sec-Butylbenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
tert-Butylbenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Carbon tetrachloride	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Chlorobenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Chlorodibromomethane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Chloroethane	ND		5.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Chloroform	ND		5.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Chloromethane	ND		2.50	1	05/12/2019 12:31	<a href="#">WG1279868</a>
2-Chlorotoluene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
4-Chlorotoluene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,2-Dibromoethane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Dibromomethane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,2-Dichlorobenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,3-Dichlorobenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,4-Dichlorobenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Dichlorodifluoromethane	ND		5.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,1-Dichloroethane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,2-Dichloroethane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,1-Dichloroethene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
cis-1,2-Dichloroethene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
trans-1,2-Dichloroethene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,2-Dichloropropane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,1-Dichloropropene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,3-Dichloropropane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
cis-1,3-Dichloropropene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
trans-1,3-Dichloropropene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
2,2-Dichloropropane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Di-isopropyl ether	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Ethylbenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Hexachloro-1,3-butadiene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Isopropylbenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
p-Isopropyltoluene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
2-Butanone (MEK)	ND		10.0	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Methylene Chloride	ND		5.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Methyl tert-butyl ether	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Naphthalene	ND		5.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
n-Propylbenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Styrene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Tetrachloroethene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Toluene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,2,3-Trichlorobenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,2,4-Trichlorobenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/07/19 10:45

L1097209

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	05/12/2019 12:31	<a href="#">WG1279868</a>
1,1,2-Trichloroethane	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Trichloroethene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Trichlorofluoromethane	ND		5.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,2,3-Trichloropropane	ND		2.50	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
Vinyl chloride	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
o-Xylene	ND		1.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
m&p-Xylene	ND		2.00	1	05/12/2019 12:31	<a href="#">WG1279868</a>
(S) Toluene-d8	94.5		80.0-120		05/12/2019 12:31	<a href="#">WG1279868</a>
(S) 4-Bromofluorobenzene	96.4		77.0-126		05/12/2019 12:31	<a href="#">WG1279868</a>
(S) 1,2-Dichloroethane-d4	95.5		70.0-130		05/12/2019 12:31	<a href="#">WG1279868</a>

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



Collected date/time: 05/07/19 10:45

L1097209

## 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	05/12/2019 12:52	<a href="#">WG1279868</a>
Acrolein	ND	<u>JO</u>	50.0	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Acrylonitrile	ND		10.0	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Benzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Bromobenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Bromodichloromethane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Bromoform	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Bromomethane	ND		5.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
n-Butylbenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
sec-Butylbenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
tert-Butylbenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Carbon tetrachloride	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Chlorobenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Chlorodibromomethane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Chloroethane	ND		5.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Chloroform	ND		5.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Chloromethane	ND		2.50	1	05/12/2019 12:52	<a href="#">WG1279868</a>
2-Chlorotoluene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
4-Chlorotoluene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,2-Dibromoethane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Dibromomethane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,2-Dichlorobenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,3-Dichlorobenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,4-Dichlorobenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Dichlorodifluoromethane	ND		5.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,1-Dichloroethane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,2-Dichloroethane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,1-Dichloroethene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
cis-1,2-Dichloroethene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
trans-1,2-Dichloroethene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,2-Dichloropropane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,1-Dichloropropene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,3-Dichloropropane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
cis-1,3-Dichloropropene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
trans-1,3-Dichloropropene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
2,2-Dichloropropane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Di-isopropyl ether	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Ethylbenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Hexachloro-1,3-butadiene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Isopropylbenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
p-Isopropyltoluene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
2-Butanone (MEK)	ND		10.0	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Methylene Chloride	ND		5.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Methyl tert-butyl ether	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Naphthalene	ND		5.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
n-Propylbenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Styrene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Tetrachloroethene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Toluene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,2,3-Trichlorobenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,2,4-Trichlorobenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/07/19 10:45

L1097209

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	05/12/2019 12:52	<a href="#">WG1279868</a>
1,1,2-Trichloroethane	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Trichloroethene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Trichlorofluoromethane	ND		5.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,2,3-Trichloropropane	ND		2.50	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
Vinyl chloride	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
o-Xylene	ND		1.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
m&p-Xylene	ND		2.00	1	05/12/2019 12:52	<a href="#">WG1279868</a>
(S) Toluene-d8	92.9		80.0-120		05/12/2019 12:52	<a href="#">WG1279868</a>
(S) 4-Bromofluorobenzene	97.9		77.0-126		05/12/2019 12:52	<a href="#">WG1279868</a>
(S) 1,2-Dichloroethane-d4	95.9		70.0-130		05/12/2019 12:52	<a href="#">WG1279868</a>

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



Method Blank (MB)

(MB) R3411892-1 05/16/19 10:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	36.0	↓	31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1097209-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1097209-01 05/16/19 10:48 • (DUP) R3411892-3 05/16/19 10:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1097209-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1097209-09 05/16/19 11:10 • (DUP) R3411892-6 05/16/19 11:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3411892-2 05/16/19 10:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	7870	105	90.0-110	

L1097209-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097209-02 05/16/19 10:51 • (MS) R3411892-4 05/16/19 10:53 • (MSD) R3411892-5 05/16/19 10:54

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	5370	5120	107	102	1	90.0-110			4.79	10

L1097209-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1097209-10 05/16/19 11:14 • (MS) R3411892-7 05/16/19 11:15

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4900	97.3	1	90.0-110	



Method Blank (MB)

(MB) R3411986-1 05/16/19 15:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1096889-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1096889-01 05/16/19 15:06 • (DUP) R3411986-3 05/16/19 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	689	659	1	4.45		20

L1097209-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1097209-10 05/16/19 15:31 • (DUP) R3411986-6 05/16/19 15:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	449	451	1	0.444		20

Laboratory Control Sample (LCS)

(LCS) R3411986-2 05/16/19 15:04

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	4350	109	90.0-110	

L1097209-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097209-01 05/16/19 15:09 • (MS) R3411986-4 05/16/19 15:10 • (MSD) R3411986-5 05/16/19 15:12

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	28100	50800	49700	90.9	86.4	10	90.0-110	E	J6	2.23	20

L1097209-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L1097209-11 05/16/19 15:34 • (MS) R3411986-7 05/16/19 15:36

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	ND	2650	106	1	90.0-110	



Method Blank (MB)

(MB) R3412739-1 05/20/19 08:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1097055-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1097055-01 05/20/19 08:56 • (DUP) R3412739-3 05/20/19 08:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1770	1770	1	0.169		20

Laboratory Control Sample (LCS)

(LCS) R3412739-2 05/20/19 08:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	3890	97.3	90.0-110	

L1097209-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097209-13 05/20/19 08:59 • (MS) R3412739-4 05/20/19 09:00 • (MSD) R3412739-5 05/20/19 09:02

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	4210	6140	6440	77.4	89.2	1	90.0-110	<u>E J6</u>	<u>E J6</u>	4.71	20



Method Blank (MB)

(MB) R3410238-1 05/10/19 16:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1097209-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1097209-12 05/10/19 17:06 • (DUP) R3410238-5 05/10/19 17:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1097209-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1097209-01 05/10/19 17:30 • (DUP) R3410238-6 05/10/19 17:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3410238-2 05/10/19 16:59

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	443	88.6	85.0-115	

L1097209-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097209-03 05/10/19 17:01 • (MS) R3410238-3 05/10/19 17:02 • (MSD) R3410238-4 05/10/19 17:02

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	874	843	86.3	83.2	1	80.0-120			3.61	20





Method Blank (MB)

(MB) R3410926-1 05/13/19 14:22

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

L1097209-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1097209-01 05/13/19 16:03 • (DUP) R3410926-3 05/13/19 16:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	37000	37100	1	0.0928		15

L1097268-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1097268-04 05/13/19 23:49 • (DUP) R3410926-6 05/14/19 00:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	10100	10100	1	0.187		15

Laboratory Control Sample (LCS)

(LCS) R3410926-2 05/13/19 14:40

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	40800	102	80.0-120	

L1097209-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097209-01 05/13/19 16:03 • (MS) R3410926-4 05/13/19 16:39 • (MSD) R3410926-5 05/13/19 16:57

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	37000	86000	86400	97.9	98.6	1	80.0-120			0.421	15

L1097268-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1097268-04 05/13/19 23:49 • (MS) R3410926-7 05/14/19 00:25

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	10100	60500	101	1	80.0-120	



Method Blank (MB)

(MB) R3410472-1 05/12/19 12:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3410472-2 05/12/19 12:03 • (LCSD) R3410472-3 05/12/19 12:05

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	2.60	2.78	86.7	92.8	80.0-120			6.84	20

L1096002-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096002-08 05/12/19 12:08 • (MS) R3410472-4 05/12/19 12:10 • (MSD) R3410472-5 05/12/19 12:13

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	3.25	3.25	108	108	1	75.0-125			0.0492	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3410471-1 05/12/19 11:29

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) R3410471-2 05/12/19 11:31 • (LCSD) R3410471-3 05/12/19 11:34

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	3.06	2.81	102	93.8	80.0-120			8.35	20

L1097209-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097209-06 05/12/19 11:36 • (MS) R3410471-4 05/12/19 11:39 • (MSD) R3410471-5 05/12/19 11:41

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 %
Mercury,Dissolved	3.00	ND	2.87	2.84	95.8	94.8	1	75.0-125			1.03	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3411629-1 05/15/19 22:05

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
Iron,Dissolved	U		15.0	100
Lead,Dissolved	U		0.240	2.00
Manganese,Dissolved	U		0.250	5.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3411629-2 05/15/19 22:09 • (LCSD) R3411629-3 05/15/19 22:14

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	%	%	%			%	%
Arsenic,Dissolved	50.0	51.8	50.1	104	100	80.0-120			3.30	20
Barium,Dissolved	50.0	48.9	49.3	97.8	98.7	80.0-120			0.920	20
Cadmium,Dissolved	50.0	52.5	52.0	105	104	80.0-120			1.01	20
Chromium,Dissolved	50.0	51.9	51.0	104	102	80.0-120			1.68	20
Iron,Dissolved	500	518	506	104	101	80.0-120			2.29	20
Lead,Dissolved	50.0	50.8	50.5	102	101	80.0-120			0.565	20
Manganese,Dissolved	50.0	51.4	50.1	103	100	80.0-120			2.64	20
Selenium,Dissolved	50.0	50.4	50.2	101	100	80.0-120			0.474	20
Silver,Dissolved	50.0	51.7	51.8	103	104	80.0-120			0.244	20

L1097209-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097209-01 05/15/19 22:18 • (MS) R3411629-5 05/15/19 22:28 • (MSD) R3411629-6 05/15/19 22:32

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	9.28	61.1	60.8	104	103	1	75.0-125			0.606	20
Barium,Dissolved	50.0	36.2	88.8	89.2	105	106	1	75.0-125			0.351	20
Cadmium,Dissolved	50.0	ND	52.7	52.1	105	104	1	75.0-125			1.14	20
Chromium,Dissolved	50.0	7.54	58.4	57.9	102	101	1	75.0-125			0.845	20
Iron,Dissolved	500	ND	505	496	101	99.2	1	75.0-125			1.85	20
Lead,Dissolved	50.0	ND	50.3	50.7	100	101	1	75.0-125			0.829	20
Manganese,Dissolved	50.0	ND	50.0	48.6	98.8	96.0	1	75.0-125			2.79	20
Selenium,Dissolved	50.0	4.58	53.6	54.4	98.1	99.7	1	75.0-125			1.42	20
Silver,Dissolved	50.0	ND	52.8	52.8	106	106	1	75.0-125			0.118	20



Method Blank (MB)

(MB) R3411195-1 05/14/19 15:45

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	0.448	J	0.380	2.00
Silver	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3411195-2 05/14/19 15:49 • (LCSD) R3411195-3 05/14/19 15:54

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	%	%	%			%	%
Arsenic	50.0	48.0	47.8	96.0	95.6	80.0-120			0.460	20
Barium	50.0	49.0	47.8	98.0	95.6	80.0-120			2.45	20
Cadmium	50.0	50.9	50.1	102	100	80.0-120			1.60	20
Chromium	50.0	48.9	48.7	97.9	97.3	80.0-120			0.528	20
Lead	50.0	49.6	49.4	99.2	98.8	80.0-120			0.365	20
Selenium	50.0	52.8	52.0	106	104	80.0-120			1.64	20
Silver	50.0	49.5	49.7	99.0	99.4	80.0-120			0.406	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1096002-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096002-01 05/14/19 15:58 • (MS) R3411195-5 05/14/19 16:07 • (MSD) R3411195-6 05/14/19 16:12

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	5.95	42.9	50.3	73.9	88.7	1	75.0-125	J6		15.9	20
Barium	50.0	4.17	51.6	53.5	94.8	98.6	1	75.0-125			3.63	20
Cadmium	50.0	U	49.7	51.6	99.3	103	1	75.0-125			3.85	20
Chromium	50.0	20.5	54.8	66.0	68.5	91.0	1	75.0-125	J6		18.6	20
Lead	50.0	1.01	45.0	49.3	87.9	96.5	1	75.0-125			9.10	20
Selenium	50.0	0.490	49.7	49.9	98.4	98.9	1	75.0-125			0.475	20
Silver	50.0	U	48.8	50.4	97.6	101	1	75.0-125			3.32	20



Method Blank (MB)

(MB) R3410524-2 05/12/19 14:13

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	98.0	↓	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	84.6			78.0-120

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS)

(LCS) R3410524-1 05/12/19 13:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5190	94.4	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			88.9	78.0-120	

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3410642-1 05/13/19 11:14

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

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1097209-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1097209-04 05/13/19 11:24 • (DUP) R3410642-2 05/13/19 11:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	995	1020	1	1.96		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1097456-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1097456-01 05/13/19 13:11 • (DUP) R3410642-3 05/13/19 13:20

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) R3410642-4 05/13/19 13:22 • (LCSD) R3410642-5 05/13/19 13:26

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	77.9	112	115	85.0-115			2.43	20
Ethane	129	114	117	88.4	90.7	85.0-115			2.67	20
Ethene	127	113	116	88.8	91.6	85.0-115			3.08	20



Method Blank (MB)

(MB) R3410705-1 05/13/19 13:41

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

L1097441-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1097441-02 05/13/19 14:06 • (DUP) R3410705-2 05/13/19 14:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	2890	2690	1	7.12		20

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

(LCS) R3410705-3 05/13/19 14:39 • (LCSD) R3410705-4 05/13/19 14:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	73.5	72.9	108	107	85.0-115			0.916	20

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3410741-3 05/10/19 10:50

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3410741-3 05/10/19 10:50

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
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	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
1,2,4-Trimethylbenzene	U		0.373	1.00
1,2,3-Trimethylbenzene	U		0.321	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	93.6			80.0-120
(S) 4-Bromofluorobenzene	101			77.0-126
(S) 1,2-Dichloroethane-d4	98.7			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3410741-1 05/10/19 09:26 • (LCSD) R3410741-2 05/10/19 09:47

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	%	%	%			%	%
Acetone	125	123	123	98.1	98.2	19.0-160			0.147	27
Acrylonitrile	125	122	117	97.7	93.5	55.0-149			4.45	20
Benzene	25.0	27.0	25.7	108	103	70.0-123			4.95	20



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

(LCS) R3410741-1 05/10/19 09:26 • (LCSD) R3410741-2 05/10/19 09:47

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 %
Bromobenzene	25.0	26.2	25.1	105	100	73.0-121			4.34	20
Bromodichloromethane	25.0	24.6	23.4	98.4	93.7	75.0-120			4.89	20
Bromoform	25.0	23.9	23.2	95.5	92.7	68.0-132			2.98	20
Bromomethane	25.0	26.7	25.3	107	101	10.0-160			5.39	25
n-Butylbenzene	25.0	25.1	24.6	100	98.2	73.0-125			2.21	20
sec-Butylbenzene	25.0	26.6	26.4	106	106	75.0-125			0.735	20
tert-Butylbenzene	25.0	27.3	27.4	109	110	76.0-124			0.309	20
Carbon tetrachloride	25.0	25.8	24.9	103	99.8	68.0-126			3.42	20
Chlorobenzene	25.0	25.5	24.3	102	97.4	80.0-121			4.80	20
Chlorodibromomethane	25.0	23.6	23.1	94.5	92.4	77.0-125			2.26	20
Chloroethane	25.0	25.8	24.3	103	97.2	47.0-150			5.84	20
Chloroform	25.0	25.6	24.6	102	98.4	73.0-120			4.05	20
Chloromethane	25.0	27.3	25.8	109	103	41.0-142			5.39	20
2-Chlorotoluene	25.0	25.7	25.2	103	101	76.0-123			1.98	20
4-Chlorotoluene	25.0	25.4	24.5	102	97.8	75.0-122			3.83	20
1,2-Dibromo-3-Chloropropane	25.0	24.3	24.1	97.3	96.6	58.0-134			0.733	20
1,2-Dibromoethane	25.0	24.8	23.4	99.3	93.5	80.0-122			5.94	20
Dibromomethane	25.0	24.8	23.1	99.3	92.4	80.0-120			7.19	20
1,2-Dichlorobenzene	25.0	25.6	25.2	102	101	79.0-121			1.62	20
1,3-Dichlorobenzene	25.0	25.3	24.0	101	96.2	79.0-120			4.99	20
1,4-Dichlorobenzene	25.0	24.7	23.9	99.0	95.6	79.0-120			3.54	20
Dichlorodifluoromethane	25.0	27.5	27.7	110	111	51.0-149			0.504	20
1,1-Dichloroethane	25.0	26.1	25.0	104	100	70.0-126			4.36	20
1,2-Dichloroethane	25.0	25.8	24.9	103	99.8	70.0-128			3.29	20
Acrolein	125	91.6	88.7	73.3	71.0	10.0-160			3.23	26
1,1-Dichloroethene	25.0	29.3	27.4	117	110	71.0-124			6.72	20
cis-1,2-Dichloroethene	25.0	26.1	25.4	104	102	73.0-120			2.71	20
trans-1,2-Dichloroethene	25.0	25.6	25.5	102	102	73.0-120			0.508	20
1,2-Dichloropropane	25.0	24.9	23.6	99.4	94.5	77.0-125			5.10	20
1,1-Dichloropropene	25.0	25.7	25.1	103	100	74.0-126			2.65	20
1,3-Dichloropropane	25.0	23.7	22.8	94.8	91.3	80.0-120			3.86	20
cis-1,3-Dichloropropene	25.0	23.9	22.1	95.4	88.6	80.0-123			7.47	20
trans-1,3-Dichloropropene	25.0	23.9	22.3	95.5	89.2	78.0-124			6.76	20
2,2-Dichloropropane	25.0	21.7	21.2	86.9	84.7	58.0-130			2.61	20
Di-isopropyl ether	25.0	24.9	24.2	99.5	96.7	58.0-138			2.83	20
Ethylbenzene	25.0	25.8	25.1	103	100	79.0-123			2.77	20
Hexachloro-1,3-butadiene	25.0	26.4	26.3	105	105	54.0-138			0.0685	20
Isopropylbenzene	25.0	25.9	25.7	104	103	76.0-127			0.669	20
p-Isopropyltoluene	25.0	26.5	25.4	106	102	76.0-125			4.31	20
2-Butanone (MEK)	125	114	107	90.9	85.9	44.0-160			5.65	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) R3410741-1 05/10/19 09:26 • (LCSD) R3410741-2 05/10/19 09:47

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	26.5	25.5	106	102	67.0-120			3.79	20
4-Methyl-2-pentanone (MIBK)	125	115	111	91.8	89.0	68.0-142			3.03	20
Methyl tert-butyl ether	25.0	27.3	26.4	109	106	68.0-125			3.19	20
Naphthalene	25.0	24.9	24.6	99.4	98.3	54.0-135			1.11	20
n-Propylbenzene	25.0	27.4	26.3	110	105	77.0-124			4.20	20
Styrene	25.0	26.0	24.3	104	97.4	73.0-130			6.49	20
1,1,1,2-Tetrachloroethane	25.0	25.0	24.8	100	99.1	75.0-125			0.864	20
1,1,2,2-Tetrachloroethane	25.0	25.6	24.7	102	98.8	65.0-130			3.54	20
1,1,2-Trichlorotrifluoroethane	25.0	27.2	25.9	109	104	69.0-132			4.69	20
Tetrachloroethene	25.0	25.1	24.5	101	97.8	72.0-132			2.72	20
Toluene	25.0	24.8	23.7	99.0	94.9	79.0-120			4.30	20
1,2,3-Trichlorobenzene	25.0	26.4	26.0	106	104	50.0-138			1.79	20
1,2,4-Trichlorobenzene	25.0	26.1	26.0	104	104	57.0-137			0.366	20
1,1,1-Trichloroethane	25.0	26.3	25.4	105	101	73.0-124			3.80	20
1,1,2-Trichloroethane	25.0	24.7	22.8	98.8	91.3	80.0-120			7.84	20
Trichloroethene	25.0	25.3	24.0	101	96.1	78.0-124			5.11	20
Trichlorofluoromethane	25.0	28.3	27.2	113	109	59.0-147			4.03	20
1,2,3-Trichloropropane	25.0	24.7	24.4	98.9	97.7	73.0-130			1.22	20
1,2,4-Trimethylbenzene	25.0	24.8	24.7	99.1	98.8	76.0-121			0.326	20
1,2,3-Trimethylbenzene	25.0	25.0	24.8	100	99.0	77.0-120			0.948	20
1,3,5-Trimethylbenzene	25.0	28.2	27.5	113	110	76.0-122			2.67	20
Vinyl chloride	25.0	27.9	27.0	112	108	67.0-131			3.35	20
o-Xylene	25.0	25.3	25.5	101	102	80.0-122			0.743	20
m&p-Xylenes	50.0	51.7	51.6	103	103	80.0-122			0.175	20
(S) Toluene-d8				95.1	95.2	80.0-120				
(S) 4-Bromofluorobenzene				94.0	100	77.0-126				
(S) 1,2-Dichloroethane-d4				108	103	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3411680-3 05/11/19 15:15

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
2-Chlorotoluene	U		0.375	1.00
Chloromethane	U		0.276	2.50
4-Chlorotoluene	U		0.351	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
Dibromomethane	U		0.346	1.00
1,2-Dibromoethane	U		0.381	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
cis-1,2-Dichloroethene	U		0.260	1.00
1,1-Dichloroethene	U		0.398	1.00
1,1-Dichloropropene	U		0.352	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
1,3-Dichloropropane	U		0.366	1.00
2,2-Dichloropropane	U		0.321	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3411680-3 05/11/19 15:15

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
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methylene Chloride	U		1.00	5.00
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-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	1.00
1,2,3-Trichloropropane	U		0.807	2.50
1,2,3-Trimethylbenzene	U		0.321	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,2,4-Trimethylbenzene	U		0.373	1.00
1,1,2-Trichloroethane	U		0.383	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
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	95.8			80.0-120
(S) a,a,a-Trifluorotoluene	100			80.0-120
(S) 4-Bromofluorobenzene	105			77.0-126
(S) 1,2-Dichloroethane-d4	94.9			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3411680-1 05/11/19 13:51 • (LCSD) R3411680-2 05/11/19 14:12

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	123	117	98.3	93.4	19.0-160			5.19	27
Acrolein	125	76.7	79.3	61.4	63.4	10.0-160			3.27	26



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

(LCS) R3411680-1 05/11/19 13:51 • (LCSD) R3411680-2 05/11/19 14:12

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 %
Acrylonitrile	125	114	112	91.1	89.8	55.0-149			1.52	20
Bromobenzene	25.0	24.1	23.0	96.4	92.0	73.0-121			4.62	20
n-Butylbenzene	25.0	24.6	23.1	98.3	92.5	73.0-125			6.04	20
sec-Butylbenzene	25.0	25.2	24.2	101	96.7	75.0-125			4.30	20
tert-Butylbenzene	25.0	25.3	24.5	101	98.0	76.0-124			3.28	20
2-Chlorotoluene	25.0	24.6	22.8	98.3	91.1	76.0-123			7.63	20
Benzene	25.0	25.2	24.6	101	98.6	70.0-123			2.16	20
4-Chlorotoluene	25.0	24.2	23.0	97.0	92.1	75.0-122			5.12	20
1,2-Dibromo-3-Chloropropane	25.0	23.2	21.4	92.6	85.7	58.0-134			7.76	20
Bromodichloromethane	25.0	22.7	22.6	90.8	90.4	75.0-120			0.540	20
Bromoform	25.0	22.7	23.8	90.7	95.3	68.0-132			4.92	20
Dibromomethane	25.0	23.6	23.4	94.4	93.7	80.0-120			0.693	20
Bromomethane	25.0	26.3	24.5	105	98.0	10.0-160			7.23	25
Carbon tetrachloride	25.0	25.1	25.4	100	102	68.0-126			1.13	20
Chlorobenzene	25.0	24.1	24.8	96.4	99.4	80.0-121			3.06	20
Chlorodibromomethane	25.0	22.0	23.0	88.0	92.1	77.0-125			4.59	20
Chloroethane	25.0	24.1	22.9	96.3	91.5	47.0-150			5.15	20
cis-1,2-Dichloroethene	25.0	25.5	25.1	102	101	73.0-120			1.57	20
Chloroform	25.0	25.0	24.6	99.9	98.4	73.0-120			1.50	20
1,1-Dichloropropene	25.0	24.7	25.0	98.7	100	74.0-126			1.32	20
Chloromethane	25.0	25.2	25.4	101	102	41.0-142			0.970	20
1,3-Dichloropropane	25.0	22.7	22.9	90.9	91.8	80.0-120			0.897	20
2,2-Dichloropropane	25.0	23.5	23.8	94.0	95.1	58.0-130			1.17	20
1,2-Dibromoethane	25.0	23.3	24.1	93.1	96.5	80.0-122			3.62	20
1,2-Dichlorobenzene	25.0	24.3	23.1	97.2	92.3	79.0-121			5.18	20
1,3-Dichlorobenzene	25.0	24.2	22.9	96.8	91.7	79.0-120			5.37	20
1,4-Dichlorobenzene	25.0	23.8	22.7	95.2	90.9	79.0-120			4.62	20
Hexachloro-1,3-butadiene	25.0	24.7	24.2	98.8	96.7	54.0-138			2.12	20
Dichlorodifluoromethane	25.0	30.2	31.2	121	125	51.0-149			3.30	20
1,1-Dichloroethane	25.0	25.2	25.1	101	100	70.0-126			0.336	20
1,2-Dichloroethane	25.0	24.1	23.1	96.4	92.5	70.0-128			4.07	20
Isopropylbenzene	25.0	24.7	25.4	98.8	102	76.0-127			2.96	20
1,1-Dichloroethene	25.0	28.9	29.5	116	118	71.0-124			1.81	20
p-Isopropyltoluene	25.0	25.5	24.3	102	97.0	76.0-125			4.98	20
2-Butanone (MEK)	125	103	105	82.4	84.0	44.0-160			1.91	20
trans-1,2-Dichloroethene	25.0	25.7	26.3	103	105	73.0-120			2.26	20
1,2-Dichloropropane	25.0	23.5	22.4	93.8	89.6	77.0-125			4.56	20
4-Methyl-2-pentanone (MIBK)	125	101	103	81.0	82.2	68.0-142			1.54	20
cis-1,3-Dichloropropene	25.0	22.6	22.9	90.4	91.6	80.0-123			1.29	20
trans-1,3-Dichloropropene	25.0	22.2	23.1	88.9	92.3	78.0-124			3.65	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) R3411680-1 05/11/19 13:51 • (LCSD) R3411680-2 05/11/19 14:12

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 %
Di-isopropyl ether	25.0	23.5	22.9	94.1	91.6	58.0-138			2.70	20
Ethylbenzene	25.0	24.3	24.9	97.2	99.7	79.0-123			2.60	20
n-Propylbenzene	25.0	25.4	23.6	102	94.6	77.0-124			7.06	20
Styrene	25.0	24.2	24.7	96.7	98.8	73.0-130			2.15	20
1,1,1,2-Tetrachloroethane	25.0	23.7	24.3	94.7	97.4	75.0-125			2.84	20
1,1,2-Trichlorotrifluoroethane	25.0	29.2	28.2	117	113	69.0-132			3.51	20
1,2,3-Trichlorobenzene	25.0	26.1	23.2	104	92.9	50.0-138			11.5	20
1,2,4-Trichlorobenzene	25.0	25.8	23.6	103	94.5	57.0-137			8.67	20
Methylene Chloride	25.0	25.2	26.0	101	104	67.0-120			3.16	20
1,2,3-Trichloropropane	25.0	21.6	22.2	86.3	88.9	73.0-130			2.89	20
Methyl tert-butyl ether	25.0	26.8	26.9	107	108	68.0-125			0.354	20
1,2,3-Trimethylbenzene	25.0	24.2	22.7	96.9	90.9	77.0-120			6.36	20
1,2,4-Trimethylbenzene	25.0	23.1	22.2	92.4	88.6	76.0-121			4.19	20
1,3,5-Trimethylbenzene	25.0	26.5	24.8	106	99.1	76.0-122			6.71	20
Naphthalene	25.0	24.2	22.3	96.7	89.1	54.0-135			8.21	20
1,1,2,2-Tetrachloroethane	25.0	24.8	22.9	99.3	91.8	65.0-130			7.88	20
Tetrachloroethene	25.0	23.7	24.4	94.8	97.7	72.0-132			3.04	20
Toluene	25.0	23.1	23.9	92.4	95.5	79.0-120			3.30	20
1,1,1-Trichloroethane	25.0	26.3	26.1	105	105	73.0-124			0.835	20
1,1,2-Trichloroethane	25.0	22.6	23.8	90.3	95.3	80.0-120			5.36	20
Trichloroethene	25.0	22.6	22.8	90.4	91.2	78.0-124			0.922	20
Trichlorofluoromethane	25.0	27.6	27.1	110	109	59.0-147			1.68	20
Vinyl chloride	25.0	27.1	26.0	108	104	67.0-131			3.86	20
o-Xylene	25.0	24.5	25.5	97.9	102	80.0-122			4.01	20
m&p-Xylenes	50.0	48.5	49.6	97.0	99.1	80.0-122			2.21	20
(S) Toluene-d8				95.4	97.1	80.0-120				
(S) a,a,a-Trifluorotoluene				102	102	80.0-120				
(S) 4-Bromofluorobenzene				93.6	98.7	77.0-126				
(S) 1,2-Dichloroethane-d4				103	102	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3411559-3 05/12/19 10:52

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3411559-3 05/12/19 10:52

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	97.7			80.0-120
(S) 4-Bromofluorobenzene	103			77.0-126
(S) 1,2-Dichloroethane-d4	98.6			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3411559-1 05/12/19 09:28 • (LCSD) R3411559-2 05/12/19 09:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Acetone	125	118	123	94.3	98.2	19.0-160			4.09	27
Acrolein	125	48.4	51.2	38.7	41.0	10.0-160			5.71	26
Acrylonitrile	125	114	115	91.3	91.8	55.0-149			0.461	20



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

(LCS) R3411559-1 05/12/19 09:28 • (LCSD) R3411559-2 05/12/19 09:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	25.8	25.2	103	101	70.0-123			2.38	20
Bromobenzene	25.0	23.4	23.9	93.8	95.7	73.0-121			2.06	20
Bromodichloromethane	25.0	23.4	23.1	93.6	92.6	75.0-120			1.10	20
Bromoform	25.0	23.5	24.0	94.0	96.2	68.0-132			2.30	20
Bromomethane	25.0	25.7	24.8	103	99.0	10.0-160			3.87	25
n-Butylbenzene	25.0	24.0	24.0	95.9	95.9	73.0-125			0.0206	20
sec-Butylbenzene	25.0	24.9	24.6	99.6	98.3	75.0-125			1.34	20
tert-Butylbenzene	25.0	25.1	24.9	101	99.7	76.0-124			0.844	20
Carbon tetrachloride	25.0	25.9	24.2	103	96.9	68.0-126			6.45	20
Chlorobenzene	25.0	25.3	25.9	101	104	80.0-121			2.41	20
Chlorodibromomethane	25.0	23.4	24.2	93.8	96.9	77.0-125			3.23	20
Chloroethane	25.0	22.3	24.2	89.3	96.7	47.0-150			7.89	20
Chloroform	25.0	25.1	24.4	100	97.6	73.0-120			2.82	20
Chloromethane	25.0	27.2	25.8	109	103	41.0-142			4.95	20
2-Chlorotoluene	25.0	24.2	24.0	97.0	95.9	76.0-123			1.14	20
4-Chlorotoluene	25.0	23.9	24.5	95.7	98.1	75.0-122			2.54	20
1,2-Dibromo-3-Chloropropane	25.0	22.5	21.6	90.0	86.3	58.0-134			4.20	20
1,2-Dibromoethane	25.0	24.9	25.5	99.7	102	80.0-122			2.26	20
Dibromomethane	25.0	23.8	23.6	95.3	94.4	80.0-120			0.938	20
1,2-Dichlorobenzene	25.0	23.5	23.6	94.0	94.4	79.0-121			0.461	20
1,3-Dichlorobenzene	25.0	24.0	23.7	95.9	94.8	79.0-120			1.19	20
1,4-Dichlorobenzene	25.0	22.8	24.1	91.2	96.4	79.0-120			5.60	20
Dichlorodifluoromethane	25.0	34.4	32.4	138	130	51.0-149			6.05	20
1,1-Dichloroethane	25.0	25.3	24.5	101	98.1	70.0-126			2.95	20
1,2-Dichloroethane	25.0	24.3	23.7	97.1	94.9	70.0-128			2.32	20
1,1-Dichloroethene	25.0	29.0	28.2	116	113	71.0-124			2.86	20
cis-1,2-Dichloroethene	25.0	26.6	25.0	106	99.9	73.0-120			6.41	20
trans-1,2-Dichloroethene	25.0	27.4	25.8	110	103	73.0-120			5.86	20
1,2-Dichloropropane	25.0	24.2	22.4	96.9	89.6	77.0-125			7.88	20
1,1-Dichloropropene	25.0	26.0	24.2	104	97.0	74.0-126			7.03	20
1,3-Dichloropropane	25.0	23.8	24.2	95.2	96.7	80.0-120			1.53	20
cis-1,3-Dichloropropene	25.0	23.7	24.5	94.9	97.9	80.0-123			3.16	20
trans-1,3-Dichloropropene	25.0	22.8	24.2	91.2	96.6	78.0-124			5.84	20
2,2-Dichloropropane	25.0	24.8	24.1	99.1	96.2	58.0-130			2.92	20
Di-isopropyl ether	25.0	23.3	22.5	93.3	90.0	58.0-138			3.65	20
Ethylbenzene	25.0	25.4	25.1	102	100	79.0-123			1.38	20
Hexachloro-1,3-butadiene	25.0	23.0	24.3	91.8	97.3	54.0-138			5.82	20
Isopropylbenzene	25.0	25.7	24.6	103	98.2	76.0-127			4.70	20
p-Isopropyltoluene	25.0	24.6	24.5	98.6	97.9	76.0-125			0.658	20
2-Butanone (MEK)	125	108	112	86.0	89.4	44.0-160			3.80	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3411559-1 05/12/19 09:28 • (LCSD) R3411559-2 05/12/19 09:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methylene Chloride	25.0	26.3	26.0	105	104	67.0-120			0.819	20
4-Methyl-2-pentanone (MIBK)	125	104	106	82.9	85.0	68.0-142			2.44	20
Methyl tert-butyl ether	25.0	27.3	26.6	109	107	68.0-125			2.32	20
Naphthalene	25.0	22.0	22.1	88.1	88.6	54.0-135			0.510	20
n-Propylbenzene	25.0	24.6	24.3	98.4	97.2	77.0-124			1.26	20
Styrene	25.0	24.6	25.9	98.3	104	73.0-130			5.32	20
1,1,1,2-Tetrachloroethane	25.0	25.3	24.4	101	97.7	75.0-125			3.64	20
1,1,2,2-Tetrachloroethane	25.0	24.1	24.5	96.4	97.9	65.0-130			1.49	20
Tetrachloroethene	25.0	27.3	26.1	109	105	72.0-132			4.36	20
Toluene	25.0	24.8	24.7	99.0	98.6	79.0-120			0.442	20
1,1,2-Trichlorotrifluoroethane	25.0	29.1	27.7	116	111	69.0-132			4.81	20
1,2,3-Trichlorobenzene	25.0	22.7	23.6	90.9	94.4	50.0-138			3.75	20
1,2,4-Trichlorobenzene	25.0	23.5	23.6	93.9	94.4	57.0-137			0.558	20
1,1,1-Trichloroethane	25.0	26.6	25.5	106	102	73.0-124			4.33	20
1,1,2-Trichloroethane	25.0	24.3	24.2	97.0	96.9	80.0-120			0.126	20
Trichloroethene	25.0	24.1	24.7	96.6	99.0	78.0-124			2.47	20
Trichlorofluoromethane	25.0	26.8	25.0	107	100	59.0-147			6.87	20
1,2,3-Trichloropropane	25.0	22.6	23.4	90.5	93.4	73.0-130			3.17	20
1,2,3-Trimethylbenzene	25.0	24.1	23.2	96.2	92.9	77.0-120			3.55	20
1,2,4-Trimethylbenzene	25.0	23.3	23.3	93.2	93.2	76.0-121			0.0343	20
1,3,5-Trimethylbenzene	25.0	25.8	25.8	103	103	76.0-122			0.343	20
Vinyl chloride	25.0	27.6	25.7	110	103	67.0-131			7.07	20
o-Xylene	25.0	25.2	24.4	101	97.5	80.0-122			3.18	20
m&p-Xylenes	50.0	51.0	51.6	102	103	80.0-122			1.13	20
(S) Toluene-d8				98.7	98.1	80.0-120				
(S) 4-Bromofluorobenzene				92.0	89.0	77.0-126				
(S) 1,2-Dichloroethane-d4				103	100	70.0-130				

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. [LCS7209-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15,16,17](#)

Method Blank (MB)

(MB) R3410618-1 05/11/19 14:32

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>	88.0			52.0-156

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

(LCS) R3410618-2 05/11/19 14:49 • (LCSD) R3410618-3 05/11/19 15:06

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)	1500	1280	1300	85.3	86.7	50.0-150			1.55	20
<i>(S) o-Terphenyl</i>				114	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) R3411065-1 05/14/19 12:50

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>	79.0			52.0-156

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

(LCS) R3411065-2 05/14/19 13:12 • (LCSD) R3411065-3 05/14/19 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	709	732	94.5	97.6	50.0-150			3.19	20
<i>(S) o-Terphenyl</i>				89.5	100	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) R3411345-1 05/15/19 00:45

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)	255		83.3	250
(S) o-Terphenyl	82.5			52.0-156

Laboratory Control Sample (LCS)

(LCS) R3411345-2 05/15/19 01:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Diesel Range Organics (DRO)	1500	1080	72.0	50.0-150	
(S) o-Terphenyl			80.0	52.0-156	

L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/15/19 02:13 • (MS) R3411345-3 05/15/19 02:35 • (MSD) R3411345-4 05/15/19 02:57

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	%	%		%			%	%
Diesel Range Organics (DRO)	1430	ND	1010	1080	70.6	75.5	1	50.0-150			6.70	20
(S) o-Terphenyl					80.0	85.3		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) R3410303-1 05/10/19 12:32

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	0.00555	J	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	138			31.0-160
(S) 2-Fluorobiphenyl	119			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)

(LCS) R3410303-2 05/10/19 12:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Anthracene	2.00	2.13	106	67.0-150	
Acenaphthene	2.00	1.92	96.0	65.0-138	
Acenaphthylene	2.00	1.99	99.5	66.0-140	
Benzo(a)anthracene	2.00	1.92	96.0	61.0-140	
Benzo(a)pyrene	2.00	1.93	96.5	60.0-143	
Benzo(b)fluoranthene	2.00	1.80	90.0	58.0-141	
Benzo(g,h,i)perylene	2.00	1.94	97.0	52.0-153	
Benzo(k)fluoranthene	2.00	2.01	100	58.0-148	
Chrysene	2.00	1.95	97.5	64.0-144	
Dibenz(a,h)anthracene	2.00	1.97	98.5	52.0-155	
Fluoranthene	2.00	2.10	105	69.0-153	





Laboratory Control Sample (LCS)

(LCS) R3410303-2 05/10/19 12:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	2.00	1.74	87.0	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.98	99.0	54.0-153	
Naphthalene	2.00	1.90	95.0	61.0-137	
Phenanthrene	2.00	1.83	91.5	62.0-137	
Pyrene	2.00	1.86	93.0	60.0-142	
1-Methylnaphthalene	2.00	1.82	91.0	66.0-142	
2-Methylnaphthalene	2.00	1.81	90.5	62.0-136	
2-Chloronaphthalene	2.00	1.93	96.5	64.0-140	
(S) Nitrobenzene-d5			120	31.0-160	
(S) 2-Fluorobiphenyl			107	48.0-148	
(S) p-Terphenyl-d14			96.0	37.0-146	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1097314-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097314-03 05/10/19 19:49 • (MS) R3410303-3 05/10/19 20:11 • (MSD) R3410303-4 05/10/19 20:33

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 %
Anthracene	1.90	0.156	2.03	2.16	98.6	105	1	56.0-156			6.21	20
Acenaphthene	1.90	0.566	2.30	2.44	91.3	98.6	1	44.0-153			5.91	20
Acenaphthylene	1.90	ND	2.00	2.11	105	111	1	53.0-150			5.35	20
Benzo(a)anthracene	1.90	ND	1.82	1.93	93.2	99.0	1	47.0-151			5.87	20
Benzo(a)pyrene	1.90	ND	1.70	1.78	88.4	92.6	1	45.0-146			4.60	20
Benzo(b)fluoranthene	1.90	0.0500	1.69	1.85	86.3	94.7	1	43.0-142			9.04	20
Benzo(g,h,i)perylene	1.90	ND	1.72	1.81	89.4	94.1	1	40.0-147			5.10	20
Benzo(k)fluoranthene	1.90	ND	1.66	1.68	87.4	88.4	1	43.0-148			1.20	21
Chrysene	1.90	0.0722	1.79	1.93	90.4	97.8	1	50.0-148			7.53	20
Dibenz(a,h)anthracene	1.90	ND	1.78	1.85	93.7	97.4	1	37.0-151			3.86	20
Fluoranthene	1.90	0.608	2.35	2.49	91.7	99.1	1	56.0-157			5.79	20
Fluorene	1.90	0.752	2.47	2.51	90.4	92.5	1	48.0-148			1.61	20
Indeno(1,2,3-cd)pyrene	1.90	ND	1.77	1.85	92.2	96.4	1	41.0-148			4.42	20
Naphthalene	1.90	110	92.2	98.0	0.000	0.000	1	10.0-160	V	E V	6.10	20
Phenanthrene	1.90	0.536	2.29	2.43	92.3	99.7	1	47.0-147			5.93	20
Pyrene	1.90	0.428	2.13	2.30	89.6	98.5	1	51.0-148			7.67	20
1-Methylnaphthalene	1.90	90.2	76.0	80.6	0.000	0.000	1	21.0-160	V	V	5.87	20
2-Methylnaphthalene	1.90	28.4	25.0	26.2	0.000	0.000	1	31.0-160	V	V	4.69	20
2-Chloronaphthalene	1.90	ND	1.86	1.98	97.9	104	1	52.0-148			6.25	20
(S) Nitrobenzene-d5					130	142		31.0-160				
(S) 2-Fluorobiphenyl					98.4	111		48.0-148				
(S) p-Terphenyl-d14					95.8	103		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, 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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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.
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.
J0	J0: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration method criteria.
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.



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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

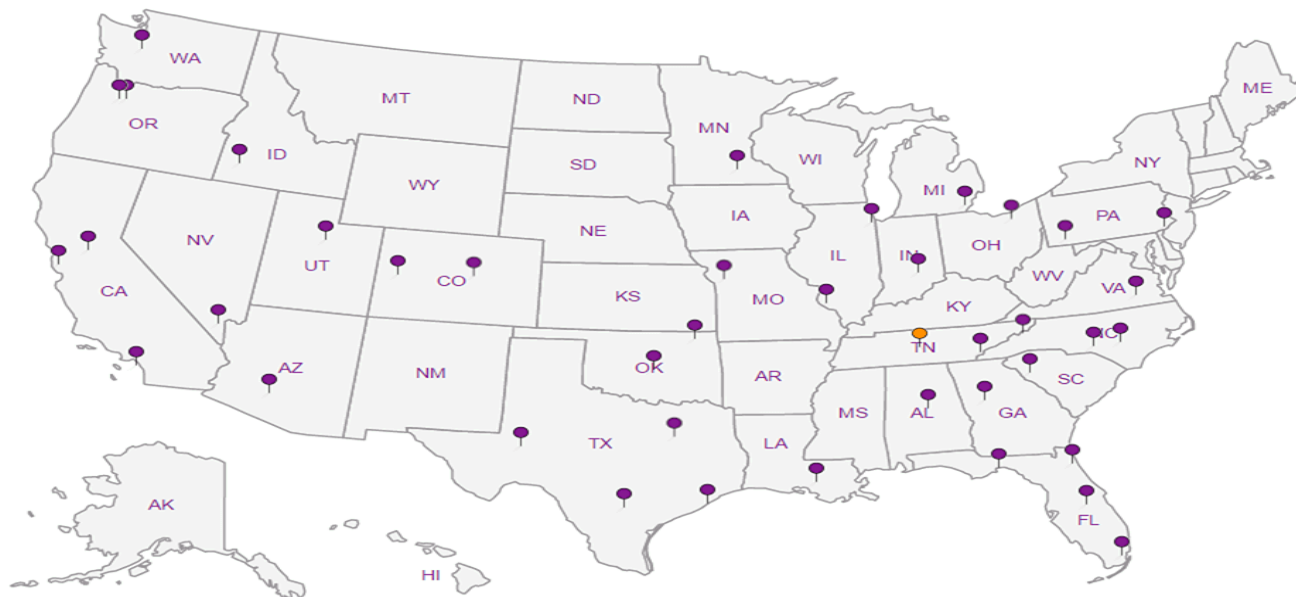
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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 1 of 4  
  
 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](mailto:RyanHultgren@kennedyjenks.com),  
[KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com)

Project  
 Description: **BNSF - Wishram Rail yard, WA**

City/State  
 Collected: **Wishram, WA**

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

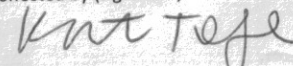
Client Project #  
**1996120\*00**

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

Diss M6020RCRAB 250mlHDPE-HNO3  
 Dissolved Fe, Mn 250mlHDPE-HNO3 (FF)  
 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



L# **1097209**  
**H097**

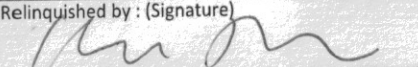
Acctnum: **BNSF1KEN**  
 Template: **T149555**  
 Prelogin: **P705634**  
 TSR: **134 - Mark W. Beasley**  
 PB: **4-26-196m**  
 Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss M6020RCRAB 250mlHDPE-HNO3	Dissolved Fe, Mn 250mlHDPE-HNO3 (FF)	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	Remarks	Sample # (lab only)
1 WMW-12-20190508	Grab	GW	—	5/8/19	0745	8	X	X	X	X	X	X	X	X	X	X		-01
3 WMW-14-20190507		GW	—	5/7/19	0950	10	X	X	X	X	X	X	X	X	X	X		02
3 WMW-15-20190507		GW	—	5/7/19	1150	8	X	X	X	X	X	X	X	X	X	X		03
4 WMW-16-20190507		GW	—	5/7/19	1405	15	X	X	X	X	X	X	X	X	X	X		04
3 WMW-19-20190507		GW	—	5/7/19	0900	14	X	X	X	X	X	X	X	X	X	X	BTX pg 2	05
1 WMW-24-20190507		GW	—	5/7/19	1530	15	X	X	X	X	X	X	X	X	X	X	see pg 2	06
2 WMW-26-20190507		GW	—	5/7/19	0920	17	X	X	X	X	X	X	X	X	X	X	see pg 2	07
2 WMW-28-20190507		GW	—	5/7/19	1225	15	X	X	X	X	X	X	X	X	X	X	see pg 2	08
2 DUP-01-20190507		GW	—	5/7/19	1235	14	X	X	X	X	X	X	X	X	X	X	see pg 2	09
2 WMW-29-20190507	↓	GW	—	5/7/19	1010	15	X	X	X	X	X	X	X	X	X	X	see pg 2	10

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

Remarks: **continued on pg 2**  
 RAD SCREEN: <0.5 mR/hr  
 pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_  
 Samples returned via:  
 UPS  FedEx  Courier \_\_\_\_\_  
 Tracking # **4876 1094 8098 { 1076 } 8087**

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)  


Date: **5/8/19**  
 Time: **1000**

Received by: (Signature)  
**FedEx**

Trip Blank Received: **4**  
 Yes /  No  
 HCl /  MeOH  
 TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_  
 Time: \_\_\_\_\_


Received by: (Signature)  
**1.4 0.6**  
**2.6**

Temp: \_\_\_\_\_ °C  
**1.8 2.0 1.8 2.0**  
 Bottles Received: **222**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Received for lab by: (Signature)  


Date: **5/9/19**  
 Time: **0845**

Hold: \_\_\_\_\_  
 Condition: **NCA / 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 4



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 #  
1996120\*00

Lab Project #  
BNSF1KEN-WISHRAM

Collected by (print):  
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):  
*K. Teague*

Rush? (Lab MUST Be Notified)

Quote #

Date Results Needed

No. of  
Cntrs

Immediately  
Packed on Ice N    Y X

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	No. of Cntrs	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl	Dissolved Pb (field filtered) 6020	Dissolved M6020RCRA8 (FF)	Remarks	Sample # (lab only)
3 WMW-19-20190507	Grab	GW	—	5/7/19	0900	14			X	X					05
1 WMW-24-20190507		GW	—	5/7/19	1530	15		X			X				06
2 WMW-26-20190507		GW	—	5/7/19	0920	17		X			X				07
2 WMW-28-20190507		GW	—	5/7/19	1225	15		X			X				08
2 DVP-01-20190507		GW	—	5/7/19	1235	14		X			X				09
2 WMW-29-20190507		GW	—	5/7/19	1010	15		X			X				10
		GW													
		GW													
		GW													
		GW													

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:

PAD SCREEN: <0.5 mR/hr

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
   UPS X FedEx    Courier   

Tracking #

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: 5/8/19	Time: 1000	Received by: (Signature) FedEx	Trip Blank Received: <u>4</u> <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No HCL / MeOH TBR	Bottles Received: 1-830:18 <sup>PM</sup> 222
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 5/9/19	Time: 0845
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 5/9/19	Time: 0845

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:  
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 #  
1996120\*00

Lab Project #  
BNSF1KEN-WISHRAM

Collected by (print):  
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

Date Results Needed

No.  
of  
Cntrs

Immediately  
Packed on Ice N    Y X

Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Analysis / Container / Preservative

Chain of Custody Page 3 of 4



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



L# 1097207

Table #

Acctnum: BNSF1KEN

Template: T149555

Prelogin: P705634

TSR: 134 - Mark W. Beasley

PB: 4-26-196m

Shipped Via: FedEX Ground

Remarks Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss M6020RCRA8 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	Remarks	Sample # (lab only)
4 WMW-17-20190508	Grab	GW	-	5/8/19	0820	12		X	X		X	X		X	X	X	see pg 4	11
4 DVP-02-20190508		GW	-	5/8/19	0830	12		X	X		X	X		X	X	X	see pg 4	12
1 WMW-30-20190507		GW	-	5/7/19	1400	17	X	X	X	X	X		X	X	X	X	see pg 4	13
3 RMD-1-20190507		GW	-	5/7/19	1305	12		X	X	X	X		X	X	X	X		14
1 RMD-2-20190507		GW	-	5/7/19	1505	12		X	X	X	X		X	X	X	X		15
4 RMD-3-20190507		GW	-	5/7/19	1620	10		X	X		X		X	X	X	X		16
3 RMD-5-20190507		GW	-	5/7/19	1045	16		X	X	X	X		X	X	X	X	see pg 4	17
		GW																
		GW																
		GW																

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:  
continued on pg 4

RAD SCREEN: <0.5 mR/hr

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)  
Date: 5/8/19 Time: 1000

Received by: (Signature)  
Date: Time:

Received by: (Signature)  
Date: Time:

Trip Blank Received:  Yes /  No  
HCL / MeOH TBR  
Temp: 1-830-18 TW 272  
Bottles Received: 4  
Date: 5/9/19 Time: 0845

If preservation required by Login: Date/Time  
Hold:  
Condition: NCF / OK



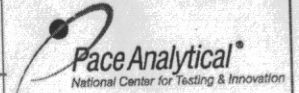
# Kennedy/Jenks Con-BNSF Region 1

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

Billing Information:  
Accounts Payable  
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

Pres  
Chk

Analysis / Container / Preservative



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](mailto:RyanHultgren@kennedyjenks.com),  
[KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com)

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

City/State  
Collected: **Wishram, WA**

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

Client Project #  
**1996120\*00**

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl	Dissolved As 6020 (FF)	Dissolved Pb 6020 (FF)
4 WMW-17-20190508	Grab	GW	—	5/8/19	0820	12	X					X	
4 DVP-02-20190508	↓	GW	—	5/8/19	0830	12	X					X	
1 WMW-30-20190507	↓	GW	—	5/7/19	1400	17		X		X			
3 RMD-5-20190507	↓	GW	—	5/7/19	1045	16			X	X			X
1 TB-01		GW				1							
2 TB-02		GW				1							
3 TB-03		GW				1							
4 TB-04		GW				1							
		GW				1							

L # **1097207**  
Table #  
Acctnum: **BNSF1KEN**  
Template: **T149555**  
Prelogin: **P705634**  
TSR: **134 - Mark W. Beasley**  
PB:  
Shipped Via: **FedEX Ground**

Remarks	Sample # (lab only)
	11
	12
	13
	17
	18
	19
	20
	21

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:  
RAD SCREEN: <0.5 mR/hr  
pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

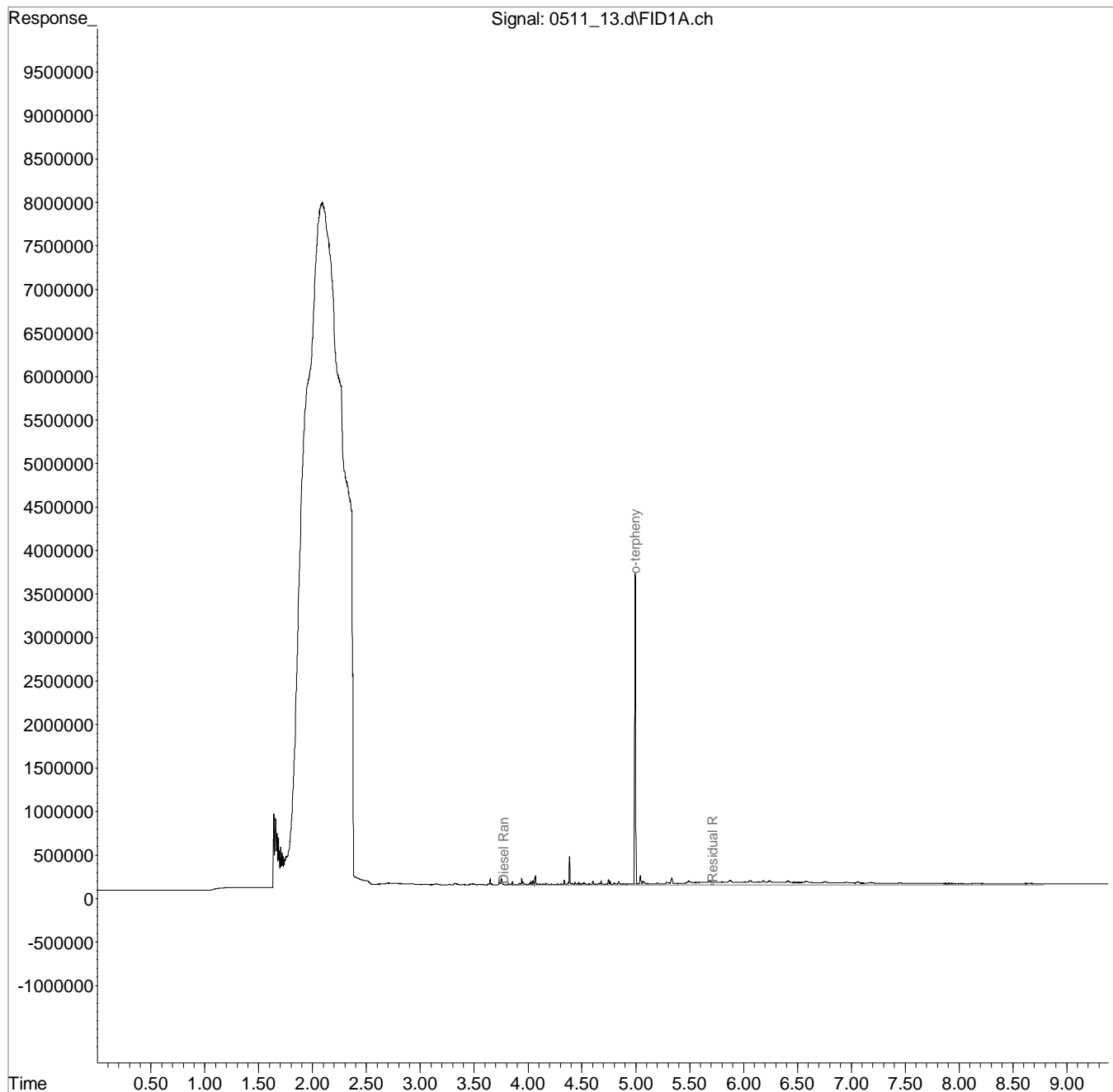
Sample Receipt Checklist  
COC Seal Present/Intact:  NP  Y  N  
COC Signed/Accurate:  Y  N  
Bottles arrive intact:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
If Applicable  
VOA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature) <i>[Signature]</i>	Date: 5/8/19	Time: 1000	Received by: (Signature) FedEx	Trip Blank Received: <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No HCl/ MeOH TBR	Bottles Received: 222	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 18.5°C		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 5/9/19	Time: 0845	Hold: Condition: NCF / OK

Data Path : C:\msdchem\1\data\051119\  
Data File : 0511\_13.d  
Signal(s) : FID1A.ch  
Acq On : 11 May 2019 3:41 pm  
Operator : 773  
Sample : L1097209-01 1x WG1278954  
Misc : M.I.s on ranges are corrections  
ALS Vial : 11 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: May 11 15:56:16 2019  
Quant Method : C:\msdchem\1\methods\DM31E10S.M  
Quant Title :  
QLast Update : Sat May 11 09:42:52 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

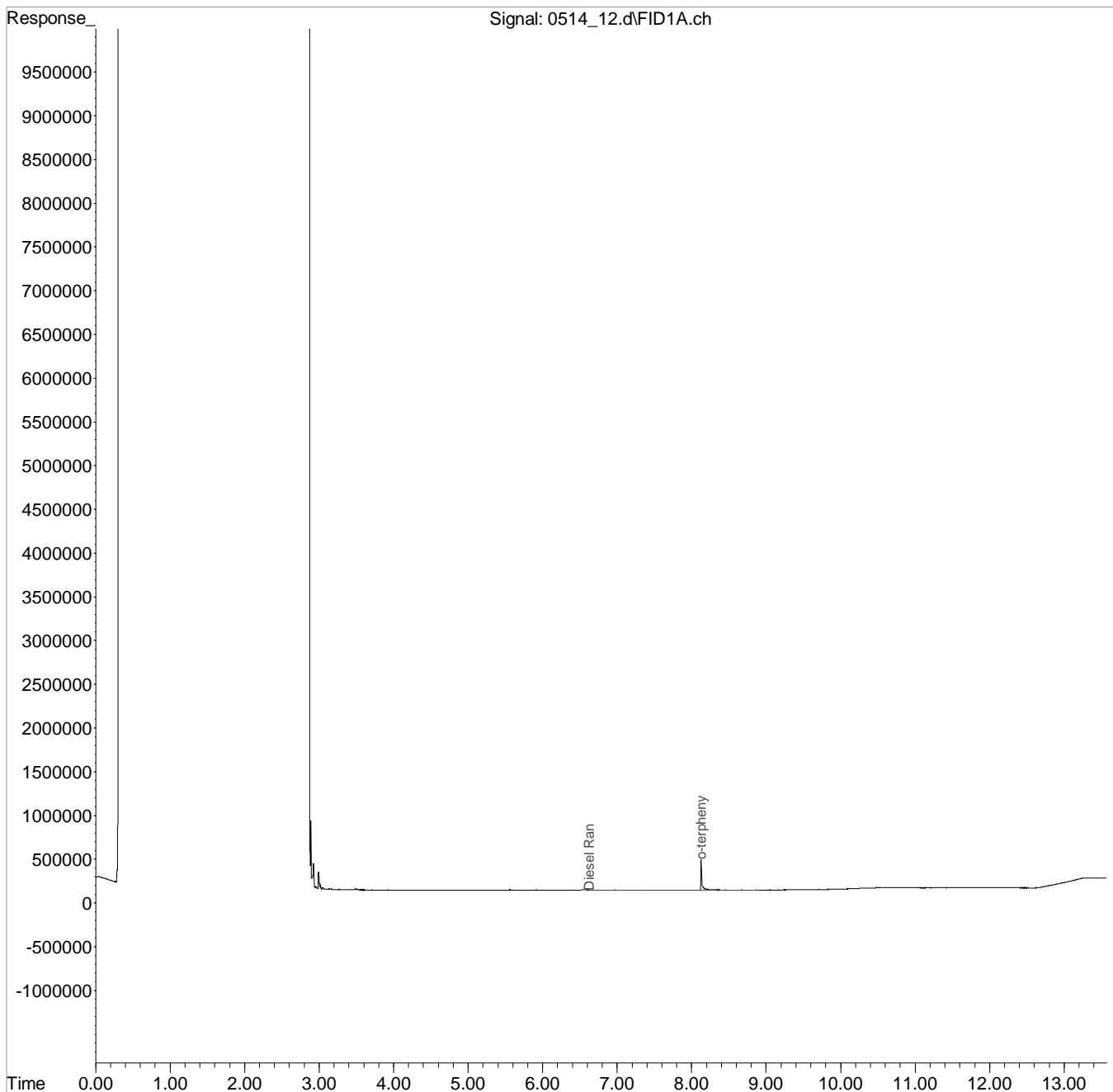




Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514 12.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 May 2019 1:56 pm  
 Operator : 784  
 Sample : L1097209-02 1x WG1278958  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 10 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 14 14:57:11 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

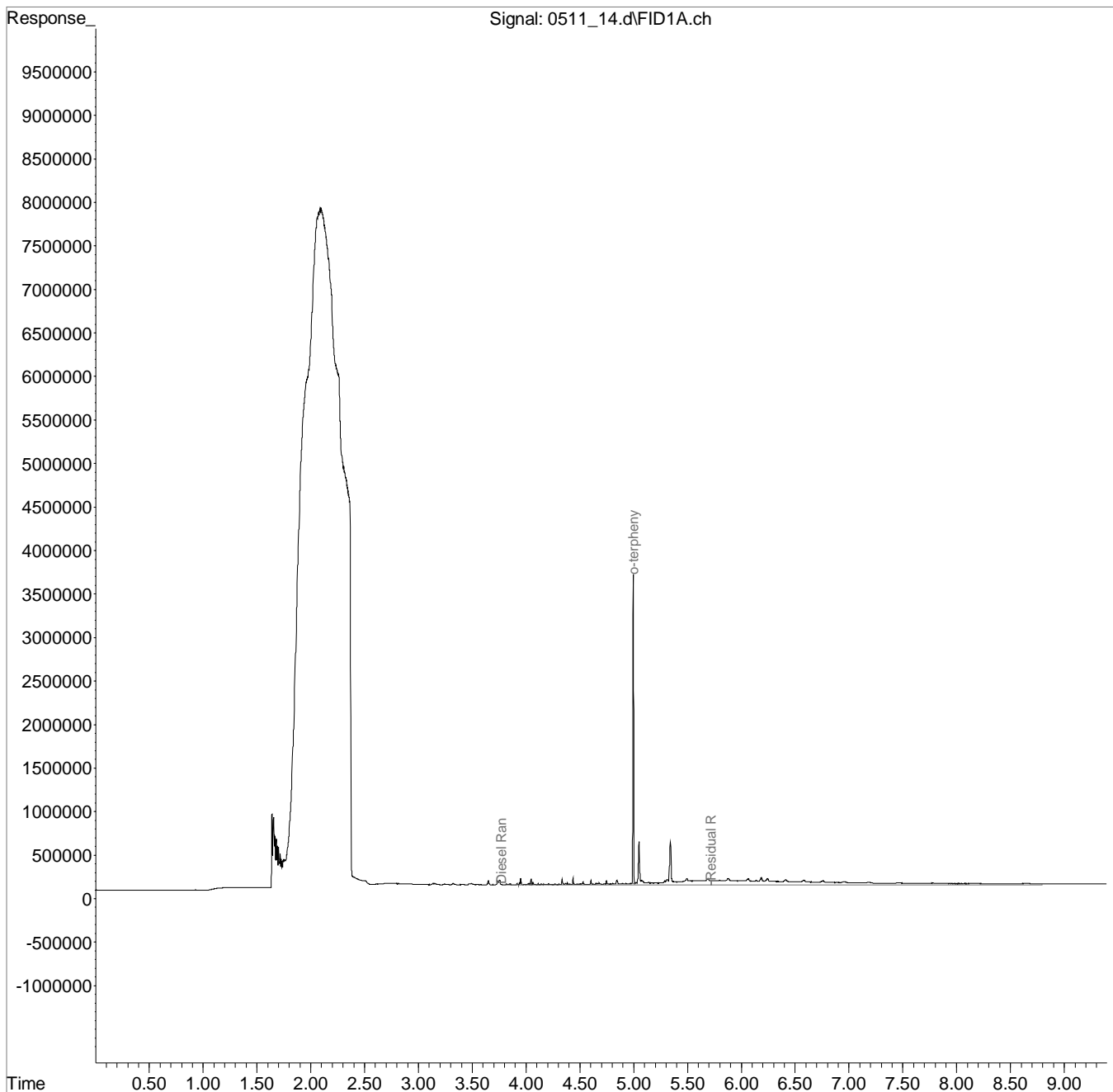
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051119\  
 Data File : 0511\_14.d  
 Signal(s) : FID1A.ch  
 Acq On : 11 May 2019 3:58 pm  
 Operator : 773  
 Sample : L1097209-02 1x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 12 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 11 16:28:07 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

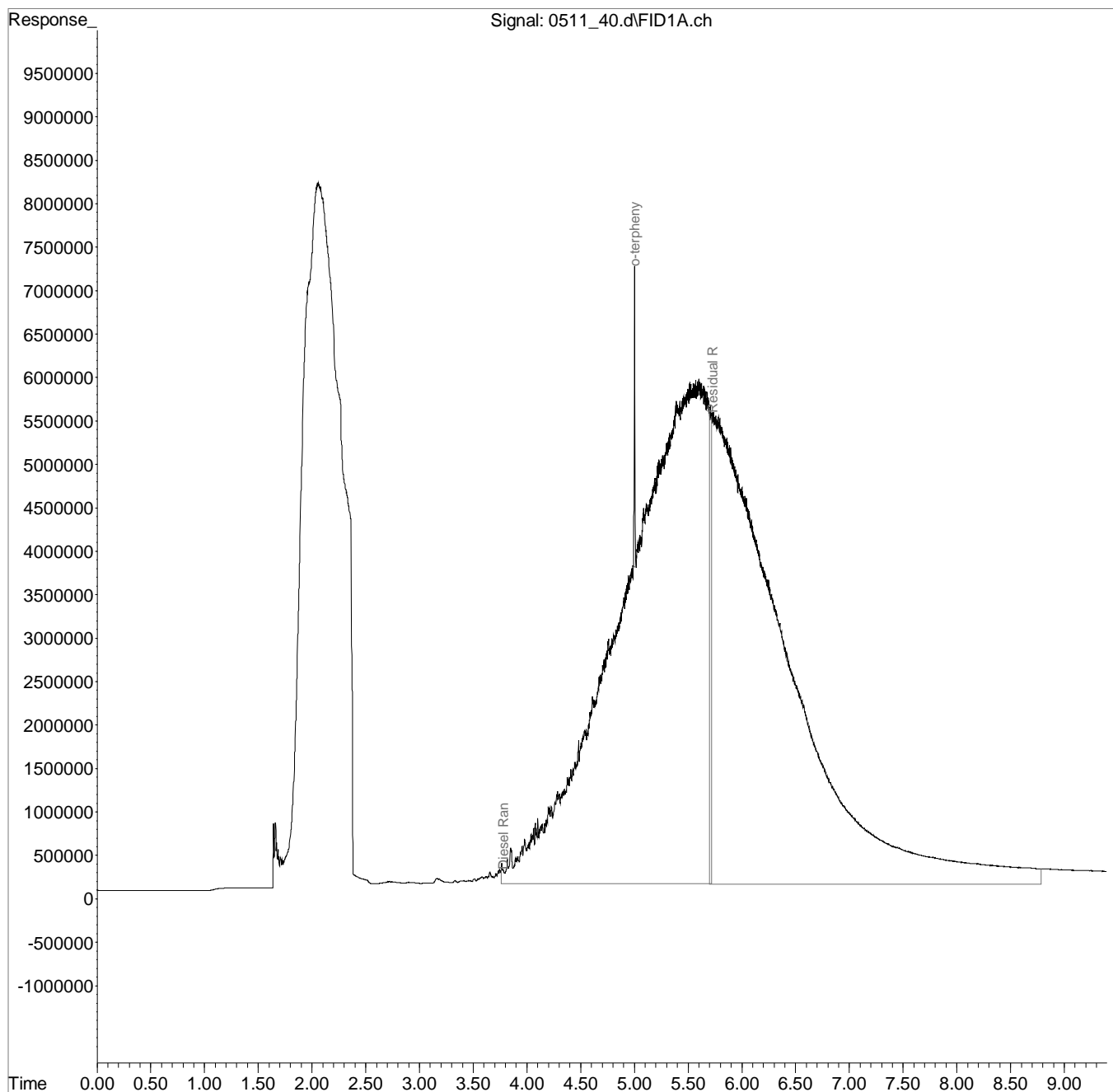
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051119\  
Data File : 0511\_40.d  
Signal(s) : FID1A.ch  
Acq On : 11 May 2019 11:24 pm  
Operator : 773  
Sample : L1097209-03 1x WG1278954  
Misc : M.I.s on ranges are corrections  
ALS Vial : 26 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: May 12 11:06:25 2019  
Quant Method : C:\msdchem\1\methods\DM31E10S.M  
Quant Title :  
QLast Update : Sat May 11 09:42:52 2019  
Response via : Initial Calibration  
Integrator: ChemStation

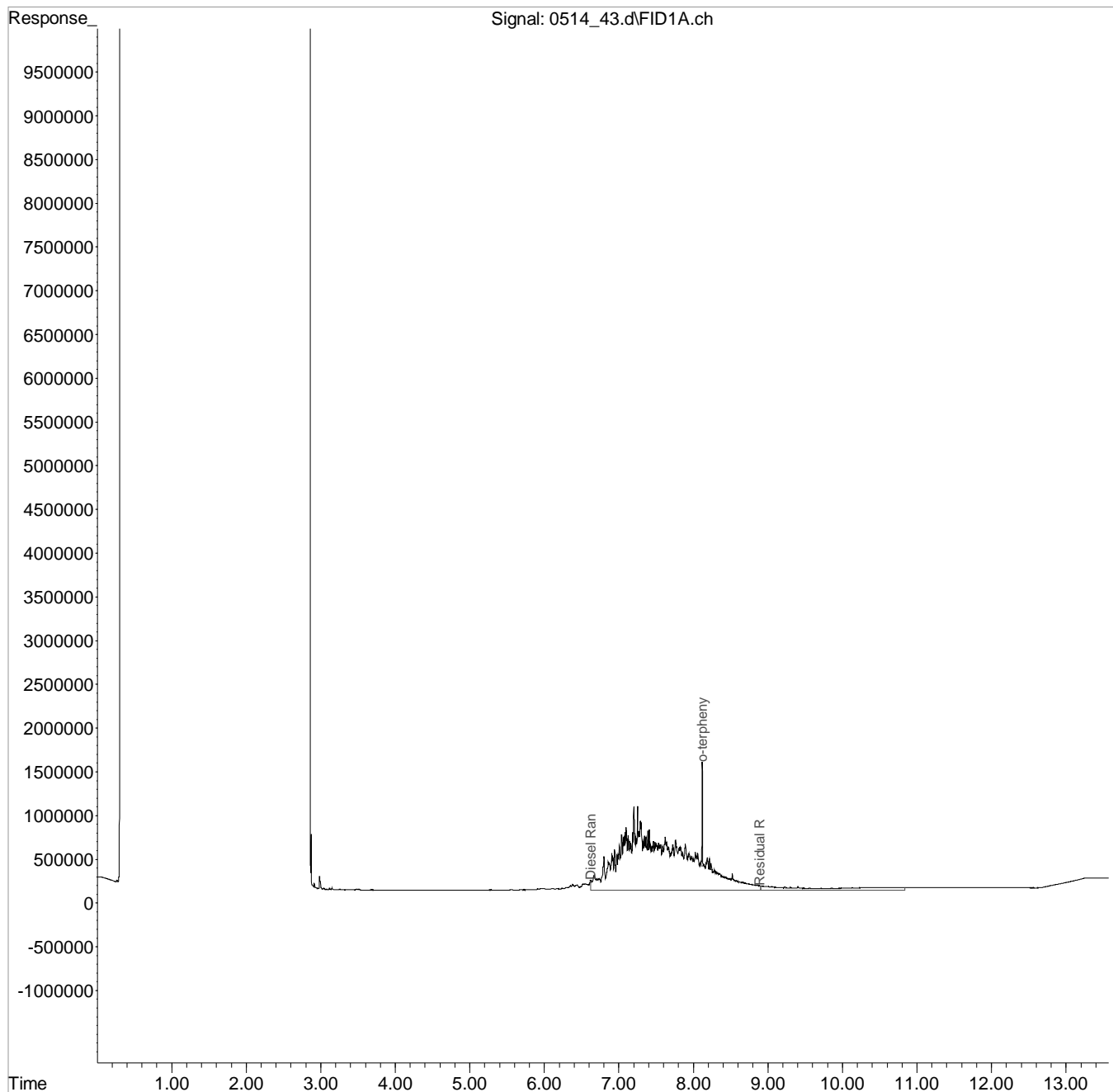
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
Data File : 0514 43.d  
Signal(s) : FID1A.ch  
Acq On : 15 May 2019 1:29 am  
Operator : 784  
Sample : L1097209-04 1x WG1280920  
Misc : M.I.s on ranges are corrections  
ALS Vial : 28 Sample Multiplier: 1  
InstName : SVGC21

Integration File: events.e  
Quant Time: May 15 10:49:55 2019  
Quant Method : C:\msdchem\1\methods\DM21E08S.M  
Quant Title : DROLVI  
QLast Update : Thu May 09 14:33:23 2019  
Response via : Initial Calibration  
Integrator: ChemStation

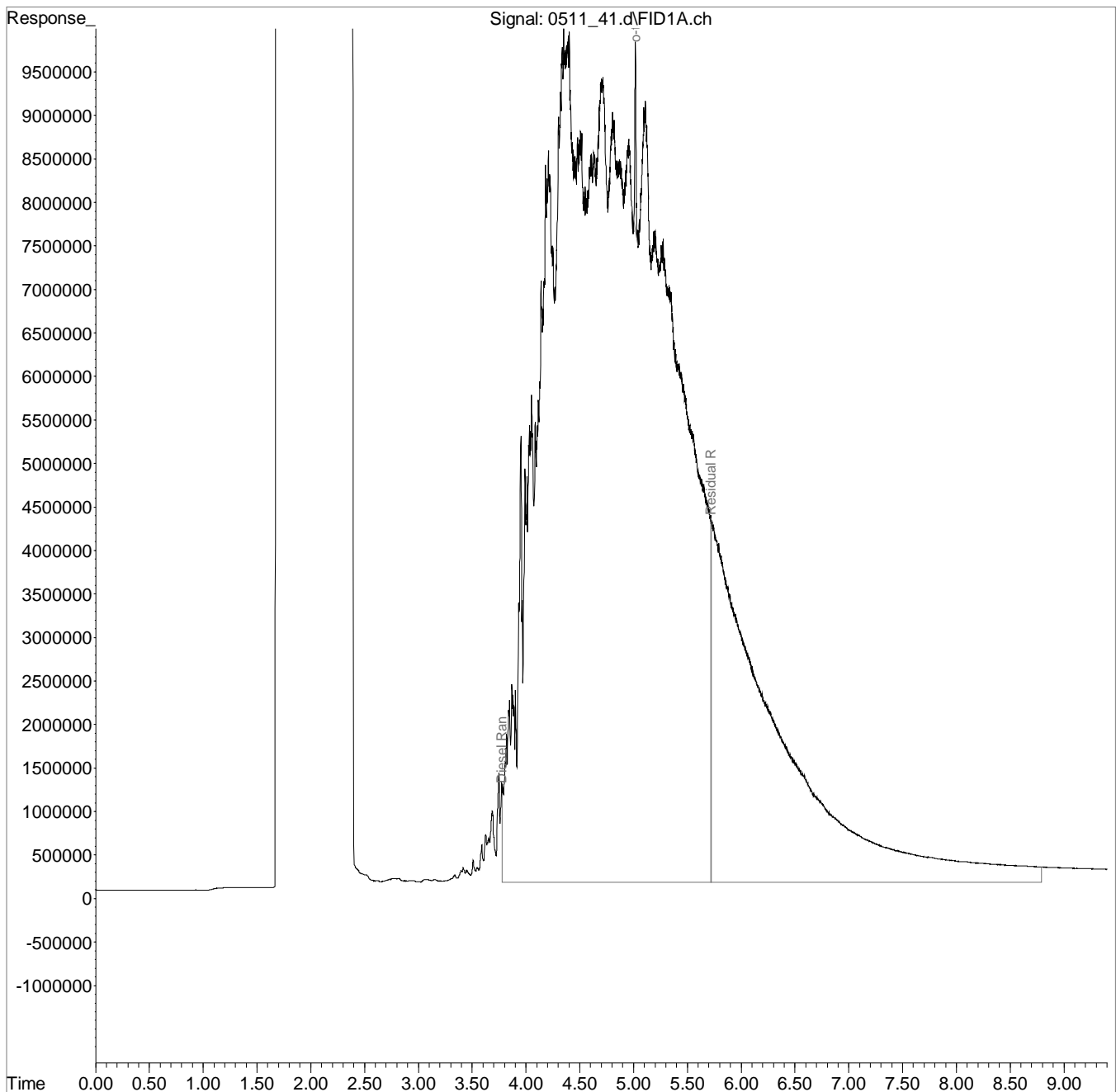
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051119\  
 Data File : 0511\_41.d  
 Signal(s) : FID1A.ch  
 Acq On : 11 May 2019 11:41 pm  
 Operator : 773  
 Sample : L1097209-04 1x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 27 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 12 11:06:57 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

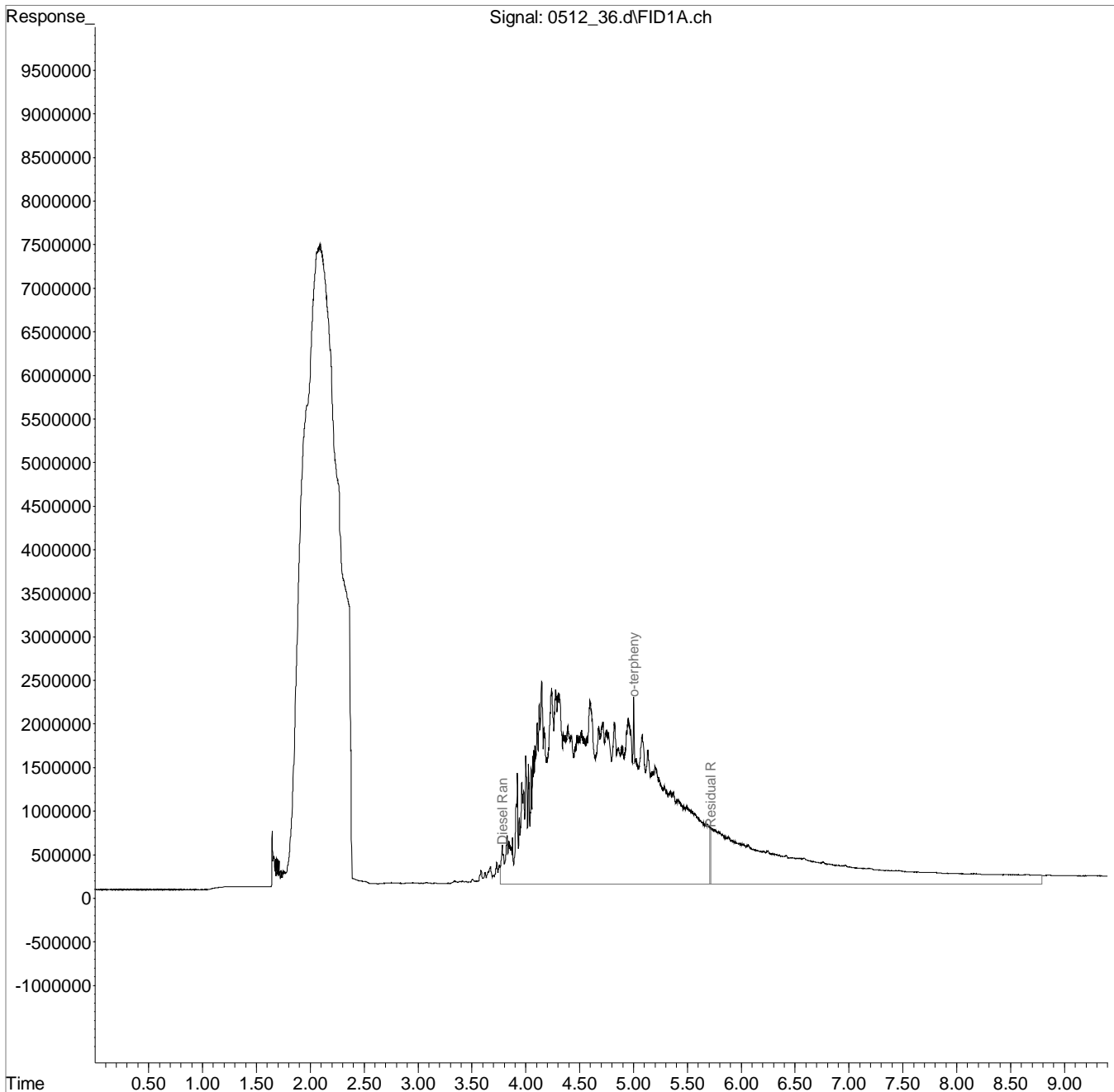
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051219\  
 Data File : 0512\_36.d  
 Signal(s) : FID1A.ch  
 Acq On : 12 May 2019 10:07 pm  
 Operator : 773  
 Sample : L1097209-04 5x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 18 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 13 08:19:48 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

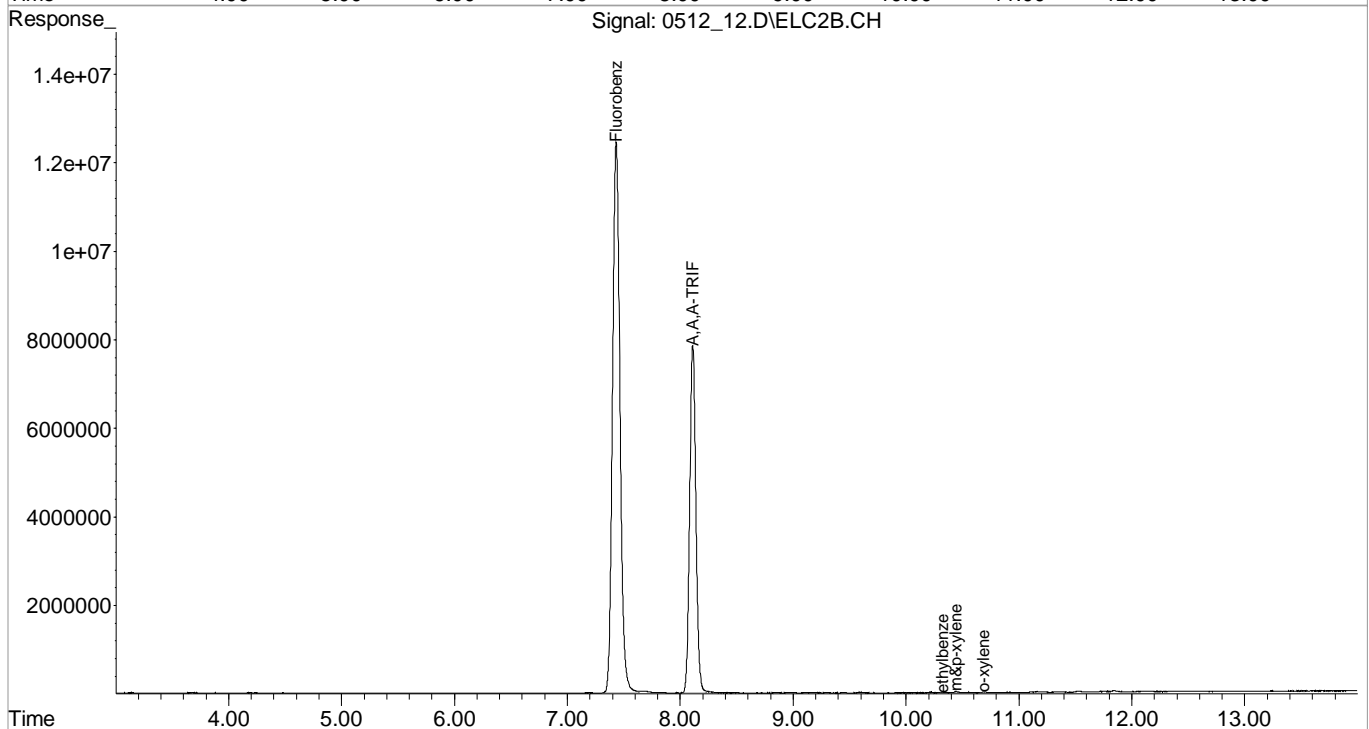
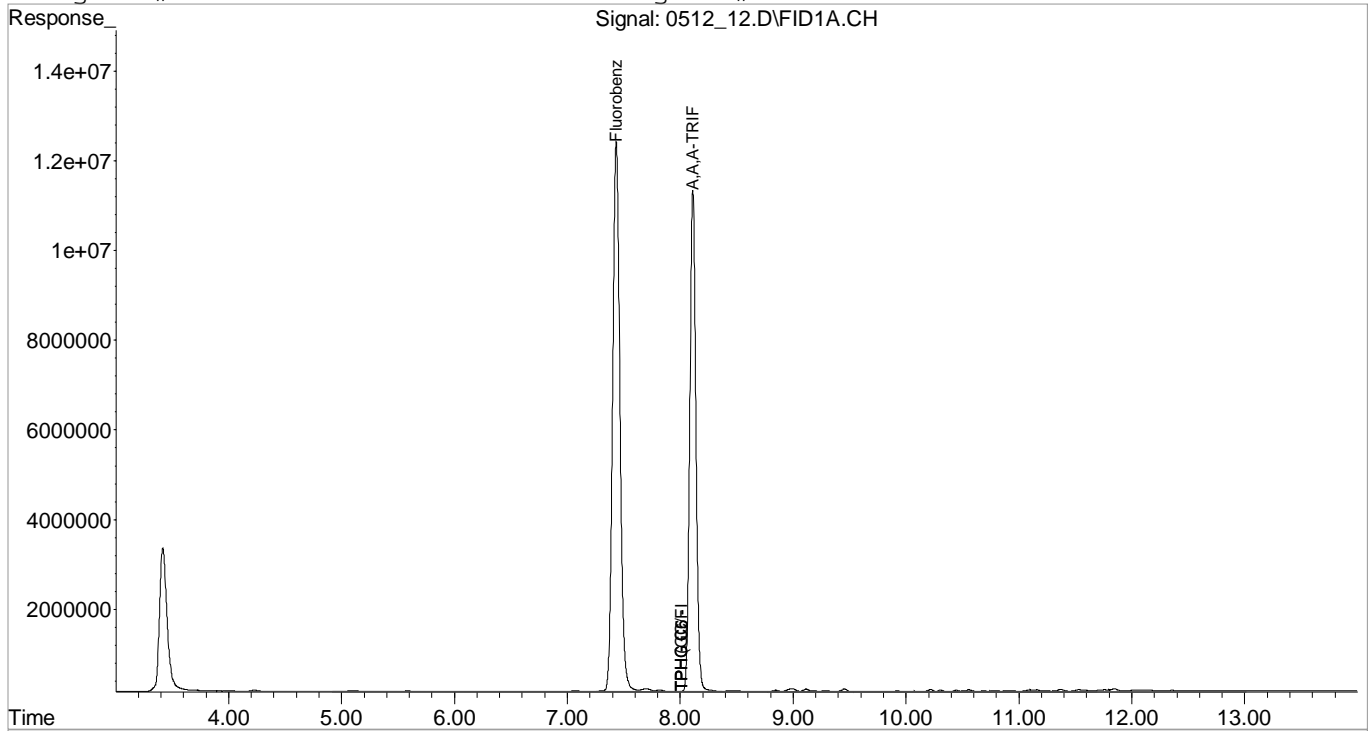
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Signal #1 : C:\MSDCHEM\1\DATA\051219\0512 12.D\FID1A.CH Vial: 12  
Signal #2 : C:\MSDCHEM\1\DATA\051219\0512 12.D\ELC2B.CH  
Acq On : 5-12-2019 03:32:50 PM Operator:  
Sample : L1097209-04 1x WG1279922 Inst : VOCGC14  
Misc : water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E  
Quant Time: May 13 7:56 2019 Quant Results File: BG14C25S.RES

Quant Method : C:\MSDCHEM\1\METHODS\BG14C25S.M (Chemstation Integrator)  
Title : Volatile Organics by GC/FID/PID  
Last Update : Tue Mar 26 09:24:04 2019  
Response via : Single Level Calibration  
DataAcq Meth : GROW.M

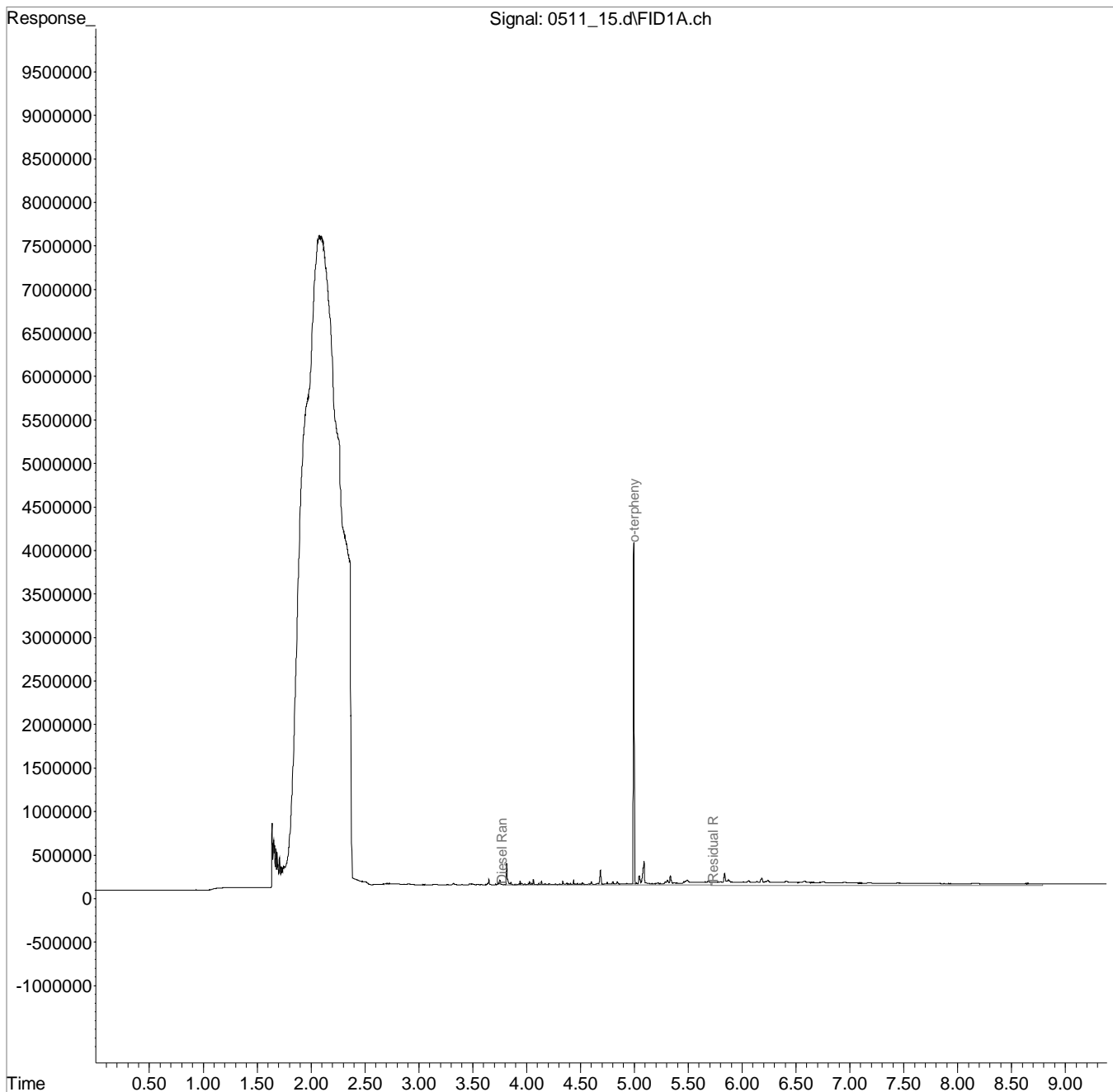
Volume Inj. :  
Signal #1 Phase : Signal #2 Phase:  
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\051119\  
 Data File : 0511 15.d  
 Signal(s) : FID1A.ch  
 Acq On : 11 May 2019 4:15 pm  
 Operator : 773  
 Sample : L1097209-05 1x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 13 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 11 16:28:29 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :

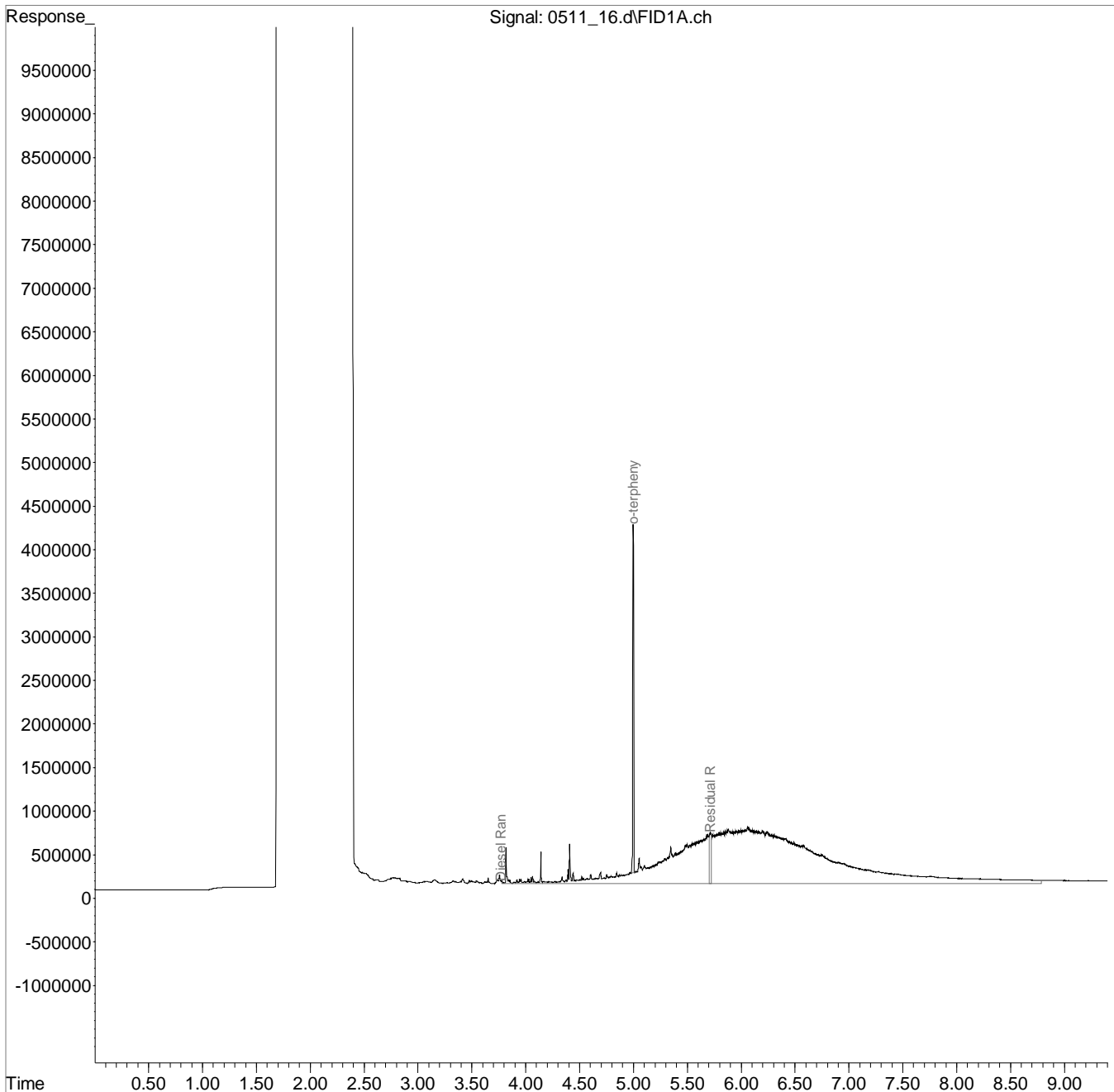




Data Path : C:\msdchem\1\data\051119\  
 Data File : 0511\_16.d  
 Signal(s) : FID1A.ch  
 Acq On : 11 May 2019 4:32 pm  
 Operator : 773  
 Sample : L1097209-06 1x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 14 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 12 10:58:15 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

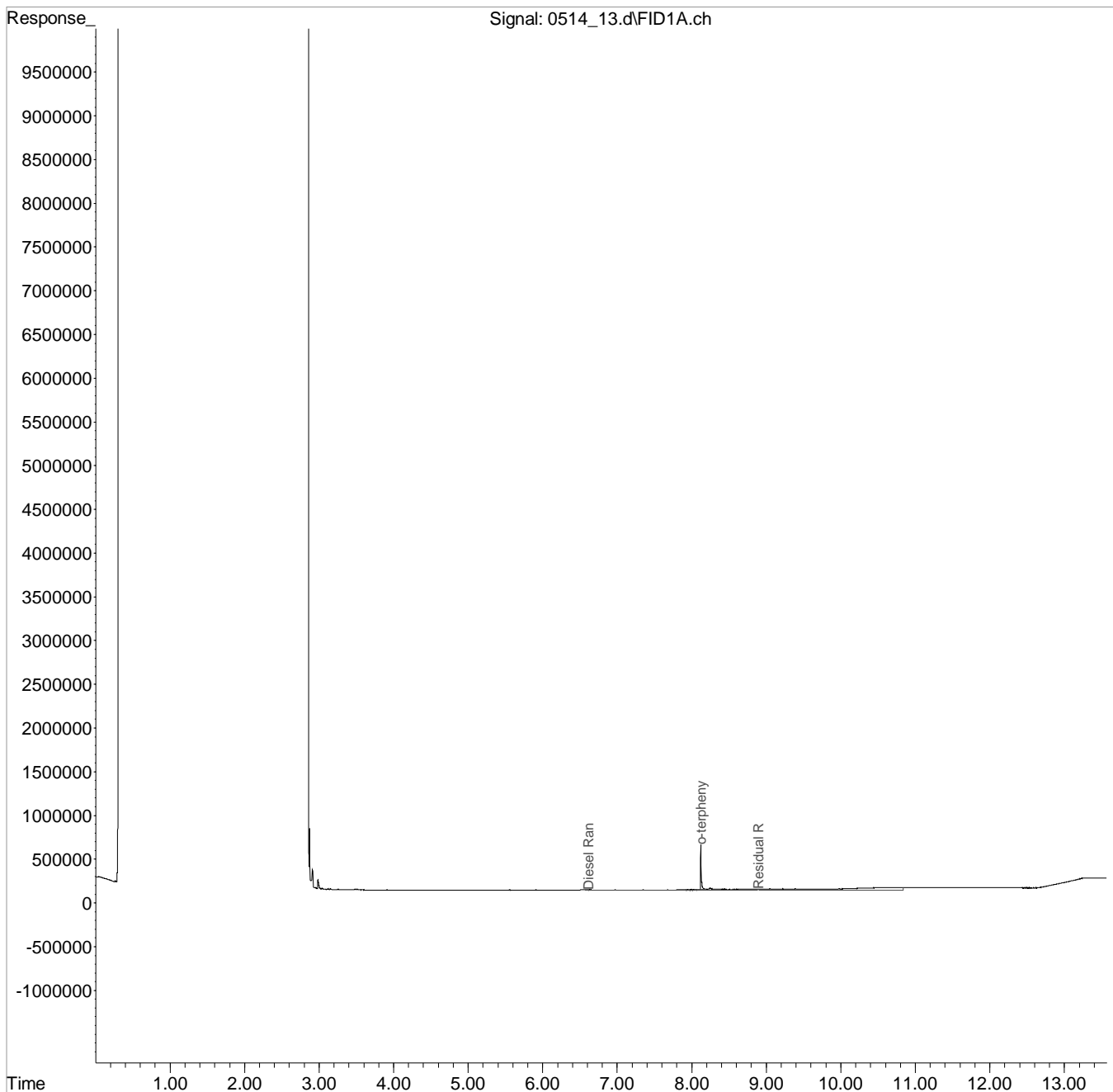
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514\_13.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 May 2019 2:18 pm  
 Operator : 784  
 Sample : L1097209-07 1x WG1278958  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 11 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 14 14:56:45 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

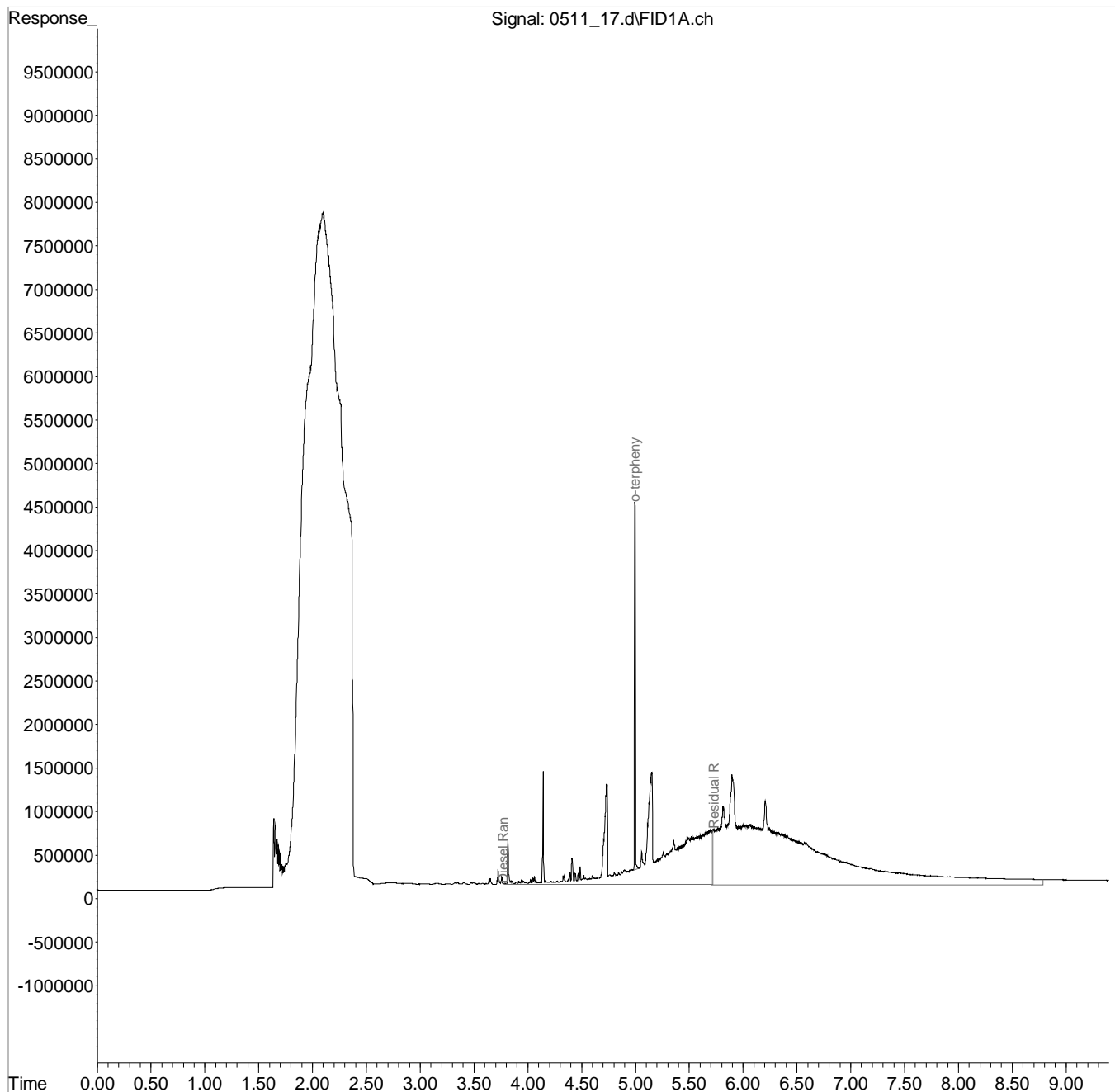
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051119\  
Data File : 0511 17.d  
Signal(s) : FID1A.ch  
Acq On : 11 May 2019 4:49 pm  
Operator : 773  
Sample : L1097209-07 1x WG1278954  
Misc : M.I.s on ranges are corrections  
ALS Vial : 15 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: May 12 10:58:58 2019  
Quant Method : C:\msdchem\1\methods\DM31E10S.M  
Quant Title :  
QLast Update : Sat May 11 09:42:52 2019  
Response via : Initial Calibration  
Integrator: ChemStation

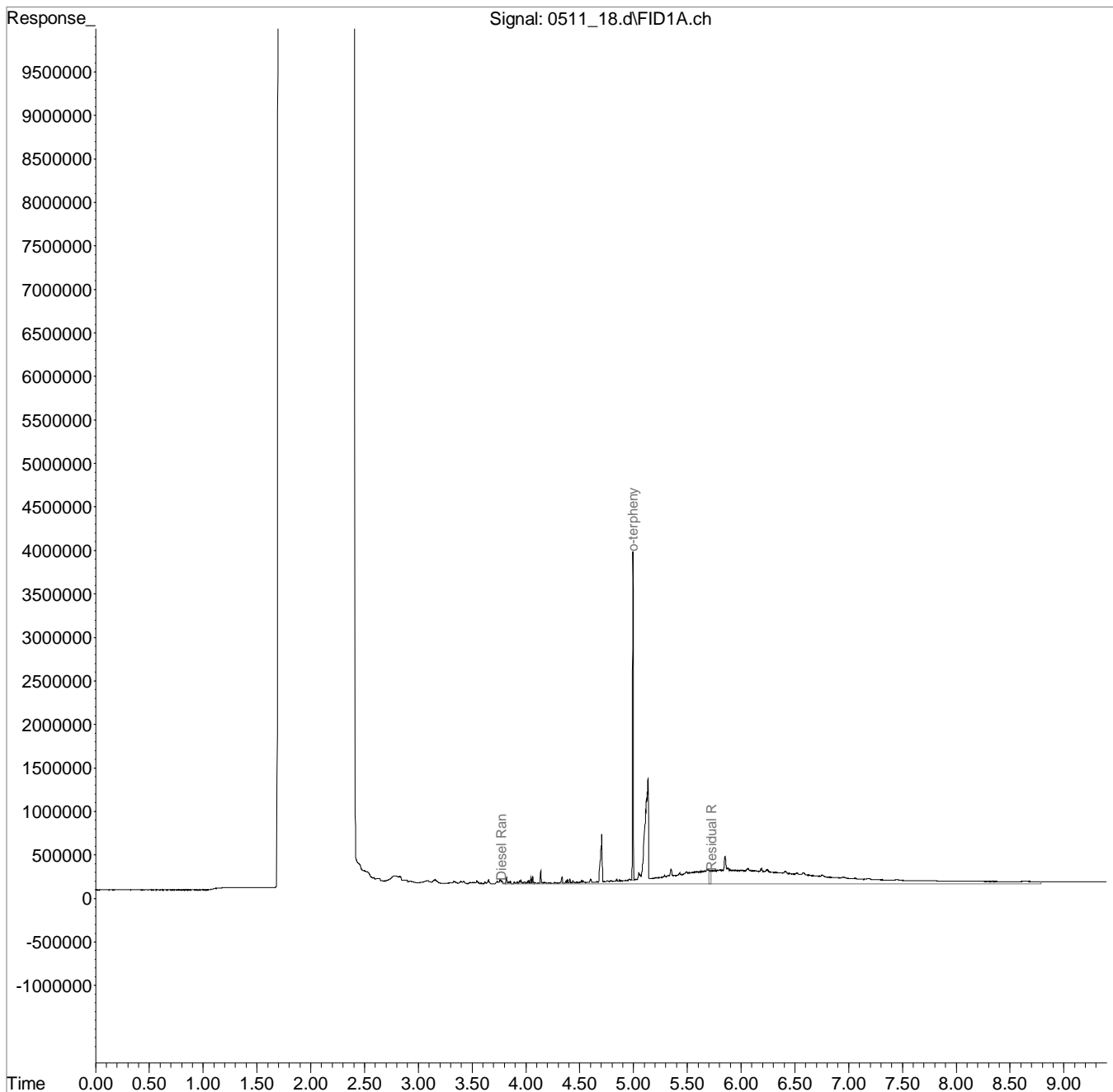
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051119\  
 Data File : 0511 18.d  
 Signal(s) : FID1A.ch  
 Acq On : 11 May 2019 5:06 pm  
 Operator : 773  
 Sample : L1097209-08 1x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 16 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 12 10:59:55 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

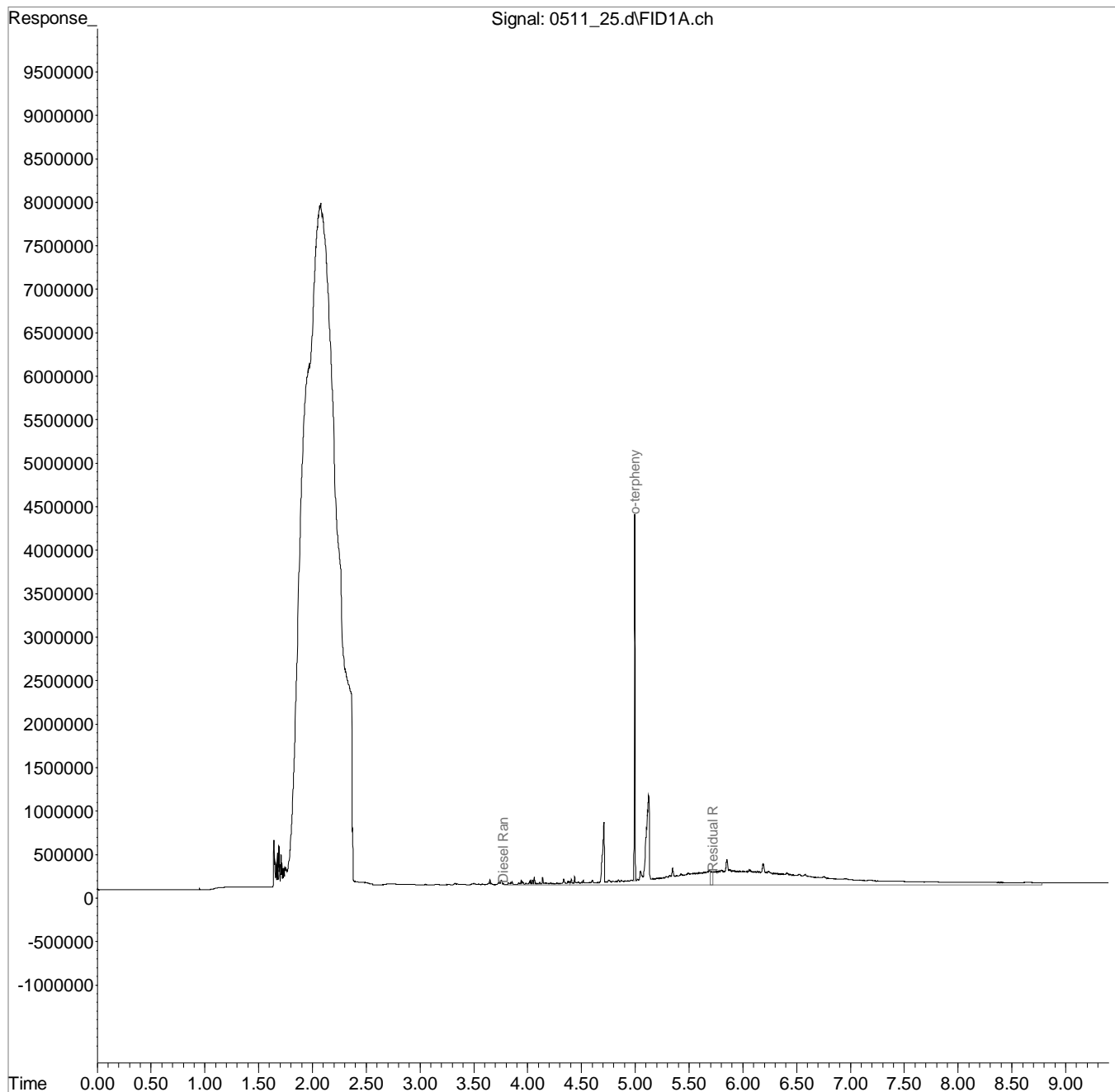
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051119\  
Data File : 0511 25.d  
Signal(s) : FID1A.ch  
Acq On : 11 May 2019 7:07 pm  
Operator : 773  
Sample : L1097209-09 1x WG1278954  
Misc : M.I.s on ranges are corrections  
ALS Vial : 17 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: May 12 11:01:53 2019  
Quant Method : C:\msdchem\1\methods\DM31E10S.M  
Quant Title :  
QLast Update : Sat May 11 09:42:52 2019  
Response via : Initial Calibration  
Integrator: ChemStation

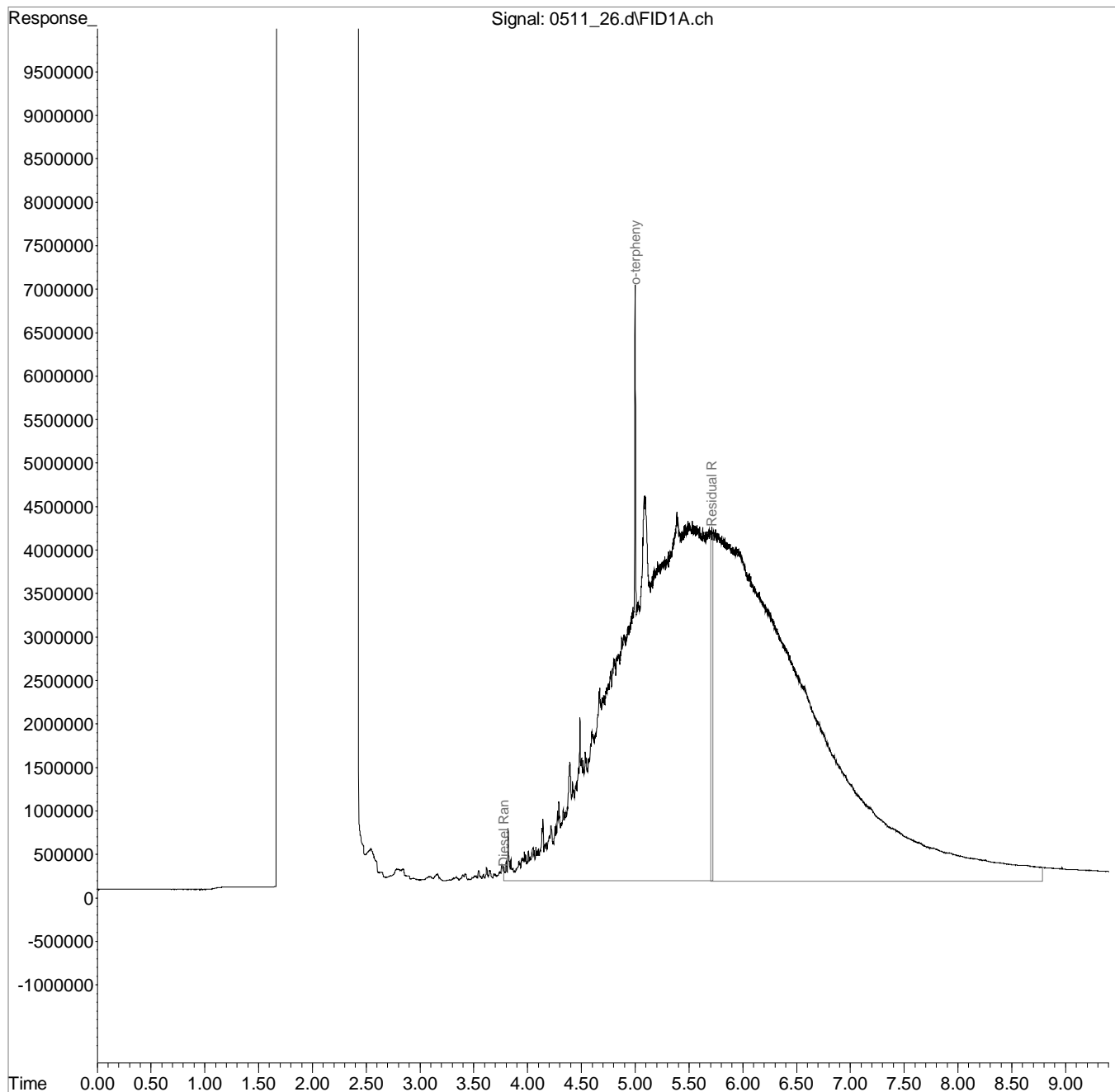
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051119\  
Data File : 0511\_26.d  
Signal(s) : FID1A.ch  
Acq On : 11 May 2019 7:24 pm  
Operator : 773  
Sample : L1097209-10 1x WG1278954  
Misc : M.I.s on ranges are corrections  
ALS Vial : 18 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: May 12 11:02:15 2019  
Quant Method : C:\msdchem\1\methods\DM31E10S.M  
Quant Title :  
QLast Update : Sat May 11 09:42:52 2019  
Response via : Initial Calibration  
Integrator: ChemStation

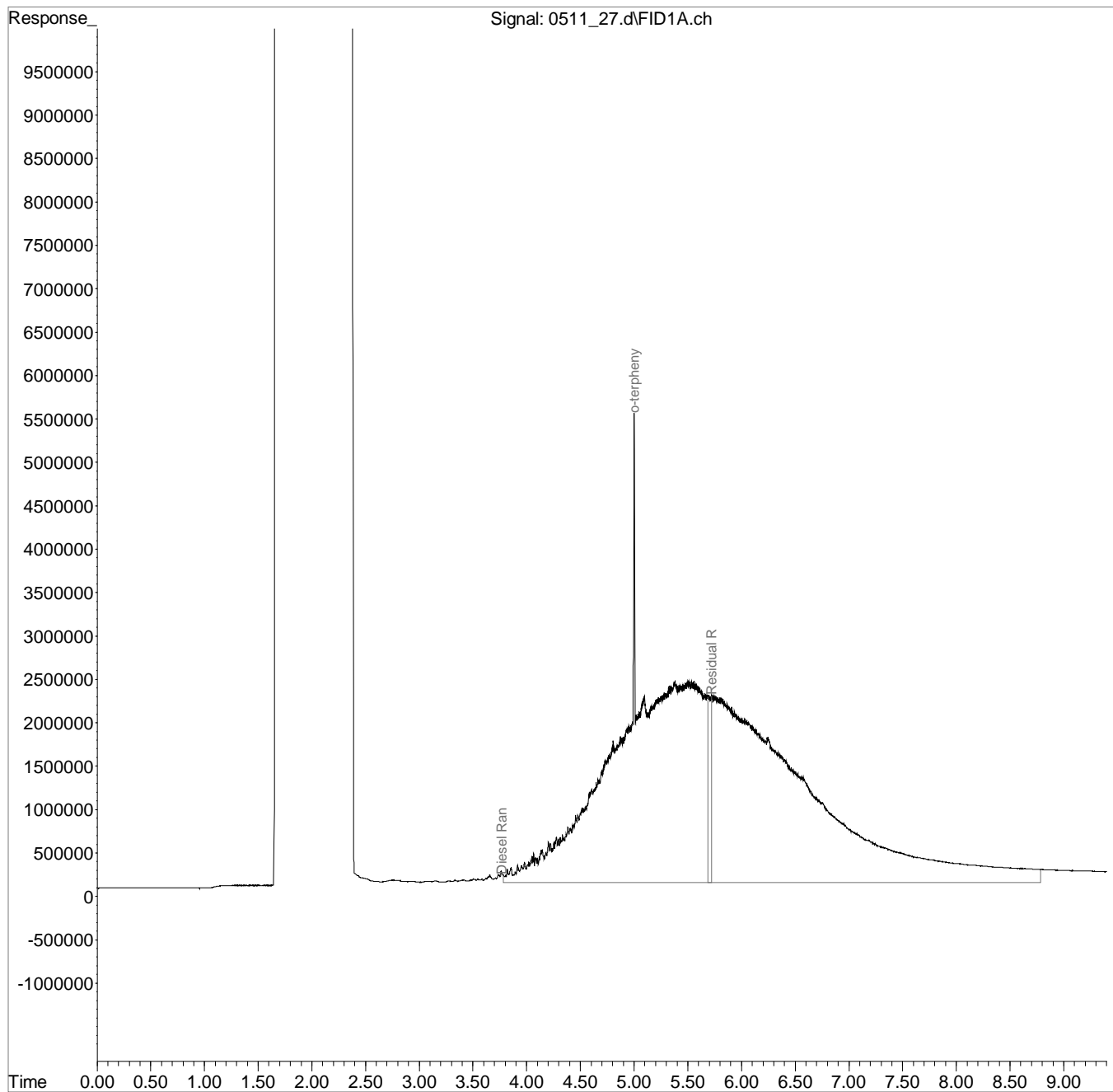
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051119\  
Data File : 0511 27.d  
Signal(s) : FID1A.ch  
Acq On : 11 May 2019 7:41 pm  
Operator : 773  
Sample : L1097209-11 1x WG1278954  
Misc : M.I.s on ranges are corrections  
ALS Vial : 19 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: May 12 11:02:41 2019  
Quant Method : C:\msdchem\1\methods\DM31E10S.M  
Quant Title :  
QLast Update : Sat May 11 09:42:52 2019  
Response via : Initial Calibration  
Integrator: ChemStation

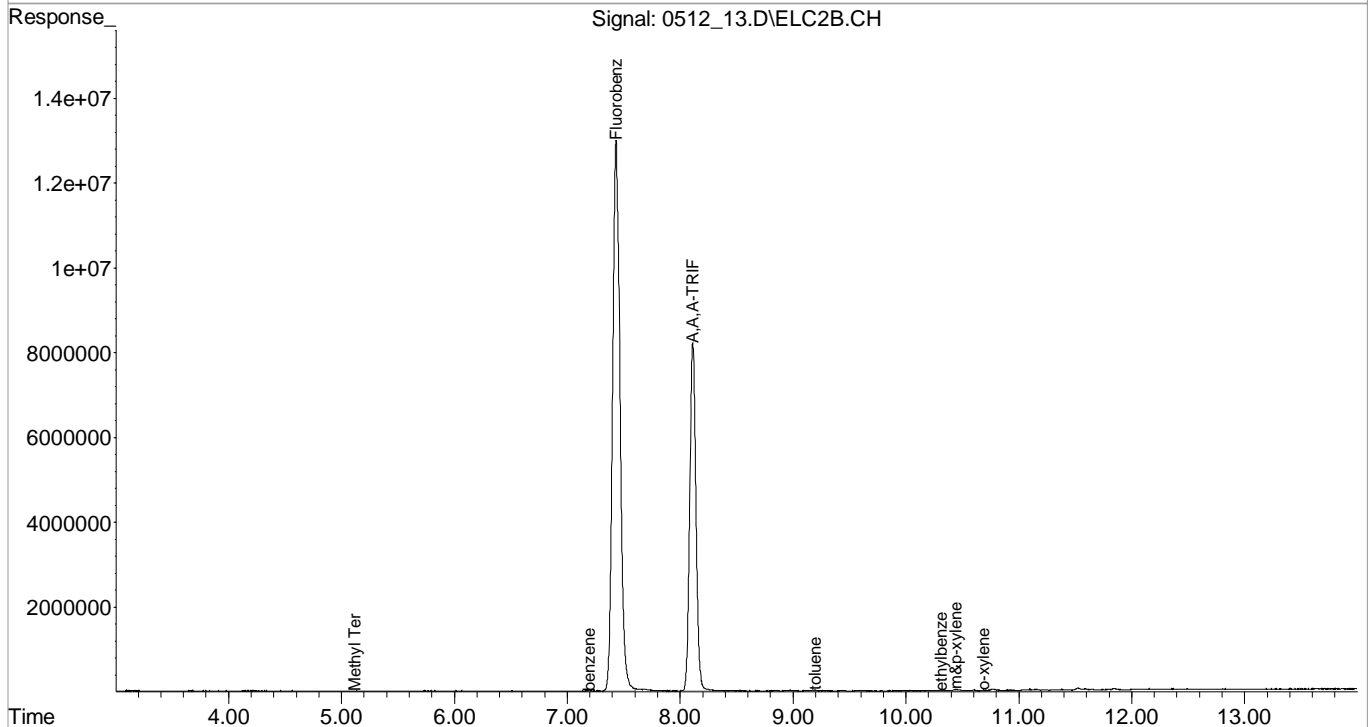
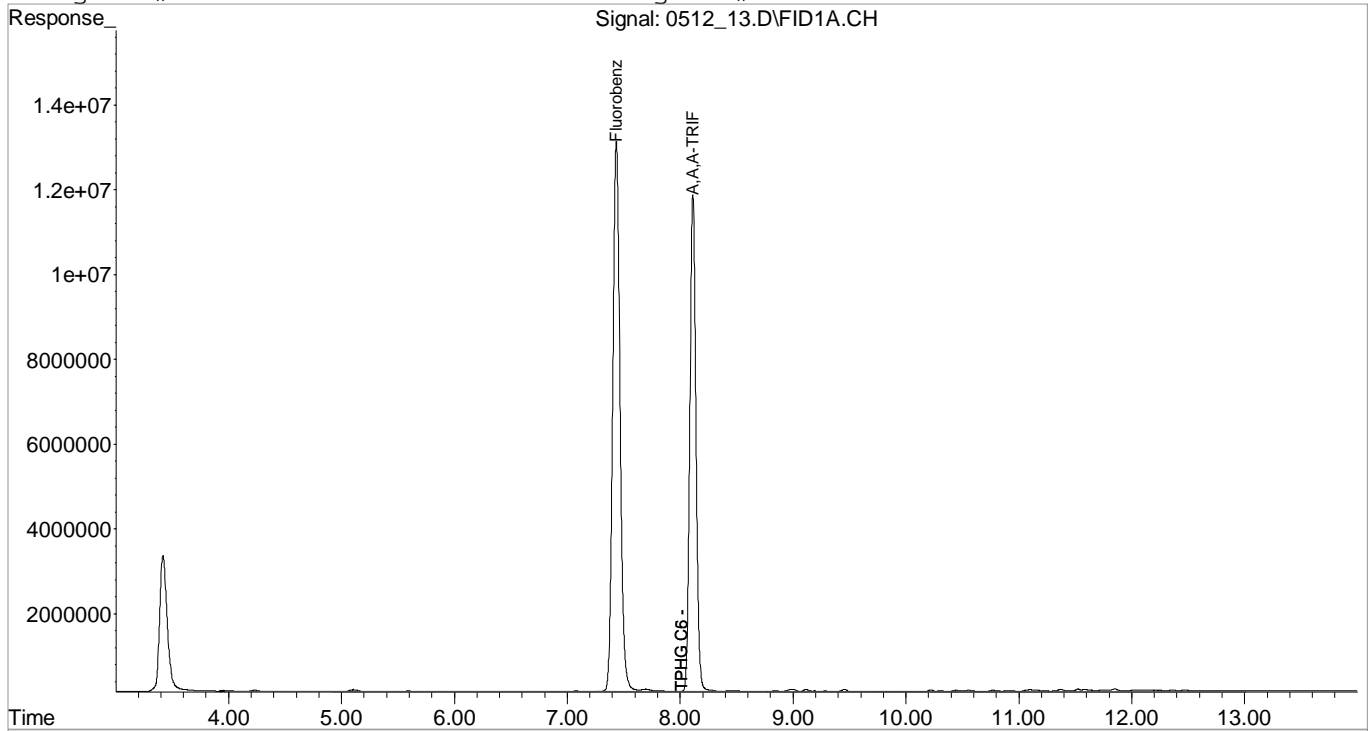
Volume Inj. :  
Signal Phase :  
Signal Info :



Signal #1 : C:\MSDCHEM\1\DATA\051219\0512 13.D\FID1A.CH Vial: 13  
 Signal #2 : C:\MSDCHEM\1\DATA\051219\0512 13.D\ELC2B.CH  
 Acq On : 5-12-2019 03:56:30 PM Operator:  
 Sample : L1097209-11 1x WG1279922 Inst : VOCGC14  
 Misc : water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E  
 Quant Time: May 13 7:56 2019 Quant Results File: BG14C25S.RES

Quant Method : C:\MSDCHEM\1\METHODS\BG14C25S.M (Chemstation Integrator)  
 Title : Volatile Organics by GC/FID/PID  
 Last Update : Tue Mar 26 09:24:04 2019  
 Response via : Single Level Calibration  
 DataAcq Meth : GROW.M

Volume Inj. :  
 Signal #1 Phase : Signal #2 Phase:  
 Signal #1 Info : Signal #2 Info :

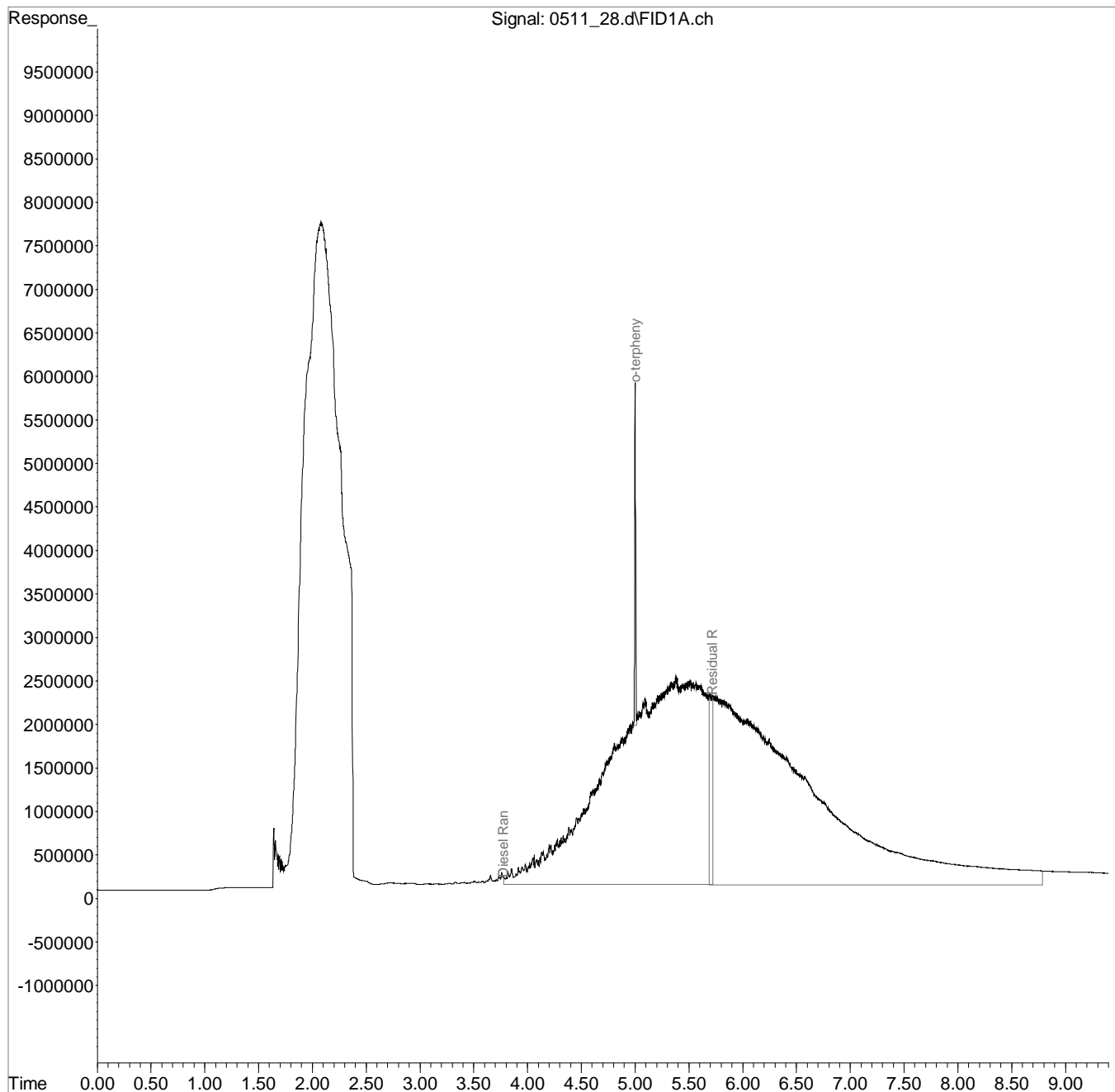




Data Path : C:\msdchem\1\data\051119\  
Data File : 0511 28.d  
Signal(s) : FID1A.ch  
Acq On : 11 May 2019 7:58 pm  
Operator : 773  
Sample : L1097209-12 1x WG1278954  
Misc : M.I.s on ranges are corrections  
ALS Vial : 20 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: May 12 11:03:11 2019  
Quant Method : C:\msdchem\1\methods\DM31E10S.M  
Quant Title :  
QLast Update : Sat May 11 09:42:52 2019  
Response via : Initial Calibration  
Integrator: ChemStation

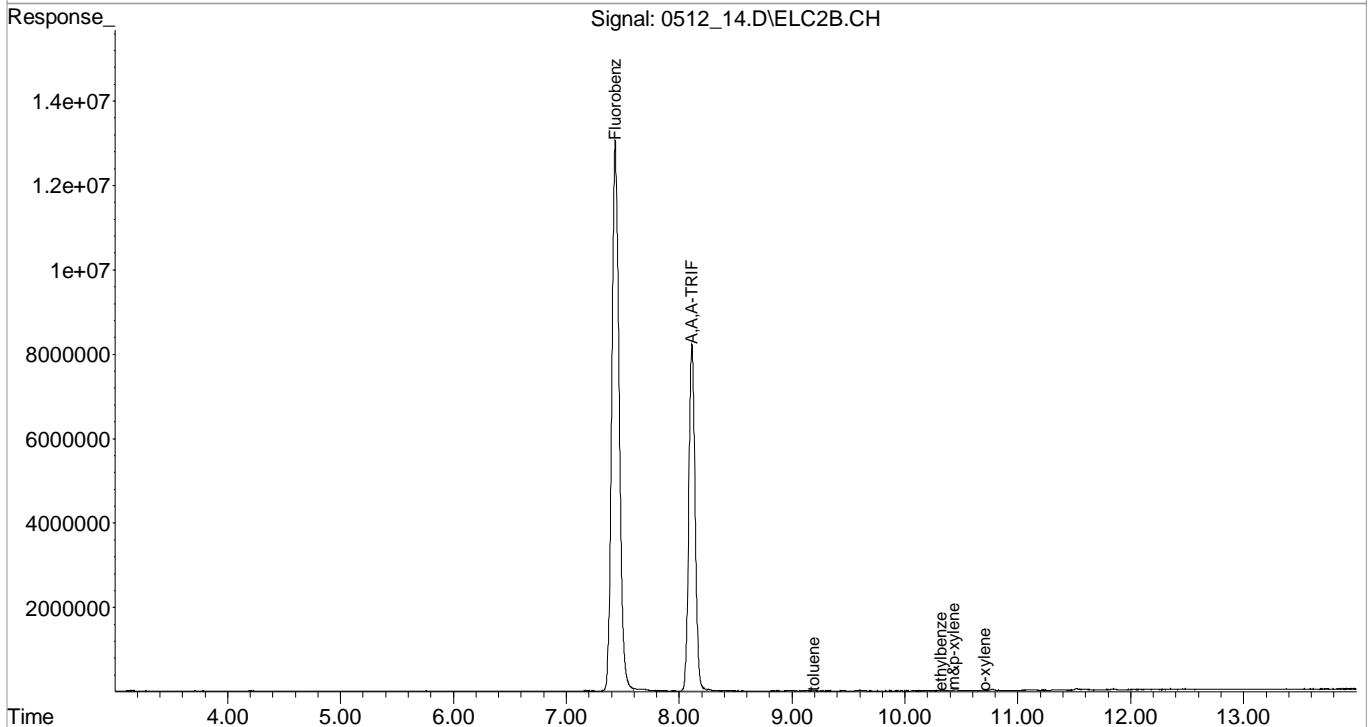
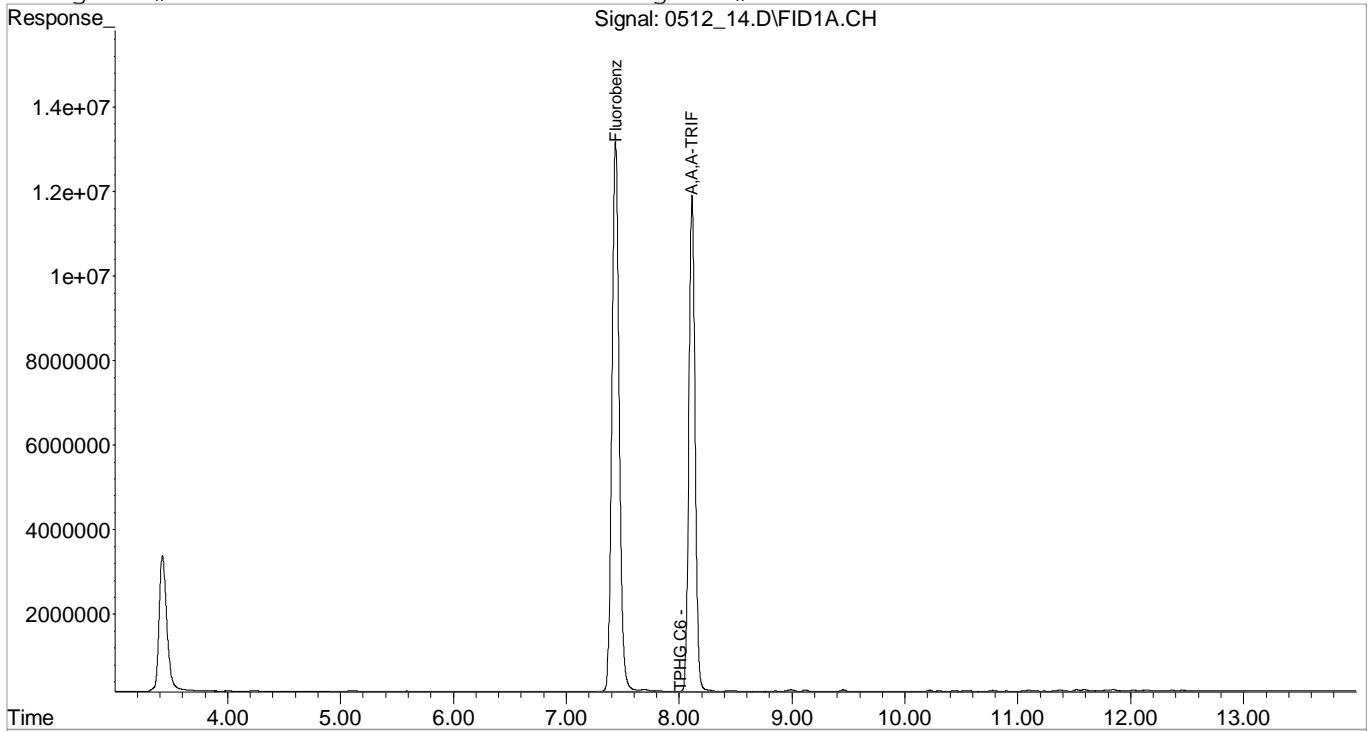
Volume Inj. :  
Signal Phase :  
Signal Info :



Signal #1 : C:\MSDCHEM\1\DATA\051219\0512 14.D\FID1A.CH Vial: 14  
 Signal #2 : C:\MSDCHEM\1\DATA\051219\0512 14.D\ELC2B.CH  
 Acq On : 5-12-2019 04:20:06 PM Operator:  
 Sample : L1097209-12 1x WG1279922 Inst : VOCGC14  
 Misc : water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E  
 Quant Time: May 13 7:56 2019 Quant Results File: BG14C25S.RES

Quant Method : C:\MSDCHEM\1\METHODS\BG14C25S.M (Chemstation Integrator)  
 Title : Volatile Organics by GC/FID/PID  
 Last Update : Tue Mar 26 09:24:04 2019  
 Response via : Single Level Calibration  
 DataAcq Meth : GROW.M

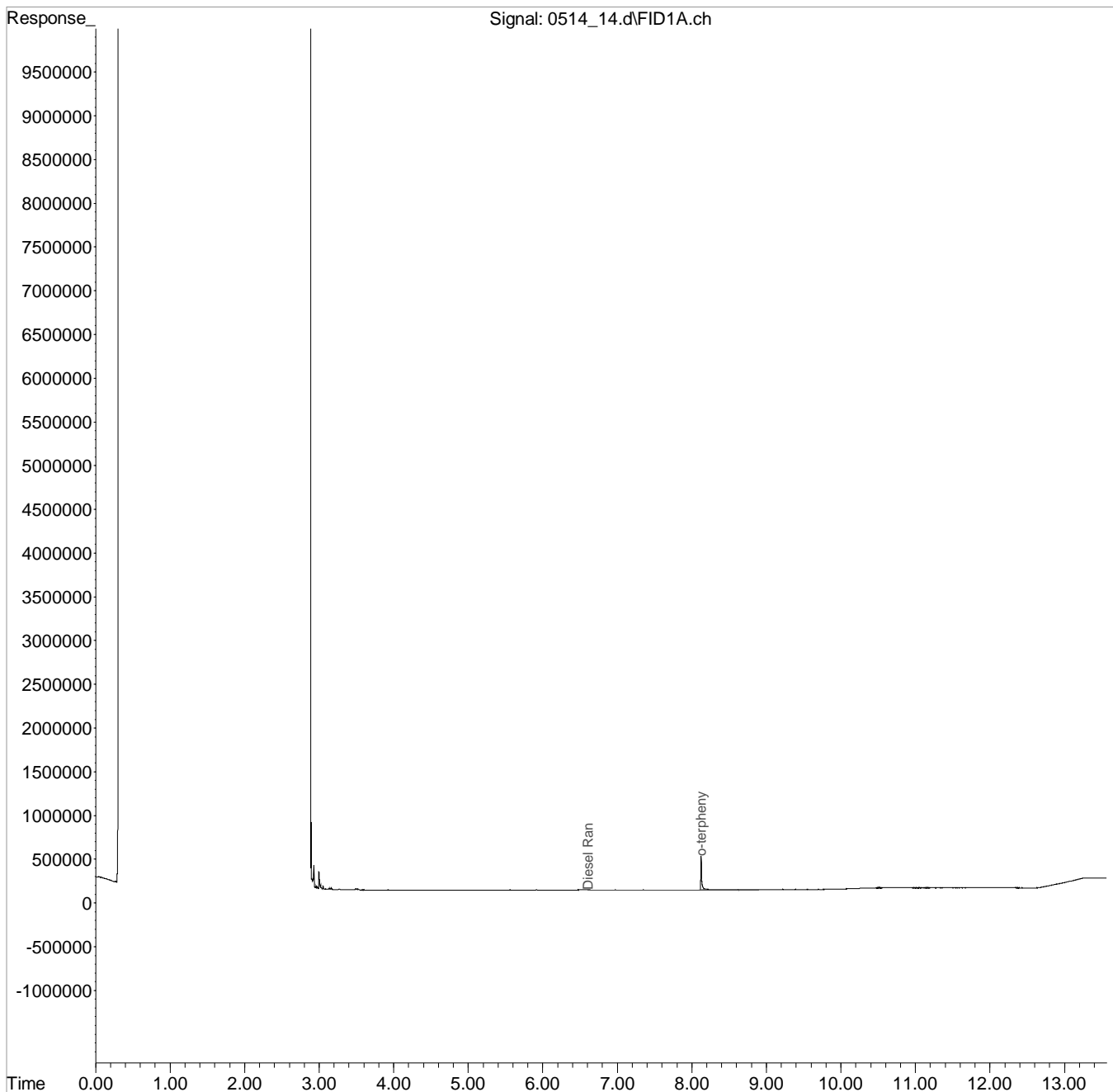
Volume Inj. :  
 Signal #1 Phase : Signal #2 Phase:  
 Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514 14.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 May 2019 2:40 pm  
 Operator : 784  
 Sample : L1097209-13 1x WG1278958  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 12 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 14 15:44:38 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

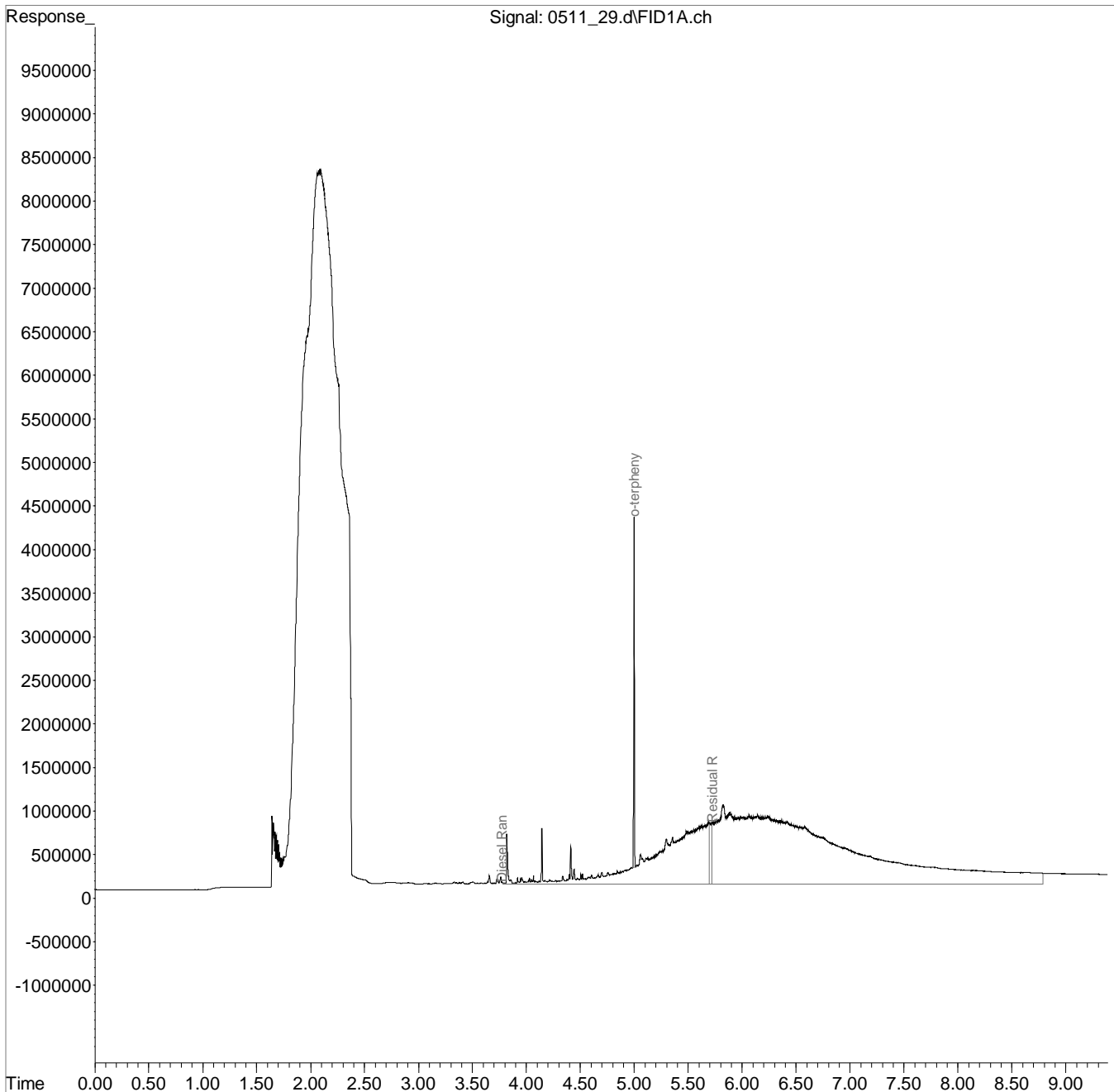
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051119\  
 Data File : 0511 29.d  
 Signal(s) : FID1A.ch  
 Acq On : 11 May 2019 8:15 pm  
 Operator : 773  
 Sample : L1097209-13 1x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 21 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 12 11:03:38 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

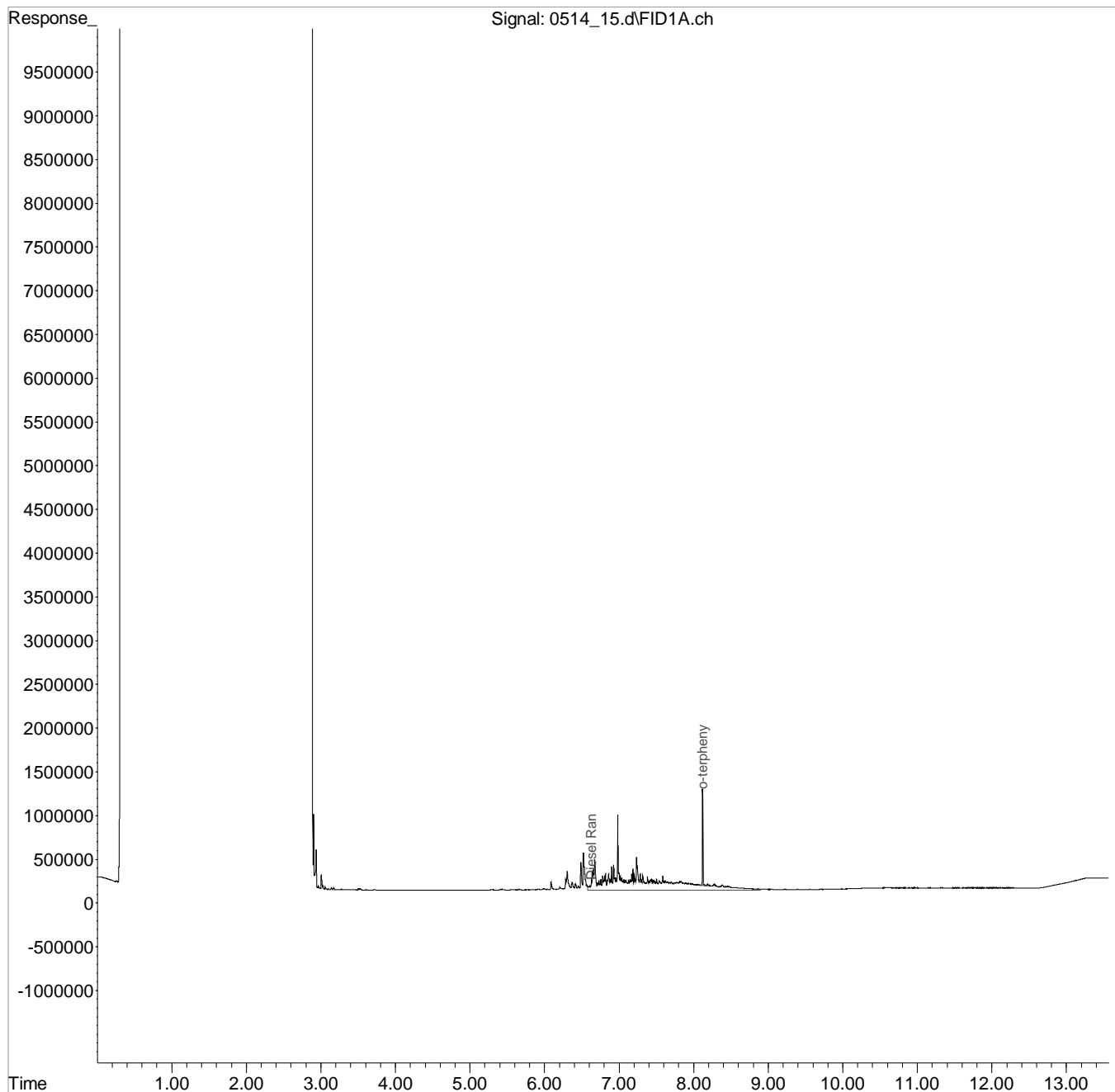
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051419\  
Data File : 0514 15.d  
Signal(s) : FID1A.ch  
Acq On : 14 May 2019 3:02 pm  
Operator : 784  
Sample : L1097209-14 1x WG1278958  
Misc : M.I.s on ranges are corrections  
ALS Vial : 13 Sample Multiplier: 1  
InstName : SVGC21

Integration File: events.e  
Quant Time: May 14 15:45:04 2019  
Quant Method : C:\msdchem\1\methods\DM21E08S.M  
Quant Title : DROLVI  
QLast Update : Thu May 09 14:33:23 2019  
Response via : Initial Calibration  
Integrator: ChemStation

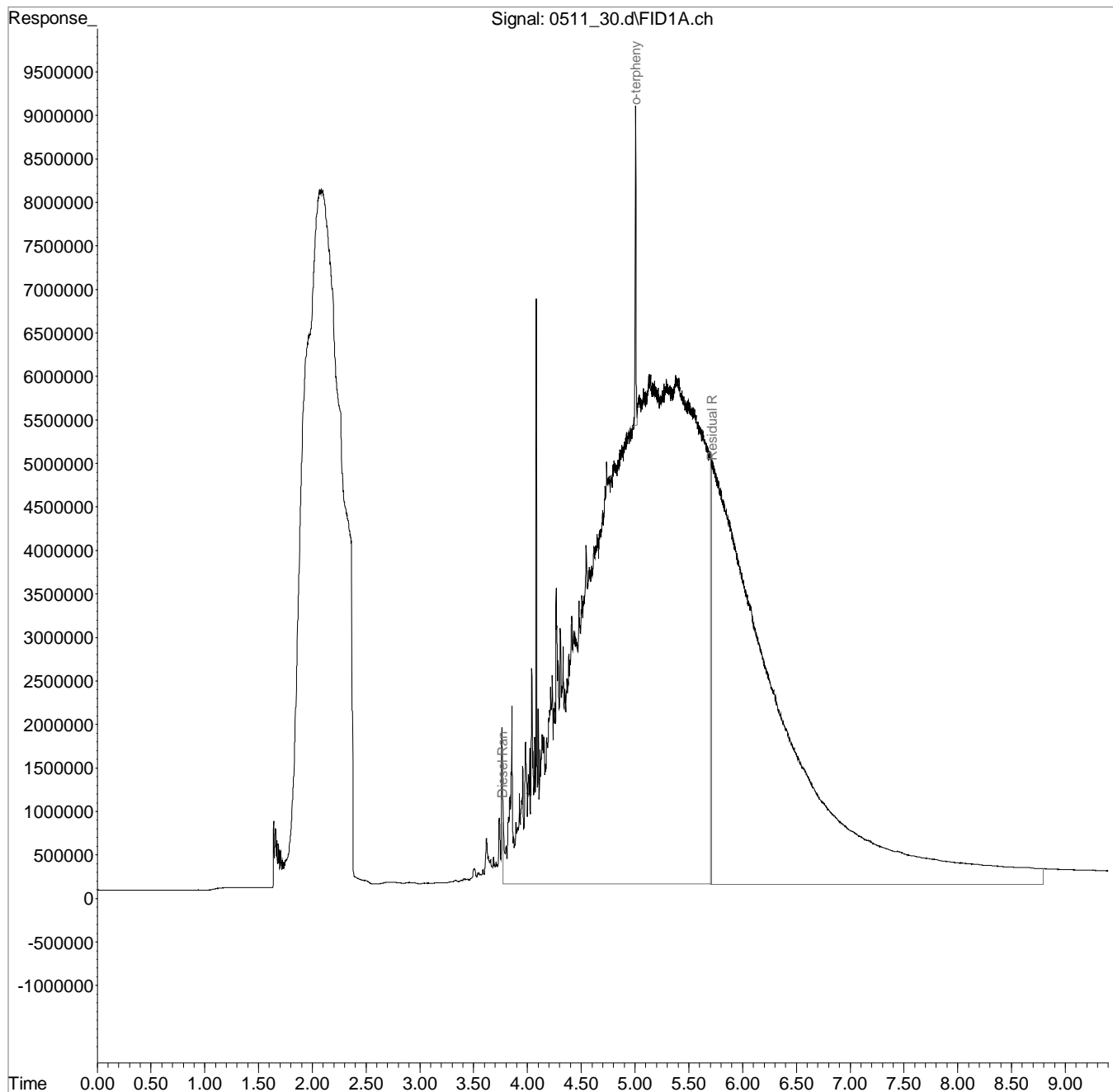
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051119\  
Data File : 0511\_30.d  
Signal(s) : FID1A.ch  
Acq On : 11 May 2019 8:32 pm  
Operator : 773  
Sample : L1097209-14 1x WG1278954  
Misc : M.I.s on ranges are corrections  
ALS Vial : 22 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: May 12 11:04:19 2019  
Quant Method : C:\msdchem\1\methods\DM31E10S.M  
Quant Title :  
QLast Update : Sat May 11 09:42:52 2019  
Response via : Initial Calibration  
Integrator: ChemStation

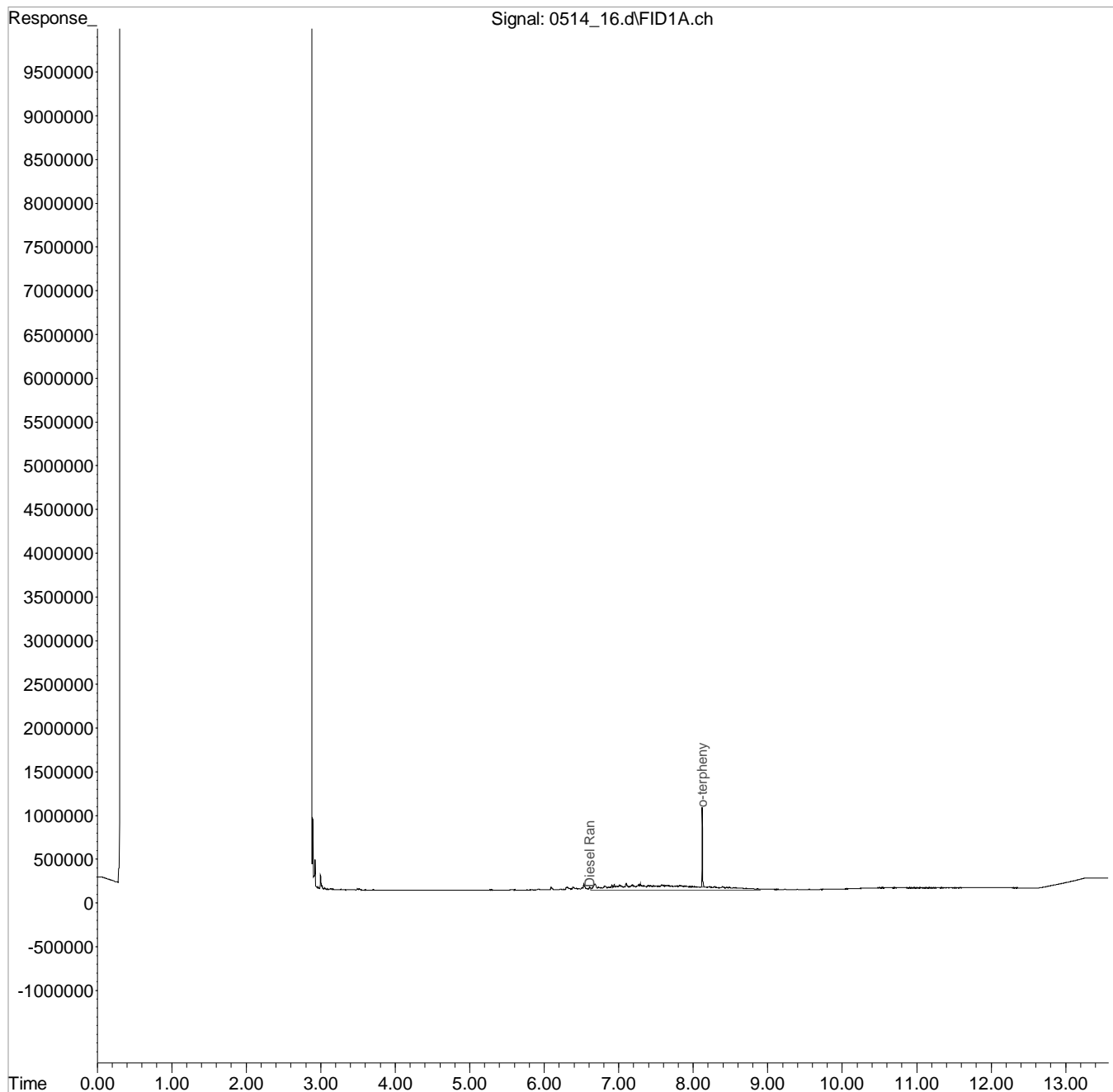
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
Data File : 0514 16.d  
Signal(s) : FID1A.ch  
Acq On : 14 May 2019 3:24 pm  
Operator : 784  
Sample : L1097209-15 1x WG1278958  
Misc : M.I.s on ranges are corrections  
ALS Vial : 14 Sample Multiplier: 1  
InstName : SVGC21

Integration File: events.e  
Quant Time: May 14 15:45:31 2019  
Quant Method : C:\msdchem\1\methods\DM21E08S.M  
Quant Title : DROLVI  
QLast Update : Thu May 09 14:33:23 2019  
Response via : Initial Calibration  
Integrator: ChemStation

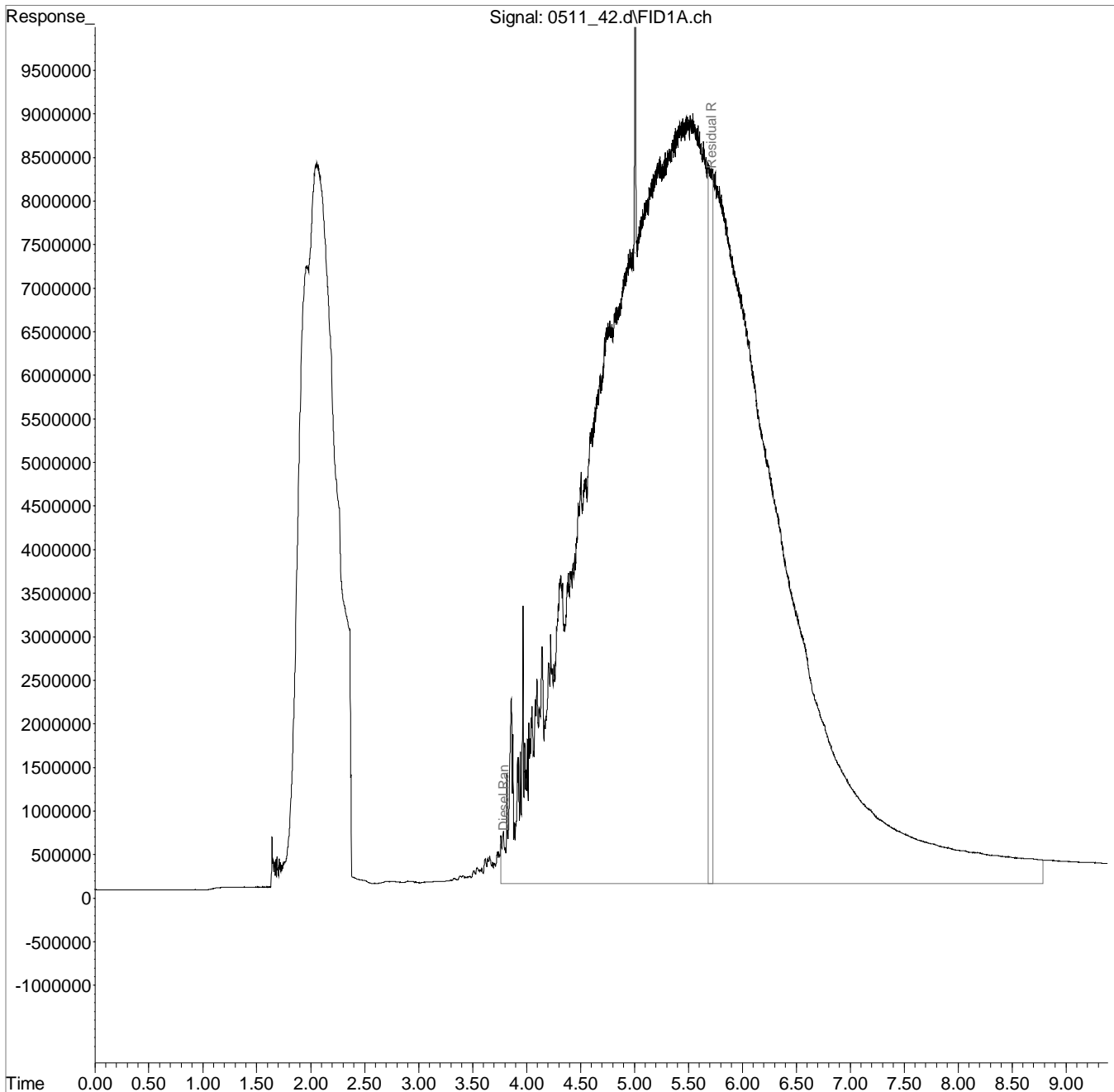
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051119\  
 Data File : 0511\_42.d  
 Signal(s) : FID1A.ch  
 Acq On : 11 May 2019 11:58 pm  
 Operator : 773  
 Sample : L1097209-15 1x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 28 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 12 11:08:05 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :

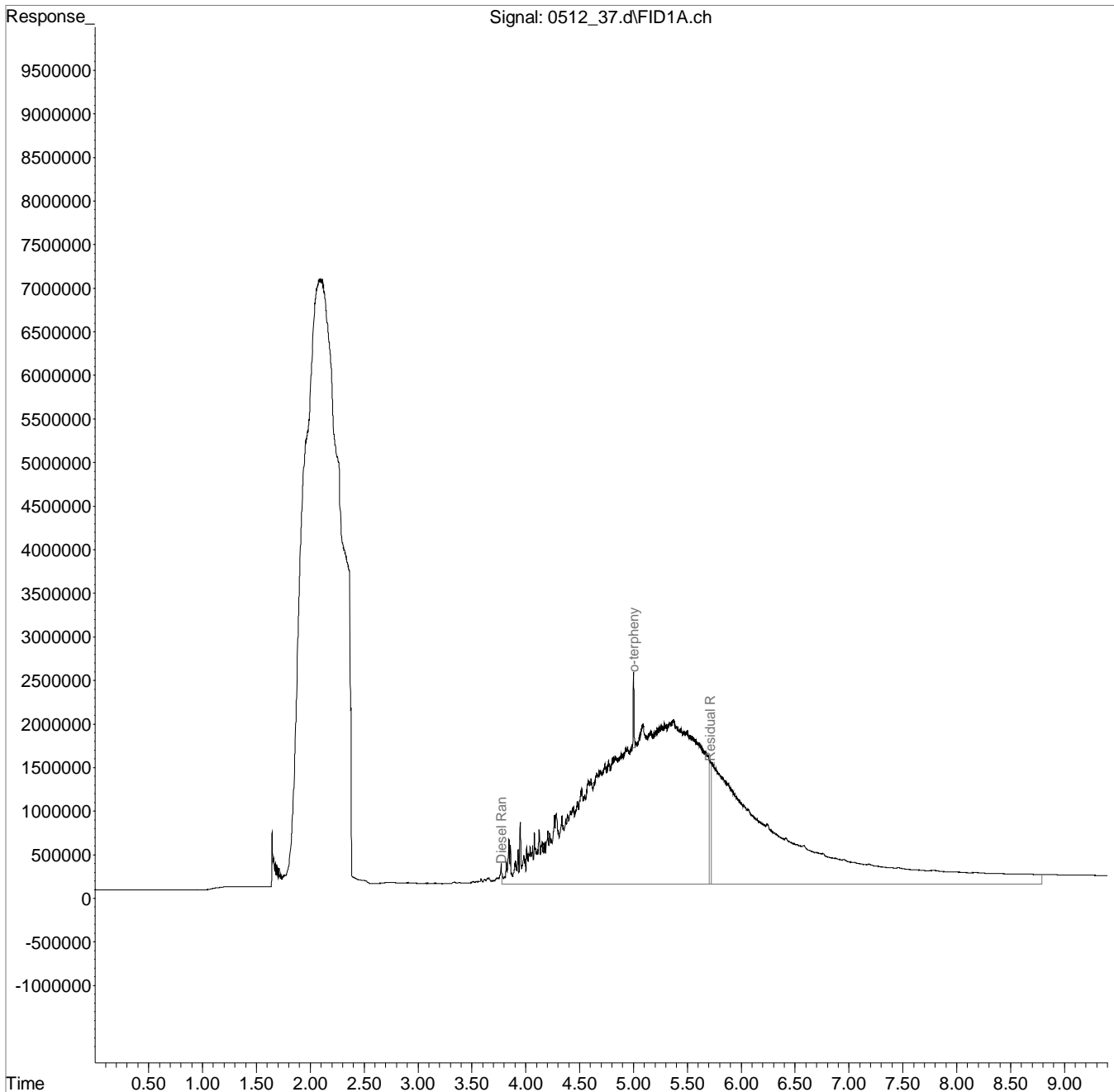




Data Path : C:\msdchem\1\data\051219\  
 Data File : 0512\_37.d  
 Signal(s) : FID1A.ch  
 Acq On : 12 May 2019 10:24 pm  
 Operator : 773  
 Sample : L1097209-15 5x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 19 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 13 08:19:28 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

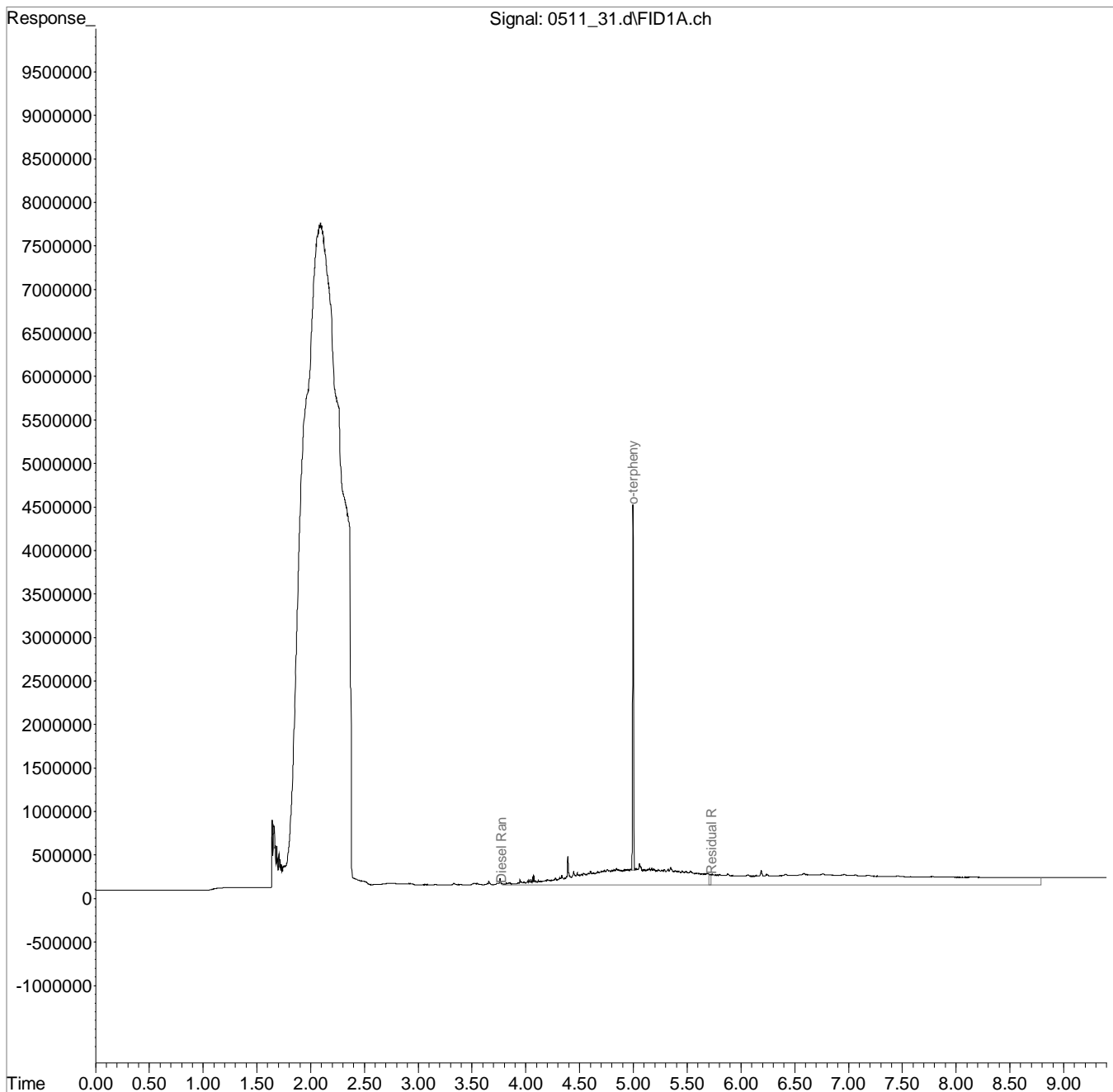
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051119\  
 Data File : 0511 31.d  
 Signal(s) : FID1A.ch  
 Acq On : 11 May 2019 8:49 pm  
 Operator : 773  
 Sample : L1097209-16 1x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 23 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 12 11:04:40 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

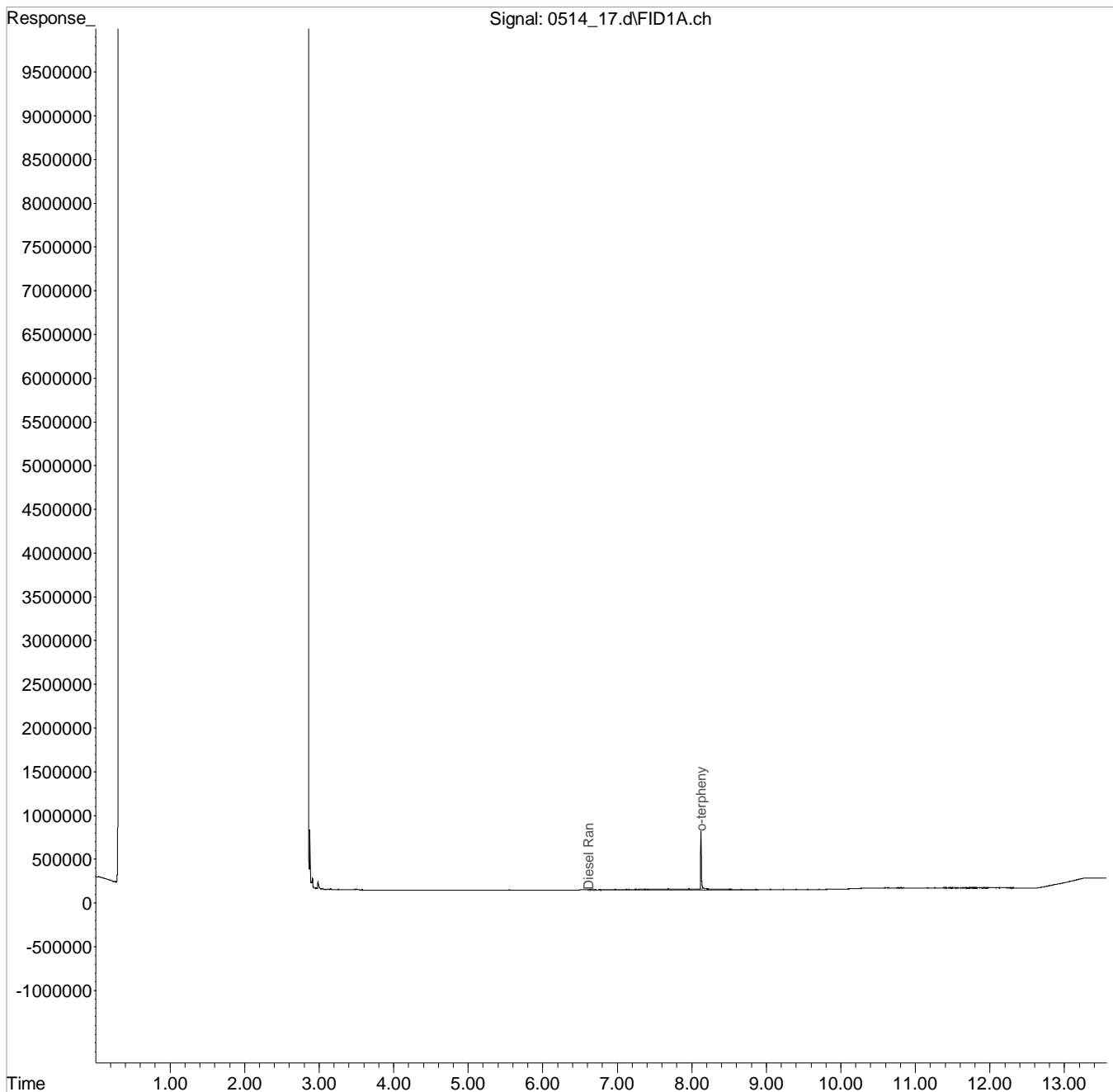
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514 17.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 May 2019 3:47 pm  
 Operator : 784  
 Sample : L1097209-17 1x WG1278958  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 15 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 14 16:05:57 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

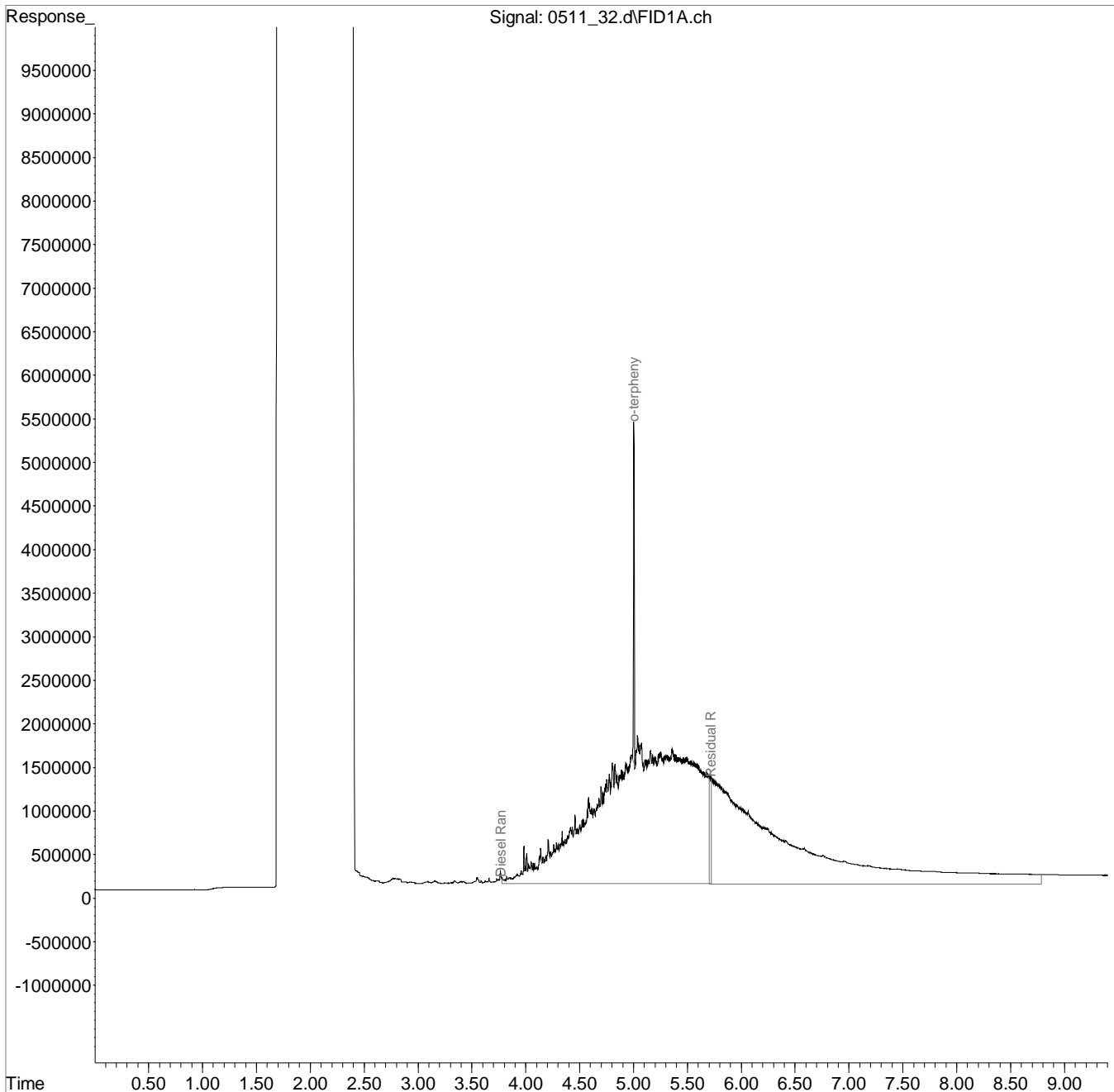
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051119\  
 Data File : 0511 32.d  
 Signal(s) : FID1A.ch  
 Acq On : 11 May 2019 9:07 pm  
 Operator : 773  
 Sample : L1097209-17 1x WG1278954  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 24 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 12 11:05:08 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :



May 22, 2019

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Kennedy/Jenks Con-BNSF Region 1

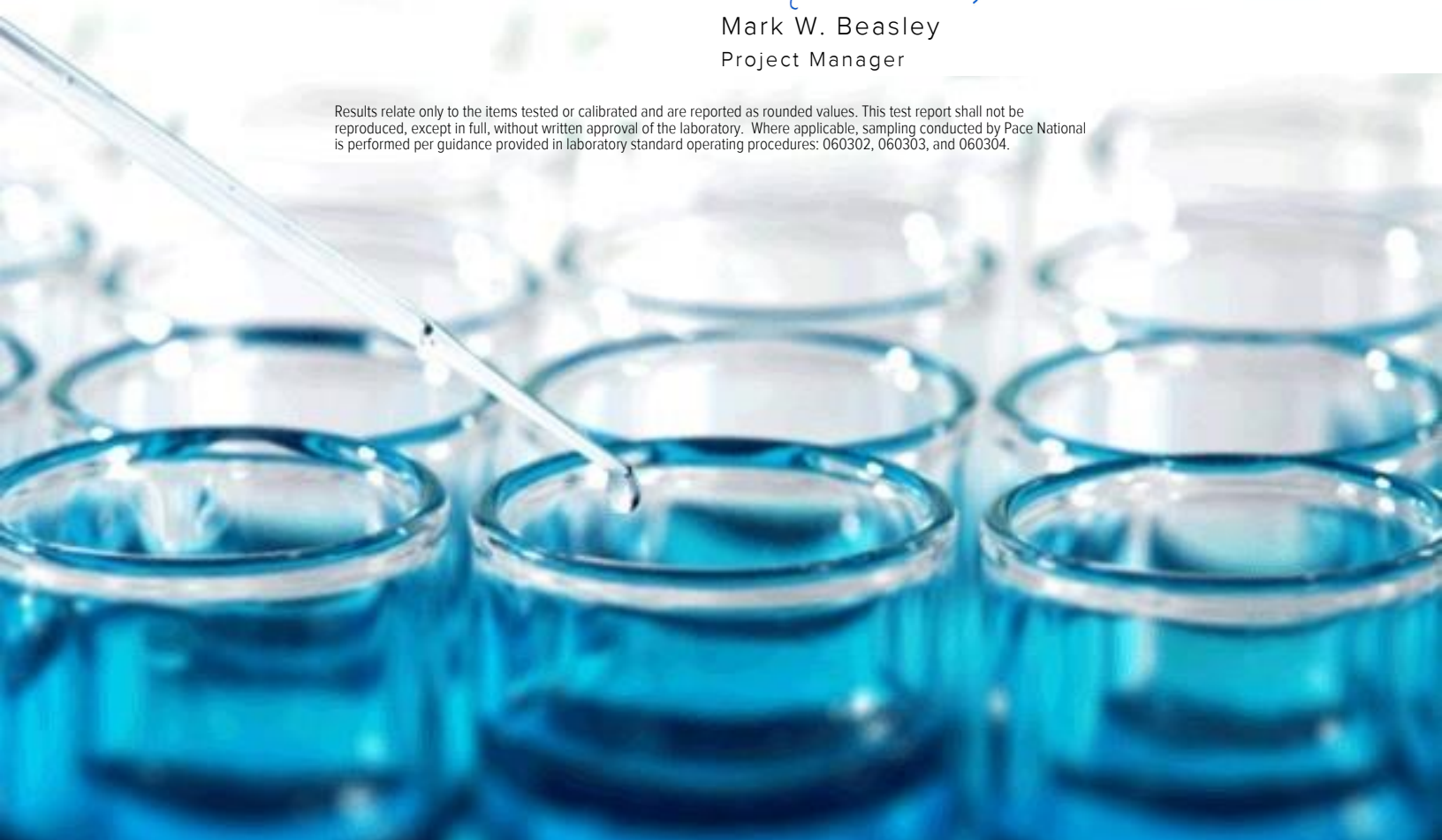
Sample Delivery Group: L1098098  
Samples Received: 05/11/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

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



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**5 Sr****6 Qc****7 Gl****8 Al****9 Sc**

# SAMPLE SUMMARY



## WMW-01-20190509 L1098098-01 GW

Collected by: K. Teague  
 Collected date/time: 05/09/19 10:05  
 Received date/time: 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 11:39	05/20/19 11:39	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	1	05/20/19 12:43	05/20/19 12:43	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280556	1	05/14/19 12:05	05/14/19 12:05	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 03:51	05/17/19 03:51	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	5	05/17/19 13:15	05/21/19 13:53	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 11:19	05/14/19 11:19	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/14/19 21:24	TH	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-03-20190509 L1098098-02 GW

Collected by: K. Teague  
 Collected date/time: 05/09/19 10:15  
 Received date/time: 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 11:41	05/20/19 11:41	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	1	05/20/19 12:46	05/20/19 12:46	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280556	1	05/14/19 12:06	05/14/19 12:06	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 11:04	05/17/19 11:04	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	5	05/17/19 13:15	05/21/19 13:58	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	50	05/17/19 13:15	05/21/19 14:14	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 11:22	05/14/19 11:22	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	5	05/14/19 09:58	05/15/19 22:07	TH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 18:23	TH	Mt. Juliet, TN

## WMW-05-20190508 L1098098-03 GW

Collected by: K. Teague  
 Collected date/time: 05/08/19 12:30  
 Received date/time: 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 11:42	05/20/19 11:42	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	1	05/20/19 12:48	05/20/19 12:48	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280556	1	05/14/19 12:07	05/14/19 12:07	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 05:36	05/17/19 05:36	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 15:29	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 11:25	05/14/19 11:25	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/14/19 21:44	TH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 18:46	TH	Mt. Juliet, TN

## WMW-09-20190508 L1098098-04 GW

Collected by: K. Teague  
 Collected date/time: 05/08/19 13:55  
 Received date/time: 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 11:49	05/20/19 11:49	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	1	05/20/19 12:55	05/20/19 12:55	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280556	1	05/14/19 12:07	05/14/19 12:07	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 05:51	05/17/19 05:51	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 15:34	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 11:30	05/14/19 11:30	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/14/19 22:04	TH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 19:08	TH	Mt. Juliet, TN



# SAMPLE SUMMARY



## WMW-10-20190508 L1098098-05 GW

Collected by: K. Teague  
 Collected date/time: 05/09/19 12:30  
 Received date/time: 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 11:50	05/20/19 11:50	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	4	05/20/19 13:28	05/20/19 13:28	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280556	1	05/14/19 12:08	05/14/19 12:08	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 06:05	05/17/19 06:05	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 15:40	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 11:32	05/14/19 11:32	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/14/19 22:25	TH	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

## WMW-11-20190509 L1098098-06 GW

Collected by: K. Teague  
 Collected date/time: 05/09/19 11:30  
 Received date/time: 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 11:52	05/20/19 11:52	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	1	05/20/19 12:58	05/20/19 12:58	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280556	1	05/14/19 12:08	05/14/19 12:08	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 06:20	05/17/19 06:20	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 15:45	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	10	05/17/19 13:15	05/21/19 14:19	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 11:36	05/14/19 11:36	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/14/19 22:45	TH	Mt. Juliet, TN

6 Qc

7 Gl

8 Al

9 Sc

## WMW-13-20190509 L1098098-07 GW

Collected by: K. Teague  
 Collected date/time: 05/09/19 11:30  
 Received date/time: 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 11:53	05/20/19 11:53	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	2	05/20/19 13:00	05/20/19 13:00	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:48	05/14/19 15:48	BAM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 06:35	05/17/19 06:35	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 16:01	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 11:39	05/14/19 11:39	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/14/19 23:05	TH	Mt. Juliet, TN

## WMW-18-20190509 L1098098-08 GW

Collected by: K. Teague  
 Collected date/time: 05/09/19 07:55  
 Received date/time: 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 11:57	05/20/19 11:57	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	1	05/20/19 13:03	05/20/19 13:03	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:49	05/14/19 15:49	BAM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 06:50	05/17/19 06:50	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1280497	1	05/14/19 13:37	05/14/19 21:12	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 14:23	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 11:50	05/14/19 11:50	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/15/19 15:49	FM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1280920	1	05/14/19 17:51	05/15/19 02:13	TH	Mt. Juliet, TN

# SAMPLE SUMMARY



## WMW-20-20190508 L1098098-09 GW

Collected by  
K. Teague  
Collected date/time  
05/08/19 11:10  
Received date/time  
05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 12:01	05/20/19 12:01	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	1	05/20/19 13:07	05/20/19 13:07	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:49	05/14/19 15:49	BAM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 07:05	05/17/19 07:05	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1279896	1	05/13/19 19:00	05/14/19 12:31	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1279901	1	05/13/19 11:18	05/13/19 18:32	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280927	1	05/17/19 14:28	05/21/19 15:18	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 16:06	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/21/19 12:46	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 11:55	05/14/19 11:55	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 05:48	05/15/19 05:48	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/14/19 23:25	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1280394	1	05/14/19 09:51	05/14/19 16:50	DMG	Mt. Juliet, TN

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

## WMW-21-20190508 L1098098-10 GW

Collected by  
K. Teague  
Collected date/time  
05/08/19 13:00  
Received date/time  
05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 12:03	05/20/19 12:03	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	1	05/20/19 13:09	05/20/19 13:09	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:50	05/14/19 15:50	BAM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 07:20	05/17/19 07:20	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1279896	1	05/13/19 19:00	05/14/19 12:34	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1279901	1	05/13/19 11:18	05/13/19 18:34	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280927	1	05/17/19 14:28	05/21/19 15:24	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 16:12	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/21/19 12:51	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 11:58	05/14/19 11:58	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 06:08	05/15/19 06:08	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/15/19 16:50	FM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 19:52	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1280394	1	05/14/19 09:51	05/14/19 17:11	DMG	Mt. Juliet, TN

## TB-05 L1098098-11 GW

Collected by  
K. Teague  
Collected date/time  
05/09/19 00:00  
Received date/time  
05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 01:47	05/15/19 01:47	ACG	Mt. Juliet, TN

## TB-06 L1098098-12 GW

Collected by  
K. Teague  
Collected date/time  
05/09/19 00:00  
Received date/time  
05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 02:07	05/15/19 02:07	ACG	Mt. Juliet, TN

## TB-07 L1098098-13 GW

Collected by  
K. Teague  
Collected date/time  
05/09/19 00:00  
Received date/time  
05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 02:27	05/15/19 02:27	ACG	Mt. Juliet, TN

# SAMPLE SUMMARY



## TB-08 L1098098-14 GW

Collected by K. Teague      Collected date/time 05/09/19 00:00      Received date/time 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 02:47	05/15/19 02:47	ACG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## TB-09 L1098098-15 GW

Collected by K. Teague      Collected date/time 05/09/19 00:00      Received date/time 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 03:07	05/15/19 03:07	ACG	Mt. Juliet, TN

4 Cn

5 Sr

## WMW-22-20190508 L1098098-16 GW

Collected by K. Teague      Collected date/time 05/08/19 14:40      Received date/time 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 12:09	05/20/19 12:09	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	2	05/20/19 13:16	05/20/19 13:16	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:50	05/14/19 15:50	BAM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 08:05	05/17/19 08:05	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1279896	1	05/13/19 19:00	05/14/19 12:41	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1279904	1	05/13/19 19:00	05/14/19 11:12	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280927	1	05/17/19 14:28	05/21/19 15:29	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 16:17	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/21/19 12:56	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 12:00	05/14/19 12:00	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 06:28	05/15/19 06:28	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/15/19 17:10	FM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 20:14	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1280394	1	05/14/19 09:51	05/14/19 17:32	DMG	Mt. Juliet, TN

6 Qc

7 Gl

8 Al

9 Sc

## WMW-23-20190508 L1098098-17 GW

Collected by K. Teague      Collected date/time 05/08/19 16:15      Received date/time 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 12:11	05/20/19 12:11	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	2	05/20/19 13:18	05/20/19 13:18	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:51	05/14/19 15:51	BAM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 08:20	05/17/19 08:20	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1279896	1	05/13/19 19:00	05/14/19 12:43	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1279904	1	05/13/19 19:00	05/14/19 11:14	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280927	1	05/17/19 14:28	05/21/19 15:34	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 16:22	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/21/19 13:12	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 12:02	05/14/19 12:02	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 06:48	05/15/19 06:48	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/15/19 21:47	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1280394	1	05/14/19 09:51	05/14/19 17:53	DMG	Mt. Juliet, TN

## WMW-27-20190509 L1098098-18 GW

Collected by K. Teague      Collected date/time 05/09/19 14:00      Received date/time 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 12:12	05/20/19 12:12	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	1	05/20/19 13:19	05/20/19 13:19	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:51	05/14/19 15:51	BAM	Mt. Juliet, TN

# SAMPLE SUMMARY

## WMW-27-20190509 L1098098-18 GW

Collected by  
K. Teague  
Collected date/time  
05/09/19 14:00  
Received date/time  
05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1281970	1	05/18/19 14:41	05/18/19 14:41	ST	Mt. Juliet, TN
Mercury by Method 7470A	WG1279896	1	05/13/19 19:00	05/14/19 11:49	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1279904	1	05/13/19 19:00	05/14/19 10:45	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280927	1	05/17/19 14:28	05/21/19 13:21	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 15:03	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/21/19 13:17	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 12:05	05/14/19 12:05	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 08:09	05/15/19 08:09	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/15/19 17:30	FM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1280936	1	05/15/19 15:36	05/16/19 16:28	DMG	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-31-20190508 L1098098-19 GW

Collected by  
K. Teague  
Collected date/time  
05/08/19 15:45  
Received date/time  
05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 12:17	05/20/19 12:17	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	2	05/20/19 13:24	05/20/19 13:24	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:52	05/14/19 15:52	BAM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 08:35	05/17/19 08:35	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1279896	1	05/13/19 19:00	05/14/19 12:46	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1279904	1	05/13/19 19:00	05/14/19 11:17	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280927	1	05/17/19 14:28	05/21/19 15:40	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 16:28	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/21/19 13:32	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 12:07	05/14/19 12:07	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 07:09	05/15/19 07:09	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280917	1	05/14/19 22:22	05/15/19 12:50	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1280394	1	05/14/19 09:51	05/14/19 18:13	DMG	Mt. Juliet, TN

## WMW-32-20190509 L1098098-20 GW

Collected by  
K. Teague  
Collected date/time  
05/09/19 15:35  
Received date/time  
05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 12:19	05/20/19 12:19	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	5	05/20/19 13:43	05/20/19 13:43	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:53	05/14/19 15:53	BAM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 08:49	05/17/19 08:49	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1279896	1	05/13/19 19:00	05/14/19 12:48	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1279904	1	05/13/19 19:00	05/14/19 11:19	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280927	1	05/17/19 14:28	05/21/19 15:45	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 16:33	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/21/19 13:37	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1281549	1	05/15/19 17:10	05/15/19 17:10	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 12:12	05/14/19 12:12	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 07:29	05/15/19 07:29	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/15/19 18:30	FM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1280936	1	05/15/19 15:36	05/16/19 17:34	DMG	Mt. Juliet, TN

# SAMPLE SUMMARY



## RMD-4-20190508 L1098098-21 GW

Collected by  
K. Teague

Collected date/time  
05/08/19 10:15

Received date/time  
05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283669	1	05/20/19 12:20	05/20/19 12:20	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1283677	2	05/20/19 13:27	05/20/19 13:27	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:54	05/14/19 15:54	BAM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 09:04	05/17/19 09:04	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 16:38	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 13:12	05/14/19 13:12	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/15/19 18:51	FM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 20:36	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1280394	1	05/14/19 09:51	05/14/19 18:34	DMG	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

## RMD-6-20190508 L1098098-22 GW

Collected by  
K. Teague

Collected date/time  
05/08/19 11:45

Received date/time  
05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1283668	1	05/20/19 15:24	05/20/19 15:24	JER	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1282741	1	05/20/19 09:18	05/20/19 09:18	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1280557	1	05/14/19 15:54	05/14/19 15:54	BAM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1281963	1	05/17/19 09:19	05/17/19 09:19	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1279896	1	05/13/19 19:00	05/14/19 12:51	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1279904	1	05/13/19 19:00	05/14/19 11:21	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280931	1	05/15/19 08:16	05/16/19 12:44	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/20/19 16:44	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1280954	1	05/17/19 13:15	05/21/19 13:48	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1280551	1	05/14/19 13:14	05/14/19 13:14	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1281103	1	05/15/19 07:49	05/15/19 07:49	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1280380	1	05/14/19 09:58	05/15/19 21:27	TH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1278958	1	05/14/19 00:14	05/14/19 20:58	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1280394	1	05/14/19 09:51	05/14/19 18:55	DMG	Mt. Juliet, TN

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

Project Narrative

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Due to a vendor supply error, AAA-TFT was not included in the surrogate mixed used for this analytical batch.

- 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	05/20/2019 11:39	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	05/20/2019 12:43	<a href="#">WG1283677</a>

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	05/14/2019 12:05	<a href="#">WG1280556</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	5550		5000	1	05/17/2019 03:51	<a href="#">WG1281963</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	2350		500	5	05/21/2019 13:53	<a href="#">WG1280954</a>
Manganese,Dissolved	487		25.0	5	05/21/2019 13:53	<a href="#">WG1280954</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	1700		10.0	1	05/14/2019 11:19	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 11:19	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 11:19	<a href="#">WG1280551</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2080		200	1	05/14/2019 21:24	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	1590		250	1	05/14/2019 21:24	<a href="#">WG1280380</a>
(S) o-Terphenyl	94.7		52.0-156		05/14/2019 21:24	<a href="#">WG1280380</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	460		100	1	05/20/2019 11:41	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	05/20/2019 12:46	<a href="#">WG1283677</a>

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	05/14/2019 12:06	<a href="#">WG1280556</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	05/17/2019 11:04	<a href="#">WG1281963</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	9720		500	5	05/21/2019 13:58	<a href="#">WG1280954</a>
Manganese,Dissolved	5360		250	50	05/21/2019 14:14	<a href="#">WG1280954</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	1480		10.0	1	05/14/2019 11:22	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 11:22	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 11:22	<a href="#">WG1280551</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	20800		1000	5	05/15/2019 22:07	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	8450		1250	5	05/15/2019 22:07	<a href="#">WG1280380</a>
(S) o-Terphenyl	92.6		52.0-156		05/15/2019 22:07	<a href="#">WG1280380</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	741		200	1	05/14/2019 18:23	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 18:23	<a href="#">WG1278958</a>
(S) o-Terphenyl	94.7		52.0-156		05/14/2019 18:23	<a href="#">WG1278958</a>





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 11:42	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2310		100	1	05/20/2019 12:48	<a href="#">WG1283677</a>

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	05/14/2019 12:07	<a href="#">WG1280556</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	13600		5000	1	05/17/2019 05:36	<a href="#">WG1281963</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/20/2019 15:29	<a href="#">WG1280954</a>
Manganese,Dissolved	ND		5.00	1	05/20/2019 15:29	<a href="#">WG1280954</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 11:25	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 11:25	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 11:25	<a href="#">WG1280551</a>

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	05/14/2019 21:44	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	356		250	1	05/14/2019 21:44	<a href="#">WG1280380</a>
(S) o-Terphenyl	75.3		52.0-156		05/14/2019 21:44	<a href="#">WG1280380</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	05/14/2019 18:46	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 18:46	<a href="#">WG1278958</a>
(S) o-Terphenyl	57.4		52.0-156		05/14/2019 18:46	<a href="#">WG1278958</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 11:49	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3890		100	1	05/20/2019 12:55	<a href="#">WG1283677</a>

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	05/14/2019 12:07	<a href="#">WG1280556</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	44100		5000	1	05/17/2019 05:51	<a href="#">WG1281963</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/20/2019 15:34	<a href="#">WG1280954</a>
Manganese,Dissolved	152		5.00	1	05/20/2019 15:34	<a href="#">WG1280954</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 11:30	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 11:30	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 11:30	<a href="#">WG1280551</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1010		200	1	05/14/2019 22:04	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	1590		250	1	05/14/2019 22:04	<a href="#">WG1280380</a>
(S) o-Terphenyl	86.8		52.0-156		05/14/2019 22:04	<a href="#">WG1280380</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	05/14/2019 19:08	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 19:08	<a href="#">WG1278958</a>
(S) o-Terphenyl	67.4		52.0-156		05/14/2019 19:08	<a href="#">WG1278958</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 11:50	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	12500		400	4	05/20/2019 13:28	<a href="#">WG1283677</a>

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	05/14/2019 12:08	<a href="#">WG1280556</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	48000		5000	1	05/17/2019 06:05	<a href="#">WG1281963</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/20/2019 15:40	<a href="#">WG1280954</a>
Manganese,Dissolved	ND		5.00	1	05/20/2019 15:40	<a href="#">WG1280954</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 11:32	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 11:32	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 11:32	<a href="#">WG1280551</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	333		200	1	05/14/2019 22:25	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	782		250	1	05/14/2019 22:25	<a href="#">WG1280380</a>
(S) o-Terphenyl	73.2		52.0-156		05/14/2019 22:25	<a href="#">WG1280380</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 11:52	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	05/20/2019 12:58	<a href="#">WG1283677</a>

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	05/14/2019 12:08	<a href="#">WG1280556</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	12100		5000	1	05/17/2019 06:20	<a href="#">WG1281963</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/20/2019 15:45	<a href="#">WG1280954</a>
Manganese,Dissolved	1190		50.0	10	05/21/2019 14:19	<a href="#">WG1280954</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	483		10.0	1	05/14/2019 11:36	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 11:36	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 11:36	<a href="#">WG1280551</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4660		200	1	05/14/2019 22:45	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	4470		250	1	05/14/2019 22:45	<a href="#">WG1280380</a>
(S) o-Terphenyl	96.3		52.0-156		05/14/2019 22:45	<a href="#">WG1280380</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 11:53	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	8200		200	2	05/20/2019 13:00	<a href="#">WG1283677</a>

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	05/14/2019 15:48	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	33200		5000	1	05/17/2019 06:35	<a href="#">WG1281963</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/20/2019 16:01	<a href="#">WG1280954</a>
Manganese,Dissolved	8.91		5.00	1	05/20/2019 16:01	<a href="#">WG1280954</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 11:39	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 11:39	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 11:39	<a href="#">WG1280551</a>

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	05/14/2019 23:05	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	599		250	1	05/14/2019 23:05	<a href="#">WG1280380</a>
(S) o-Terphenyl	61.6		52.0-156		05/14/2019 23:05	<a href="#">WG1280380</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	208		100	1	05/20/2019 11:57	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	810		100	1	05/20/2019 13:03	<a href="#">WG1283677</a>

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	05/14/2019 15:49	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	22500		5000	1	05/17/2019 06:50	<a href="#">WG1281963</a>

7 Gl

8 Al

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	16.2		10.0	1	05/14/2019 21:12	<a href="#">WG1280497</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	14.5		2.00	1	05/20/2019 14:23	<a href="#">WG1280954</a>
Iron,Dissolved	ND		100	1	05/20/2019 14:23	<a href="#">WG1280954</a>
Manganese,Dissolved	150		5.00	1	05/20/2019 14:23	<a href="#">WG1280954</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	90.0		10.0	1	05/14/2019 11:50	<a href="#">WG1280551</a>
Ethane	ND	J6	13.0	1	05/14/2019 11:50	<a href="#">WG1280551</a>
Ethene	ND	J6	13.0	1	05/14/2019 11:50	<a href="#">WG1280551</a>

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	05/15/2019 15:49	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	ND		250	1	05/15/2019 15:49	<a href="#">WG1280380</a>
(S) o-Terphenyl	57.9		52.0-156		05/15/2019 15:49	<a href="#">WG1280380</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	05/15/2019 02:13	<a href="#">WG1280920</a>
Residual Range Organics (RRO)	ND		250	1	05/15/2019 02:13	<a href="#">WG1280920</a>
(S) o-Terphenyl	57.4		52.0-156		05/15/2019 02:13	<a href="#">WG1280920</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 12:01	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	862		100	1	05/20/2019 13:07	<a href="#">WG1283677</a>

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	05/14/2019 15:49	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	17800		5000	1	05/17/2019 07:05	<a href="#">WG1281963</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/14/2019 12:31	<a href="#">WG1279896</a>
Mercury,Dissolved	ND		0.200	1	05/13/2019 18:32	<a href="#">WG1279901</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.12		2.00	1	05/21/2019 15:18	<a href="#">WG1280927</a>
Arsenic,Dissolved	3.83		2.00	1	05/20/2019 16:06	<a href="#">WG1280954</a>
Barium	37.0		5.00	1	05/21/2019 15:18	<a href="#">WG1280927</a>
Barium,Dissolved	35.7		5.00	1	05/21/2019 12:46	<a href="#">WG1280954</a>
Cadmium	ND		1.00	1	05/21/2019 15:18	<a href="#">WG1280927</a>
Cadmium,Dissolved	ND		1.00	1	05/20/2019 16:06	<a href="#">WG1280954</a>
Chromium	ND		2.00	1	05/21/2019 15:18	<a href="#">WG1280927</a>
Chromium,Dissolved	ND		2.00	1	05/21/2019 12:46	<a href="#">WG1280954</a>
Iron,Dissolved	ND		100	1	05/20/2019 16:06	<a href="#">WG1280954</a>
Lead	ND		2.00	1	05/21/2019 15:18	<a href="#">WG1280927</a>
Lead,Dissolved	ND		2.00	1	05/20/2019 16:06	<a href="#">WG1280954</a>
Manganese,Dissolved	419		5.00	1	05/21/2019 12:46	<a href="#">WG1280954</a>
Selenium	ND		2.00	1	05/21/2019 15:18	<a href="#">WG1280927</a>
Selenium,Dissolved	ND		2.00	1	05/20/2019 16:06	<a href="#">WG1280954</a>
Silver	ND		2.00	1	05/21/2019 15:18	<a href="#">WG1280927</a>
Silver,Dissolved	ND		2.00	1	05/20/2019 16:06	<a href="#">WG1280954</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 11:55	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 11:55	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 11:55	<a href="#">WG1280551</a>



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	05/15/2019 05:48	<a href="#">WG1281103</a>
Toluene	ND		1.00	1	05/15/2019 05:48	<a href="#">WG1281103</a>
Ethylbenzene	ND		1.00	1	05/15/2019 05:48	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 05:48	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 05:48	<a href="#">WG1281103</a>
(S) Toluene-d8	100		80.0-120		05/15/2019 05:48	<a href="#">WG1281103</a>
(S) a,a,a-Trifluorotoluene	0.000	J2	80.0-120		05/15/2019 05:48	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	102		77.0-126		05/15/2019 05:48	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	101		70.0-130		05/15/2019 05:48	<a href="#">WG1281103</a>

- 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)	214		200	1	05/14/2019 23:25	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	818		250	1	05/14/2019 23:25	<a href="#">WG1280380</a>
(S) o-Terphenyl	68.9		52.0-156		05/14/2019 23:25	<a href="#">WG1280380</a>

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	05/14/2019 16:50	<a href="#">WG1280394</a>
Acenaphthene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Acenaphthylene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Benzo(a)anthracene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Benzo(a)pyrene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Chrysene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Fluoranthene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Fluorene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Naphthalene	ND		0.250	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Phenanthrene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
Pyrene	ND		0.0500	1	05/14/2019 16:50	<a href="#">WG1280394</a>
1-Methylnaphthalene	ND		0.250	1	05/14/2019 16:50	<a href="#">WG1280394</a>
2-Methylnaphthalene	ND		0.250	1	05/14/2019 16:50	<a href="#">WG1280394</a>
2-Chloronaphthalene	ND		0.250	1	05/14/2019 16:50	<a href="#">WG1280394</a>
(S) Nitrobenzene-d5	125		31.0-160		05/14/2019 16:50	<a href="#">WG1280394</a>
(S) 2-Fluorobiphenyl	105		48.0-148		05/14/2019 16:50	<a href="#">WG1280394</a>
(S) p-Terphenyl-d14	132		37.0-146		05/14/2019 16:50	<a href="#">WG1280394</a>





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 12:03	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3380		100	1	05/20/2019 13:09	<a href="#">WG1283677</a>

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	05/14/2019 15:50	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	18000		5000	1	05/17/2019 07:20	<a href="#">WG1281963</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/14/2019 12:34	<a href="#">WG1279896</a>
Mercury,Dissolved	ND		0.200	1	05/13/2019 18:34	<a href="#">WG1279901</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	6.16		2.00	1	05/21/2019 15:24	<a href="#">WG1280927</a>
Arsenic,Dissolved	5.85		2.00	1	05/20/2019 16:12	<a href="#">WG1280954</a>
Barium	15.9		5.00	1	05/21/2019 15:24	<a href="#">WG1280927</a>
Barium,Dissolved	17.7		5.00	1	05/21/2019 12:51	<a href="#">WG1280954</a>
Cadmium	ND		1.00	1	05/21/2019 15:24	<a href="#">WG1280927</a>
Cadmium,Dissolved	ND		1.00	1	05/20/2019 16:12	<a href="#">WG1280954</a>
Chromium	ND		2.00	1	05/21/2019 15:24	<a href="#">WG1280927</a>
Chromium,Dissolved	ND		2.00	1	05/21/2019 12:51	<a href="#">WG1280954</a>
Iron,Dissolved	ND		100	1	05/20/2019 16:12	<a href="#">WG1280954</a>
Lead	ND		2.00	1	05/21/2019 15:24	<a href="#">WG1280927</a>
Lead,Dissolved	ND		2.00	1	05/20/2019 16:12	<a href="#">WG1280954</a>
Manganese,Dissolved	ND		5.00	1	05/20/2019 16:12	<a href="#">WG1280954</a>
Selenium	ND		2.00	1	05/21/2019 15:24	<a href="#">WG1280927</a>
Selenium,Dissolved	ND		2.00	1	05/20/2019 16:12	<a href="#">WG1280954</a>
Silver	ND		2.00	1	05/21/2019 15:24	<a href="#">WG1280927</a>
Silver,Dissolved	ND		2.00	1	05/20/2019 16:12	<a href="#">WG1280954</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 11:58	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 11:58	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 11:58	<a href="#">WG1280551</a>



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	05/15/2019 06:08	<a href="#">WG1281103</a>
Toluene	ND		1.00	1	05/15/2019 06:08	<a href="#">WG1281103</a>
Ethylbenzene	ND		1.00	1	05/15/2019 06:08	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 06:08	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 06:08	<a href="#">WG1281103</a>
(S) Toluene-d8	102		80.0-120		05/15/2019 06:08	<a href="#">WG1281103</a>
(S) a,a,a-Trifluorotoluene	0.000	J2	80.0-120		05/15/2019 06:08	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	100		77.0-126		05/15/2019 06:08	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	99.5		70.0-130		05/15/2019 06:08	<a href="#">WG1281103</a>

- 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	05/15/2019 16:50	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	291		250	1	05/15/2019 16:50	<a href="#">WG1280380</a>
(S) o-Terphenyl	67.4		52.0-156		05/15/2019 16:50	<a href="#">WG1280380</a>

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	05/14/2019 19:52	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 19:52	<a href="#">WG1278958</a>
(S) o-Terphenyl	58.4		52.0-156		05/14/2019 19:52	<a href="#">WG1278958</a>

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	05/14/2019 17:11	<a href="#">WG1280394</a>
Acenaphthene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Acenaphthylene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Benzo(a)anthracene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Benzo(a)pyrene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Chrysene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Fluoranthene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Fluorene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Naphthalene	ND		0.250	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Phenanthrene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
Pyrene	ND		0.0500	1	05/14/2019 17:11	<a href="#">WG1280394</a>
1-Methylnaphthalene	ND		0.250	1	05/14/2019 17:11	<a href="#">WG1280394</a>
2-Methylnaphthalene	ND		0.250	1	05/14/2019 17:11	<a href="#">WG1280394</a>
2-Chloronaphthalene	ND		0.250	1	05/14/2019 17:11	<a href="#">WG1280394</a>
(S) Nitrobenzene-d5	110		31.0-160		05/14/2019 17:11	<a href="#">WG1280394</a>
(S) 2-Fluorobiphenyl	92.6		48.0-148		05/14/2019 17:11	<a href="#">WG1280394</a>
(S) p-Terphenyl-d14	117		37.0-146		05/14/2019 17:11	<a href="#">WG1280394</a>



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	05/15/2019 01:47	WG1281103
Acrolein	ND		50.0	1	05/15/2019 01:47	WG1281103
Acrylonitrile	ND		10.0	1	05/15/2019 01:47	WG1281103
Benzene	ND		1.00	1	05/15/2019 01:47	WG1281103
Bromobenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
Bromodichloromethane	ND		1.00	1	05/15/2019 01:47	WG1281103
Bromoform	ND		1.00	1	05/15/2019 01:47	WG1281103
Bromomethane	ND		5.00	1	05/15/2019 01:47	WG1281103
n-Butylbenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
sec-Butylbenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
tert-Butylbenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
Carbon tetrachloride	ND		1.00	1	05/15/2019 01:47	WG1281103
Chlorobenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
Chlorodibromomethane	ND		1.00	1	05/15/2019 01:47	WG1281103
Chloroethane	ND		5.00	1	05/15/2019 01:47	WG1281103
Chloroform	ND		5.00	1	05/15/2019 01:47	WG1281103
Chloromethane	ND		2.50	1	05/15/2019 01:47	WG1281103
2-Chlorotoluene	ND		1.00	1	05/15/2019 01:47	WG1281103
4-Chlorotoluene	ND		1.00	1	05/15/2019 01:47	WG1281103
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/15/2019 01:47	WG1281103
1,2-Dibromoethane	ND		1.00	1	05/15/2019 01:47	WG1281103
Dibromomethane	ND		1.00	1	05/15/2019 01:47	WG1281103
1,2-Dichlorobenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
1,3-Dichlorobenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
1,4-Dichlorobenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
Dichlorodifluoromethane	ND		5.00	1	05/15/2019 01:47	WG1281103
1,1-Dichloroethane	ND		1.00	1	05/15/2019 01:47	WG1281103
1,2-Dichloroethane	ND		1.00	1	05/15/2019 01:47	WG1281103
1,1-Dichloroethene	ND		1.00	1	05/15/2019 01:47	WG1281103
cis-1,2-Dichloroethene	ND		1.00	1	05/15/2019 01:47	WG1281103
trans-1,2-Dichloroethene	ND		1.00	1	05/15/2019 01:47	WG1281103
1,2-Dichloropropane	ND		1.00	1	05/15/2019 01:47	WG1281103
1,1-Dichloropropene	ND		1.00	1	05/15/2019 01:47	WG1281103
1,3-Dichloropropane	ND		1.00	1	05/15/2019 01:47	WG1281103
cis-1,3-Dichloropropene	ND		1.00	1	05/15/2019 01:47	WG1281103
trans-1,3-Dichloropropene	ND		1.00	1	05/15/2019 01:47	WG1281103
2,2-Dichloropropane	ND		1.00	1	05/15/2019 01:47	WG1281103
Di-isopropyl ether	ND		1.00	1	05/15/2019 01:47	WG1281103
Ethylbenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
Hexachloro-1,3-butadiene	ND		1.00	1	05/15/2019 01:47	WG1281103
Isopropylbenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
p-Isopropyltoluene	ND		1.00	1	05/15/2019 01:47	WG1281103
2-Butanone (MEK)	ND		10.0	1	05/15/2019 01:47	WG1281103
Methylene Chloride	ND		5.00	1	05/15/2019 01:47	WG1281103
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/15/2019 01:47	WG1281103
Methyl tert-butyl ether	ND		1.00	1	05/15/2019 01:47	WG1281103
Naphthalene	ND		5.00	1	05/15/2019 01:47	WG1281103
n-Propylbenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
Styrene	ND		1.00	1	05/15/2019 01:47	WG1281103
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/15/2019 01:47	WG1281103
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/15/2019 01:47	WG1281103
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/15/2019 01:47	WG1281103
Tetrachloroethene	ND		1.00	1	05/15/2019 01:47	WG1281103
Toluene	ND		1.00	1	05/15/2019 01:47	WG1281103
1,2,3-Trichlorobenzene	ND		1.00	1	05/15/2019 01:47	WG1281103
1,2,4-Trichlorobenzene	ND		1.00	1	05/15/2019 01:47	WG1281103

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/09/19 00:00

L1098098

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	05/15/2019 01:47	<a href="#">WG1281103</a>
1,1,2-Trichloroethane	ND		1.00	1	05/15/2019 01:47	<a href="#">WG1281103</a>
Trichloroethene	ND		1.00	1	05/15/2019 01:47	<a href="#">WG1281103</a>
Trichlorofluoromethane	ND		5.00	1	05/15/2019 01:47	<a href="#">WG1281103</a>
1,2,3-Trichloropropane	ND		2.50	1	05/15/2019 01:47	<a href="#">WG1281103</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/15/2019 01:47	<a href="#">WG1281103</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/15/2019 01:47	<a href="#">WG1281103</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/15/2019 01:47	<a href="#">WG1281103</a>
Vinyl chloride	ND		1.00	1	05/15/2019 01:47	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 01:47	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 01:47	<a href="#">WG1281103</a>
(S) Toluene-d8	102		80.0-120		05/15/2019 01:47	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	103		77.0-126		05/15/2019 01:47	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	101		70.0-130		05/15/2019 01:47	<a href="#">WG1281103</a>

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



Collected date/time: 05/09/19 00:00

L1098098

## 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	05/15/2019 02:07	<a href="#">WG1281103</a>
Acrolein	ND		50.0	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Acrylonitrile	ND		10.0	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Benzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Bromobenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Bromodichloromethane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Bromoform	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Bromomethane	ND		5.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
n-Butylbenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
sec-Butylbenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
tert-Butylbenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Carbon tetrachloride	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Chlorobenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Chlorodibromomethane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Chloroethane	ND		5.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Chloroform	ND		5.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Chloromethane	ND		2.50	1	05/15/2019 02:07	<a href="#">WG1281103</a>
2-Chlorotoluene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
4-Chlorotoluene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,2-Dibromoethane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Dibromomethane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,2-Dichlorobenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,3-Dichlorobenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,4-Dichlorobenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Dichlorodifluoromethane	ND		5.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,1-Dichloroethane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,2-Dichloroethane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,1-Dichloroethene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
cis-1,2-Dichloroethene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
trans-1,2-Dichloroethene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,2-Dichloropropane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,1-Dichloropropene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,3-Dichloropropane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
cis-1,3-Dichloropropene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
trans-1,3-Dichloropropene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
2,2-Dichloropropane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Di-isopropyl ether	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Ethylbenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Hexachloro-1,3-butadiene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Isopropylbenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
p-Isopropyltoluene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
2-Butanone (MEK)	ND		10.0	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Methylene Chloride	ND		5.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Methyl tert-butyl ether	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Naphthalene	ND		5.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
n-Propylbenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Styrene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Tetrachloroethene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Toluene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,2,3-Trichlorobenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,2,4-Trichlorobenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/09/19 00:00

L1098098

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	05/15/2019 02:07	<a href="#">WG1281103</a>
1,1,2-Trichloroethane	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Trichloroethene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Trichlorofluoromethane	ND		5.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,2,3-Trichloropropane	ND		2.50	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
Vinyl chloride	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 02:07	<a href="#">WG1281103</a>
(S) Toluene-d8	99.9		80.0-120		05/15/2019 02:07	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	101		77.0-126		05/15/2019 02:07	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	100		70.0-130		05/15/2019 02:07	<a href="#">WG1281103</a>

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



Collected date/time: 05/09/19 00:00

L1098098

## 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	05/15/2019 02:27	WG1281103
Acrolein	ND		50.0	1	05/15/2019 02:27	WG1281103
Acrylonitrile	ND		10.0	1	05/15/2019 02:27	WG1281103
Benzene	ND		1.00	1	05/15/2019 02:27	WG1281103
Bromobenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
Bromodichloromethane	ND		1.00	1	05/15/2019 02:27	WG1281103
Bromoform	ND		1.00	1	05/15/2019 02:27	WG1281103
Bromomethane	ND		5.00	1	05/15/2019 02:27	WG1281103
n-Butylbenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
sec-Butylbenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
tert-Butylbenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
Carbon tetrachloride	ND		1.00	1	05/15/2019 02:27	WG1281103
Chlorobenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
Chlorodibromomethane	ND		1.00	1	05/15/2019 02:27	WG1281103
Chloroethane	ND		5.00	1	05/15/2019 02:27	WG1281103
Chloroform	ND		5.00	1	05/15/2019 02:27	WG1281103
Chloromethane	ND		2.50	1	05/15/2019 02:27	WG1281103
2-Chlorotoluene	ND		1.00	1	05/15/2019 02:27	WG1281103
4-Chlorotoluene	ND		1.00	1	05/15/2019 02:27	WG1281103
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/15/2019 02:27	WG1281103
1,2-Dibromoethane	ND		1.00	1	05/15/2019 02:27	WG1281103
Dibromomethane	ND		1.00	1	05/15/2019 02:27	WG1281103
1,2-Dichlorobenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
1,3-Dichlorobenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
1,4-Dichlorobenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
Dichlorodifluoromethane	ND		5.00	1	05/15/2019 02:27	WG1281103
1,1-Dichloroethane	ND		1.00	1	05/15/2019 02:27	WG1281103
1,2-Dichloroethane	ND		1.00	1	05/15/2019 02:27	WG1281103
1,1-Dichloroethene	ND		1.00	1	05/15/2019 02:27	WG1281103
cis-1,2-Dichloroethene	ND		1.00	1	05/15/2019 02:27	WG1281103
trans-1,2-Dichloroethene	ND		1.00	1	05/15/2019 02:27	WG1281103
1,2-Dichloropropane	ND		1.00	1	05/15/2019 02:27	WG1281103
1,1-Dichloropropene	ND		1.00	1	05/15/2019 02:27	WG1281103
1,3-Dichloropropane	ND		1.00	1	05/15/2019 02:27	WG1281103
cis-1,3-Dichloropropene	ND		1.00	1	05/15/2019 02:27	WG1281103
trans-1,3-Dichloropropene	ND		1.00	1	05/15/2019 02:27	WG1281103
2,2-Dichloropropane	ND		1.00	1	05/15/2019 02:27	WG1281103
Di-isopropyl ether	ND		1.00	1	05/15/2019 02:27	WG1281103
Ethylbenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
Hexachloro-1,3-butadiene	ND		1.00	1	05/15/2019 02:27	WG1281103
Isopropylbenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
p-Isopropyltoluene	ND		1.00	1	05/15/2019 02:27	WG1281103
2-Butanone (MEK)	ND		10.0	1	05/15/2019 02:27	WG1281103
Methylene Chloride	ND		5.00	1	05/15/2019 02:27	WG1281103
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/15/2019 02:27	WG1281103
Methyl tert-butyl ether	ND		1.00	1	05/15/2019 02:27	WG1281103
Naphthalene	ND		5.00	1	05/15/2019 02:27	WG1281103
n-Propylbenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
Styrene	ND		1.00	1	05/15/2019 02:27	WG1281103
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/15/2019 02:27	WG1281103
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/15/2019 02:27	WG1281103
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/15/2019 02:27	WG1281103
Tetrachloroethene	ND		1.00	1	05/15/2019 02:27	WG1281103
Toluene	ND		1.00	1	05/15/2019 02:27	WG1281103
1,2,3-Trichlorobenzene	ND		1.00	1	05/15/2019 02:27	WG1281103
1,2,4-Trichlorobenzene	ND		1.00	1	05/15/2019 02:27	WG1281103

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/09/19 00:00

L1098098

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	05/15/2019 02:27	<a href="#">WG1281103</a>
1,1,2-Trichloroethane	ND		1.00	1	05/15/2019 02:27	<a href="#">WG1281103</a>
Trichloroethene	ND		1.00	1	05/15/2019 02:27	<a href="#">WG1281103</a>
Trichlorofluoromethane	ND		5.00	1	05/15/2019 02:27	<a href="#">WG1281103</a>
1,2,3-Trichloropropane	ND		2.50	1	05/15/2019 02:27	<a href="#">WG1281103</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/15/2019 02:27	<a href="#">WG1281103</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/15/2019 02:27	<a href="#">WG1281103</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/15/2019 02:27	<a href="#">WG1281103</a>
Vinyl chloride	ND		1.00	1	05/15/2019 02:27	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 02:27	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 02:27	<a href="#">WG1281103</a>
(S) Toluene-d8	99.8		80.0-120		05/15/2019 02:27	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	98.3		77.0-126		05/15/2019 02:27	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	101		70.0-130		05/15/2019 02:27	<a href="#">WG1281103</a>

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





Collected date/time: 05/09/19 00:00

L1098098

## 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	05/15/2019 02:47	WG1281103
Acrolein	ND		50.0	1	05/15/2019 02:47	WG1281103
Acrylonitrile	ND		10.0	1	05/15/2019 02:47	WG1281103
Benzene	ND		1.00	1	05/15/2019 02:47	WG1281103
Bromobenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
Bromodichloromethane	ND		1.00	1	05/15/2019 02:47	WG1281103
Bromoform	ND		1.00	1	05/15/2019 02:47	WG1281103
Bromomethane	ND		5.00	1	05/15/2019 02:47	WG1281103
n-Butylbenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
sec-Butylbenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
tert-Butylbenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
Carbon tetrachloride	ND		1.00	1	05/15/2019 02:47	WG1281103
Chlorobenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
Chlorodibromomethane	ND		1.00	1	05/15/2019 02:47	WG1281103
Chloroethane	ND		5.00	1	05/15/2019 02:47	WG1281103
Chloroform	ND		5.00	1	05/15/2019 02:47	WG1281103
Chloromethane	ND		2.50	1	05/15/2019 02:47	WG1281103
2-Chlorotoluene	ND		1.00	1	05/15/2019 02:47	WG1281103
4-Chlorotoluene	ND		1.00	1	05/15/2019 02:47	WG1281103
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/15/2019 02:47	WG1281103
1,2-Dibromoethane	ND		1.00	1	05/15/2019 02:47	WG1281103
Dibromomethane	ND		1.00	1	05/15/2019 02:47	WG1281103
1,2-Dichlorobenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
1,3-Dichlorobenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
1,4-Dichlorobenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
Dichlorodifluoromethane	ND		5.00	1	05/15/2019 02:47	WG1281103
1,1-Dichloroethane	ND		1.00	1	05/15/2019 02:47	WG1281103
1,2-Dichloroethane	ND		1.00	1	05/15/2019 02:47	WG1281103
1,1-Dichloroethene	ND		1.00	1	05/15/2019 02:47	WG1281103
cis-1,2-Dichloroethene	ND		1.00	1	05/15/2019 02:47	WG1281103
trans-1,2-Dichloroethene	ND		1.00	1	05/15/2019 02:47	WG1281103
1,2-Dichloropropane	ND		1.00	1	05/15/2019 02:47	WG1281103
1,1-Dichloropropene	ND		1.00	1	05/15/2019 02:47	WG1281103
1,3-Dichloropropane	ND		1.00	1	05/15/2019 02:47	WG1281103
cis-1,3-Dichloropropene	ND		1.00	1	05/15/2019 02:47	WG1281103
trans-1,3-Dichloropropene	ND		1.00	1	05/15/2019 02:47	WG1281103
2,2-Dichloropropane	ND		1.00	1	05/15/2019 02:47	WG1281103
Di-isopropyl ether	ND		1.00	1	05/15/2019 02:47	WG1281103
Ethylbenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
Hexachloro-1,3-butadiene	ND		1.00	1	05/15/2019 02:47	WG1281103
Isopropylbenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
p-Isopropyltoluene	ND		1.00	1	05/15/2019 02:47	WG1281103
2-Butanone (MEK)	ND		10.0	1	05/15/2019 02:47	WG1281103
Methylene Chloride	ND		5.00	1	05/15/2019 02:47	WG1281103
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/15/2019 02:47	WG1281103
Methyl tert-butyl ether	ND		1.00	1	05/15/2019 02:47	WG1281103
Naphthalene	ND		5.00	1	05/15/2019 02:47	WG1281103
n-Propylbenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
Styrene	ND		1.00	1	05/15/2019 02:47	WG1281103
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/15/2019 02:47	WG1281103
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/15/2019 02:47	WG1281103
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/15/2019 02:47	WG1281103
Tetrachloroethene	ND		1.00	1	05/15/2019 02:47	WG1281103
Toluene	ND		1.00	1	05/15/2019 02:47	WG1281103
1,2,3-Trichlorobenzene	ND		1.00	1	05/15/2019 02:47	WG1281103
1,2,4-Trichlorobenzene	ND		1.00	1	05/15/2019 02:47	WG1281103

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/09/19 00:00

L1098098

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	05/15/2019 02:47	<a href="#">WG1281103</a>
1,1,2-Trichloroethane	ND		1.00	1	05/15/2019 02:47	<a href="#">WG1281103</a>
Trichloroethene	ND		1.00	1	05/15/2019 02:47	<a href="#">WG1281103</a>
Trichlorofluoromethane	ND		5.00	1	05/15/2019 02:47	<a href="#">WG1281103</a>
1,2,3-Trichloropropane	ND		2.50	1	05/15/2019 02:47	<a href="#">WG1281103</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/15/2019 02:47	<a href="#">WG1281103</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/15/2019 02:47	<a href="#">WG1281103</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/15/2019 02:47	<a href="#">WG1281103</a>
Vinyl chloride	ND		1.00	1	05/15/2019 02:47	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 02:47	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 02:47	<a href="#">WG1281103</a>
(S) Toluene-d8	99.0		80.0-120		05/15/2019 02:47	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	98.0		77.0-126		05/15/2019 02:47	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	99.0		70.0-130		05/15/2019 02:47	<a href="#">WG1281103</a>

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



Collected date/time: 05/09/19 00:00

L1098098

## 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	05/15/2019 03:07	WG1281103
Acrolein	ND		50.0	1	05/15/2019 03:07	WG1281103
Acrylonitrile	ND		10.0	1	05/15/2019 03:07	WG1281103
Benzene	ND		1.00	1	05/15/2019 03:07	WG1281103
Bromobenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
Bromodichloromethane	ND		1.00	1	05/15/2019 03:07	WG1281103
Bromoform	ND		1.00	1	05/15/2019 03:07	WG1281103
Bromomethane	ND		5.00	1	05/15/2019 03:07	WG1281103
n-Butylbenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
sec-Butylbenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
tert-Butylbenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
Carbon tetrachloride	ND		1.00	1	05/15/2019 03:07	WG1281103
Chlorobenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
Chlorodibromomethane	ND		1.00	1	05/15/2019 03:07	WG1281103
Chloroethane	ND		5.00	1	05/15/2019 03:07	WG1281103
Chloroform	ND		5.00	1	05/15/2019 03:07	WG1281103
Chloromethane	ND		2.50	1	05/15/2019 03:07	WG1281103
2-Chlorotoluene	ND		1.00	1	05/15/2019 03:07	WG1281103
4-Chlorotoluene	ND		1.00	1	05/15/2019 03:07	WG1281103
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/15/2019 03:07	WG1281103
1,2-Dibromoethane	ND		1.00	1	05/15/2019 03:07	WG1281103
Dibromomethane	ND		1.00	1	05/15/2019 03:07	WG1281103
1,2-Dichlorobenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
1,3-Dichlorobenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
1,4-Dichlorobenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
Dichlorodifluoromethane	ND		5.00	1	05/15/2019 03:07	WG1281103
1,1-Dichloroethane	ND		1.00	1	05/15/2019 03:07	WG1281103
1,2-Dichloroethane	ND		1.00	1	05/15/2019 03:07	WG1281103
1,1-Dichloroethene	ND		1.00	1	05/15/2019 03:07	WG1281103
cis-1,2-Dichloroethene	ND		1.00	1	05/15/2019 03:07	WG1281103
trans-1,2-Dichloroethene	ND		1.00	1	05/15/2019 03:07	WG1281103
1,2-Dichloropropane	ND		1.00	1	05/15/2019 03:07	WG1281103
1,1-Dichloropropene	ND		1.00	1	05/15/2019 03:07	WG1281103
1,3-Dichloropropane	ND		1.00	1	05/15/2019 03:07	WG1281103
cis-1,3-Dichloropropene	ND		1.00	1	05/15/2019 03:07	WG1281103
trans-1,3-Dichloropropene	ND		1.00	1	05/15/2019 03:07	WG1281103
2,2-Dichloropropane	ND		1.00	1	05/15/2019 03:07	WG1281103
Di-isopropyl ether	ND		1.00	1	05/15/2019 03:07	WG1281103
Ethylbenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
Hexachloro-1,3-butadiene	ND		1.00	1	05/15/2019 03:07	WG1281103
Isopropylbenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
p-Isopropyltoluene	ND		1.00	1	05/15/2019 03:07	WG1281103
2-Butanone (MEK)	ND		10.0	1	05/15/2019 03:07	WG1281103
Methylene Chloride	ND		5.00	1	05/15/2019 03:07	WG1281103
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/15/2019 03:07	WG1281103
Methyl tert-butyl ether	ND		1.00	1	05/15/2019 03:07	WG1281103
Naphthalene	ND		5.00	1	05/15/2019 03:07	WG1281103
n-Propylbenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
Styrene	ND		1.00	1	05/15/2019 03:07	WG1281103
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/15/2019 03:07	WG1281103
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/15/2019 03:07	WG1281103
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/15/2019 03:07	WG1281103
Tetrachloroethene	ND		1.00	1	05/15/2019 03:07	WG1281103
Toluene	ND		1.00	1	05/15/2019 03:07	WG1281103
1,2,3-Trichlorobenzene	ND		1.00	1	05/15/2019 03:07	WG1281103
1,2,4-Trichlorobenzene	ND		1.00	1	05/15/2019 03:07	WG1281103

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/09/19 00:00

L1098098

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	05/15/2019 03:07	<a href="#">WG1281103</a>
1,1,2-Trichloroethane	ND		1.00	1	05/15/2019 03:07	<a href="#">WG1281103</a>
Trichloroethene	ND		1.00	1	05/15/2019 03:07	<a href="#">WG1281103</a>
Trichlorofluoromethane	ND		5.00	1	05/15/2019 03:07	<a href="#">WG1281103</a>
1,2,3-Trichloropropane	ND		2.50	1	05/15/2019 03:07	<a href="#">WG1281103</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/15/2019 03:07	<a href="#">WG1281103</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/15/2019 03:07	<a href="#">WG1281103</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/15/2019 03:07	<a href="#">WG1281103</a>
Vinyl chloride	ND		1.00	1	05/15/2019 03:07	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 03:07	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 03:07	<a href="#">WG1281103</a>
(S) Toluene-d8	99.9		80.0-120		05/15/2019 03:07	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	98.2		77.0-126		05/15/2019 03:07	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	102		70.0-130		05/15/2019 03:07	<a href="#">WG1281103</a>

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	05/20/2019 12:09	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5780		200	2	05/20/2019 13:16	<a href="#">WG1283677</a>

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	05/14/2019 15:50	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	33700		5000	1	05/17/2019 08:05	<a href="#">WG1281963</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/14/2019 12:41	<a href="#">WG1279896</a>
Mercury,Dissolved	ND		0.200	1	05/14/2019 11:12	<a href="#">WG1279904</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	5.38		2.00	1	05/21/2019 15:29	<a href="#">WG1280927</a>
Arsenic,Dissolved	5.42		2.00	1	05/20/2019 16:17	<a href="#">WG1280954</a>
Barium	29.5		5.00	1	05/21/2019 15:29	<a href="#">WG1280927</a>
Barium,Dissolved	30.1		5.00	1	05/21/2019 12:56	<a href="#">WG1280954</a>
Cadmium	ND		1.00	1	05/21/2019 15:29	<a href="#">WG1280927</a>
Cadmium,Dissolved	ND		1.00	1	05/20/2019 16:17	<a href="#">WG1280954</a>
Chromium	ND		2.00	1	05/21/2019 15:29	<a href="#">WG1280927</a>
Chromium,Dissolved	ND		2.00	1	05/21/2019 12:56	<a href="#">WG1280954</a>
Iron,Dissolved	ND		100	1	05/20/2019 16:17	<a href="#">WG1280954</a>
Lead	ND		2.00	1	05/21/2019 15:29	<a href="#">WG1280927</a>
Lead,Dissolved	ND		2.00	1	05/20/2019 16:17	<a href="#">WG1280954</a>
Manganese,Dissolved	ND		5.00	1	05/20/2019 16:17	<a href="#">WG1280954</a>
Selenium	ND		2.00	1	05/21/2019 15:29	<a href="#">WG1280927</a>
Selenium,Dissolved	ND		2.00	1	05/20/2019 16:17	<a href="#">WG1280954</a>
Silver	ND		2.00	1	05/21/2019 15:29	<a href="#">WG1280927</a>
Silver,Dissolved	ND		2.00	1	05/20/2019 16:17	<a href="#">WG1280954</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 12:00	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 12:00	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 12:00	<a href="#">WG1280551</a>



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	05/15/2019 06:28	<a href="#">WG1281103</a>
Toluene	ND		1.00	1	05/15/2019 06:28	<a href="#">WG1281103</a>
Ethylbenzene	ND		1.00	1	05/15/2019 06:28	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 06:28	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 06:28	<a href="#">WG1281103</a>
(S) Toluene-d8	100		80.0-120		05/15/2019 06:28	<a href="#">WG1281103</a>
(S) a,a,a-Trifluorotoluene	0.000	J2	80.0-120		05/15/2019 06:28	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	98.0		77.0-126		05/15/2019 06:28	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	98.1		70.0-130		05/15/2019 06:28	<a href="#">WG1281103</a>

- 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	05/15/2019 17:10	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	ND		250	1	05/15/2019 17:10	<a href="#">WG1280380</a>
(S) o-Terphenyl	58.4		52.0-156		05/15/2019 17:10	<a href="#">WG1280380</a>

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	05/14/2019 20:14	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 20:14	<a href="#">WG1278958</a>
(S) o-Terphenyl	58.4		52.0-156		05/14/2019 20:14	<a href="#">WG1278958</a>

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	05/14/2019 17:32	<a href="#">WG1280394</a>
Acenaphthene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Acenaphthylene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Benzo(a)anthracene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Benzo(a)pyrene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Chrysene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Fluoranthene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Fluorene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Naphthalene	ND		0.250	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Phenanthrene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
Pyrene	ND		0.0500	1	05/14/2019 17:32	<a href="#">WG1280394</a>
1-Methylnaphthalene	ND		0.250	1	05/14/2019 17:32	<a href="#">WG1280394</a>
2-Methylnaphthalene	ND		0.250	1	05/14/2019 17:32	<a href="#">WG1280394</a>
2-Chloronaphthalene	ND		0.250	1	05/14/2019 17:32	<a href="#">WG1280394</a>
(S) Nitrobenzene-d5	121		31.0-160		05/14/2019 17:32	<a href="#">WG1280394</a>
(S) 2-Fluorobiphenyl	96.8		48.0-148		05/14/2019 17:32	<a href="#">WG1280394</a>
(S) p-Terphenyl-d14	118		37.0-146		05/14/2019 17:32	<a href="#">WG1280394</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 12:11	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	7020		200	2	05/20/2019 13:18	<a href="#">WG1283677</a>

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	05/14/2019 15:51	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	38500		5000	1	05/17/2019 08:20	<a href="#">WG1281963</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/14/2019 12:43	<a href="#">WG1279896</a>
Mercury,Dissolved	ND		0.200	1	05/14/2019 11:14	<a href="#">WG1279904</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	15.6		2.00	1	05/21/2019 15:34	<a href="#">WG1280927</a>
Arsenic,Dissolved	14.4		2.00	1	05/20/2019 16:22	<a href="#">WG1280954</a>
Barium	29.8		5.00	1	05/21/2019 15:34	<a href="#">WG1280927</a>
Barium,Dissolved	21.3		5.00	1	05/21/2019 13:12	<a href="#">WG1280954</a>
Cadmium	ND		1.00	1	05/21/2019 15:34	<a href="#">WG1280927</a>
Cadmium,Dissolved	ND		1.00	1	05/20/2019 16:22	<a href="#">WG1280954</a>
Chromium	ND		2.00	1	05/21/2019 15:34	<a href="#">WG1280927</a>
Chromium,Dissolved	ND		2.00	1	05/21/2019 13:12	<a href="#">WG1280954</a>
Iron,Dissolved	ND		100	1	05/20/2019 16:22	<a href="#">WG1280954</a>
Lead	9.68		2.00	1	05/21/2019 15:34	<a href="#">WG1280927</a>
Lead,Dissolved	ND		2.00	1	05/20/2019 16:22	<a href="#">WG1280954</a>
Manganese,Dissolved	17.3		5.00	1	05/20/2019 16:22	<a href="#">WG1280954</a>
Selenium	ND		2.00	1	05/21/2019 15:34	<a href="#">WG1280927</a>
Selenium,Dissolved	ND		2.00	1	05/20/2019 16:22	<a href="#">WG1280954</a>
Silver	ND		2.00	1	05/21/2019 15:34	<a href="#">WG1280927</a>
Silver,Dissolved	ND		2.00	1	05/20/2019 16:22	<a href="#">WG1280954</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 12:02	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 12:02	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 12:02	<a href="#">WG1280551</a>



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	05/15/2019 06:48	<a href="#">WG1281103</a>
Toluene	ND		1.00	1	05/15/2019 06:48	<a href="#">WG1281103</a>
Ethylbenzene	ND		1.00	1	05/15/2019 06:48	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 06:48	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 06:48	<a href="#">WG1281103</a>
(S) Toluene-d8	101		80.0-120		05/15/2019 06:48	<a href="#">WG1281103</a>
(S) a,a,a-Trifluorotoluene	0.000	J2	80.0-120		05/15/2019 06:48	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	98.2		77.0-126		05/15/2019 06:48	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	98.5		70.0-130		05/15/2019 06:48	<a href="#">WG1281103</a>

- 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	05/15/2019 21:47	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	ND		250	1	05/15/2019 21:47	<a href="#">WG1280380</a>
(S) o-Terphenyl	64.7		52.0-156		05/15/2019 21:47	<a href="#">WG1280380</a>

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	05/14/2019 17:53	<a href="#">WG1280394</a>
Acenaphthene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Acenaphthylene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Benzo(a)anthracene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Benzo(a)pyrene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Chrysene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Fluoranthene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Fluorene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Naphthalene	ND		0.250	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Phenanthrene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
Pyrene	ND		0.0500	1	05/14/2019 17:53	<a href="#">WG1280394</a>
1-Methylnaphthalene	ND		0.250	1	05/14/2019 17:53	<a href="#">WG1280394</a>
2-Methylnaphthalene	ND		0.250	1	05/14/2019 17:53	<a href="#">WG1280394</a>
2-Chloronaphthalene	ND		0.250	1	05/14/2019 17:53	<a href="#">WG1280394</a>
(S) Nitrobenzene-d5	117		31.0-160		05/14/2019 17:53	<a href="#">WG1280394</a>
(S) 2-Fluorobiphenyl	101		48.0-148		05/14/2019 17:53	<a href="#">WG1280394</a>
(S) p-Terphenyl-d14	122		37.0-146		05/14/2019 17:53	<a href="#">WG1280394</a>





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 12:12	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3730	J6	100	1	05/20/2019 13:19	<a href="#">WG1283677</a>

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	05/14/2019 15:51	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	8590		5000	1	05/18/2019 14:41	<a href="#">WG1281970</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND	J3 J6 O1	0.200	1	05/14/2019 11:49	<a href="#">WG1279896</a>
Mercury,Dissolved	ND		0.200	1	05/14/2019 10:45	<a href="#">WG1279904</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.50		2.00	1	05/21/2019 13:21	<a href="#">WG1280927</a>
Arsenic,Dissolved	4.73		2.00	1	05/20/2019 15:03	<a href="#">WG1280954</a>
Barium	23.7	O1	5.00	1	05/21/2019 13:21	<a href="#">WG1280927</a>
Barium,Dissolved	23.0		5.00	1	05/21/2019 13:17	<a href="#">WG1280954</a>
Cadmium	ND		1.00	1	05/21/2019 13:21	<a href="#">WG1280927</a>
Cadmium,Dissolved	ND		1.00	1	05/20/2019 15:03	<a href="#">WG1280954</a>
Chromium	ND		2.00	1	05/21/2019 13:21	<a href="#">WG1280927</a>
Chromium,Dissolved	ND		2.00	1	05/21/2019 13:17	<a href="#">WG1280954</a>
Iron,Dissolved	ND		100	1	05/20/2019 15:03	<a href="#">WG1280954</a>
Lead	ND		2.00	1	05/21/2019 13:21	<a href="#">WG1280927</a>
Lead,Dissolved	ND		2.00	1	05/20/2019 15:03	<a href="#">WG1280954</a>
Manganese,Dissolved	ND		5.00	1	05/20/2019 15:03	<a href="#">WG1280954</a>
Selenium	ND		2.00	1	05/21/2019 13:21	<a href="#">WG1280927</a>
Selenium,Dissolved	ND		2.00	1	05/20/2019 15:03	<a href="#">WG1280954</a>
Silver	ND		2.00	1	05/21/2019 13:21	<a href="#">WG1280927</a>
Silver,Dissolved	ND		2.00	1	05/20/2019 15:03	<a href="#">WG1280954</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 12:05	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 12:05	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 12:05	<a href="#">WG1280551</a>



Collected date/time: 05/09/19 14:00

L1098098

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	05/15/2019 08:09	<a href="#">WG1281103</a>
Acrolein	ND		50.0	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Acrylonitrile	ND		10.0	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Benzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Bromobenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Bromodichloromethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Bromoform	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Bromomethane	ND		5.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
n-Butylbenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
sec-Butylbenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
tert-Butylbenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Carbon tetrachloride	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Chlorobenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Chlorodibromomethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Chloroethane	ND		5.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Chloroform	ND		5.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Chloromethane	ND		2.50	1	05/15/2019 08:09	<a href="#">WG1281103</a>
2-Chlorotoluene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
4-Chlorotoluene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,2-Dibromoethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Dibromomethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,2-Dichlorobenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,3-Dichlorobenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,4-Dichlorobenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Dichlorodifluoromethane	ND		5.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,1-Dichloroethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,2-Dichloroethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,1-Dichloroethene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
cis-1,2-Dichloroethene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
trans-1,2-Dichloroethene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,2-Dichloropropane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,1-Dichloropropene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,3-Dichloropropane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
cis-1,3-Dichloropropene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
trans-1,3-Dichloropropene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
2,2-Dichloropropane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Di-isopropyl ether	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Ethylbenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Hexachloro-1,3-butadiene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Isopropylbenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
p-Isopropyltoluene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
2-Butanone (MEK)	ND		10.0	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Methylene Chloride	ND		5.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Methyl tert-butyl ether	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Naphthalene	ND		5.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
n-Propylbenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Styrene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Tetrachloroethene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Toluene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,2,3-Trichlorobenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,2,4-Trichlorobenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>

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	
1,1,1-Trichloroethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,1,2-Trichloroethane	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Trichloroethene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Trichlorofluoromethane	ND		5.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,2,3-Trichloropropane	ND		2.50	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
Vinyl chloride	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 08:09	<a href="#">WG1281103</a>
(S) Toluene-d8	102		80.0-120		05/15/2019 08:09	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	100		77.0-126		05/15/2019 08:09	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	96.5		70.0-130		05/15/2019 08:09	<a href="#">WG1281103</a>

- 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	05/15/2019 17:30	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	ND		250	1	05/15/2019 17:30	<a href="#">WG1280380</a>
(S) o-Terphenyl	75.3		52.0-156		05/15/2019 17:30	<a href="#">WG1280380</a>

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	05/16/2019 16:28	<a href="#">WG1280936</a>
Acenaphthene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Acenaphthylene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Benzo(a)anthracene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Benzo(a)pyrene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Chrysene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Fluoranthene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Fluorene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Naphthalene	ND		0.250	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Phenanthrene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
Pyrene	ND		0.0500	1	05/16/2019 16:28	<a href="#">WG1280936</a>
1-Methylnaphthalene	ND		0.250	1	05/16/2019 16:28	<a href="#">WG1280936</a>
2-Methylnaphthalene	ND		0.250	1	05/16/2019 16:28	<a href="#">WG1280936</a>
2-Chloronaphthalene	ND		0.250	1	05/16/2019 16:28	<a href="#">WG1280936</a>
(S) Nitrobenzene-d5	135		31.0-160		05/16/2019 16:28	<a href="#">WG1280936</a>
(S) 2-Fluorobiphenyl	87.5		48.0-148		05/16/2019 16:28	<a href="#">WG1280936</a>
(S) p-Terphenyl-d14	94.0		37.0-146		05/16/2019 16:28	<a href="#">WG1280936</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 12:17	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5680		200	2	05/20/2019 13:24	<a href="#">WG1283677</a>

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	05/14/2019 15:52	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	14300		5000	1	05/17/2019 08:35	<a href="#">WG1281963</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/14/2019 12:46	<a href="#">WG1279896</a>
Mercury,Dissolved	ND		0.200	1	05/14/2019 11:17	<a href="#">WG1279904</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	ND		2.00	1	05/21/2019 15:40	<a href="#">WG1280927</a>
Arsenic,Dissolved	ND		2.00	1	05/20/2019 16:28	<a href="#">WG1280954</a>
Barium	33.6		5.00	1	05/21/2019 15:40	<a href="#">WG1280927</a>
Barium,Dissolved	31.9		5.00	1	05/21/2019 13:32	<a href="#">WG1280954</a>
Cadmium	ND		1.00	1	05/21/2019 15:40	<a href="#">WG1280927</a>
Cadmium,Dissolved	ND		1.00	1	05/20/2019 16:28	<a href="#">WG1280954</a>
Chromium	ND		2.00	1	05/21/2019 15:40	<a href="#">WG1280927</a>
Chromium,Dissolved	ND		2.00	1	05/21/2019 13:32	<a href="#">WG1280954</a>
Iron,Dissolved	ND		100	1	05/20/2019 16:28	<a href="#">WG1280954</a>
Lead	ND		2.00	1	05/21/2019 15:40	<a href="#">WG1280927</a>
Lead,Dissolved	ND		2.00	1	05/20/2019 16:28	<a href="#">WG1280954</a>
Manganese,Dissolved	36.1		5.00	1	05/20/2019 16:28	<a href="#">WG1280954</a>
Selenium	ND		2.00	1	05/21/2019 15:40	<a href="#">WG1280927</a>
Selenium,Dissolved	ND		2.00	1	05/20/2019 16:28	<a href="#">WG1280954</a>
Silver	ND		2.00	1	05/21/2019 15:40	<a href="#">WG1280927</a>
Silver,Dissolved	ND		2.00	1	05/20/2019 16:28	<a href="#">WG1280954</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 12:07	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 12:07	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 12:07	<a href="#">WG1280551</a>



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	05/15/2019 07:09	WG1281103
Acrolein	ND		50.0	1	05/15/2019 07:09	WG1281103
Acrylonitrile	ND		10.0	1	05/15/2019 07:09	WG1281103
Benzene	ND		1.00	1	05/15/2019 07:09	WG1281103
Bromobenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
Bromodichloromethane	ND		1.00	1	05/15/2019 07:09	WG1281103
Bromoform	ND		1.00	1	05/15/2019 07:09	WG1281103
Bromomethane	ND		5.00	1	05/15/2019 07:09	WG1281103
n-Butylbenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
sec-Butylbenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
tert-Butylbenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
Carbon tetrachloride	ND		1.00	1	05/15/2019 07:09	WG1281103
Chlorobenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
Chlorodibromomethane	ND		1.00	1	05/15/2019 07:09	WG1281103
Chloroethane	ND		5.00	1	05/15/2019 07:09	WG1281103
Chloroform	ND		5.00	1	05/15/2019 07:09	WG1281103
Chloromethane	ND		2.50	1	05/15/2019 07:09	WG1281103
2-Chlorotoluene	ND		1.00	1	05/15/2019 07:09	WG1281103
4-Chlorotoluene	ND		1.00	1	05/15/2019 07:09	WG1281103
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/15/2019 07:09	WG1281103
1,2-Dibromoethane	ND		1.00	1	05/15/2019 07:09	WG1281103
Dibromomethane	ND		1.00	1	05/15/2019 07:09	WG1281103
1,2-Dichlorobenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
1,3-Dichlorobenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
1,4-Dichlorobenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
Dichlorodifluoromethane	ND		5.00	1	05/15/2019 07:09	WG1281103
1,1-Dichloroethane	ND		1.00	1	05/15/2019 07:09	WG1281103
1,2-Dichloroethane	ND		1.00	1	05/15/2019 07:09	WG1281103
1,1-Dichloroethene	ND		1.00	1	05/15/2019 07:09	WG1281103
cis-1,2-Dichloroethene	ND		1.00	1	05/15/2019 07:09	WG1281103
trans-1,2-Dichloroethene	ND		1.00	1	05/15/2019 07:09	WG1281103
1,2-Dichloropropane	ND		1.00	1	05/15/2019 07:09	WG1281103
1,1-Dichloropropene	ND		1.00	1	05/15/2019 07:09	WG1281103
1,3-Dichloropropane	ND		1.00	1	05/15/2019 07:09	WG1281103
cis-1,3-Dichloropropene	ND		1.00	1	05/15/2019 07:09	WG1281103
trans-1,3-Dichloropropene	ND		1.00	1	05/15/2019 07:09	WG1281103
2,2-Dichloropropane	ND		1.00	1	05/15/2019 07:09	WG1281103
Di-isopropyl ether	ND		1.00	1	05/15/2019 07:09	WG1281103
Ethylbenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
Hexachloro-1,3-butadiene	ND		1.00	1	05/15/2019 07:09	WG1281103
Isopropylbenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
p-Isopropyltoluene	ND		1.00	1	05/15/2019 07:09	WG1281103
2-Butanone (MEK)	ND		10.0	1	05/15/2019 07:09	WG1281103
Methylene Chloride	ND		5.00	1	05/15/2019 07:09	WG1281103
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/15/2019 07:09	WG1281103
Methyl tert-butyl ether	ND		1.00	1	05/15/2019 07:09	WG1281103
Naphthalene	ND		5.00	1	05/15/2019 07:09	WG1281103
n-Propylbenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
Styrene	ND		1.00	1	05/15/2019 07:09	WG1281103
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/15/2019 07:09	WG1281103
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/15/2019 07:09	WG1281103
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/15/2019 07:09	WG1281103
Tetrachloroethene	ND		1.00	1	05/15/2019 07:09	WG1281103
Toluene	ND		1.00	1	05/15/2019 07:09	WG1281103
1,2,3-Trichlorobenzene	ND		1.00	1	05/15/2019 07:09	WG1281103
1,2,4-Trichlorobenzene	ND		1.00	1	05/15/2019 07:09	WG1281103

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	
1,1,1-Trichloroethane	ND		1.00	1	05/15/2019 07:09	<a href="#">WG1281103</a>
1,1,2-Trichloroethane	ND		1.00	1	05/15/2019 07:09	<a href="#">WG1281103</a>
Trichloroethene	ND		1.00	1	05/15/2019 07:09	<a href="#">WG1281103</a>
Trichlorofluoromethane	ND		5.00	1	05/15/2019 07:09	<a href="#">WG1281103</a>
1,2,3-Trichloropropane	ND		2.50	1	05/15/2019 07:09	<a href="#">WG1281103</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/15/2019 07:09	<a href="#">WG1281103</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/15/2019 07:09	<a href="#">WG1281103</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/15/2019 07:09	<a href="#">WG1281103</a>
Vinyl chloride	ND		1.00	1	05/15/2019 07:09	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 07:09	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 07:09	<a href="#">WG1281103</a>
(S) Toluene-d8	101		80.0-120		05/15/2019 07:09	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	99.9		77.0-126		05/15/2019 07:09	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	98.2		70.0-130		05/15/2019 07:09	<a href="#">WG1281103</a>

- 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	05/15/2019 12:50	<a href="#">WG1280917</a>
Residual Range Organics (RRO)	ND		250	1	05/15/2019 12:50	<a href="#">WG1280917</a>
(S) o-Terphenyl	104		52.0-156		05/15/2019 12:50	<a href="#">WG1280917</a>

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	05/14/2019 18:13	<a href="#">WG1280394</a>
Acenaphthene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Acenaphthylene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Benzo(a)anthracene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Benzo(a)pyrene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Chrysene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Fluoranthene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Fluorene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Naphthalene	ND		0.250	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Phenanthrene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
Pyrene	ND		0.0500	1	05/14/2019 18:13	<a href="#">WG1280394</a>
1-Methylnaphthalene	ND		0.250	1	05/14/2019 18:13	<a href="#">WG1280394</a>
2-Methylnaphthalene	ND		0.250	1	05/14/2019 18:13	<a href="#">WG1280394</a>
2-Chloronaphthalene	ND		0.250	1	05/14/2019 18:13	<a href="#">WG1280394</a>
(S) Nitrobenzene-d5	115		31.0-160		05/14/2019 18:13	<a href="#">WG1280394</a>
(S) 2-Fluorobiphenyl	97.4		48.0-148		05/14/2019 18:13	<a href="#">WG1280394</a>
(S) p-Terphenyl-d14	117		37.0-146		05/14/2019 18:13	<a href="#">WG1280394</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 12:19	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	12700		500	5	05/20/2019 13:43	<a href="#">WG1283677</a>

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	05/14/2019 15:53	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	19500		5000	1	05/17/2019 08:49	<a href="#">WG1281963</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/14/2019 12:48	<a href="#">WG1279896</a>
Mercury,Dissolved	ND		0.200	1	05/14/2019 11:19	<a href="#">WG1279904</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.79		2.00	1	05/21/2019 15:45	<a href="#">WG1280927</a>
Arsenic,Dissolved	5.83		2.00	1	05/20/2019 16:33	<a href="#">WG1280954</a>
Barium	31.4		5.00	1	05/21/2019 15:45	<a href="#">WG1280927</a>
Barium,Dissolved	30.4		5.00	1	05/21/2019 13:37	<a href="#">WG1280954</a>
Cadmium	ND		1.00	1	05/21/2019 15:45	<a href="#">WG1280927</a>
Cadmium,Dissolved	ND		1.00	1	05/20/2019 16:33	<a href="#">WG1280954</a>
Chromium	9.04		2.00	1	05/21/2019 15:45	<a href="#">WG1280927</a>
Chromium,Dissolved	9.76		2.00	1	05/21/2019 13:37	<a href="#">WG1280954</a>
Iron,Dissolved	ND		100	1	05/20/2019 16:33	<a href="#">WG1280954</a>
Lead	ND		2.00	1	05/21/2019 15:45	<a href="#">WG1280927</a>
Lead,Dissolved	ND		2.00	1	05/20/2019 16:33	<a href="#">WG1280954</a>
Manganese,Dissolved	ND		5.00	1	05/20/2019 16:33	<a href="#">WG1280954</a>
Selenium	ND		2.00	1	05/21/2019 15:45	<a href="#">WG1280927</a>
Selenium,Dissolved	ND		2.00	1	05/20/2019 16:33	<a href="#">WG1280954</a>
Silver	ND		2.00	1	05/21/2019 15:45	<a href="#">WG1280927</a>
Silver,Dissolved	ND		2.00	1	05/20/2019 16:33	<a href="#">WG1280954</a>

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	05/15/2019 17:10	<a href="#">WG1281549</a>
(S) a, a, a-Trifluorotoluene(FID)	104		78.0-120		05/15/2019 17:10	<a href="#">WG1281549</a>





Collected date/time: 05/09/19 15:35

L1098098

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	05/14/2019 12:12	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 12:12	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 12:12	<a href="#">WG1280551</a>

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	05/15/2019 07:29	<a href="#">WG1281103</a>
Acrolein	ND		50.0	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Acrylonitrile	ND		10.0	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Benzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Bromobenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Bromodichloromethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Bromoform	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Bromomethane	ND		5.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
n-Butylbenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
sec-Butylbenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
tert-Butylbenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Carbon tetrachloride	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Chlorobenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Chlorodibromomethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Chloroethane	ND		5.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Chloroform	ND		5.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Chloromethane	ND		2.50	1	05/15/2019 07:29	<a href="#">WG1281103</a>
2-Chlorotoluene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
4-Chlorotoluene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,2-Dibromoethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Dibromomethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,2-Dichlorobenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,3-Dichlorobenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,4-Dichlorobenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Dichlorodifluoromethane	ND		5.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,1-Dichloroethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,2-Dichloroethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,1-Dichloroethene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
cis-1,2-Dichloroethene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
trans-1,2-Dichloroethene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,2-Dichloropropane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,1-Dichloropropene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,3-Dichloropropane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
cis-1,3-Dichloropropene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
trans-1,3-Dichloropropene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
2,2-Dichloropropane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Di-isopropyl ether	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Ethylbenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Hexachloro-1,3-butadiene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Isopropylbenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
p-Isopropyltoluene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
2-Butanone (MEK)	ND		10.0	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Methylene Chloride	ND		5.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Methyl tert-butyl ether	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Naphthalene	ND		5.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
n-Propylbenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Styrene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>

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	
1,1,1,2-Tetrachloroethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Tetrachloroethene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Toluene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,2,3-Trichlorobenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,2,4-Trichlorobenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,1,1-Trichloroethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,1,2-Trichloroethane	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Trichloroethene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Trichlorofluoromethane	ND		5.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,2,3-Trichloropropane	ND		2.50	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,2,4-Trimethylbenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,2,3-Trimethylbenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
1,3,5-Trimethylbenzene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
Vinyl chloride	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 07:29	<a href="#">WG1281103</a>
(S) Toluene-d8	101		80.0-120		05/15/2019 07:29	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	96.9		77.0-126		05/15/2019 07:29	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	101		70.0-130		05/15/2019 07:29	<a href="#">WG1281103</a>

- 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	05/15/2019 18:30	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	492		250	1	05/15/2019 18:30	<a href="#">WG1280380</a>
(S) o-Terphenyl	74.7		52.0-156		05/15/2019 18:30	<a href="#">WG1280380</a>

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	05/16/2019 17:34	<a href="#">WG1280936</a>
Acenaphthene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Acenaphthylene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Benzo(a)anthracene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Benzo(a)pyrene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Chrysene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Fluoranthene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Fluorene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Naphthalene	ND		0.250	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Phenanthrene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
Pyrene	ND		0.0500	1	05/16/2019 17:34	<a href="#">WG1280936</a>
1-Methylnaphthalene	ND		0.250	1	05/16/2019 17:34	<a href="#">WG1280936</a>
2-Methylnaphthalene	ND		0.250	1	05/16/2019 17:34	<a href="#">WG1280936</a>
2-Chloronaphthalene	ND		0.250	1	05/16/2019 17:34	<a href="#">WG1280936</a>
(S) Nitrobenzene-d5	138		31.0-160		05/16/2019 17:34	<a href="#">WG1280936</a>
(S) 2-Fluorobiphenyl	89.0		48.0-148		05/16/2019 17:34	<a href="#">WG1280936</a>
(S) p-Terphenyl-d14	90.5		37.0-146		05/16/2019 17:34	<a href="#">WG1280936</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	05/20/2019 12:20	<a href="#">WG1283669</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5530		200	2	05/20/2019 13:27	<a href="#">WG1283677</a>

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	05/14/2019 15:54	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	75000		5000	1	05/17/2019 09:04	<a href="#">WG1281963</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	05/20/2019 16:38	<a href="#">WG1280954</a>
Manganese,Dissolved	16.7		5.00	1	05/20/2019 16:38	<a href="#">WG1280954</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 13:12	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 13:12	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 13:12	<a href="#">WG1280551</a>

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	05/15/2019 18:51	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	ND		250	1	05/15/2019 18:51	<a href="#">WG1280380</a>
(S) o-Terphenyl	57.4		52.0-156		05/15/2019 18:51	<a href="#">WG1280380</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	05/14/2019 20:36	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 20:36	<a href="#">WG1278958</a>
(S) o-Terphenyl	55.3		52.0-156		05/14/2019 20:36	<a href="#">WG1278958</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Acenaphthene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Acenaphthylene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Benzo(a)anthracene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Benzo(a)pyrene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Chrysene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Fluoranthene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Fluorene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Naphthalene	ND		0.250	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Phenanthrene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
Pyrene	ND		0.0500	1	05/14/2019 18:34	<a href="#">WG1280394</a>
1-Methylnaphthalene	ND		0.250	1	05/14/2019 18:34	<a href="#">WG1280394</a>
2-Methylnaphthalene	ND		0.250	1	05/14/2019 18:34	<a href="#">WG1280394</a>
2-Chloronaphthalene	ND		0.250	1	05/14/2019 18:34	<a href="#">WG1280394</a>
(S) Nitrobenzene-d5	125		31.0-160		05/14/2019 18:34	<a href="#">WG1280394</a>
(S) 2-Fluorobiphenyl	112		48.0-148		05/14/2019 18:34	<a href="#">WG1280394</a>
(S) p-Terphenyl-d14	126		37.0-146		05/14/2019 18:34	<a href="#">WG1280394</a>

- 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	05/20/2019 15:24	<a href="#">WG1283668</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2350		100	1	05/20/2019 09:18	<a href="#">WG1282741</a>

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	05/14/2019 15:54	<a href="#">WG1280557</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	72200		5000	1	05/17/2019 09:19	<a href="#">WG1281963</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	05/14/2019 12:51	<a href="#">WG1279896</a>
Mercury,Dissolved	ND		0.200	1	05/14/2019 11:21	<a href="#">WG1279904</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	13.3		2.00	1	05/16/2019 12:44	<a href="#">WG1280931</a>
Arsenic,Dissolved	11.9		2.00	1	05/20/2019 16:44	<a href="#">WG1280954</a>
Barium	27.2		5.00	1	05/16/2019 12:44	<a href="#">WG1280931</a>
Barium,Dissolved	27.7		5.00	1	05/21/2019 13:48	<a href="#">WG1280954</a>
Cadmium	ND		1.00	1	05/16/2019 12:44	<a href="#">WG1280931</a>
Cadmium,Dissolved	ND		1.00	1	05/20/2019 16:44	<a href="#">WG1280954</a>
Chromium	ND		2.00	1	05/16/2019 12:44	<a href="#">WG1280931</a>
Chromium,Dissolved	ND		2.00	1	05/21/2019 13:48	<a href="#">WG1280954</a>
Iron,Dissolved	ND		100	1	05/20/2019 16:44	<a href="#">WG1280954</a>
Lead	ND		2.00	1	05/16/2019 12:44	<a href="#">WG1280931</a>
Lead,Dissolved	ND		2.00	1	05/20/2019 16:44	<a href="#">WG1280954</a>
Manganese,Dissolved	90.5		5.00	1	05/20/2019 16:44	<a href="#">WG1280954</a>
Selenium	ND		2.00	1	05/16/2019 12:44	<a href="#">WG1280931</a>
Selenium,Dissolved	ND		2.00	1	05/20/2019 16:44	<a href="#">WG1280954</a>
Silver	ND		2.00	1	05/16/2019 12:44	<a href="#">WG1280931</a>
Silver,Dissolved	ND		2.00	1	05/20/2019 16:44	<a href="#">WG1280954</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	05/14/2019 13:14	<a href="#">WG1280551</a>
Ethane	ND		13.0	1	05/14/2019 13:14	<a href="#">WG1280551</a>
Ethene	ND		13.0	1	05/14/2019 13:14	<a href="#">WG1280551</a>



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	05/15/2019 07:49	<a href="#">WG1281103</a>
Toluene	ND		1.00	1	05/15/2019 07:49	<a href="#">WG1281103</a>
Ethylbenzene	ND		1.00	1	05/15/2019 07:49	<a href="#">WG1281103</a>
o-Xylene	ND		1.00	1	05/15/2019 07:49	<a href="#">WG1281103</a>
m&p-Xylene	ND		2.00	1	05/15/2019 07:49	<a href="#">WG1281103</a>
(S) Toluene-d8	100		80.0-120		05/15/2019 07:49	<a href="#">WG1281103</a>
(S) a,a,a-Trifluorotoluene	0.000	J2	80.0-120		05/15/2019 07:49	<a href="#">WG1281103</a>
(S) 4-Bromofluorobenzene	99.9		77.0-126		05/15/2019 07:49	<a href="#">WG1281103</a>
(S) 1,2-Dichloroethane-d4	100		70.0-130		05/15/2019 07:49	<a href="#">WG1281103</a>

- 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	05/15/2019 21:27	<a href="#">WG1280380</a>
Residual Range Organics (RRO)	ND		250	1	05/15/2019 21:27	<a href="#">WG1280380</a>
(S) o-Terphenyl	53.7		52.0-156		05/15/2019 21:27	<a href="#">WG1280380</a>

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	05/14/2019 20:58	<a href="#">WG1278958</a>
Residual Range Organics (RRO)	ND		250	1	05/14/2019 20:58	<a href="#">WG1278958</a>
(S) o-Terphenyl	61.1		52.0-156		05/14/2019 20:58	<a href="#">WG1278958</a>

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	05/14/2019 18:55	<a href="#">WG1280394</a>
Acenaphthene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Acenaphthylene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Benzo(a)anthracene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Benzo(a)pyrene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Benzo(b)fluoranthene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Benzo(g,h,i)perylene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Benzo(k)fluoranthene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Chrysene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Dibenz(a,h)anthracene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Fluoranthene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Fluorene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Naphthalene	ND		0.250	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Phenanthrene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
Pyrene	ND		0.0500	1	05/14/2019 18:55	<a href="#">WG1280394</a>
1-Methylnaphthalene	ND		0.250	1	05/14/2019 18:55	<a href="#">WG1280394</a>
2-Methylnaphthalene	ND		0.250	1	05/14/2019 18:55	<a href="#">WG1280394</a>
2-Chloronaphthalene	ND		0.250	1	05/14/2019 18:55	<a href="#">WG1280394</a>
(S) Nitrobenzene-d5	116		31.0-160		05/14/2019 18:55	<a href="#">WG1280394</a>
(S) 2-Fluorobiphenyl	101		48.0-148		05/14/2019 18:55	<a href="#">WG1280394</a>
(S) p-Terphenyl-d14	116		37.0-146		05/14/2019 18:55	<a href="#">WG1280394</a>



Method Blank (MB)

(MB) R3412983-1 05/20/19 14:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	63.0	↓	31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1096967-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1096967-01 05/20/19 14:38 • (DUP) R3412983-3 05/20/19 14:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	97800	92400	20	5.66		10

L1097901-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1097901-02 05/20/19 15:03 • (DUP) R3412983-6 05/20/19 15:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	457	463	1	1.30		10

Laboratory Control Sample (LCS)

(LCS) R3412983-2 05/20/19 14:36

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	7670	102	90.0-110	

L1097885-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097885-01 05/20/19 16:30 • (MS) R3412983-4 05/20/19 14:55 • (MSD) R3412983-5 05/20/19 14:57

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	5000	ND	5200	5260	102	103	1	90.0-110			1.22	10

L1097902-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1097902-01 05/20/19 15:06 • (MS) R3412983-7 05/20/19 15:08

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	97.0	5380	106	1	90.0-110	



Method Blank (MB)

(MB) R3412840-1 05/20/19 11:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1098061-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1098061-02 05/20/19 11:33 • (DUP) R3412840-3 05/20/19 11:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	4620	4630	1	0.195		10

L1098098-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1098098-07 05/20/19 11:53 • (DUP) R3412840-4 05/20/19 11:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3412840-2 05/20/19 11:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	7030	93.8	90.0-110	

L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/20/19 11:57 • (MS) R3412840-5 05/20/19 11:58 • (MSD) R3412840-6 05/20/19 12:00

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	208	4840	4850	92.6	92.7	1	90.0-110			0.124	10

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/20/19 12:12 • (MS) R3412840-7 05/20/19 12:14 • (MSD) R3412840-8 05/20/19 12:16

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	4520	4500	90.4	90.0	1	90.0-110			0.466	10



Method Blank (MB)

(MB) R3412739-1 05/20/19 08:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1097055-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1097055-01 05/20/19 08:56 • (DUP) R3412739-3 05/20/19 08:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	1770	1770	1	0.169		20

Laboratory Control Sample (LCS)

(LCS) R3412739-2 05/20/19 08:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	3890	97.3	90.0-110	

L1097209-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097209-13 05/20/19 08:59 • (MS) R3412739-4 05/20/19 09:00 • (MSD) R3412739-5 05/20/19 09:02

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	4210	6140	6440	77.4	89.2	1	90.0-110	<u>E J6</u>	<u>E J6</u>	4.71	20





Method Blank (MB)

(MB) R3412888-1 05/20/19 12:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1098098-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1098098-01 05/20/19 12:43 • (DUP) R3412888-3 05/20/19 12:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	0.000		20

L1098098-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1098098-07 05/20/19 13:00 • (DUP) R3412888-4 05/20/19 13:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	8200	8180	2	0.318		20

Laboratory Control Sample (LCS)

(LCS) R3412888-2 05/20/19 12:36

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	4000	99.9	90.0-110	

L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/20/19 13:03 • (MS) R3412888-5 05/20/19 13:04 • (MSD) R3412888-6 05/20/19 13:06

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	810	3230	3330	97.0	101	1	90.0-110			2.90	20

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/20/19 13:19 • (MS) R3412888-7 05/20/19 13:21 • (MSD) R3412888-8 05/20/19 13:22

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	3730	5940	5940	88.2	88.5	1	90.0-110	E J6	E J6	0.135	20



Method Blank (MB)

(MB) R3410987-1 05/14/19 11:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1097939-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1097939-02 05/14/19 12:03 • (DUP) R3410987-5 05/14/19 12:03

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1098098-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1098098-02 05/14/19 12:06 • (DUP) R3410987-6 05/14/19 12:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3410987-2 05/14/19 11:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	429	85.8	85.0-115	

L1097939-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097939-01 05/14/19 11:59 • (MS) R3410987-3 05/14/19 11:59 • (MSD) R3410987-4 05/14/19 12:00

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	857	853	85.7	85.3	1	80.0-120			0.468	20



Method Blank (MB)

(MB) R3411134-1 05/14/19 15:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1098098-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1098098-07 05/14/19 15:48 • (DUP) R3411134-3 05/14/19 15:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1098098-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1098098-22 05/14/19 15:54 • (DUP) R3411134-8 05/14/19 15:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3411134-2 05/14/19 15:47

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	460	92.0	85.0-115	

L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/14/19 15:49 • (MS) R3411134-4 05/14/19 15:49 • (MSD) R3411134-5 05/14/19 15:49

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	873	871	87.3	87.1	1	80.0-120			0.229	20

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/14/19 15:51 • (MS) R3411134-6 05/14/19 15:51 • (MSD) R3411134-7 05/14/19 15:51

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	831	830	83.1	83.0	1	80.0-120			0.120	20



Method Blank (MB)

(MB) R3412338-1 05/17/19 01:52

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

L1098098-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1098098-01 05/17/19 03:51 • (DUP) R3412338-3 05/17/19 04:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	5550	5480	1	1.12		15

L1098098-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1098098-22 05/17/19 09:19 • (DUP) R3412338-6 05/17/19 09:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	72200	72200	1	0.0112		15

Laboratory Control Sample (LCS)

(LCS) R3412338-2 05/17/19 02:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	41200	103	80.0-120	

L1098098-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-01 05/17/19 03:51 • (MS) R3412338-4 05/17/19 04:21 • (MSD) R3412338-5 05/17/19 05:06

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	5550	52400	52800	93.8	94.4	1	80.0-120			0.611	15

L1098098-22 Original Sample (OS) • Matrix Spike (MS)

(OS) L1098098-22 05/17/19 09:19 • (MS) R3412338-7 05/17/19 09:49

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	72200	120000	94.8	1	80.0-120	E



L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/17/19 06:50 • (MS) R3412338-8 05/17/19 11:19 • (MSD) R3412338-9 05/17/19 11:33

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Sulfate	50000	22500	71800	72200	98.5	99.2	1	80.0-120			0.505	15

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3412642-1 05/18/19 09:30

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1098098-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1098098-18 05/18/19 14:41 • (DUP) R3412642-3 05/18/19 14:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	8590	8600	1	0.117		15

L1098409-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1098409-01 05/18/19 21:14 • (DUP) R3412642-6 05/18/19 21:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	24200	24300	1	0.432		15

Laboratory Control Sample (LCS)

(LCS) R3412642-2 05/18/19 09:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	40200	101	80.0-120	

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/18/19 14:41 • (MS) R3412642-4 05/18/19 15:16 • (MSD) R3412642-5 05/18/19 15:34

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	8590	57800	57900	98.4	98.6	1	80.0-120			0.142	15

L1098409-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1098409-01 05/18/19 21:14 • (MS) R3412642-7 05/18/19 21:50

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	24200	72800	97.2	1	80.0-120	



Method Blank (MB)

(MB) R3411138-1 05/14/19 11:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	0.0588	<u>J</u>	0.0490	0.200

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

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

(LCS) R3411138-2 05/14/19 11:44 • (LCSD) R3411138-3 05/14/19 11:46

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	3.04	3.10	101	103	80.0-120			1.83	20

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/14/19 11:49 • (MS) R3411138-4 05/14/19 11:51 • (MSD) R3411138-5 05/14/19 11:54

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	1.27	2.90	42.2	96.6	1	75.0-125	<u>J6</u>	<u>J3</u>	78.3	20

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3410805-1 05/13/19 17:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	0.0494	↓	0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3410805-5 05/13/19 18:51 • (LCSD) R3410805-2 05/13/19 17:55

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	3.04	2.76	101	92.0	80.0-120			9.52	20

L1097654-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097654-01 05/13/19 17:58 • (MS) R3410805-3 05/13/19 18:00 • (MSD) R3410805-4 05/13/19 18:03

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	U	2.67	2.74	89.0	91.2	1	75.0-125			2.46	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Method Blank (MB)

(MB) R3410986-1 05/14/19 10:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	0.0582	↓	0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3410986-2 05/14/19 10:40 • (LCSD) R3410986-3 05/14/19 10:42

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 %
Mercury,Dissolved	3.00	3.03	2.87	101	95.7	80.0-120			5.24	20

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/14/19 10:45 • (MS) R3410986-4 05/14/19 10:47 • (MSD) R3410986-5 05/14/19 10:50

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	3.24	3.22	108	107	1	75.0-125			0.483	20



Method Blank (MB)

(MB) R3411247-1 05/14/19 21:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Arsenic	U		6.50	10.0

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

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

(LCS) R3411247-2 05/14/19 21:07 • (LCSD) R3411247-3 05/14/19 21:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Arsenic	1000	959	939	95.9	93.9	80.0-120			2.14	20

L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/14/19 21:12 • (MS) R3411247-5 05/14/19 21:18 • (MSD) R3411247-6 05/14/19 21:20

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Arsenic	1000	16.2	972	987	95.6	97.1	1	75.0-125			1.53	20



Method Blank (MB)

(MB) R3413349-1 05/21/19 13:05

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	0.245	J	0.240	2.00
Selenium	U		0.380	2.00
Silver	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3413349-2 05/21/19 13:11 • (LCSD) R3413349-3 05/21/19 13:16

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	%	%	%			%	%
Arsenic	50.0	48.8	51.4	97.6	103	80.0-120			5.30	20
Barium	50.0	45.5	44.2	91.0	88.3	80.0-120			3.00	20
Cadmium	50.0	50.9	50.0	102	100	80.0-120			1.84	20
Chromium	50.0	47.1	49.2	94.1	98.4	80.0-120			4.41	20
Lead	50.0	49.4	50.0	98.7	100	80.0-120			1.31	20
Selenium	50.0	48.9	50.3	97.8	101	80.0-120			2.76	20
Silver	50.0	50.1	50.4	100	101	80.0-120			0.672	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/21/19 13:21 • (MS) R3413349-5 05/21/19 13:32 • (MSD) R3413349-6 05/21/19 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	50.0	4.50	51.9	55.4	94.7	102	1	75.0-125			6.57	20
Barium	50.0	23.7	73.8	69.7	100	91.9	1	75.0-125			5.70	20
Cadmium	50.0	ND	53.5	52.4	107	105	1	75.0-125			2.15	20
Chromium	50.0	ND	50.1	50.1	98.5	98.6	1	75.0-125			0.0830	20
Lead	50.0	ND	52.1	51.6	101	99.9	1	75.0-125			1.07	20
Selenium	50.0	ND	51.2	50.4	101	99.3	1	75.0-125			1.75	20
Silver	50.0	ND	51.8	50.2	104	100	1	75.0-125			3.22	20



Method Blank (MB)

(MB) R3411887-1 05/16/19 10:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		0.250	2.00
Barium	0.784	J	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3411887-2 05/16/19 10:43 • (LCSD) R3411887-3 05/16/19 10:47

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	50.0	49.3	49.1	98.7	98.3	80.0-120			0.435	20
Barium	50.0	46.1	45.9	92.2	91.8	80.0-120			0.401	20
Cadmium	50.0	50.5	50.2	101	100	80.0-120			0.522	20
Chromium	50.0	50.6	50.0	101	100	80.0-120			1.08	20
Lead	50.0	48.7	49.4	97.3	98.8	80.0-120			1.47	20
Selenium	50.0	52.6	50.2	105	100	80.0-120			4.56	20
Silver	50.0	48.1	47.9	96.2	95.8	80.0-120			0.449	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1097654-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097654-01 05/16/19 10:52 • (MS) R3411887-5 05/16/19 11:01 • (MSD) R3411887-6 05/16/19 11:06

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	10.9	60.1	62.9	98.5	104	1	75.0-125			4.49	20
Barium	50.0	71.8	121	122	98.8	101	1	75.0-125			0.743	20
Cadmium	50.0	U	50.3	52.0	101	104	1	75.0-125			3.21	20
Chromium	50.0	3.01	51.5	53.2	97.0	100	1	75.0-125			3.16	20
Lead	50.0	0.285	49.8	51.6	99.1	103	1	75.0-125			3.50	20
Selenium	50.0	U	53.5	54.5	107	109	1	75.0-125			1.86	20
Silver	50.0	U	50.7	51.3	101	103	1	75.0-125			1.26	20



Method Blank (MB)

(MB) R3413052-1 05/20/19 14:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		0.250	2.00
Cadmium,Dissolved	U		0.160	1.00
Iron,Dissolved	U		15.0	100
Lead,Dissolved	U		0.240	2.00
Manganese,Dissolved	0.838	J	0.250	5.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Method Blank (MB)

(MB) R3413303-1 05/21/19 12:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Barium,Dissolved	U		0.360	5.00
Chromium,Dissolved	U		0.540	2.00

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

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

(LCS) R3413052-2 05/20/19 14:12 • (LCSD) R3413052-3 05/20/19 14:18

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	%	%	%			%	%
Arsenic,Dissolved	50.0	47.7	51.0	95.4	102	80.0-120			6.77	20
Cadmium,Dissolved	50.0	51.6	49.4	103	98.8	80.0-120			4.40	20
Iron,Dissolved	500	479	500	95.7	99.9	80.0-120			4.26	20
Lead,Dissolved	50.0	46.9	48.3	93.8	96.7	80.0-120			3.05	20
Manganese,Dissolved	50.0	48.9	50.2	97.7	100	80.0-120			2.69	20
Selenium,Dissolved	50.0	46.1	50.0	92.3	99.9	80.0-120			8.00	20
Silver,Dissolved	50.0	45.7	47.3	91.5	94.6	80.0-120			3.29	20

<sup>9</sup> Sc

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

(LCS) R3413303-2 05/21/19 12:15 • (LCSD) R3413303-3 05/21/19 12:20

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	%	%	%			%	%
Barium,Dissolved	50.0	45.6	47.3	91.1	94.7	80.0-120			3.83	20
Chromium,Dissolved	50.0	48.0	48.8	96.0	97.6	80.0-120			1.65	20



L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/20/19 14:23 • (MS) R3413052-5 05/20/19 14:34 • (MSD) R3413052-6 05/20/19 14:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic,Dissolved	50.0	14.5	64.4	61.7	99.9	94.3	1	75.0-125			4.41	20
Cadmium,Dissolved	50.0	ND	49.2	49.4	98.3	98.8	1	75.0-125			0.492	20
Iron,Dissolved	500	ND	485	469	93.3	89.9	1	75.0-125			3.47	20
Lead,Dissolved	50.0	ND	48.0	48.4	96.0	96.9	1	75.0-125			0.914	20
Manganese,Dissolved	50.0	150	194	187	88.0	75.3	1	75.0-125			3.33	20
Selenium,Dissolved	50.0	ND	48.2	49.1	95.4	97.3	1	75.0-125			1.94	20
Silver,Dissolved	50.0	ND	47.7	48.2	95.3	96.5	1	75.0-125			1.23	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/20/19 15:03 • (MS) R3413052-7 05/20/19 15:08 • (MSD) R3413052-8 05/20/19 15:13

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	4.73	51.8	51.5	94.1	93.5	1	75.0-125			0.611	20
Cadmium,Dissolved	50.0	ND	49.1	49.9	98.3	99.7	1	75.0-125			1.46	20
Iron,Dissolved	500	ND	462	489	87.8	93.1	1	75.0-125			5.57	20
Lead,Dissolved	50.0	ND	47.9	47.4	95.8	94.8	1	75.0-125			1.08	20
Manganese,Dissolved	50.0	ND	46.3	51.2	82.8	92.7	1	75.0-125			10.2	20
Selenium,Dissolved	50.0	ND	47.2	51.2	92.3	100	1	75.0-125			7.96	20
Silver,Dissolved	50.0	ND	47.4	48.0	94.9	96.0	1	75.0-125			1.11	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/21/19 12:25 • (MS) R3413303-5 05/21/19 12:35 • (MSD) R3413303-6 05/21/19 12:41

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 %
Barium,Dissolved	50.0	18.1	66.4	64.9	96.6	93.6	1	75.0-125			2.25	20
Barium,Dissolved	50.0	18.1	66.4	69.3	96.6	103	1	75.0-125			4.37	20
Chromium,Dissolved	50.0	ND	49.1	49.5	98.2	98.9	1	75.0-125			0.766	20
Chromium,Dissolved	50.0	ND	49.1	49.7	98.2	99.3	1	75.0-125			1.14	20

L1098098-18 Original Sample (OS) • Matrix Spike (MS)

(OS) L1098098-18 05/21/19 13:17 • (MS) R3413303-7 05/21/19 13:22

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Barium,Dissolved	50.0	23.0	69.1	92.3	1	75.0-125	
Chromium,Dissolved	50.0	ND	49.9	96.2	1	75.0-125	



Method Blank (MB)

(MB) R3411871-3 05/15/19 14:10

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)	107			78.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

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

(LCS) R3411871-1 05/15/19 12:16 • (LCSD) R3411871-2 05/15/19 12:50

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	5210	94.7	94.7	70.0-124			0.000787	20
(S) a,a,a-Trifluorotoluene(FID)				91.8	93.6	78.0-120				

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3411040-1 05/14/19 11:14

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

L1097915-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1097915-01 05/14/19 11:16 • (DUP) R3411040-2 05/14/19 11:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	39.7	38.4	1	3.23		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1098098-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1098098-02 05/14/19 11:22 • (DUP) R3411040-3 05/14/19 11:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	1480	1480	1	0.334		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) R3411040-8 05/14/19 13:26 • (LCSD) R3411040-9 05/14/19 13:29

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	%	%	%			%	%
Methane	67.8	70.3	76.2	104	112	85.0-115			8.09	20
Ethane	129	112	120	87.2	92.8	85.0-115			6.26	20
Ethene	127	111	118	87.6	93.3	85.0-115			6.25	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/14/19 11:50 • (MS) R3411040-4 05/14/19 13:17 • (MSD) R3411040-5 05/14/19 13:19

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 %
Methane	67.8	90.0	151	152	90.0	91.9	1	85.0-115			0.879	20
Ethane	129	ND	109	110	84.4	85.1	1	85.0-115	<u>J6</u>		0.794	20
Ethene	127	ND	108	109	84.9	85.5	1	85.0-115	<u>J6</u>		0.653	20

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/14/19 12:05 • (MS) R3411040-6 05/14/19 13:21 • (MSD) R3411040-7 05/14/19 13:24

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	76.0	75.1	112	111	1	85.0-115			1.20	20
Ethane	129	ND	116	113	90.3	87.9	1	85.0-115			2.62	20
Ethene	127	ND	116	112	91.2	88.4	1	85.0-115			3.13	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3412800-3 05/15/19 01:07

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
1,1-Dichloroethene	U		0.398	1.00
1,2-Dichloroethane	U		0.361	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	0.437	U	0.256	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3412800-3 05/15/19 01:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
p-Isopropyltoluene	U		0.350	1.00
2-Butanone (MEK)	U		3.93	10.0
Isopropylbenzene	U		0.326	1.00
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	0.328	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
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
Vinyl chloride	U		0.259	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
(S) a,a,a-Trifluorotoluene	0.000	J2		80.0-120
(S) Toluene-d8	100			80.0-120
(S) 4-Bromofluorobenzene	101			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

- 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) R3412800-1 05/15/19 00:06 • (LCSD) R3412800-2 05/15/19 00:26

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	89.8	83.8	71.8	67.1	19.0-160			6.87	27
Acrolein	125	173	170	138	136	10.0-160			2.01	26



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

(LCS) R3412800-1 05/15/19 00:06 • (LCSD) R3412800-2 05/15/19 00:26

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 %
Acrylonitrile	125	131	127	105	102	55.0-149			2.70	20
Bromobenzene	25.0	23.7	23.6	94.6	94.4	73.0-121			0.243	20
Bromodichloromethane	25.0	23.0	22.5	91.9	89.8	75.0-120			2.22	20
Bromoform	25.0	23.5	24.1	93.8	96.3	68.0-132			2.63	20
Bromomethane	25.0	24.4	23.8	97.8	95.3	10.0-160			2.59	25
n-Butylbenzene	25.0	23.7	24.7	95.0	98.8	73.0-125			3.92	20
sec-Butylbenzene	25.0	24.4	25.2	97.7	101	75.0-125			3.01	20
tert-Butylbenzene	25.0	23.7	23.7	95.0	94.6	76.0-124			0.365	20
Carbon tetrachloride	25.0	24.1	24.9	96.2	99.8	68.0-126			3.61	20
Chlorobenzene	25.0	24.2	24.6	96.7	98.3	80.0-121			1.65	20
Chlorodibromomethane	25.0	24.0	25.0	96.0	99.8	77.0-125			3.88	20
Chloroethane	25.0	25.2	25.5	101	102	47.0-150			1.26	20
Chloroform	25.0	23.6	23.0	94.4	92.1	73.0-120			2.44	20
Chloromethane	25.0	26.3	25.4	105	102	41.0-142			3.43	20
2-Chlorotoluene	25.0	24.2	24.3	96.8	97.2	76.0-123			0.383	20
Benzene	25.0	24.4	24.2	97.5	97.0	70.0-123			0.497	20
4-Chlorotoluene	25.0	23.7	24.0	94.9	96.2	75.0-122			1.31	20
1,2-Dibromo-3-Chloropropane	25.0	23.5	24.5	93.9	98.0	58.0-134			4.36	20
1,2-Dibromoethane	25.0	22.9	24.1	91.6	96.4	80.0-122			5.11	20
Dibromomethane	25.0	23.5	23.7	93.9	94.6	80.0-120			0.836	20
1,2-Dichlorobenzene	25.0	23.6	24.0	94.6	96.0	79.0-121			1.53	20
1,3-Dichlorobenzene	25.0	23.9	24.4	95.7	97.5	79.0-120			1.87	20
1,4-Dichlorobenzene	25.0	23.5	24.6	94.1	98.3	79.0-120			4.32	20
Dichlorodifluoromethane	25.0	27.1	26.9	109	107	51.0-149			1.03	20
1,1-Dichloroethane	25.0	24.6	23.9	98.4	95.5	70.0-126			3.01	20
1,1-Dichloroethene	25.0	24.9	23.8	99.4	95.0	71.0-124			4.52	20
cis-1,2-Dichloroethene	25.0	24.2	23.9	96.6	95.7	73.0-120			0.969	20
trans-1,2-Dichloroethene	25.0	23.7	23.6	94.8	94.5	73.0-120			0.391	20
1,2-Dichloropropane	25.0	24.2	24.0	96.8	95.8	77.0-125			1.01	20
1,1-Dichloropropene	25.0	24.4	24.2	97.7	96.6	74.0-126			1.10	20
1,3-Dichloropropane	25.0	23.7	24.2	94.9	96.9	80.0-120			2.04	20
cis-1,3-Dichloropropene	25.0	23.8	23.5	95.1	94.0	80.0-123			1.23	20
trans-1,3-Dichloropropene	25.0	23.5	24.3	93.9	97.2	78.0-124			3.49	20
2,2-Dichloropropane	25.0	24.1	24.8	96.5	99.1	58.0-130			2.65	20
Di-isopropyl ether	25.0	25.0	24.6	100	98.3	58.0-138			1.85	20
Hexachloro-1,3-butadiene	25.0	22.3	24.5	89.3	97.9	54.0-138			9.18	20
1,2-Dichloroethane	25.0	23.1	23.0	92.6	92.0	70.0-128			0.611	20
p-Isopropyltoluene	25.0	23.6	24.5	94.5	98.1	76.0-125			3.77	20
2-Butanone (MEK)	125	125	125	100	100	44.0-160			0.344	20
Methylene Chloride	25.0	23.8	23.5	95.4	94.0	67.0-120			1.42	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3412800-1 05/15/19 00:06 • (LCSD) R3412800-2 05/15/19 00:26

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 %
4-Methyl-2-pentanone (MIBK)	125	126	130	101	104	68.0-142			2.99	20
Ethylbenzene	25.0	24.4	24.9	97.7	99.7	79.0-123			1.95	20
n-Propylbenzene	25.0	23.8	24.1	95.2	96.2	77.0-124			1.03	20
Styrene	25.0	24.2	24.5	97.0	98.1	73.0-130			1.18	20
1,1,1,2-Tetrachloroethane	25.0	23.5	24.5	93.9	97.9	75.0-125			4.23	20
1,1,2,2-Tetrachloroethane	25.0	23.8	24.1	95.4	96.5	65.0-130			1.20	20
Tetrachloroethene	25.0	24.0	24.0	96.0	95.9	72.0-132			0.123	20
1,1,2-Trichlorotrifluoroethane	25.0	24.0	24.1	96.1	96.2	69.0-132			0.188	20
Isopropylbenzene	25.0	24.1	24.7	96.5	99.0	76.0-127			2.51	20
1,2,3-Trichlorobenzene	25.0	21.8	24.1	87.2	96.6	50.0-138			10.3	20
1,2,4-Trichlorobenzene	25.0	23.2	24.7	93.0	98.7	57.0-137			5.93	20
1,1,1-Trichloroethane	25.0	24.8	24.5	99.2	98.1	73.0-124			1.16	20
1,1,2-Trichloroethane	25.0	23.0	23.5	92.0	93.9	80.0-120			2.01	20
Trichloroethene	25.0	24.1	23.6	96.3	94.4	78.0-124			2.05	20
Trichlorofluoromethane	25.0	25.0	25.1	100	100	59.0-147			0.103	20
1,2,3-Trichloropropane	25.0	22.8	23.4	91.4	93.4	73.0-130			2.20	20
Methyl tert-butyl ether	25.0	24.2	24.0	96.7	96.2	68.0-125			0.544	20
1,2,3-Trimethylbenzene	25.0	23.6	24.3	94.4	97.3	77.0-120			3.01	20
Naphthalene	25.0	23.0	25.3	91.8	101	54.0-135			9.57	20
Vinyl chloride	25.0	24.7	24.1	98.6	96.4	67.0-131			2.26	20
o-Xylene	25.0	24.2	24.5	96.6	98.1	80.0-122			1.58	20
m&p-Xylenes	50.0	48.6	49.7	97.3	99.5	80.0-122			2.22	20
Toluene	25.0	23.3	23.6	93.0	94.3	79.0-120			1.43	20
1,2,4-Trimethylbenzene	25.0	23.3	23.4	93.3	93.6	76.0-121			0.412	20
1,3,5-Trimethylbenzene	25.0	23.6	24.2	94.5	96.9	76.0-122			2.54	20
(S) a,a,a-Trifluorotoluene				0.000	0.000	80.0-120	J2	J2		
(S) Toluene-d8				101	102	80.0-120				
(S) 4-Bromofluorobenzene				101	101	77.0-126				
(S) 1,2-Dichloroethane-d4				101	101	70.0-130				

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

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/15/19 08:09 • (MS) R3412800-4 05/15/19 08:29 • (MSD) R3412800-5 05/15/19 08:49

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	50.2	58.4	40.2	46.7	1	10.0-160			15.1	35
Acrolein	125	ND	113	128	90.4	103	1	10.0-160			12.6	39
Acrylonitrile	125	ND	77.2	82.6	61.7	66.1	1	21.0-160			6.80	32
Bromobenzene	25.0	ND	14.0	14.3	55.9	57.4	1	30.0-149			2.49	28



L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/15/19 08:09 • (MS) R3412800-4 05/15/19 08:29 • (MSD) R3412800-5 05/15/19 08:49

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 %
Bromodichloromethane	25.0	ND	13.9	14.2	55.4	56.9	1	31.0-150			2.60	27
Bromoform	25.0	ND	13.4	14.0	53.7	55.8	1	29.0-150			3.86	29
Bromomethane	25.0	ND	13.3	13.5	53.2	54.1	1	10.0-160			1.65	38
n-Butylbenzene	25.0	ND	14.1	14.0	56.3	56.2	1	31.0-150			0.280	30
sec-Butylbenzene	25.0	ND	14.4	14.7	57.6	58.7	1	33.0-155			1.96	29
tert-Butylbenzene	25.0	ND	14.2	14.5	56.8	58.2	1	34.0-153			2.49	28
Carbon tetrachloride	25.0	ND	14.8	15.0	59.1	59.9	1	23.0-159			1.34	28
Chlorobenzene	25.0	ND	14.4	14.7	57.7	58.9	1	33.0-152			2.07	27
Chlorodibromomethane	25.0	ND	14.5	15.1	57.9	60.3	1	37.0-149			4.05	27
Chloroethane	25.0	ND	14.1	14.3	56.5	57.1	1	10.0-160			1.08	30
Chloroform	25.0	ND	14.4	14.9	57.8	59.4	1	29.0-154			2.84	28
Chloromethane	25.0	ND	14.3	14.5	57.3	58.0	1	10.0-160			1.19	29
2-Chlorotoluene	25.0	ND	14.4	14.5	57.4	58.1	1	32.0-153			1.22	28
4-Chlorotoluene	25.0	ND	14.1	14.1	56.2	56.5	1	32.0-150			0.504	28
1,2-Dibromo-3-Chloropropane	25.0	ND	13.4	14.4	53.7	57.6	1	22.0-151			7.06	34
Benzene	25.0	ND	14.7	15.1	59.0	60.3	1	17.0-158			2.28	27
1,2-Dibromoethane	25.0	ND	13.5	14.3	54.1	57.4	1	34.0-147			5.80	27
Dibromomethane	25.0	ND	13.6	14.3	54.3	57.1	1	30.0-151			5.04	27
1,2-Dichlorobenzene	25.0	ND	13.7	14.3	54.9	57.2	1	34.0-149			4.06	28
1,3-Dichlorobenzene	25.0	ND	14.0	14.2	56.0	56.8	1	36.0-146			1.47	27
1,4-Dichlorobenzene	25.0	ND	13.8	14.2	55.3	56.6	1	35.0-142			2.43	27
Dichlorodifluoromethane	25.0	ND	14.1	13.8	56.4	55.2	1	10.0-160			2.17	29
1,1-Dichloroethane	25.0	ND	14.8	15.4	59.2	61.5	1	25.0-158			3.68	27
1,1-Dichloroethene	25.0	ND	14.6	15.0	58.2	60.1	1	11.0-160			3.26	29
cis-1,2-Dichloroethene	25.0	ND	14.9	15.1	59.8	60.3	1	10.0-160			0.880	27
trans-1,2-Dichloroethene	25.0	ND	14.3	14.5	57.1	57.8	1	17.0-153			1.29	27
1,2-Dichloropropane	25.0	ND	14.5	15.2	58.1	60.7	1	30.0-156			4.35	27
1,1-Dichloropropene	25.0	ND	14.5	14.6	58.2	58.5	1	25.0-158			0.446	27
1,3-Dichloropropane	25.0	ND	14.0	14.6	56.0	58.6	1	38.0-147			4.59	27
cis-1,3-Dichloropropene	25.0	ND	13.9	14.5	55.6	58.1	1	34.0-149			4.48	28
trans-1,3-Dichloropropene	25.0	ND	13.8	14.1	55.1	56.5	1	32.0-149			2.47	28
2,2-Dichloropropane	25.0	ND	14.1	14.7	56.2	58.6	1	24.0-152			4.21	29
Di-isopropyl ether	25.0	ND	14.6	15.7	58.5	62.8	1	21.0-160			7.03	28
Hexachloro-1,3-butadiene	25.0	ND	14.4	14.5	57.8	58.2	1	20.0-154			0.651	34
p-Isopropyltoluene	25.0	ND	14.0	14.1	55.9	56.5	1	30.0-154			1.17	29
1,2-Dichloroethane	25.0	ND	13.9	14.2	55.5	56.8	1	29.0-151			2.20	27
2-Butanone (MEK)	125	ND	70.3	76.5	56.3	61.2	1	10.0-160			8.32	32
Methylene Chloride	25.0	ND	14.3	14.6	57.1	58.5	1	23.0-144			2.39	28
4-Methyl-2-pentanone (MIBK)	125	ND	73.6	77.8	58.8	62.2	1	29.0-160			5.57	29
n-Propylbenzene	25.0	ND	14.0	14.2	56.0	56.7	1	31.0-154			1.26	28

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



[L1098098-09,10,11,12,13,14,15,16,17,18,19,20,22](#)

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/15/19 08:09 • (MS) R3412800-4 05/15/19 08:29 • (MSD) R3412800-5 05/15/19 08:49

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 %
Styrene	25.0	ND	14.3	14.4	57.1	57.8	1	33.0-155			1.17	28
1,1,1,2-Tetrachloroethane	25.0	ND	14.3	15.0	57.0	60.1	1	36.0-151			5.13	29
Ethylbenzene	25.0	ND	14.6	14.9	58.4	59.5	1	30.0-155			1.73	27
1,1,2,2-Tetrachloroethane	25.0	ND	14.4	15.1	57.5	60.6	1	33.0-150			5.16	28
Tetrachloroethene	25.0	ND	13.8	14.1	55.4	56.4	1	10.0-160			1.82	27
1,1,2-Trichlorotrifluoroethane	25.0	ND	14.6	14.3	58.3	57.1	1	23.0-160			2.03	30
1,2,3-Trichlorobenzene	25.0	ND	13.0	14.5	51.9	57.9	1	17.0-150			10.9	36
1,2,4-Trichlorobenzene	25.0	ND	13.2	14.1	52.7	56.2	1	24.0-150			6.48	33
Isopropylbenzene	25.0	ND	14.5	14.5	57.8	57.9	1	28.0-157			0.113	27
1,1,1-Trichloroethane	25.0	ND	15.0	15.2	60.0	60.9	1	23.0-160			1.44	28
1,1,2-Trichloroethane	25.0	ND	13.5	14.4	54.1	57.6	1	35.0-147			6.30	27
Trichloroethene	25.0	ND	13.7	14.2	54.9	56.7	1	10.0-160			3.23	25
Trichlorofluoromethane	25.0	ND	14.7	14.9	58.9	59.8	1	17.0-160			1.41	31
1,2,3-Trichloropropane	25.0	ND	13.4	14.5	53.5	58.1	1	34.0-151			8.20	29
1,2,3-Trimethylbenzene	25.0	ND	13.7	14.4	54.9	57.5	1	32.0-149			4.63	28
Methyl tert-butyl ether	25.0	ND	13.8	14.7	55.2	58.8	1	28.0-150			6.38	29
Naphthalene	25.0	ND	13.1	14.7	52.3	58.8	1	12.0-156			11.7	35
Vinyl chloride	25.0	ND	13.4	13.5	53.5	53.9	1	10.0-160			0.652	27
o-Xylene	25.0	ND	14.1	14.3	56.6	57.4	1	45.0-144			1.42	26
m&p-Xylenes	50.0	ND	28.9	29.0	57.7	58.0	1	43.0-146			0.459	26
Toluene	25.0	ND	13.9	14.1	55.6	56.5	1	26.0-154			1.67	28
1,2,4-Trimethylbenzene	25.0	ND	13.6	14.0	54.2	55.8	1	26.0-154			2.89	27
1,3,5-Trimethylbenzene	25.0	ND	13.7	14.2	54.8	56.7	1	28.0-153			3.47	27
(S) a,a,a-Trifluorotoluene					0.000	0.000		80.0-120	J2	J2		
(S) Toluene-d8					99.6	99.9		80.0-120				
(S) 4-Bromofluorobenzene					99.8	98.8		77.0-126				
(S) 1,2-Dichloroethane-d4					104	104		70.0-130				

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 18098-01,02,03,04,05,06,07,08,09,10,16,17,18,20,21,22](#)

Method Blank (MB)

(MB) R3411311-1 05/14/19 20:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	54.5			52.0-156

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3411311-2 05/14/19 20:44

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Diesel Range Organics (DRO)	1500	1340	89.3	50.0-150	
(S) o-Terphenyl			87.5	52.0-156	

L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/15/19 15:49 • (MS) R3411597-1 05/15/19 16:09 • (MSD) R3411597-2 05/15/19 16:30

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Diesel Range Organics (DRO)	1430	ND	1060	1050	68.7	68.0	1	50.0-150			0.948	20
(S) o-Terphenyl					88.4	87.4		52.0-156				

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/15/19 17:30 • (MS) R3411597-3 05/15/19 17:50 • (MSD) R3411597-4 05/15/19 18:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Diesel Range Organics (DRO)	1430	ND	1100	1120	66.4	67.8	1	50.0-150			1.80	20
(S) o-Terphenyl					93.7	91.6		52.0-156				





Method Blank (MB)

(MB) R3411754-1 05/15/19 11:58

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>	99.0			52.0-156

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

(LCS) R3411754-2 05/15/19 12:15 • (LCSD) R3411754-3 05/15/19 12:33

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)	1500	1460	1510	97.3	101	50.0-150			3.37	20
<i>(S) o-Terphenyl</i>				119	121	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) R3411065-1 05/14/19 12:50

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>	79.0			52.0-156

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

(LCS) R3411065-2 05/14/19 13:12 • (LCSD) R3411065-3 05/14/19 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	709	732	94.5	97.6	50.0-150			3.19	20
<i>(S) o-Terphenyl</i>				89.5	100	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) R3411345-1 05/15/19 00:45

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)	255		83.3	250
<i>(S) o-Terphenyl</i>	82.5			52.0-156

Laboratory Control Sample (LCS)

(LCS) R3411345-2 05/15/19 01:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Diesel Range Organics (DRO)	1500	1080	72.0	50.0-150	
<i>(S) o-Terphenyl</i>			80.0	52.0-156	

L1098098-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-08 05/15/19 02:13 • (MS) R3411345-3 05/15/19 02:35 • (MSD) R3411345-4 05/15/19 02:57

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	%	%		%			%	%
Diesel Range Organics (DRO)	1430	ND	1010	1080	70.6	75.5	1	50.0-150			6.70	20
<i>(S) o-Terphenyl</i>					80.0	85.3		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) R3411267-3 05/14/19 14:04

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	106			31.0-160
(S) 2-Fluorobiphenyl	73.0			48.0-148
(S) p-Terphenyl-d14	125			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3411267-1 05/14/19 13:23 • (LCSD) R3411267-2 05/14/19 13:44

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	2.12	2.11	106	105	67.0-150			0.473	20
Acenaphthene	2.00	1.92	1.85	96.0	92.5	65.0-138			3.71	20
Acenaphthylene	2.00	2.02	1.97	101	98.5	66.0-140			2.51	20
Benzo(a)anthracene	2.00	2.44	2.43	122	122	61.0-140			0.411	20
Benzo(a)pyrene	2.00	2.46	2.49	123	124	60.0-143			1.21	20
Benzo(b)fluoranthene	2.00	2.47	2.21	123	111	58.0-141			11.1	20
Benzo(g,h,i)perylene	2.00	2.24	2.24	112	112	52.0-153			0.000	20
Benzo(k)fluoranthene	2.00	2.58	2.46	129	123	58.0-148			4.76	20
Chrysene	2.00	2.15	2.14	108	107	64.0-144			0.466	20
Dibenz(a,h)anthracene	2.00	2.17	2.20	108	110	52.0-155			1.37	20
Fluoranthene	2.00	2.35	2.37	117	118	69.0-153			0.847	20



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

(LCS) R3411267-1 05/14/19 13:23 • (LCSD) R3411267-2 05/14/19 13:44

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	2.02	1.96	101	98.0	64.0-136			3.02	20
Indeno(1,2,3-cd)pyrene	2.00	2.23	2.26	111	113	54.0-153			1.34	20
Naphthalene	2.00	1.85	1.71	92.5	85.5	61.0-137			7.87	20
Phenanthrene	2.00	2.05	2.05	102	102	62.0-137			0.000	20
Pyrene	2.00	2.05	2.09	102	105	60.0-142			1.93	20
1-Methylnaphthalene	2.00	1.99	1.84	99.5	92.0	66.0-142			7.83	20
2-Methylnaphthalene	2.00	1.90	1.73	95.0	86.5	62.0-136			9.37	20
2-Chloronaphthalene	2.00	1.85	1.71	92.5	85.5	64.0-140			7.87	20
<i>(S) Nitrobenzene-d5</i>				105	89.5	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				66.5	59.5	48.0-148				
<i>(S) p-Terphenyl-d14</i>				108	106	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) R3412091-2 05/16/19 13:12

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	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	0.0302	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	140			31.0-160
(S) 2-Fluorobiphenyl	95.0			48.0-148
(S) p-Terphenyl-d14	92.0			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)

(LCS) R3412091-1 05/16/19 12:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Anthracene	2.00	2.20	110	67.0-150	
Acenaphthene	2.00	2.07	103	65.0-138	
Acenaphthylene	2.00	2.13	106	66.0-140	
Benzo(a)anthracene	2.00	1.89	94.5	61.0-140	
Benzo(a)pyrene	2.00	1.95	97.5	60.0-143	
Benzo(b)fluoranthene	2.00	1.94	97.0	58.0-141	
Benzo(g,h,i)perylene	2.00	1.95	97.5	52.0-153	
Benzo(k)fluoranthene	2.00	1.95	97.5	58.0-148	
Chrysene	2.00	2.00	100	64.0-144	
Dibenz(a,h)anthracene	2.00	1.97	98.5	52.0-155	
Fluoranthene	2.00	2.17	108	69.0-153	



Laboratory Control Sample (LCS)

(LCS) R3412091-1 05/16/19 12:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	2.00	1.80	90.0	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	2.03	102	54.0-153	
Naphthalene	2.00	2.04	102	61.0-137	
Phenanthrene	2.00	1.86	93.0	62.0-137	
Pyrene	2.00	1.90	95.0	60.0-142	
1-Methylnaphthalene	2.00	1.86	93.0	66.0-142	
2-Methylnaphthalene	2.00	1.83	91.5	62.0-136	
2-Chloronaphthalene	2.00	1.97	98.5	64.0-140	
<i>(S) Nitrobenzene-d5</i>			146	31.0-160	
<i>(S) 2-Fluorobiphenyl</i>			95.5	48.0-148	
<i>(S) p-Terphenyl-d14</i>			97.5	37.0-146	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1098098-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1098098-18 05/16/19 16:28 • (MS) R3412091-3 05/16/19 16:50 • (MSD) R3412091-4 05/16/19 17:12

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	2.01	2.03	99.5	100	1	56.0-156			0.990	20
Acenaphthene	2.00	ND	1.91	1.95	95.5	97.5	1	44.0-153			2.07	20
Acenaphthylene	2.00	ND	1.97	2.01	98.5	100	1	53.0-150			2.01	20
Benzo(a)anthracene	2.00	ND	1.84	1.88	92.0	94.0	1	47.0-151			2.15	20
Benzo(a)pyrene	2.00	ND	1.78	1.82	89.0	91.0	1	45.0-146			2.22	20
Benzo(b)fluoranthene	2.00	ND	1.75	1.90	87.5	95.0	1	43.0-142			8.22	20
Benzo(g,h,i)perylene	2.00	ND	1.77	1.81	88.5	90.5	1	40.0-147			2.23	20
Benzo(k)fluoranthene	2.00	ND	1.77	1.70	88.5	85.0	1	43.0-148			4.03	21
Chrysene	2.00	ND	1.79	1.82	89.5	91.0	1	50.0-148			1.66	20
Dibenz(a,h)anthracene	2.00	ND	1.78	1.82	89.0	91.0	1	37.0-151			2.22	20
Fluoranthene	2.00	ND	2.07	2.09	103	105	1	56.0-157			0.962	20
Fluorene	2.00	ND	1.62	1.65	81.0	82.5	1	48.0-148			1.83	20
Indeno(1,2,3-cd)pyrene	2.00	ND	1.81	1.86	90.5	93.0	1	41.0-148			2.72	20
Naphthalene	2.00	ND	1.91	1.93	92.4	93.4	1	10.0-160			1.04	20
Phenanthrene	2.00	ND	1.78	1.81	86.8	88.3	1	47.0-147			1.67	20
Pyrene	2.00	ND	1.87	1.88	93.5	94.0	1	51.0-148			0.533	20
1-Methylnaphthalene	2.00	ND	1.72	1.75	85.6	87.1	1	21.0-160			1.73	20
2-Methylnaphthalene	2.00	ND	1.73	1.73	85.9	85.9	1	31.0-160			0.000	20
2-Chloronaphthalene	2.00	ND	1.83	1.85	91.5	92.5	1	52.0-148			1.09	20
<i>(S) Nitrobenzene-d5</i>					142	145		31.0-160				
<i>(S) 2-Fluorobiphenyl</i>					95.5	98.5		48.0-148				
<i>(S) p-Terphenyl-d14</i>					99.0	101		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, 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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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

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.
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.
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 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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

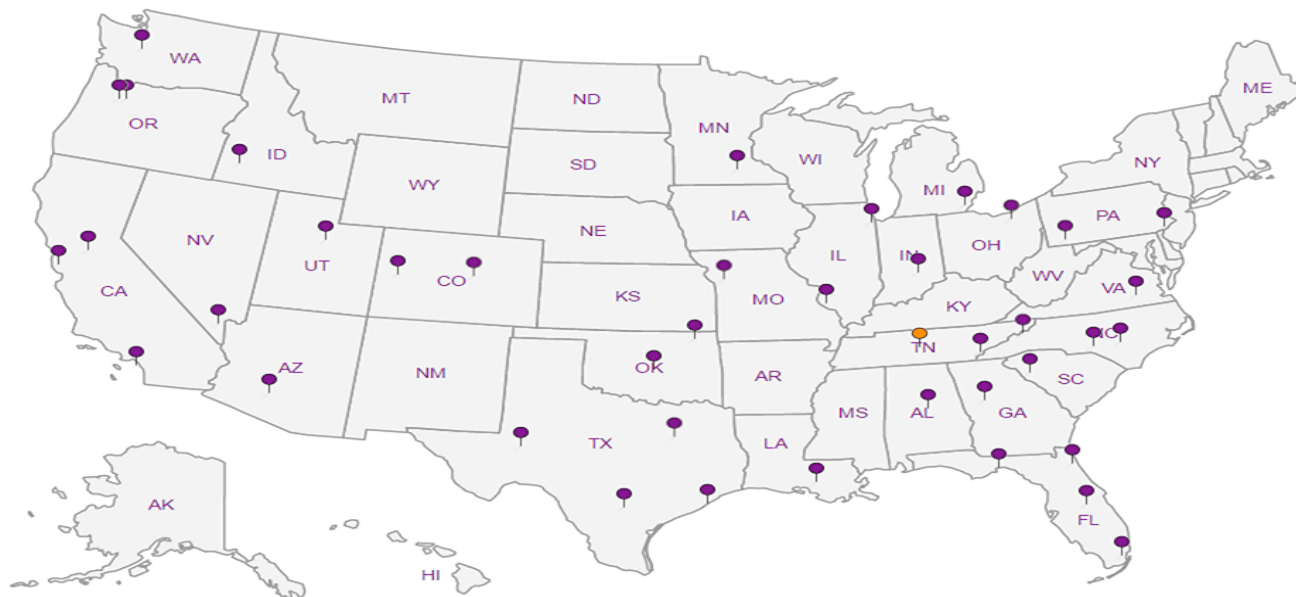
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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 1 of 4



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 #  
1996120\*00

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

Im mediately  
Packed on Ice N  Y

Diss M6020RCR8 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	(PP)	(PP)
-------------------------------	---------------------------------	-----------------------------	----------------------------------	-----------------------------------	---------------------	------------------------------	--------------------	--------------------------	------------------------------	------	------

L# 1698678  
G202

Acctnum: BNSF1KEN

Template: T149555

Prelogin: P705634

TSR: 134 - Mark W. Beasley

PB: 4-26-196m

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Diss M6020RCR8 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	Remarks	Sample # (lab only)
9 WMW-01-20190509	Grab	GW	-	5/9/19	1005	8		X	X		X			X	X	X		-01
6 WMW-03-20190509		GW	-	5/9/19	1015	10		X	X	X	X			X	X	X		02
6 WMW-05-20190508		GW	-	5/8/19	1230	10		X	X	X	X			X	X	X		03
6 WMW-09-20190508		GW	-	5/8/19	1355	10		X	X	X	X			X	X	X		04
6 WMW-10-20190509		GW	-	5/9/19	1230	8		X	X		X			X	X	X		05
8 WMW-11-20190509		GW	-	5/9/19	1130	8		X	X		X			X	X	X		06
7 WMW-13-20190509		GW	-	5/9/19	1130	8		X	X		X			X	X	X		07
5 WMW-18-20190509		GW	-	5/9/19	0755 <sup>B</sup>	X		X	X	X	X			X	X	X	MS/MSD	08
8 WMW-20-20190508		GW	-	5/8/19	1110	14	X	X	X		X		X	X	X	X	see pg 2	09
8 WMW-21-20190508		GW	-	5/8/19	1300	16	X	X	X	X	X		X	X	X	X	see pg 2	10

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:  
Temp: 20.0 (20.0) 16.3  
RAD SCREEN: <0.5 mR/hr  
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: 5/10/19	Time: 0900	Received by: (Signature) FedEX	Trip Blank Received: Yes/No S HCL/MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C 26.0-26.0 Bottles Received: 300
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 5/11/19 Time: 0845 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 2 of 4



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 #  
**1996120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Collected by (print):  
**K. Teague**

Site/Facility ID #

P.O. #

Collected by (signature):  
*[Signature]*

**Rush?** (Lab MUST Be Notified)

Quote #

Immediately  
Packed on Ice N    Y    **X**

   Same Day    Five Day  
   Next Day    5 Day (Rad Only)  
   Two Day    10 Day (Rad Only)  
   Three Day

Date Results Needed

No.  
of  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl	DISOLVED AS 6020 (FF)
5 WMW-18-20190509	Grab	GW	-	5/9/19	0755	34	X					X
8 WMW-20-20190508	↓	GW	-	5/8/19	1110	14		X	X			
8 WMW-21-20190508	↓	GW	-	5/8/19	1300	16		X	X			
5 TB-05		GW				1				X		
6 TB-06		GW				1				X		
7 TB-07		GW				1				X		
8 TB-08		GW				1				X		
9 TB-09		GW				1				X		
		GW										
		GW										

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:

**RAD SCREEN: <0.5 mR/hr**

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
   UPS    FedEx    Courier   

Tracking #

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"/> Y N
Preservation Correct/Checked:	<input checked="" type="checkbox"/> Y N

Relinquished by: (Signature)  
*[Signature]*

Date: **5/10/19** Time: **0900**

Received by: (Signature)  
**FedEx**

Trip Blank Received: Yes / No  
HCL / MeOH  
TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature)

Temp: \_\_\_\_\_ °C Bottles Received: **26 to 28 300**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by: (Signature)  
*[Signature]*

Date: **5/11/19** Time: **0825**

Hold: \_\_\_\_\_ Condition: **NCF 10k**

**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



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](mailto:RyanHultgren@kennedyjenks.com),  
[KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com)

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

City/State  
Collected: **Wishram, WA**

Phone: **253-835-6400**

Client Project #  
**1996120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Fax:

Collected by (print):  
**K. Teague**

Site/Facility ID #

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Quote #

Immediately Packed on Ice N \_\_\_ Y **X**

\_\_\_ Same Day \_\_\_ Five Day  
\_\_\_ Next Day \_\_\_ 5 Day (Rad Only)  
\_\_\_ Two Day \_\_\_ 10 Day (Rad Only)  
\_\_\_ Three Day

Date Results Needed

No. of  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Diss M6020RCR8 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
5 WMW-22-20190508	Grab	GW	—	5/8/19	1440	16	X	X	X	X	X		X	X	X	X
5 WMW-23-20190508		GW	—	5/8/19	1615	14	X	X	X		X		X	X	X	X
7 WMW-27-20190509		GW	—	5/9/19	1400	15	X	X	X		X		X	X	X	X
6 WMW-31-20190508		GW	—	5/8/19	1545	15	X	X	X		X		X	X	X	X
9 WMW-32-20190509		GW	—	5/9/19	1535	17	X	X	X		X	X	X	X	X	X
8 RMD-4-20190508		GW	—	5/8/19	1015	12		X	X	X	X		X	X	X	X
9 RMD-6-20190508	↓	GW	—	5/8/19	1145	16	X	X	X	X	X		X	X	X	X
		GW														
		GW														
		GW														

L# **1098098**

Table #

Acctnum: **BNSF1KEN**

Template: **T149555**

Prelogin: **P705634**

TSR: **134 - Mark W. Beasley**

PB: **4-26-196m**

Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other \_\_\_\_\_

Remarks:

**RAD SCREEN: <0.5 mR/hr**

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:

\_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier \_\_\_\_\_

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact: \_\_\_ NP Y N

COC Signed/Accurate: \_\_\_ Y N

Bottles arrive intact: \_\_\_ Y N

Correct bottles used: \_\_\_ Y N

Sufficient volume sent: \_\_\_ Y N

If Applicable

VOA Zero Headspace: \_\_\_ Y N

Preservation Correct/Checked: \_\_\_ Y N

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received: Yes / No  
HCL / MeOH  
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: °C Bottles Received:  
**2.6 to 2.1 pH 300**

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: **5/11/19** Time: **0825**

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](mailto:RyanHultgren@kennedyjenks.com),  
[KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com)

Project Description: **BNSF - Wishram Rail yard, WA**  
City/State Collected: **Wishram, WA**

Phone: **253-835-6400** Client Project # **1996120\*00** Lab Project # **BNSF1KEN-WISHRAM**

Fax: Site/Facility ID # P.O. #

Collected by (print): **K. Teague** Quote #  
Collected by (signature): *[Signature]* **Rush?** (Lab MUST Be Notified)  
Date Results Needed

Immediately Packed on Ice N  Y    
 Same Day  Five Day   
 Next Day  5 Day (Rad Only)   
 Two Day  10 Day (Rad Only)   
 Three Day

Analysis / Container / Preservative

Chain of Custody Page 4 of 4



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



L# **1098098**

Table #

Acctnum: **BNSF1KEN**

Template: **T149555**

Prelogin: **P705634**

TSR: **134 - Mark W. Beasley**  
PB: **4-26-196m**

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl
5 WMW-22-20190508	Grab	GW	-	5/8/19	1440	16	X		X		
5 WMW-23-20190508		GW	-	5/8/19	1615	14	X		X		
7 WMW-27-20190509		GW	-	5/9/19	1400	15	X			X	
6 WMW-31-20190508		GW	-	5/8/19	1545	15	X			X	
9 WMW-32-20190509		GW	-	5/9/19	1535	17	X			X	
9 RMD-6-20190508	↓	GW	-	5/8/19	1145	16	X		X		
		GW									
		GW									
		GW									
		GW									

Remarks	Sample # (lab only)
	16
	17
	18
	19
	20
	22

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: **RAD SCREEN: <0.5 mR/hr** pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

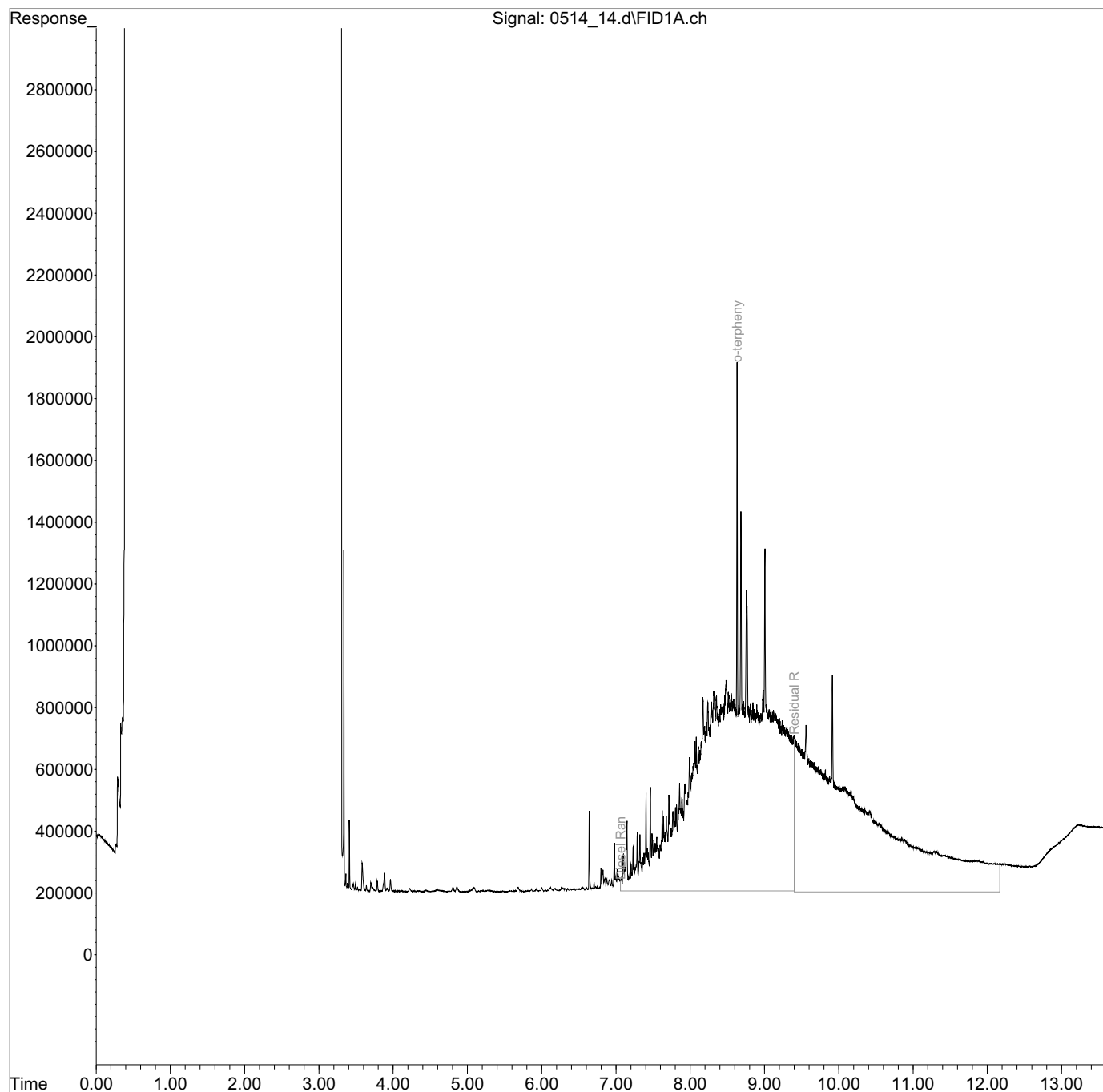
Sample Receipt Checklist  
 COC Seal Present/Intact:  Y  N  
 COC Signed/Accurate:  Y  N  
 Bottles arrive intact:  Y  N  
 Correct bottles used:  Y  N  
 Sufficient volume sent:  Y  N  
 If Applicable  
 VOA Zero Headspace:  Y  N  
 Preservation Correct/Checked:  Y  N

Relinquished by: (Signature) <i>[Signature]</i>	Date: <b>5/10/19</b>	Time: <b>0900</b>	Received by: (Signature) <b>Red Ex</b>	Trip Blank Received: Yes / No HCL / MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C <b>21.5 ± 0.2</b> Bottles Received: <b>22 300</b>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <b>5/11/19</b> Time: <b>0845</b> Hold: Condition: <b>NCF / OK</b>

Data Path : C:\msdchem\1\data\051419\  
Data File : 0514 14.d  
Signal(s) : FID1A.ch  
Acq On : 14 May 2019 9:24 pm  
Operator : 784  
Sample : L1098098-01 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 09:48:00 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

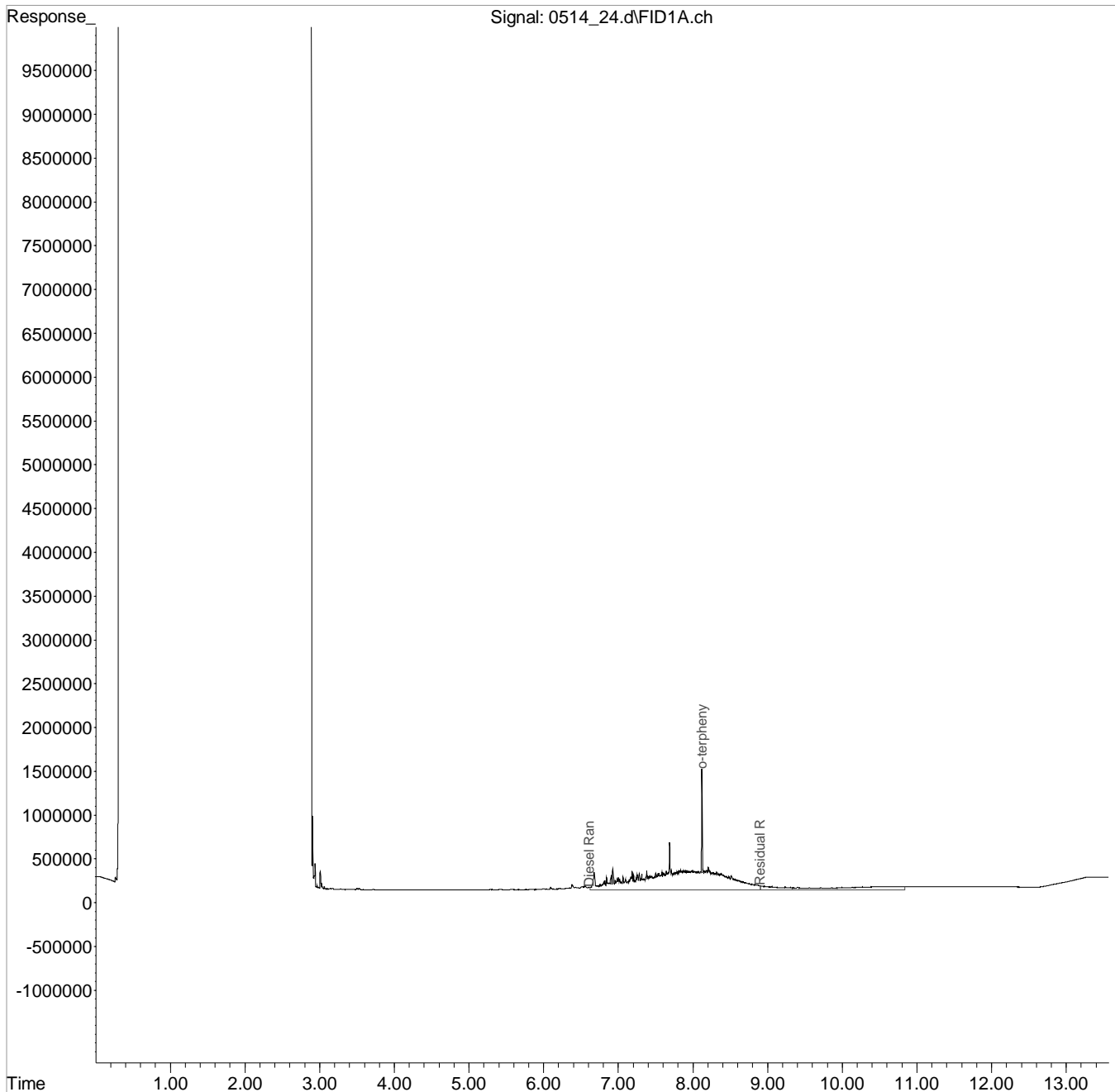
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514 24.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 May 2019 6:23 pm  
 Operator : 784  
 Sample : L1098098-02 1x WG1278958  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 17 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 14 19:38:02 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

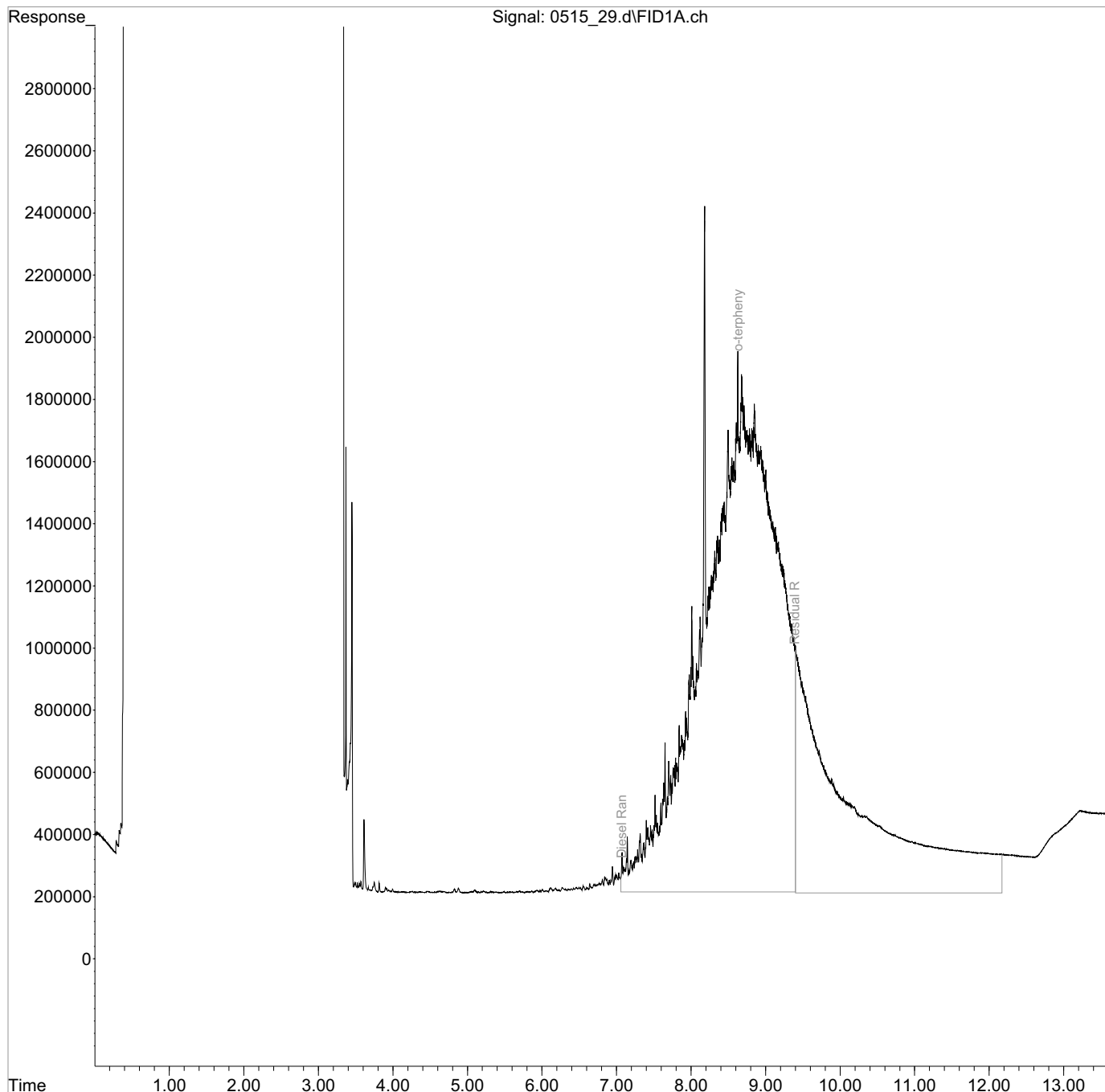
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051519\  
Data File : 0515 29.d  
Signal(s) : FID1A.ch  
Acq On : 15 May 2019 10:07 pm  
Operator : 784  
Sample : L1098098-02 5x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 16 10:44:19 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

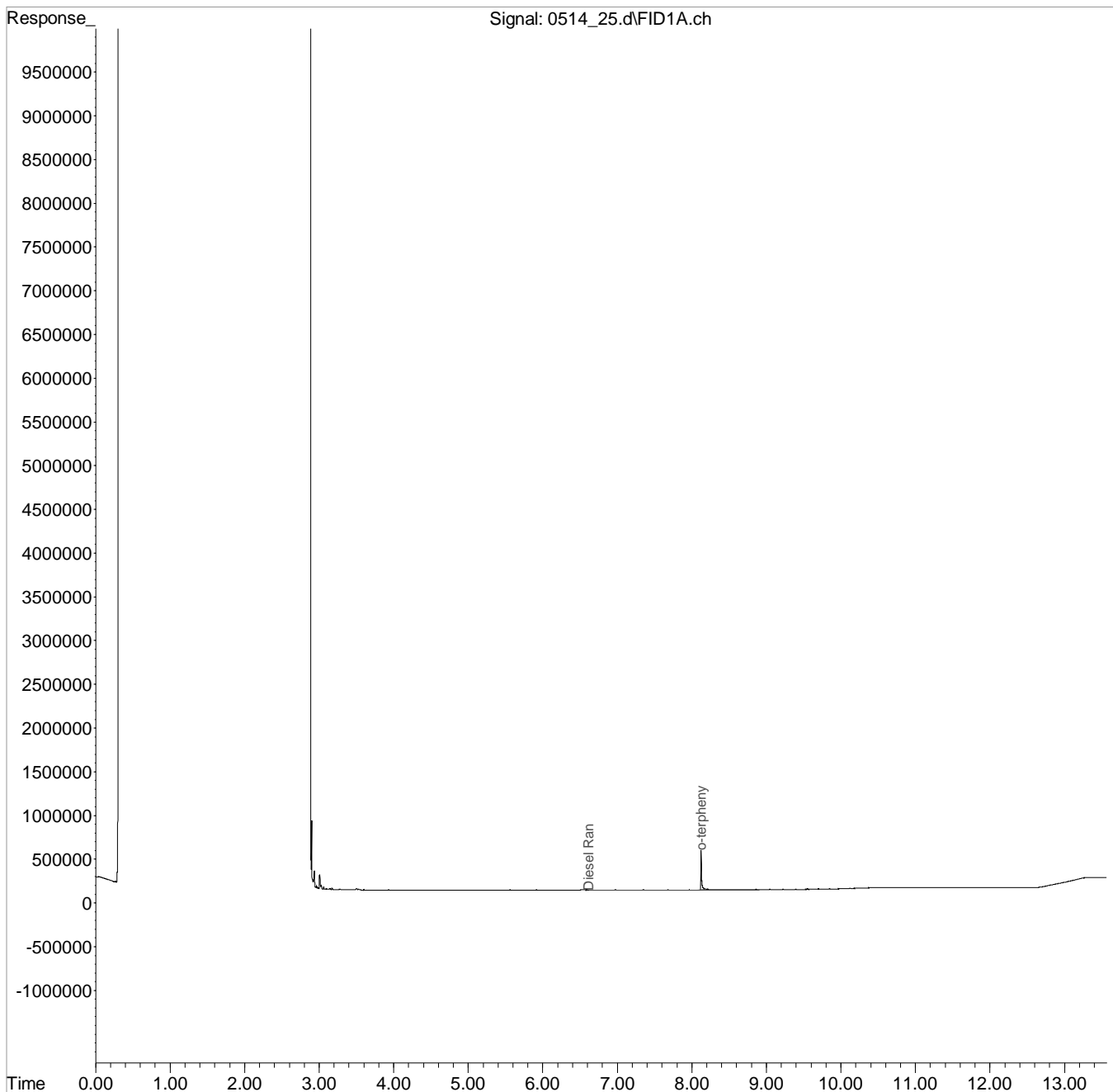




Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514 25.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 May 2019 6:46 pm  
 Operator : 784  
 Sample : L1098098-03 1x WG1278958  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 18 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 14 19:38:36 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

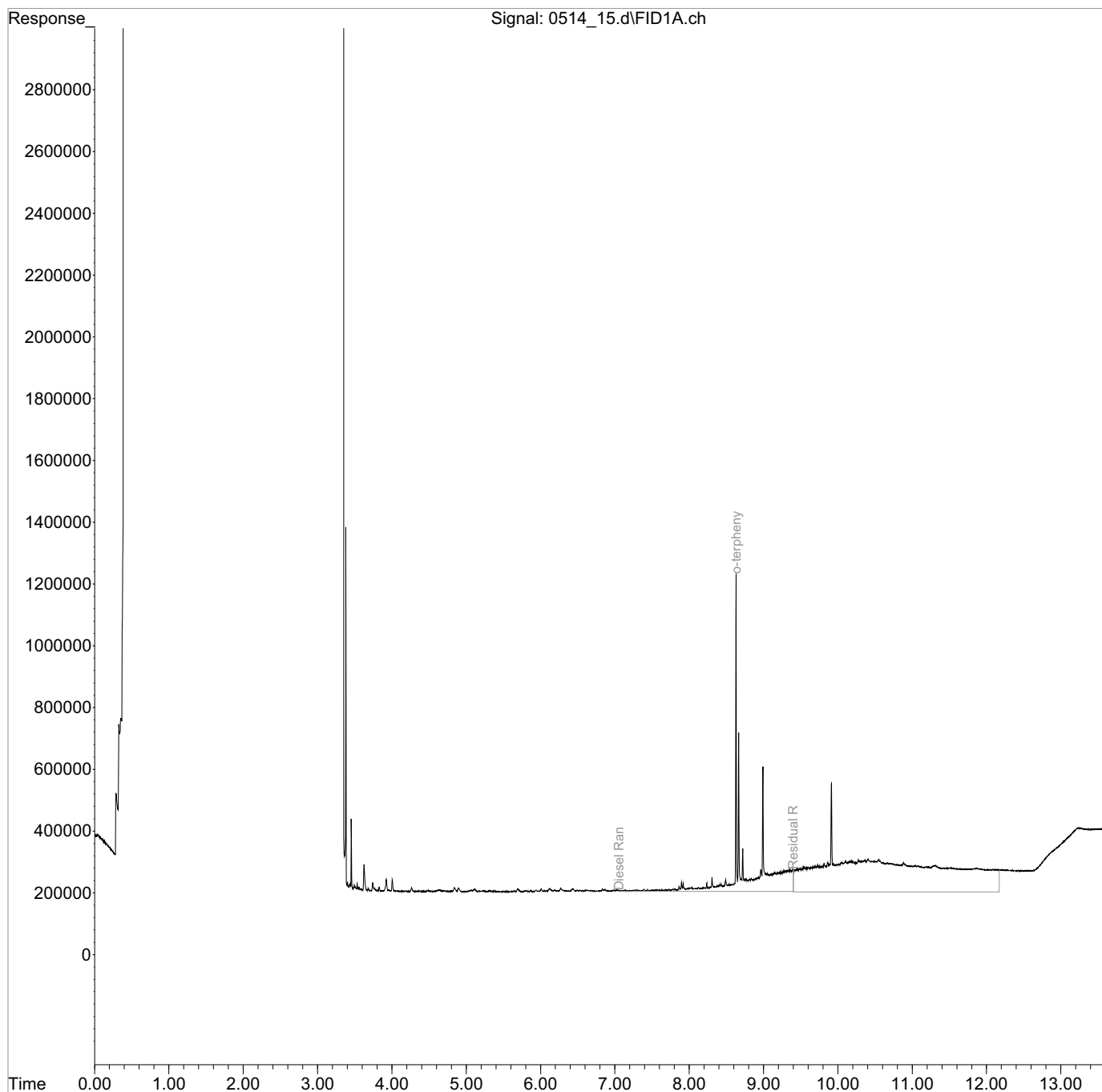
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051419\  
Data File : 0514 15.d  
Signal(s) : FID1A.ch  
Acq On : 14 May 2019 9:44 pm  
Operator : 784  
Sample : L1098098-03 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 09:48:16 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

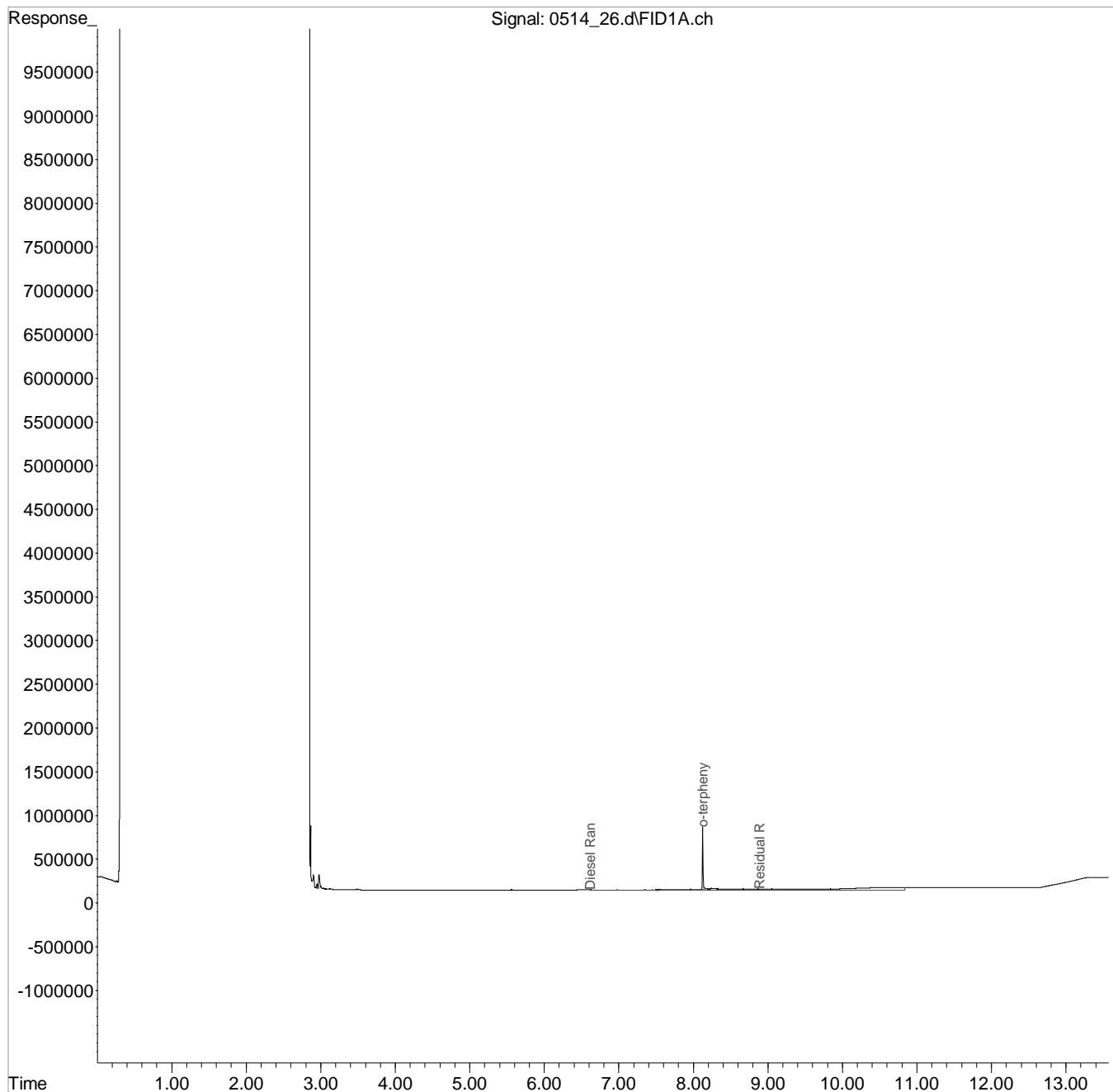
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514 26.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 May 2019 7:08 pm  
 Operator : 784  
 Sample : L1098098-04 1x WG1278958  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 19 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 14 19:38:55 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

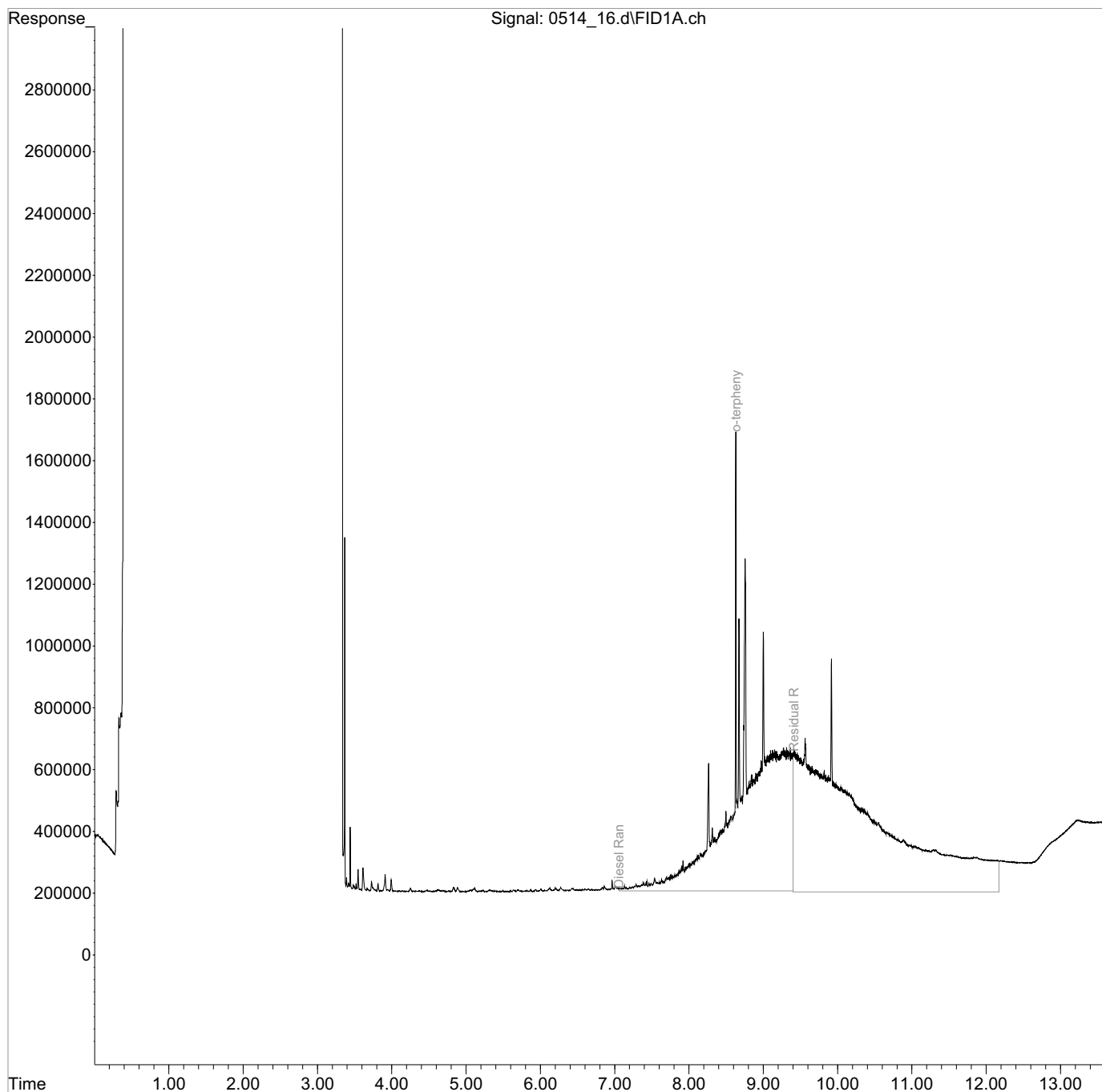
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051419\  
Data File : 0514\_16.d  
Signal(s) : FID1A.ch  
Acq On : 14 May 2019 10:04 pm  
Operator : 784  
Sample : L1098098-04 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 09:48:29 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

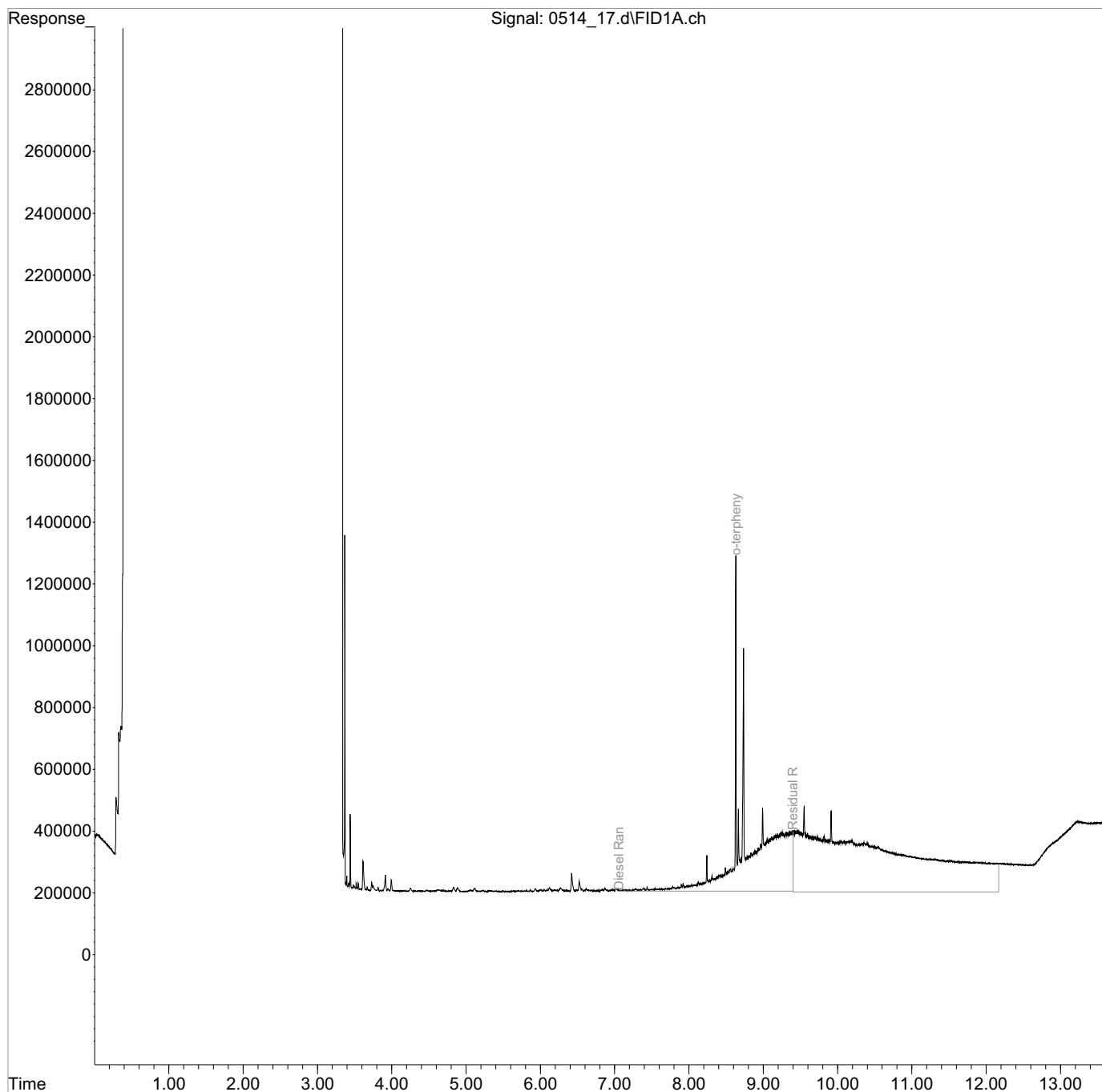
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
Data File : 0514 17.d  
Signal(s) : FID1A.ch  
Acq On : 14 May 2019 10:25 pm  
Operator : 784  
Sample : L1098098-05 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 09:48:47 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

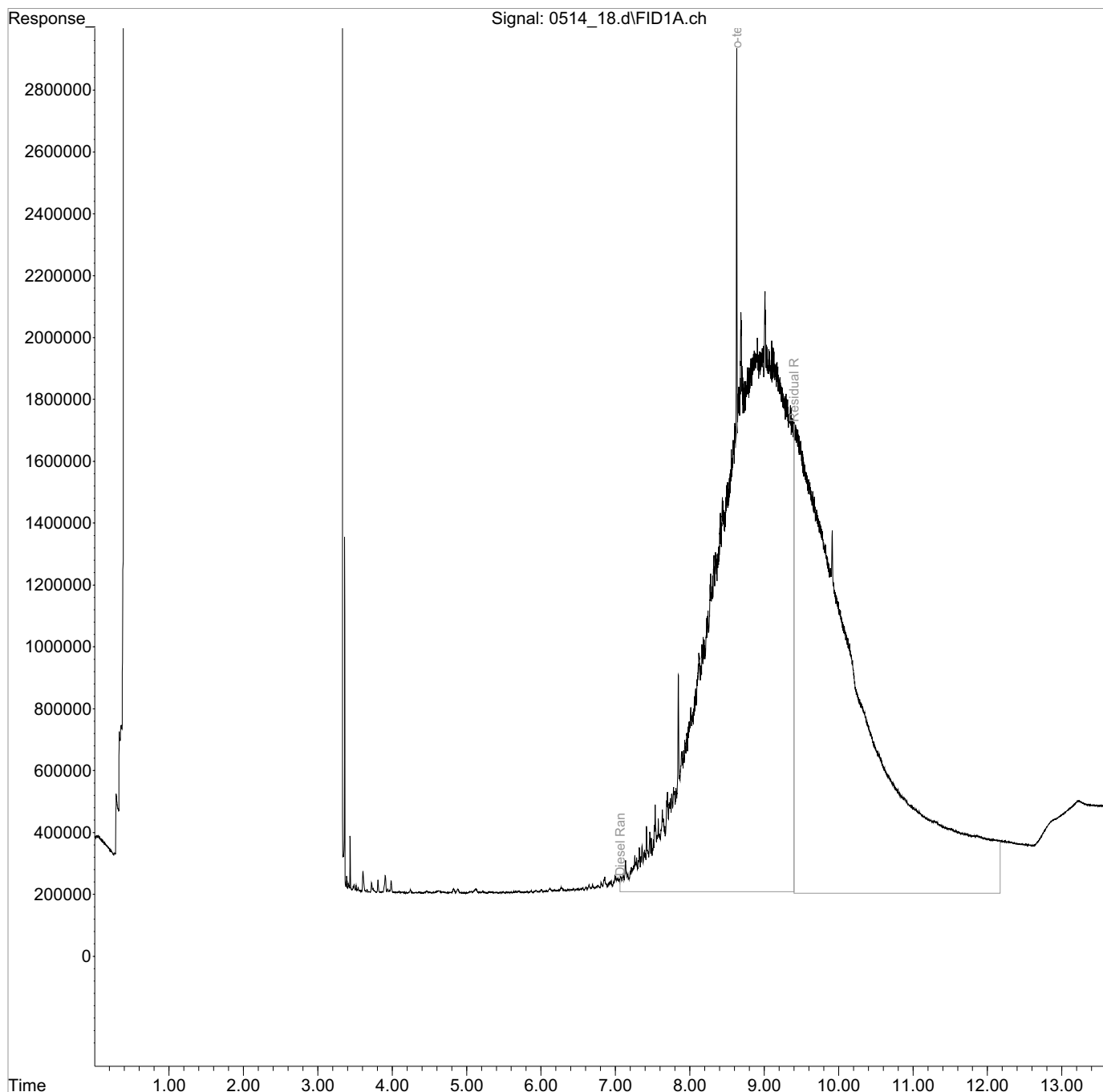
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
Data File : 0514 18.d  
Signal(s) : FID1A.ch  
Acq On : 14 May 2019 10:45 pm  
Operator : 784  
Sample : L1098098-06 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 09:49:09 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

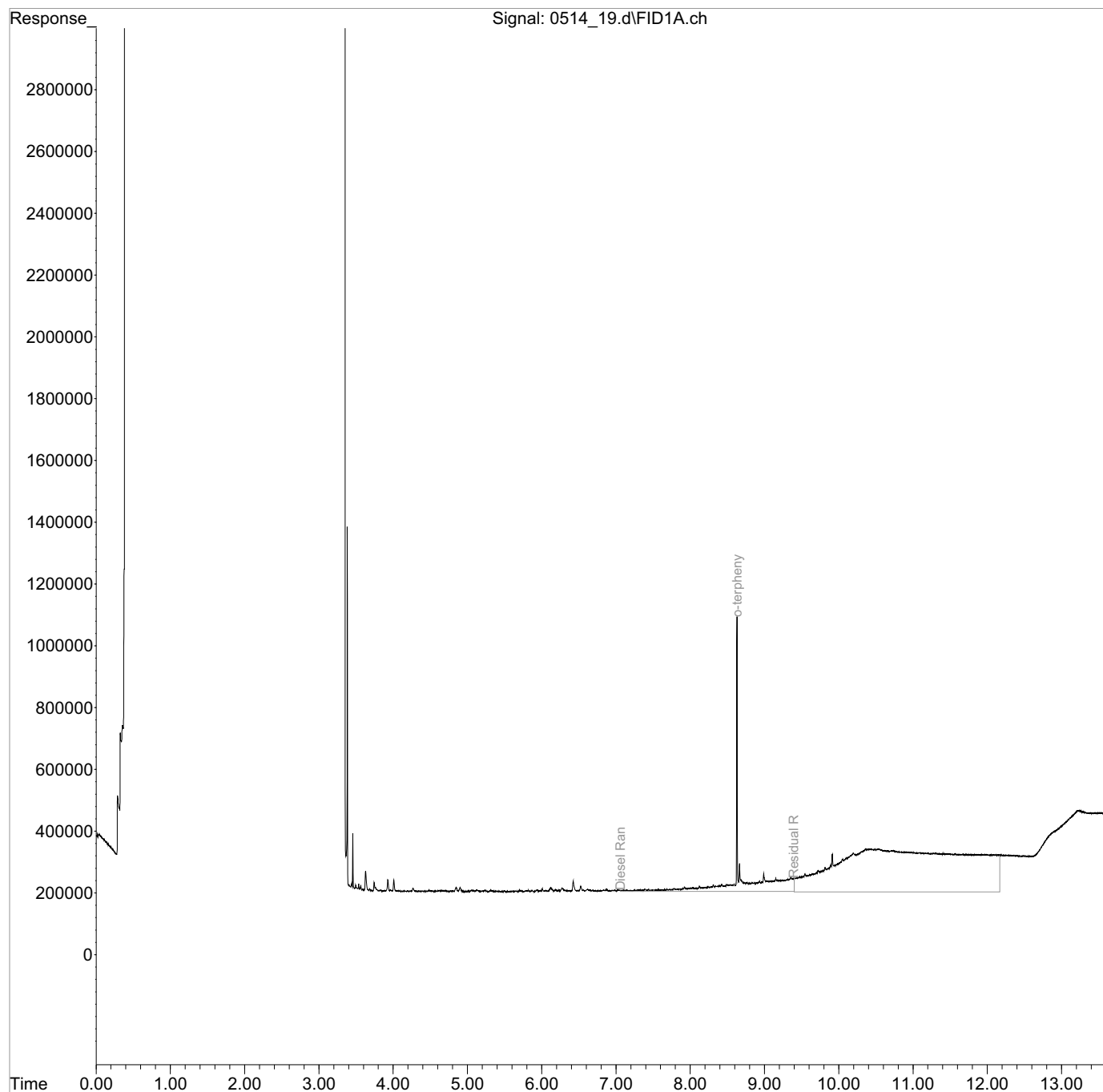
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
Data File : 0514 19.d  
Signal(s) : FID1A.ch  
Acq On : 14 May 2019 11:05 pm  
Operator : 784  
Sample : L1098098-07 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 09:49:30 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

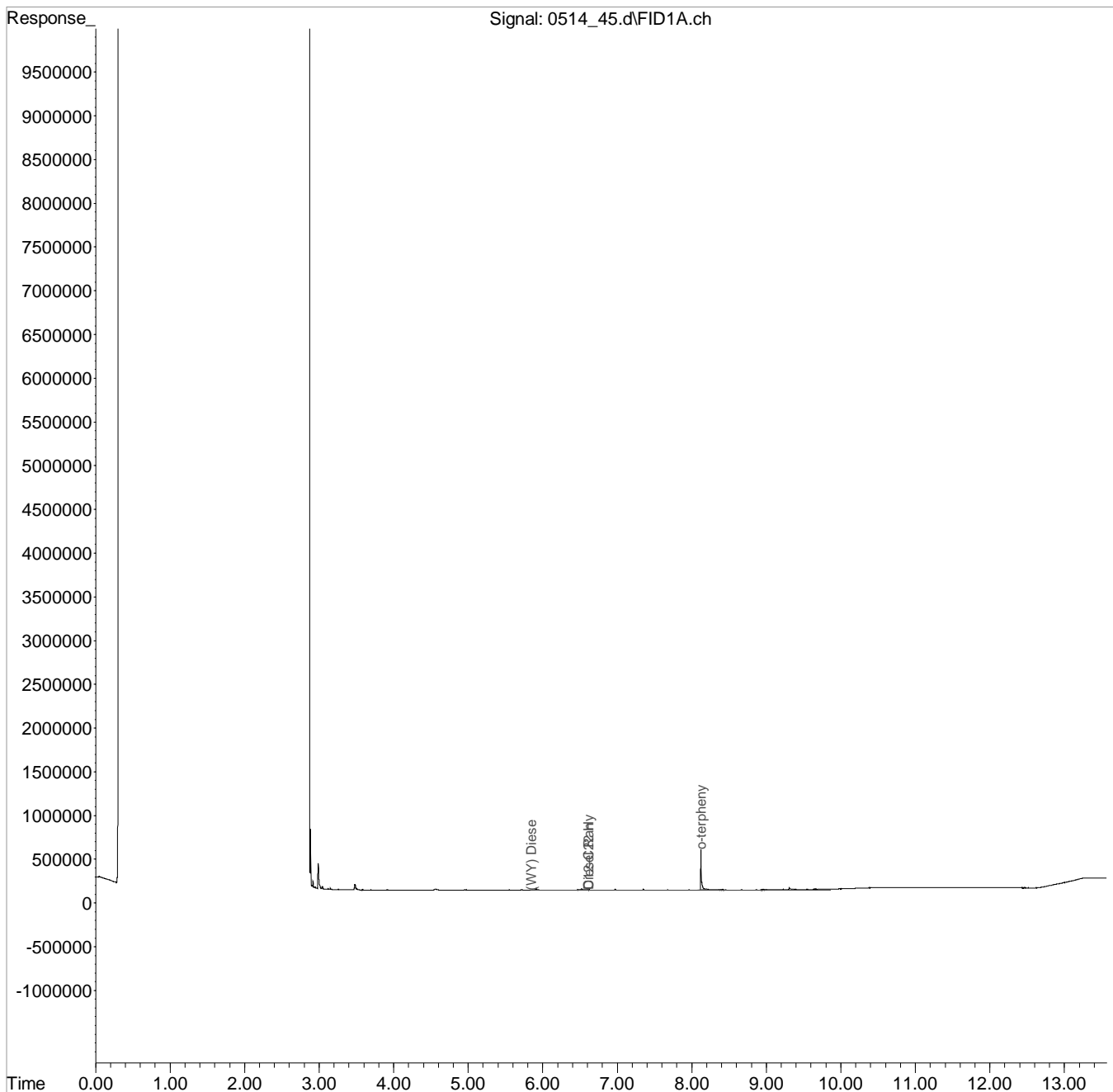
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514\_45.d  
 Signal(s) : FID1A.ch  
 Acq On : 15 May 2019 2:13 am  
 Operator : 784  
 Sample : L1098098-08 1x WG1280920  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 30 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 15 10:52:18 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :

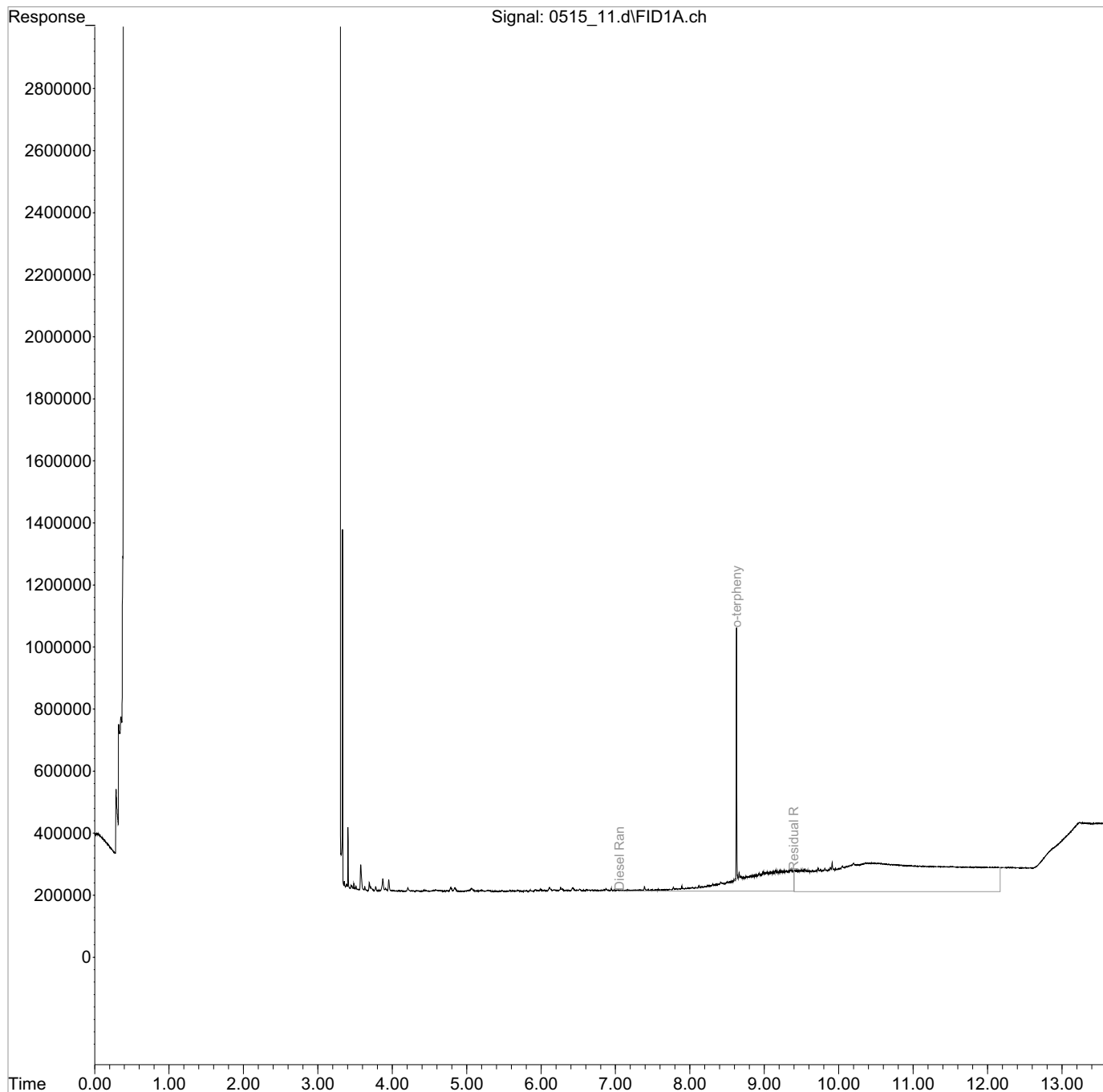




Data Path : C:\msdchem\1\data\051519\  
Data File : 0515 11.d  
Signal(s) : FID1A.ch  
Acq On : 15 May 2019 3:49 pm  
Operator : 784  
Sample : L1098098-08 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 16:13:30 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

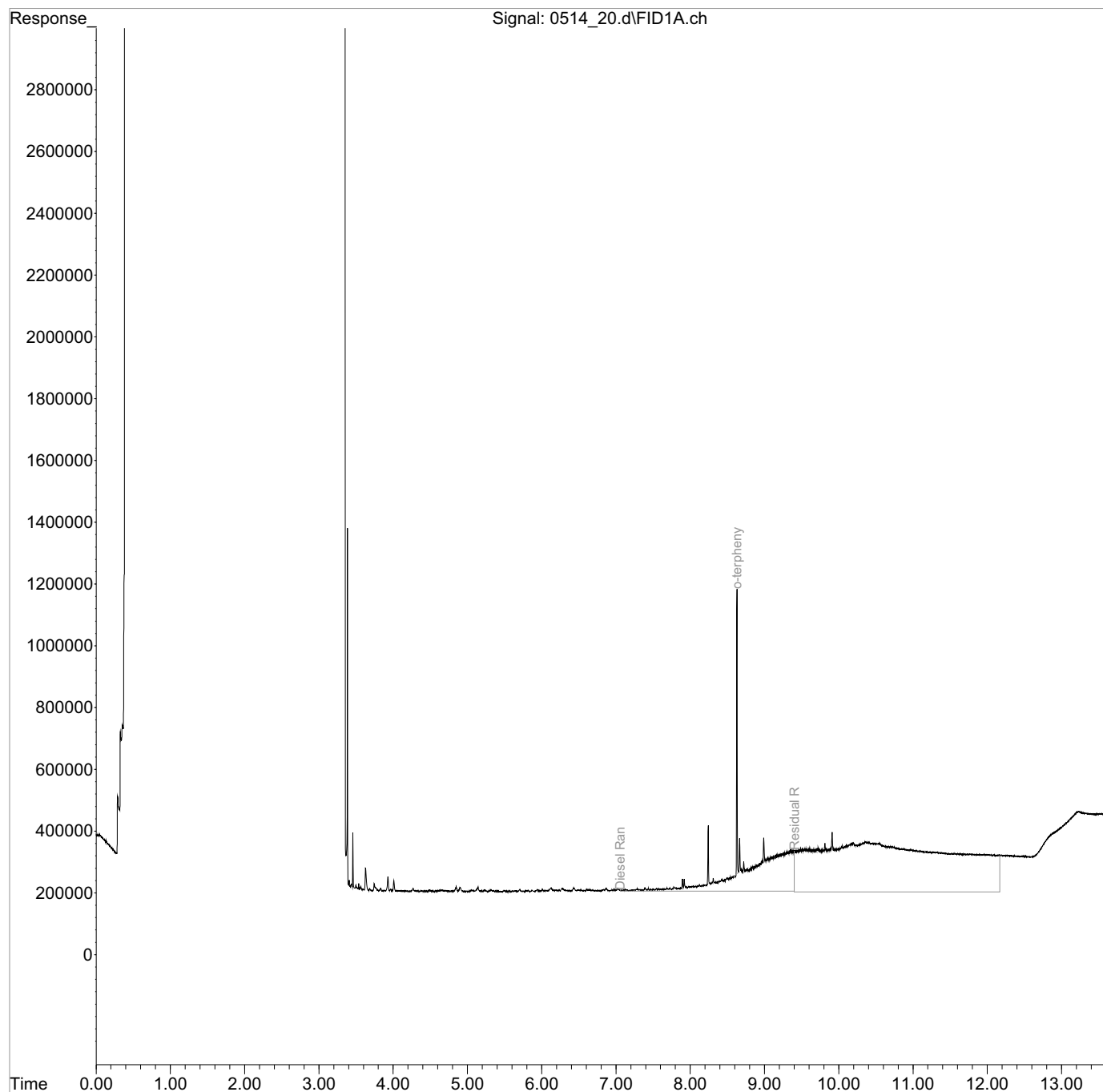
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
Data File : 0514 20.d  
Signal(s) : FID1A.ch  
Acq On : 14 May 2019 11:25 pm  
Operator : 784  
Sample : L1098098-09 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 09:49:45 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

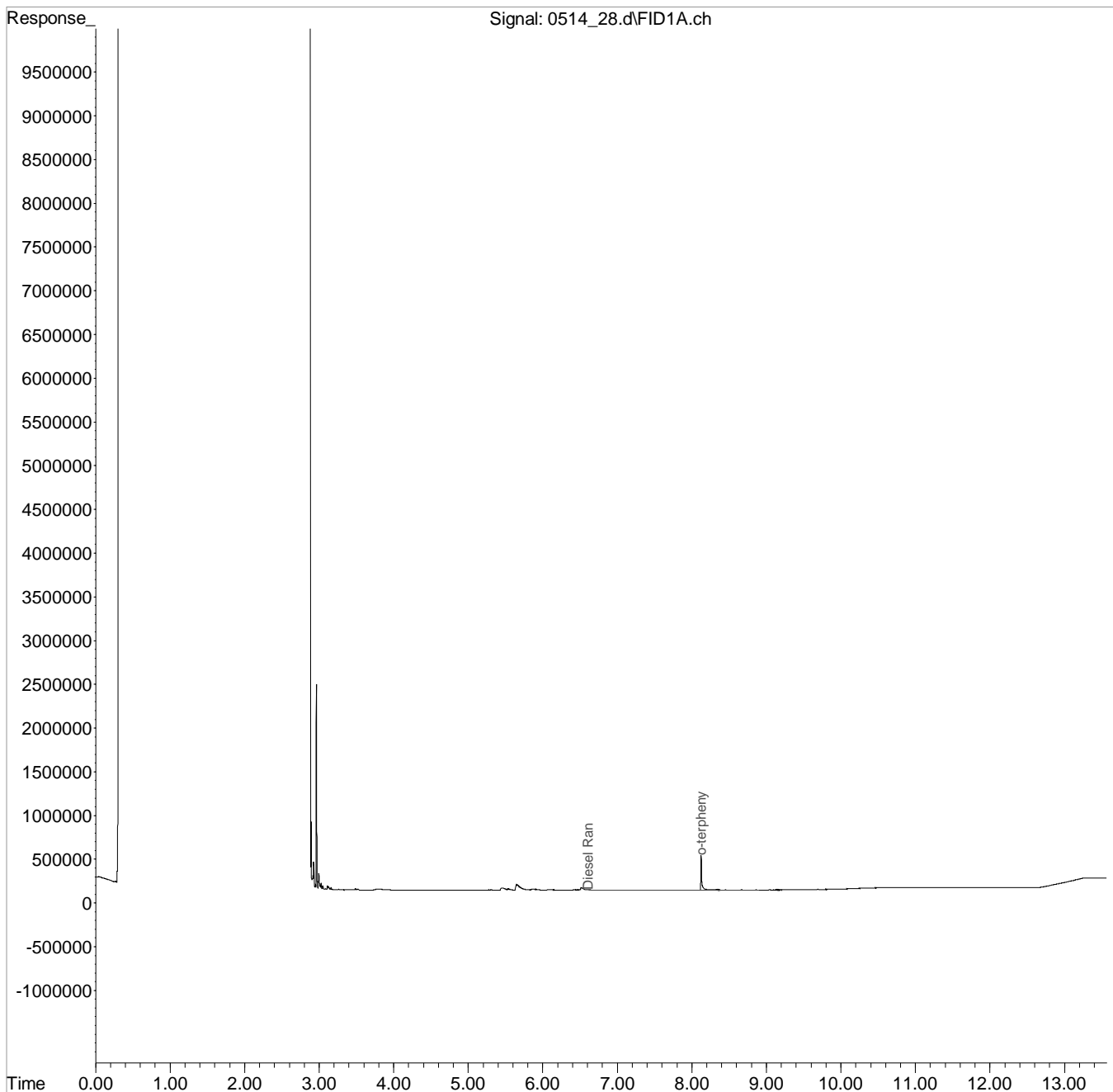
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514 28.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 May 2019 7:52 pm  
 Operator : 784  
 Sample : L1098098-10 1x WG1278958  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 21 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 15 11:03:15 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

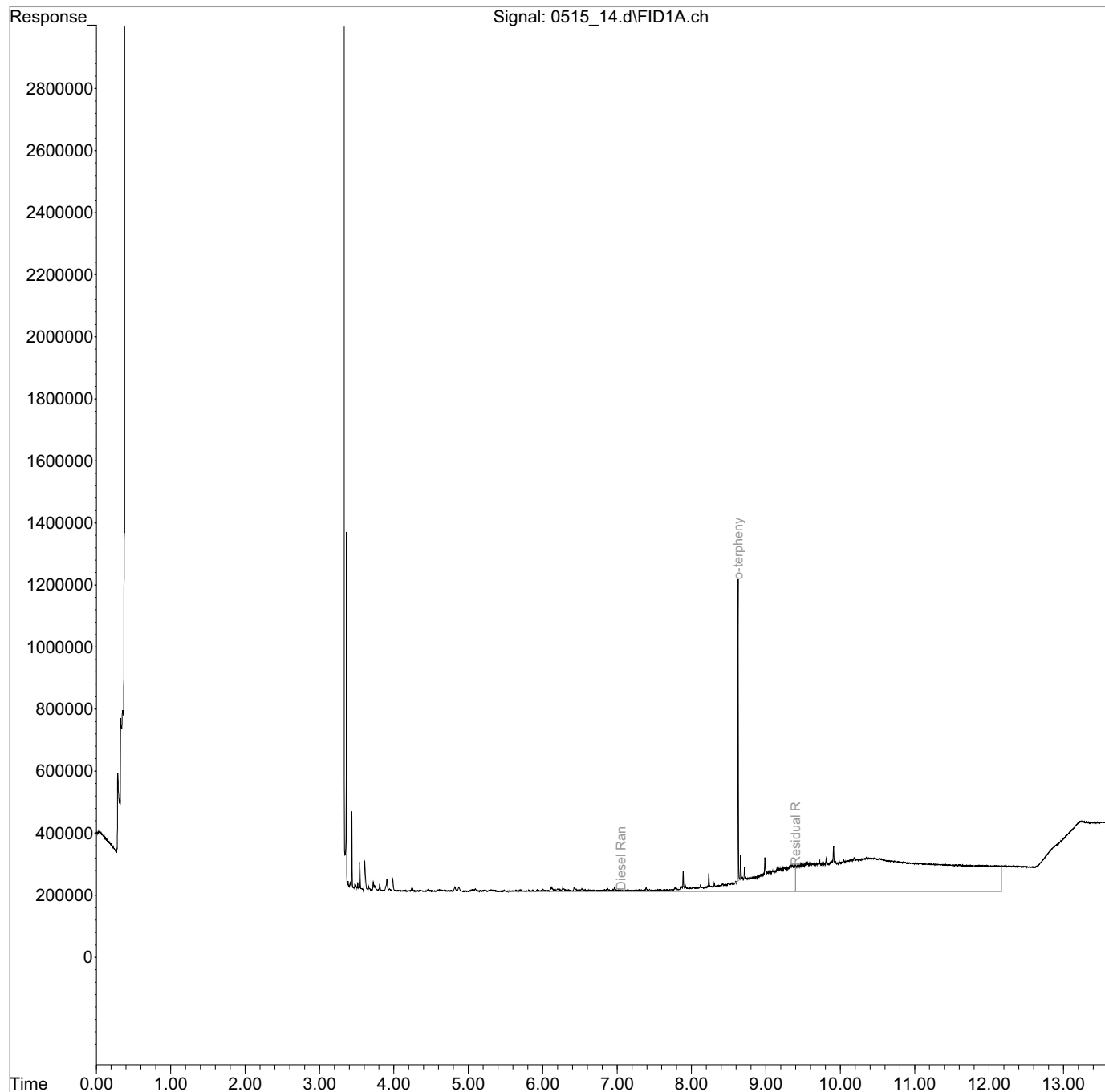
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051519\  
Data File : 0515 14.d  
Signal(s) : FID1A.ch  
Acq On : 15 May 2019 4:50 pm  
Operator : 784  
Sample : L1098098-10 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 19:25:14 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

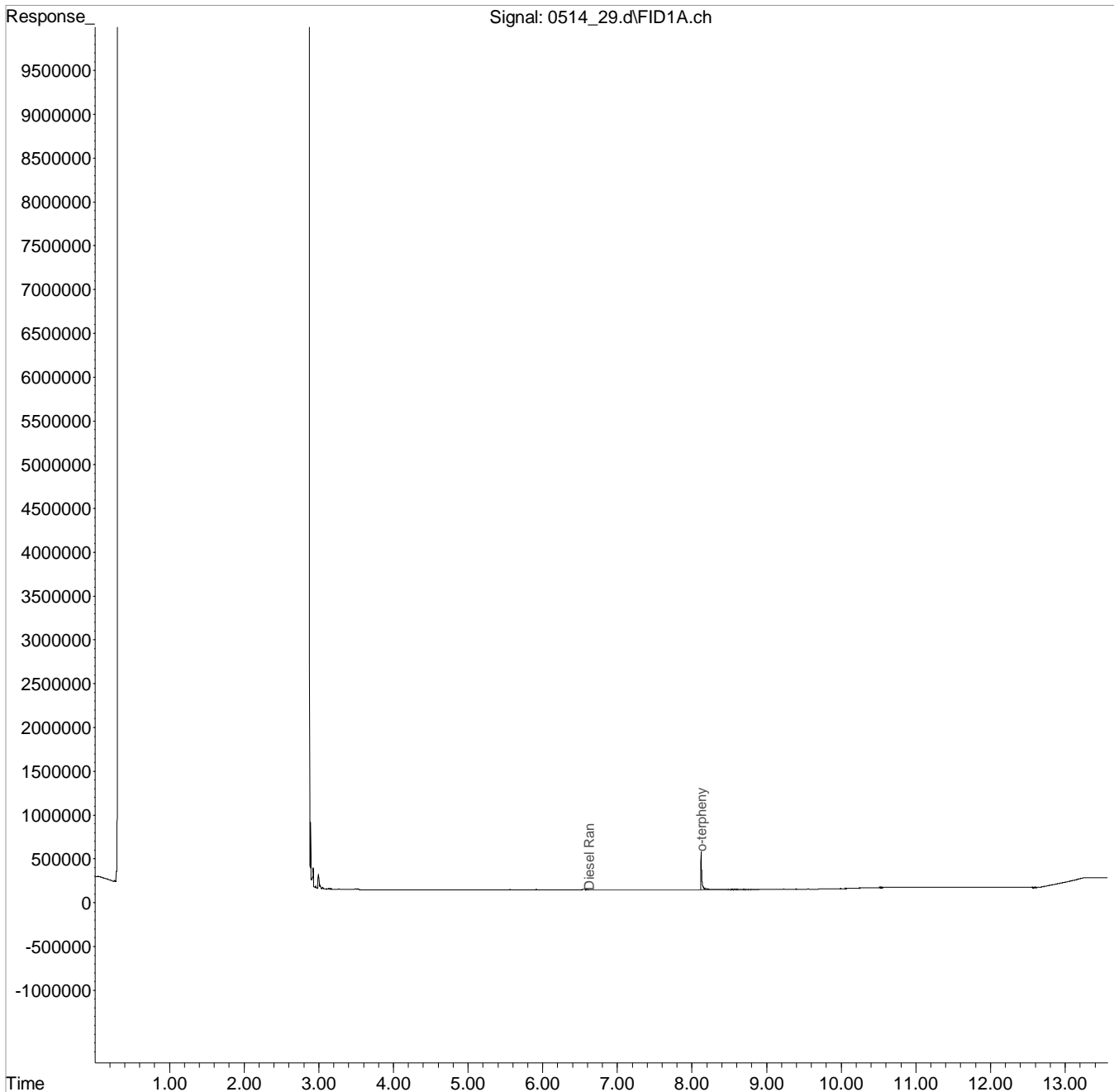
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
Data File : 0514 29.d  
Signal(s) : FID1A.ch  
Acq On : 14 May 2019 8:14 pm  
Operator : 784  
Sample : L1098098-16 1x WG1278958  
Misc : M.I.s on ranges are corrections  
ALS Vial : 22 Sample Multiplier: 1  
InstName : SVGC21

Integration File: events.e  
Quant Time: May 15 10:58:25 2019  
Quant Method : C:\msdchem\1\methods\DM21E08S.M  
Quant Title : DROLVI  
QLast Update : Thu May 09 14:33:23 2019  
Response via : Initial Calibration  
Integrator: ChemStation

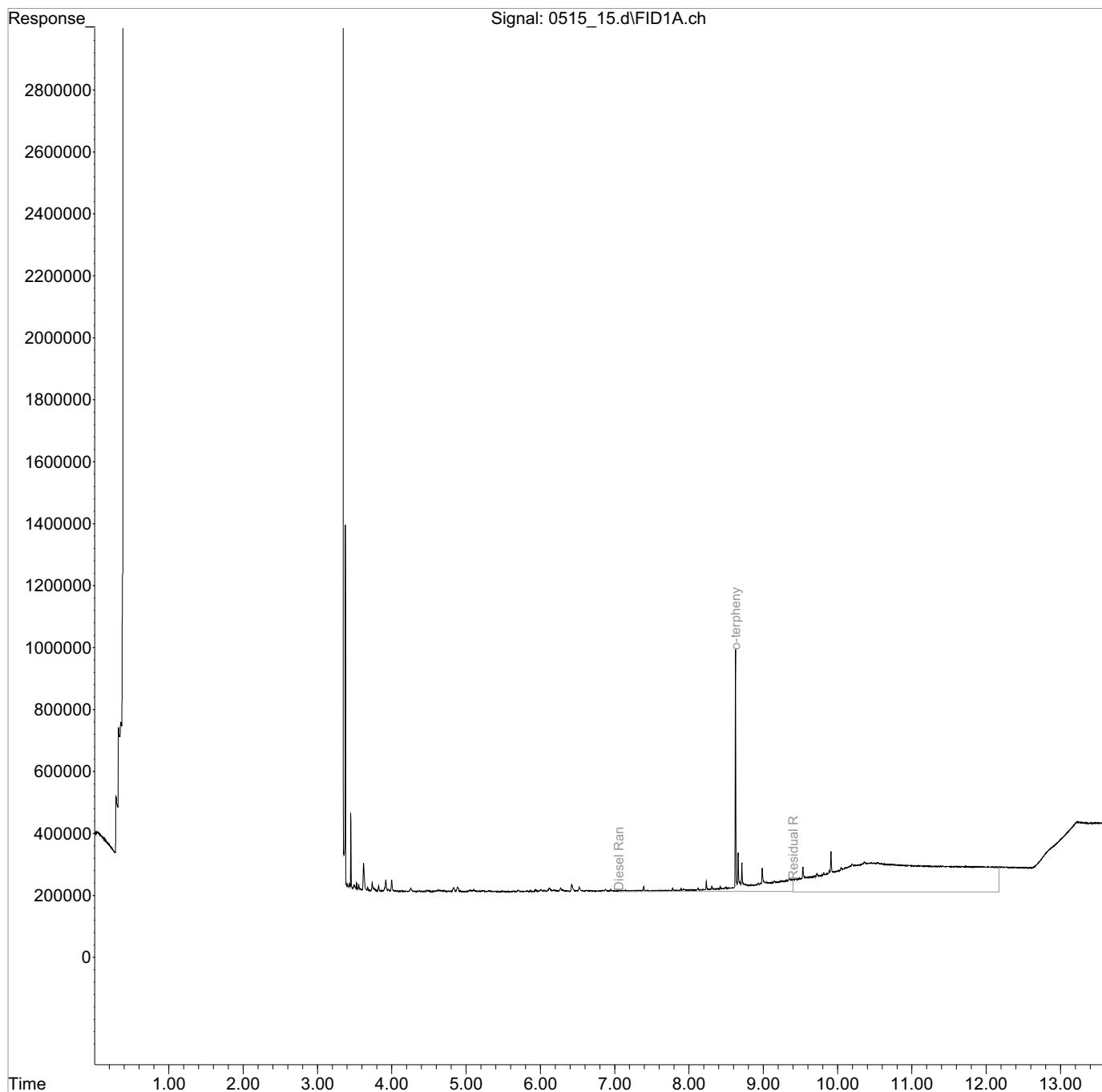
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051519\  
Data File : 0515 15.d  
Signal(s) : FID1A.ch  
Acq On : 15 May 2019 5:10 pm  
Operator : 784  
Sample : L1098098-16 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 19:27:07 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051519\  
 Data File : 0515 28.d  
 Signal(s) : FID1A.ch  
 Acq On : 15 May 2019 9:47 pm  
 Operator : 784  
 Sample : L1098098-17 1x WG1280380  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e  
 Quant Time: May 16 10:43:36 2019  
 Quant Method : C:\msdchem\1\methods\DM34E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 10:36:44 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
-----			
System Monitoring Compounds			
17) S o-terphenyl	8.63	4311813	0.2581995 ppm
Spiked Amount 0.4000	Range 70 - 130	Recovery	= 64.55%#
Target Compounds			
1) t,m,h C12-C22 Hydrocarbons	0.00	0	N.D. ppm
2) t,m,h TPH (GC/FID) HIGH FRA...	0.00	0	N.D. ppm
3) h,t DRO W/ SGT	0.00	0	N.D. ppm
4) h,m DRO C8-C28	0.00	0	N.D. ppm
5) h,m (WY) Diesel Range Org...	0.00	0	N.D. ppm
6) h,m Diesel Range Organics	7.06	40504217	2.8204445 ppm
7) h,m Residual Range Organics	9.40	141060246	7.5990419 ppm
8) h,m C10-C28 Diesel Range	0.00	0	N.D. ppm
9) h,m C28-C36 Motor Oil Range	0.00	0	N.D. ppm
10) h,m C28-C40 Oil Range	0.00	0	N.D. ppm
11) h,m Diesel	0.00	0	N.D. ppm
12) h,m Motor Oil	0.00	0	N.D. ppm
13) h Mineral Spirits	0.00	0	N.D. ppm
14) h Kerosene	0.00	0	N.D. ppm
15) h #6 Fuel Oil	0.00	0	N.D. ppm
16) h Hydraulic Fluid	0.00	0	N.D. ppm
-----			

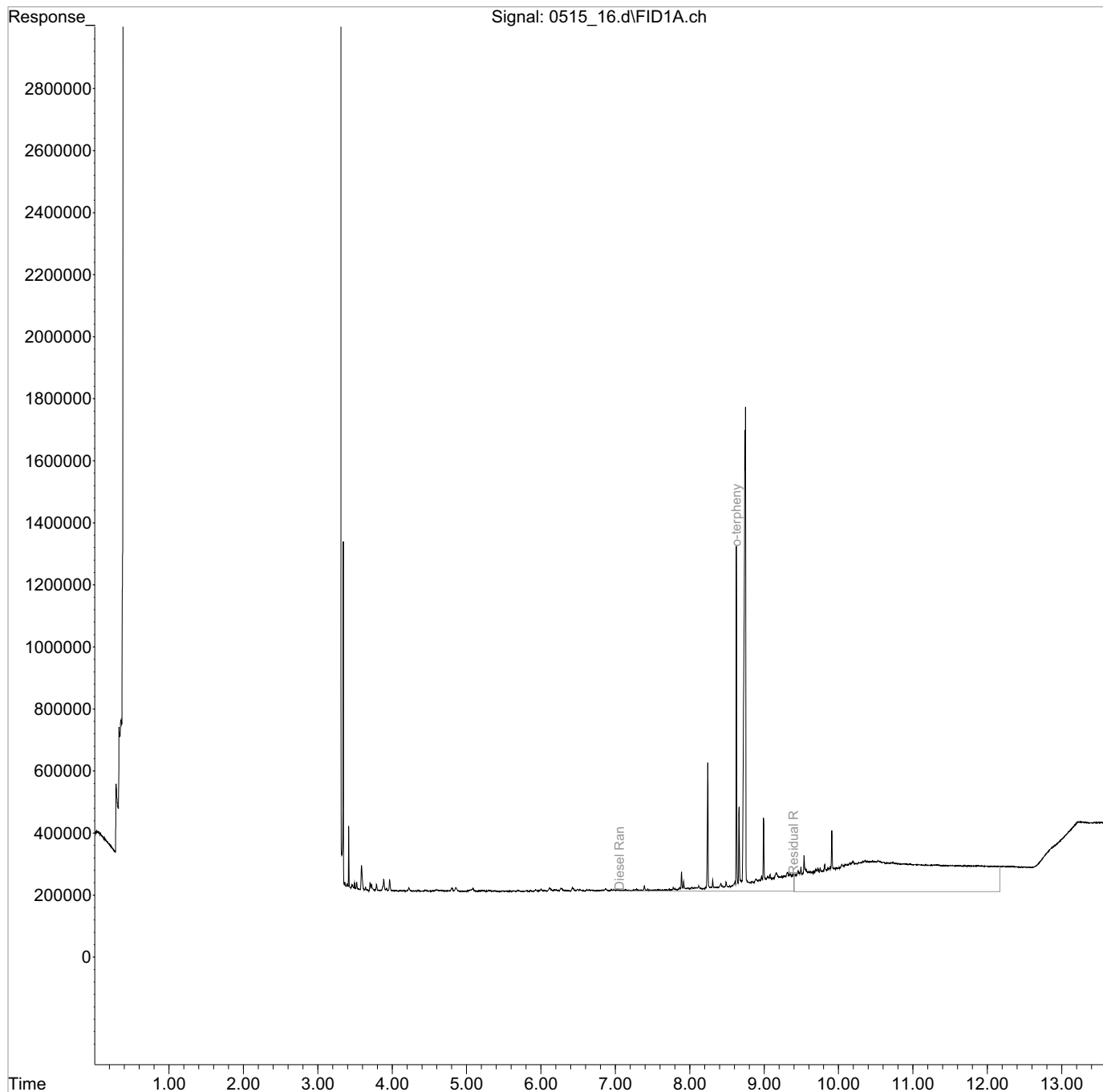
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\1\data\051519\  
Data File : 0515\_16.d  
Signal(s) : FID1A.ch  
Acq On : 15 May 2019 5:30 pm  
Operator : 784  
Sample : L1098098-18 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 19:28:56 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :





Data Path : C:\msdchem\1\data\051519\  
 Data File : 0515 12.d  
 Signal(s) : FID1A.ch  
 Acq On : 15 May 2019 12:50 pm  
 Operator : 773  
 Sample : L1098098-19 1x WG1280917  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 10 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 15 13:03:09 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :

Compound	R.T.	Response	Conc Units
-----			
System Monitoring Compounds			
16) S o-terphenyl	5.00	20608067	0.4152818 ppm
Spiked Amount 0.4000	Range 70 - 130	Recovery	= 103.82%
Target Compounds			
1) t,m,h C12-C22 Hydrocarbons	0.00	0	N.D. ppm
2) t,m,h TPH (GC/FID) HIGH FRA...	0.00	0	N.D. ppm
3) h,t DRO W/ SGT	0.00	0	N.D. ppm
4) h,m (WY) Diesel Range Org...	0.00	0	N.D. ppm
5) h,m Diesel Range Organics	3.78	36904543	0.9532965 ppm
6) h,m Residual Range Organics	5.72	65503652	1.7768981 ppm
7) h,m C10-C28 Diesel Range	0.00	0	N.D. ppm
8) h,m C28-C36 Motor Oil Range	0.00	0	N.D. ppm
9) h,m C28-C40 Oil Range	0.00	0	N.D. ppm
10) h,m Diesel	0.00	0	N.D. ppm
11) h,m Motor Oil	0.00	0	N.D. ppm
12) h Mineral Spirits	0.00	0	N.D. ppm
13) h Kerosene	0.00	0	N.D. ppm
14) h #6 Fuel Oil	0.00	0	N.D. ppm
15) h Hydraulic Fluid	0.00	0	N.D. ppm
-----			

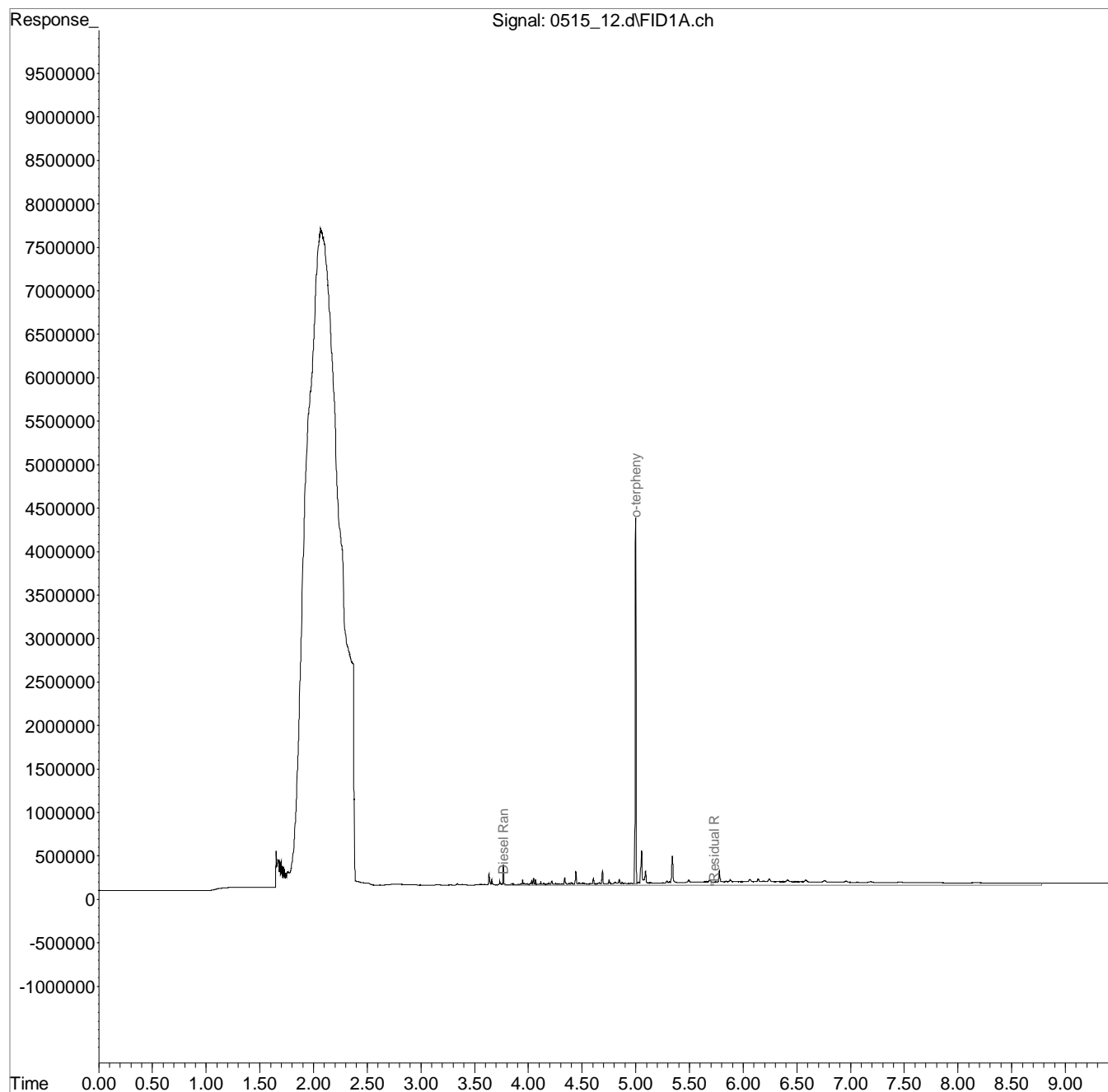
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : C:\msdchem\1\data\051519\  
 Data File : 0515 12.d  
 Signal(s) : FID1A.ch  
 Acq On : 15 May 2019 12:50 pm  
 Operator : 773  
 Sample : L1098098-19 1x WG1280917  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 10 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: May 15 13:03:09 2019  
 Quant Method : C:\msdchem\1\methods\DM31E10S.M  
 Quant Title :  
 QLast Update : Sat May 11 09:42:52 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

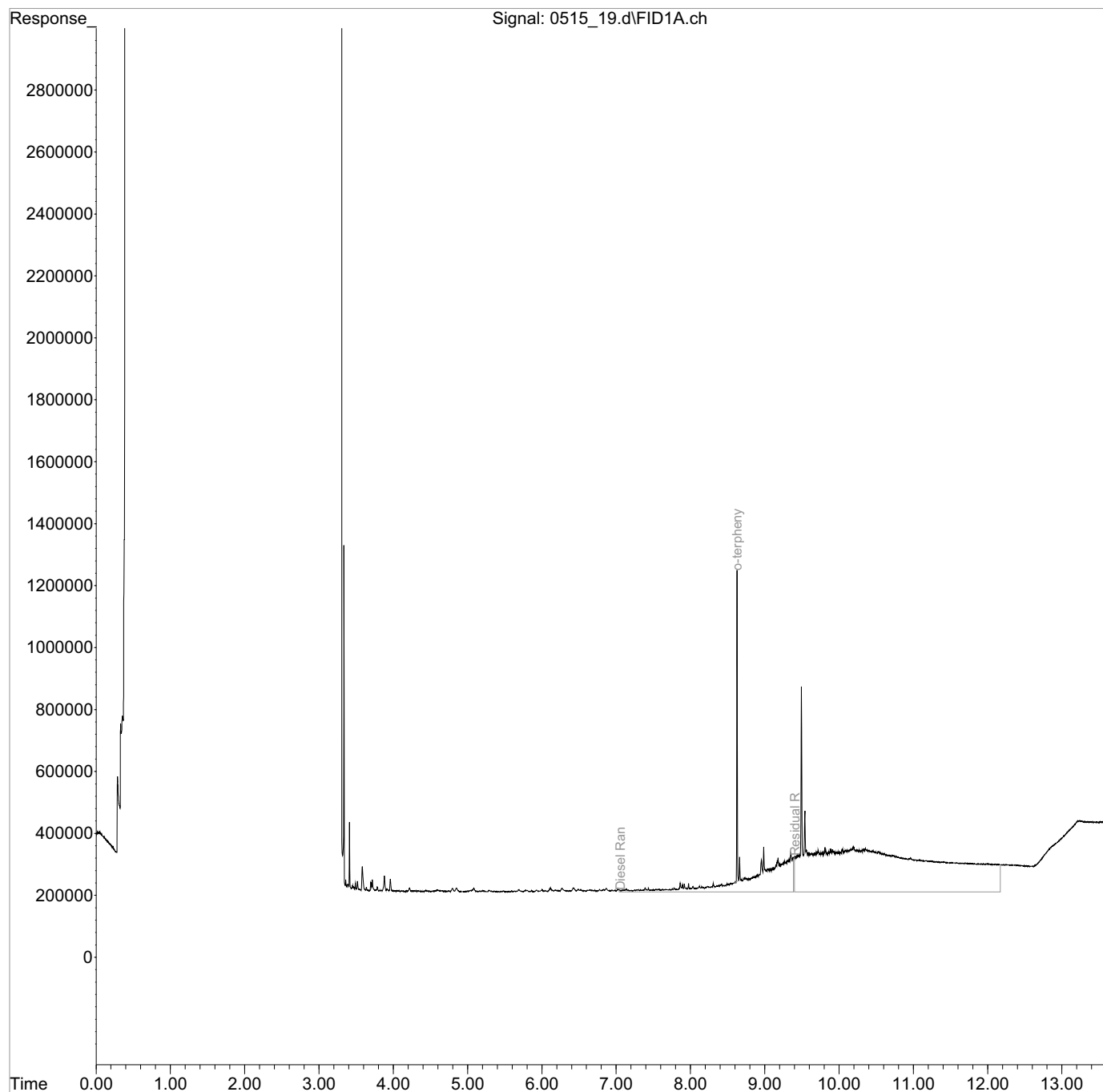
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051519\  
Data File : 0515 19.d  
Signal(s) : FID1A.ch  
Acq On : 15 May 2019 6:30 pm  
Operator : 784  
Sample : L1098098-20 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 19:36:45 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

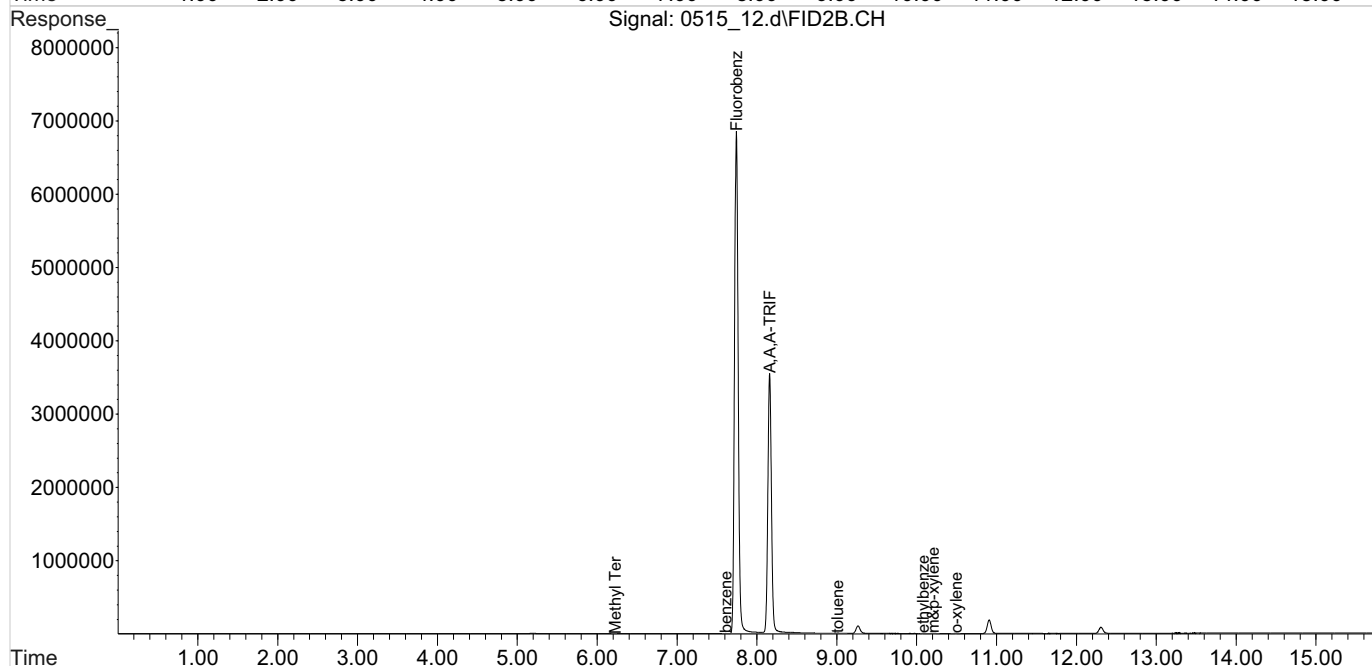
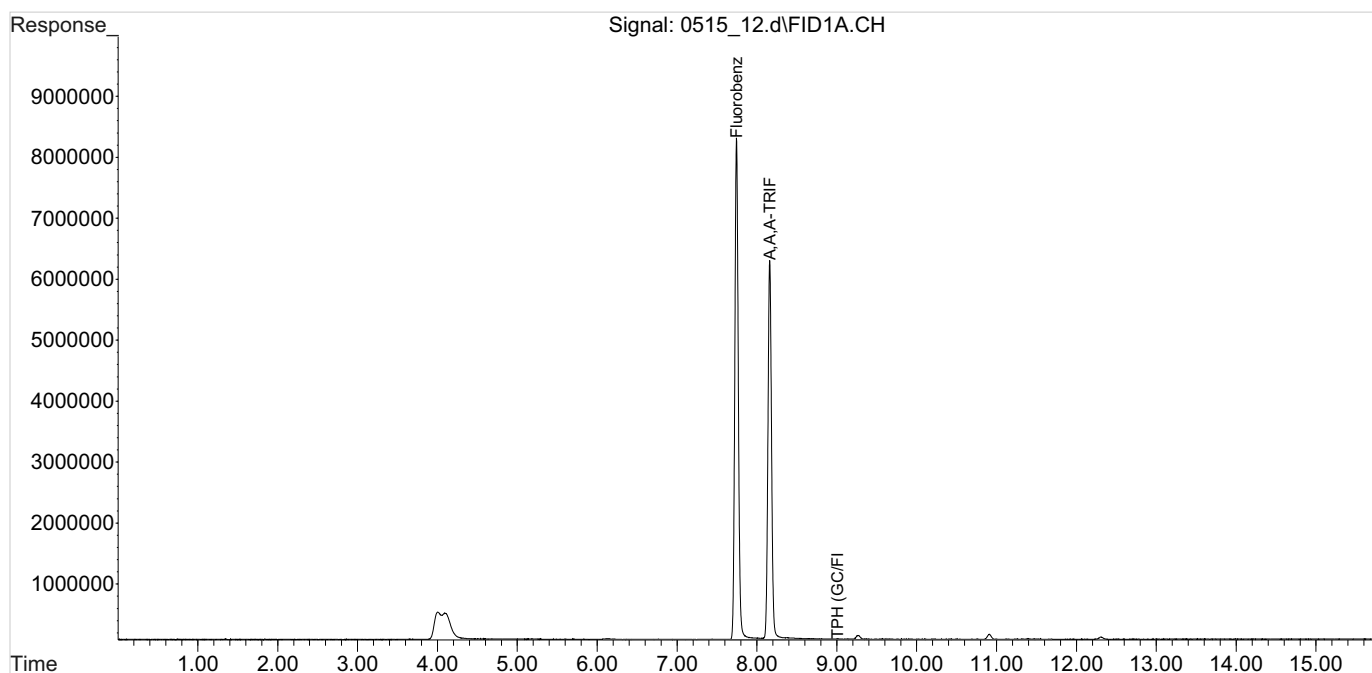
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051519\  
Data File : 0515 12.d  
Signal(s) : Signal #1: FID1A.CH Signal #2: FID2B.CH  
Acq On : 15 May 2019 17:10 pm  
Operator : 772  
Sample : L1098098-20 1x WG1281549  
Misc : soil  
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: BTEX.E  
Integration File signal 2: EVENTS3.E  
Quant Time: May 16 13:24:57 2019  
Quant Method : C:\msdchem\1\methods\BG12D29S.M  
Quant Title : WIS GRO VOCGC12  
QLast Update : Tue Apr 30 08:50:49 2019  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

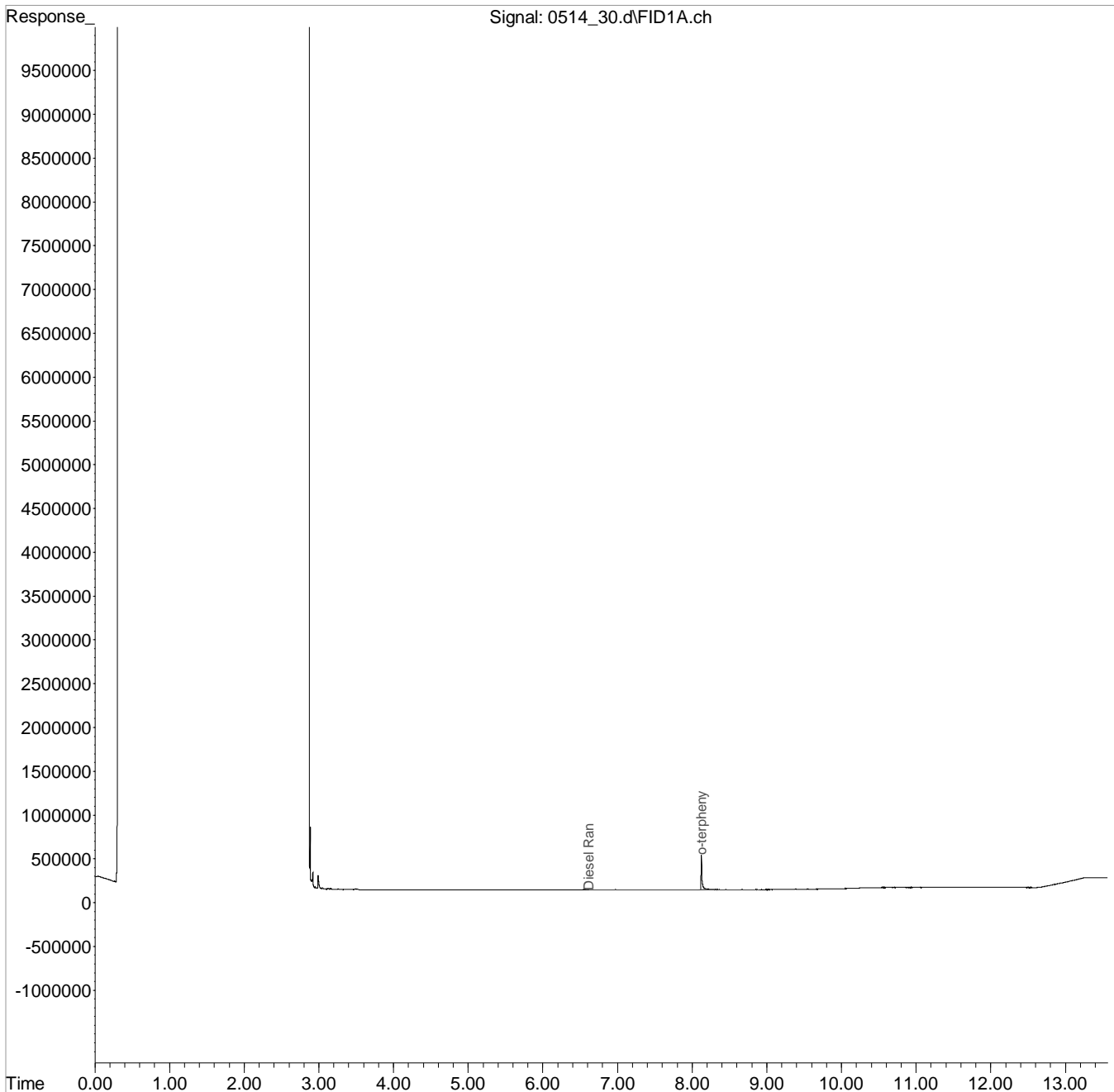
Volume Inj. :  
Signal #1 Phase : Signal #2 Phase:  
Signal #1 Info : Signal #2 Info :



Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514 30.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 May 2019 8:36 pm  
 Operator : 784  
 Sample : L1098098-21 1x WG1278958  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 23 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 15 10:58:39 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

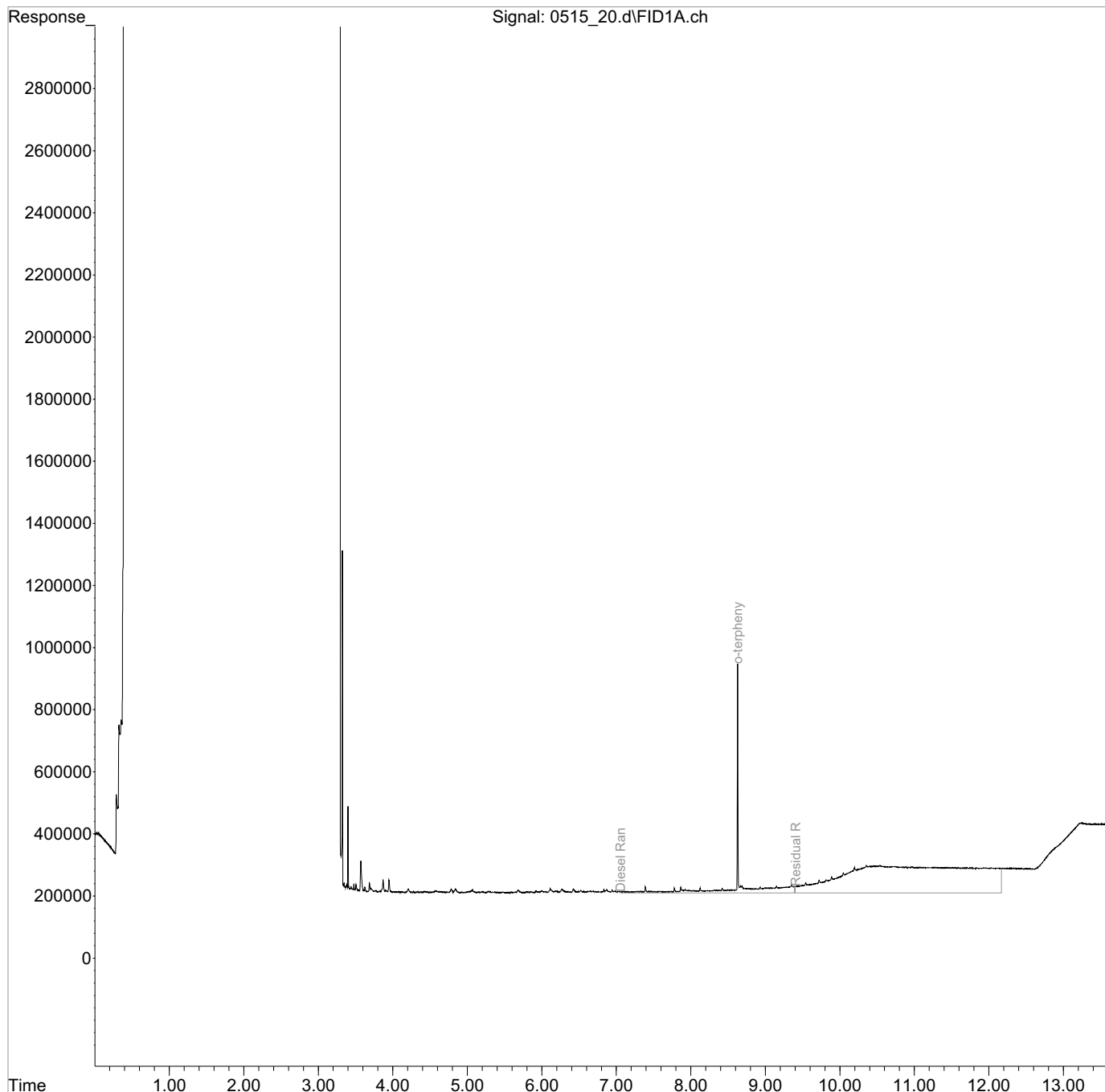
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051519\  
Data File : 0515 20.d  
Signal(s) : FID1A.ch  
Acq On : 15 May 2019 6:51 pm  
Operator : 784  
Sample : L1098098-21 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 15 19:37:21 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

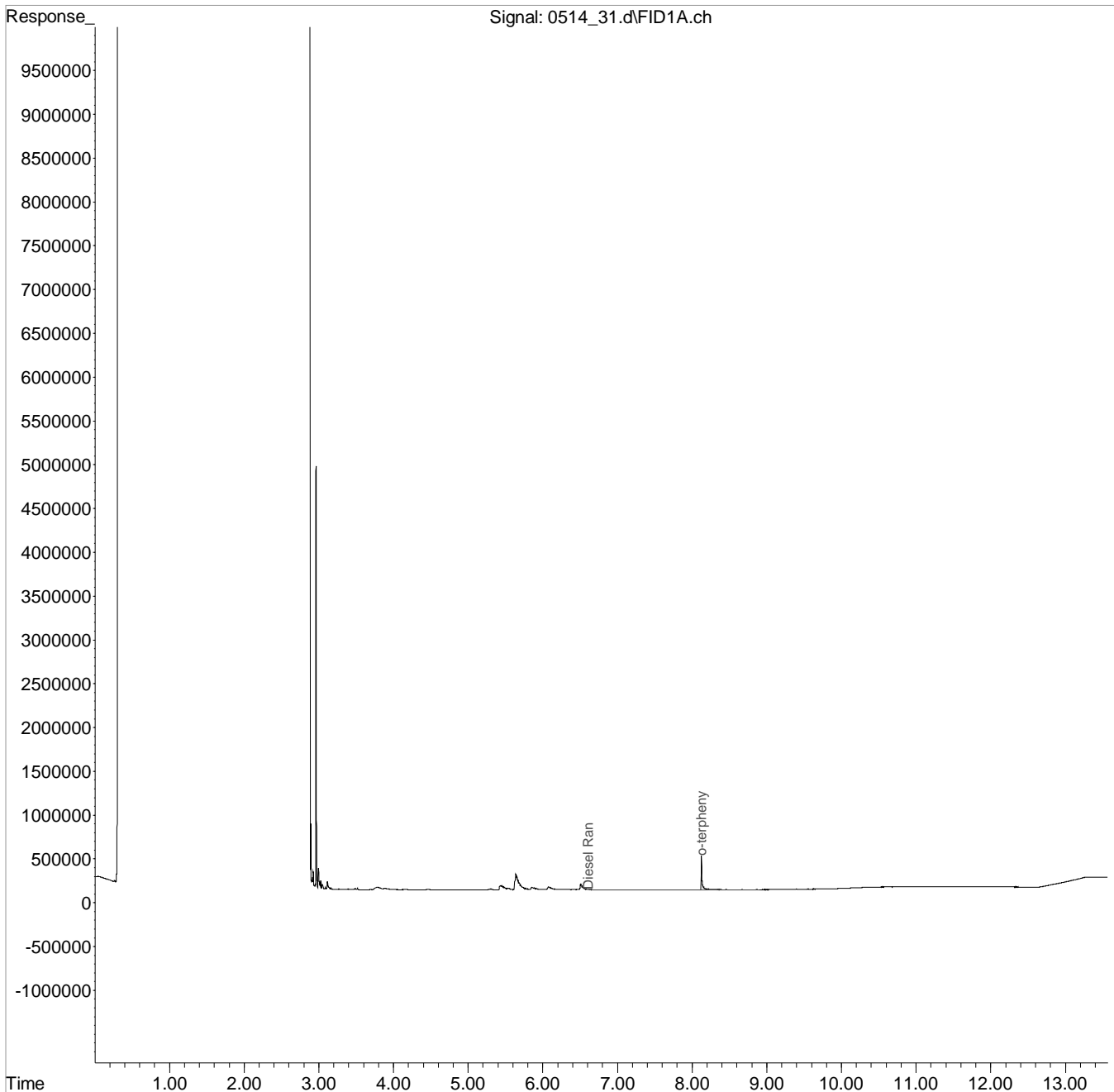
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\051419\  
 Data File : 0514 31.d  
 Signal(s) : FID1A.ch  
 Acq On : 14 May 2019 8:58 pm  
 Operator : 784  
 Sample : L1098098-22 1x WG1278958  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 24 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: May 15 10:59:48 2019  
 Quant Method : C:\msdchem\1\methods\DM21E08S.M  
 Quant Title : DROLVI  
 QLast Update : Thu May 09 14:33:23 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

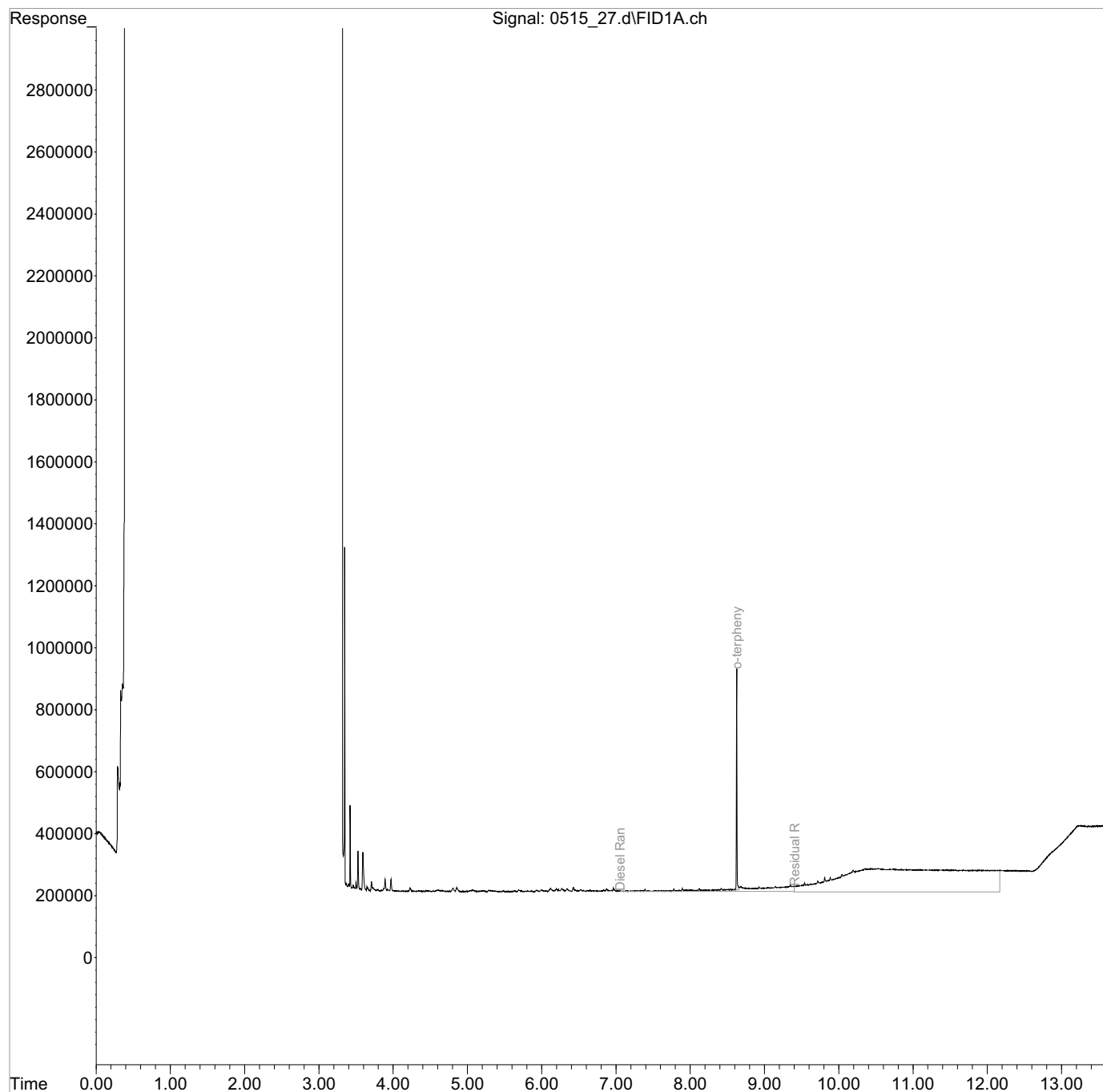
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\051519\  
Data File : 0515 27.d  
Signal(s) : FID1A.ch  
Acq On : 15 May 2019 9:27 pm  
Operator : 784  
Sample : L1098098-22 1x WG1280380  
Misc : M.I.s on ranges are corrections  
ALS Vial : 16 Sample Multiplier: 1

Integration File: events.e  
Quant Time: May 16 10:46:25 2019  
Quant Method : C:\msdchem\1\methods\DM34E10S.M  
Quant Title :  
QLast Update : Sat May 11 10:36:44 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :





## Kennedy/Jenks Con-BNSF Region 1

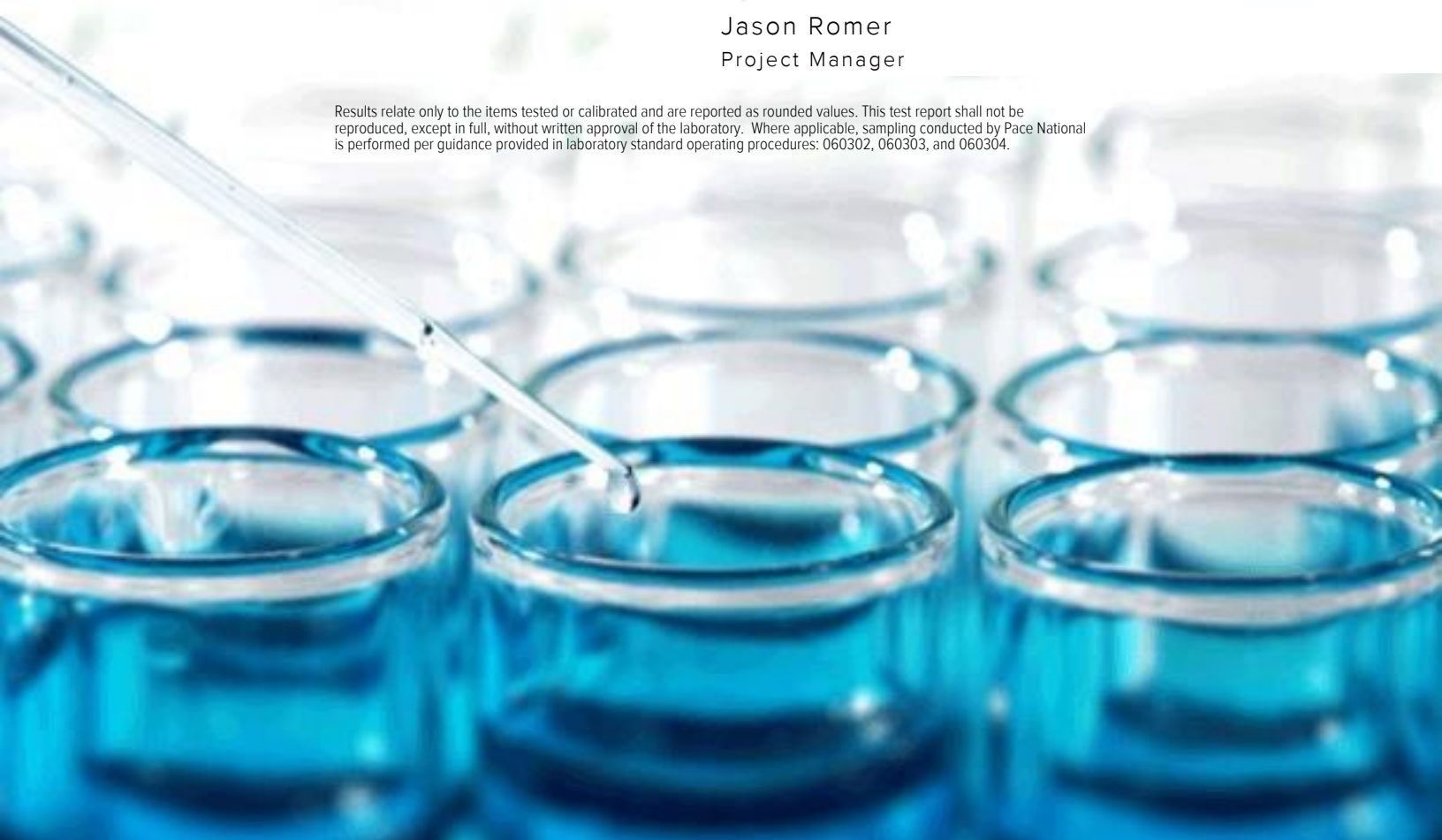
Sample Delivery Group: L1107629  
Samples Received: 05/11/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

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

Entire Report Reviewed By:

Jason Romer  
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.





<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
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# SAMPLE SUMMARY



WMW-18-20190509 L1107629-01 GW

Collected by: K. Teague  
Collected date/time: 05/09/19 07:55  
Received date/time: 05/11/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1294632	1	06/12/19 14:22	06/15/19 13:50	JPD	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>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.

Jason Romer  
Project Manager

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



Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	15.7		2.00	1	06/15/2019 13:50	<a href="#">WG1294632</a>

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



Method Blank (MB)

(MB) R3421378-1 06/15/19 12:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		0.250	2.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

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

(LCS) R3421378-2 06/15/19 12:49 • (LCSD) R3421378-3 06/15/19 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 %
Arsenic	50.0	52.1	50.3	104	101	80.0-120			3.55	20



Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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.

## 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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

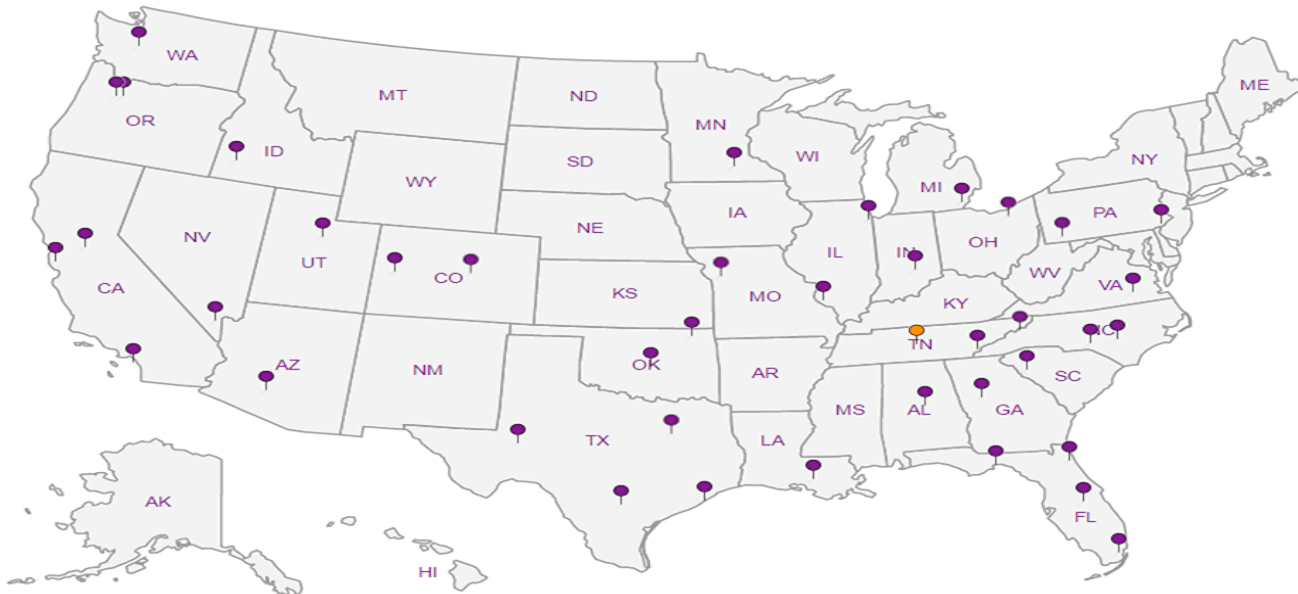
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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

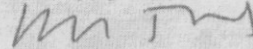
8 Al

9 Sc



<b>Kennedy/Jenks Con-BNSF Region 1</b> 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001	Billing Information: <b>Accounts Payable</b> 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001	Pres Chk 12 12 12	Analysis / Container / Preservative										Chain of Custody Page 1 of 4 
	Report to: <b>Ryan Hultgren</b>	Email To: RyanHultgren@kennedyjenks.com, KatieTeague@kennedyjenks.com,	(PP) (PP)	12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859									

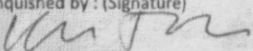
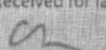
Project Description: <b>BNSF - Wishram Rail yard, WA</b>	City/State Collected: <b>Wishram, WA</b>	Lab Project # <b>BNSF1KEN-WISHRAM</b>
Phone: <b>253-835-6400</b> Fax:	Client Project # <b>1996120*00</b>	P.O. #
Collected by (print): <b>K. Teague</b>	Site/Facility ID #	Quote #

Collected by (signature): 	<b>Rush?</b> (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	Date Results Needed	No. of Cntrs
--	--	---------------------	--------------

Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>	Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss M6020RCRA8 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
--	-----------	-----------	----------	-------	------	------	--------------	--------------------------------	---------------------------------	-----------------------------	----------------------------------	-----------------------------------	---------------------	------------------------------	--------------------	--------------------------	------------------------------

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss M6020RCRA8 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	Remarks	Sample # (lab only)
9 WMW-01-20190509	Grab	GW	—	5/9/19	1005	8	X	X	X	X	X	X	X	X	X	X	X	-01
6 WMW-03-20190509		GW	—	5/9/19	1015	10	X	X	X	X	X	X	X	X	X	X	X	02
6 WMW-05-20190508		GW	—	5/8/19	1230	10	X	X	X	X	X	X	X	X	X	X	X	03
6 WMW-09-20190508		GW	—	5/8/19	1355	10	X	X	X	X	X	X	X	X	X	X	X	04
6 WMW-10-20190509		GW	—	5/9/19	1230	8	X	X	X	X	X	X	X	X	X	X	X	05
8 WMW-11-20190509		GW	—	5/9/19	1130	8	X	X	X	X	X	X	X	X	X	X	X	06
7 WMW-13-20190509		GW	—	5/9/19	1130	8	X	X	X	X	X	X	X	X	X	X	X	07
5 WMW-18-20190509		GW	—	5/9/19	0755 <sup>33</sup>	8	X	X	X	X	X	X	X	X	X	X	X	MS/MSD 08
8 WMW-20-20190508		GW	—	5/8/19	1110	14	X	X	X	X	X	X	X	X	X	X	X	see pg 2 09
8 WMW-21-20190508		GW	—	5/8/19	1300	16	X	X	X	X	X	X	X	X	X	X	X	see pg 2 10

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other	Remarks: Temp: 22.0°C (20) (1.5) <b>RAD SCREEN: &lt;0.5 mR/hr</b>	pH _____ Temp _____ Flow _____ Other _____	<b>Sample Receipt Checklist</b> 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: <input type="checkbox"/> Y <input type="checkbox"/> N VOA zero headspace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
--	---	---	---

Relinquished by: (Signature) 	Date: 5/10/19 Time: 0900	Received by: (Signature) FedEx	Trip Blank Received: Yes/No HCl/MeOH TBR
Relinquished by: (Signature)	Date:	Received by: (Signature)	Temp: 26.0-26.8°C Bottles Received: 300
Relinquished by: (Signature)	Date:	Received for lab by: (Signature) 	Date: 5/11/19 Time: 0845 Hold:



L# 1095678  
G202

Acctnum: BNSF1KEN  
 Template: T149555  
 PrelogIn: P705634  
 TSR: 134 - Mark W. Beasley  
 PB: 4-26-19  
 Shipped Via: FedEx Ground

Remarks Sample # (lab only)

111  
1107629

**Matt Shacklock**

---

**From:** Mark Beasley  
**Sent:** Tuesday, June 11, 2019 2:05 PM  
**To:** Project Service; Sample Storage  
**Subject:** L1098098 \*BNSF1KEN\* relog

Relog L1098098-08 for ASG. Log as R5 due 6/14.

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](mailto:mbeasley@pacenational.com) | [pacenational.com](http://pacenational.com)

***ESC Lab Sciences is now Pace Analytical National Center for Testing & Innovation! Please make note of my new email address and website.***

---

Groundwater Analytical Reports  
19 to 22 August 2019

September 03, 2019

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Kennedy/Jenks Con-BNSF Region 1

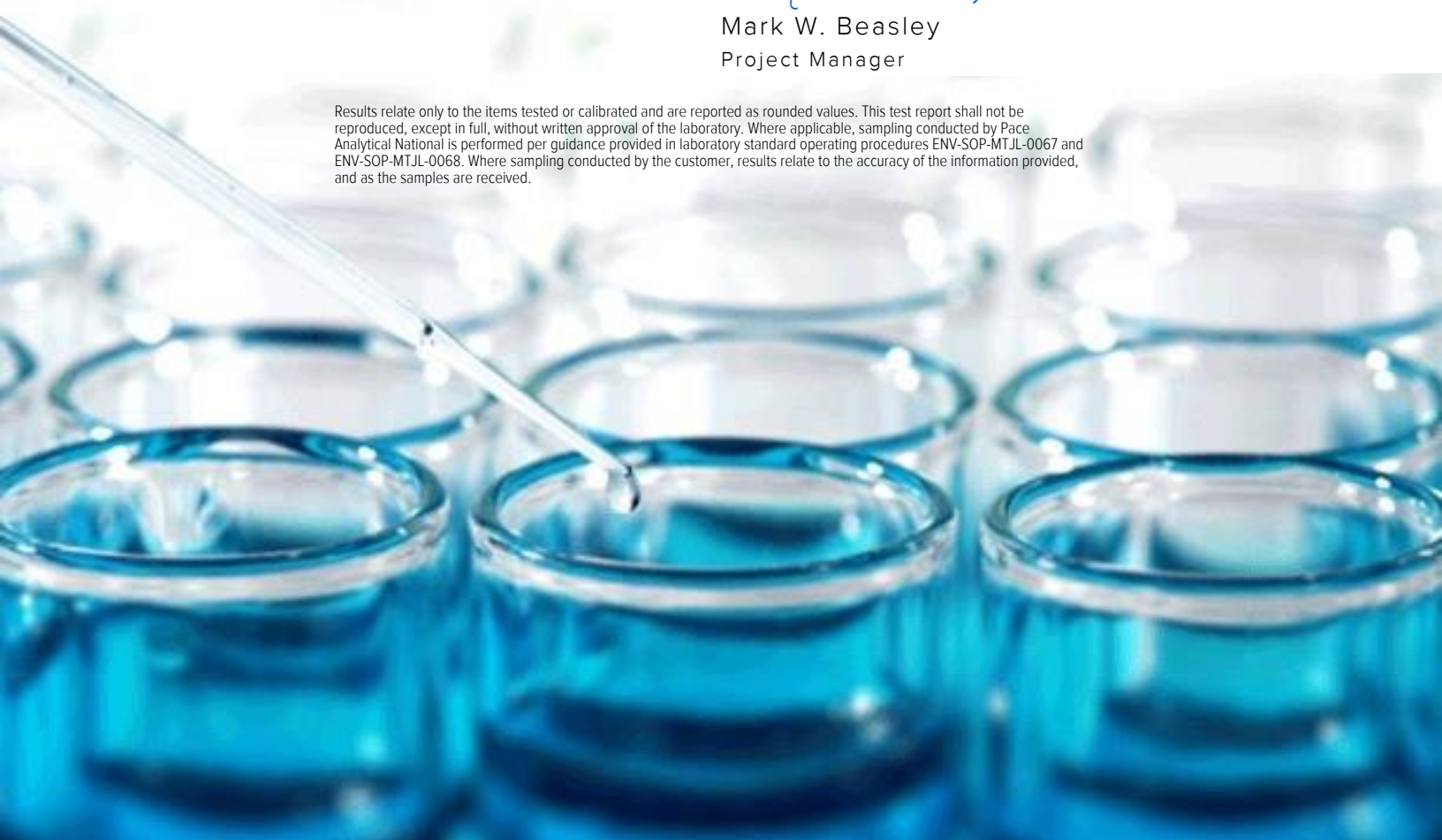
Sample Delivery Group: L1131642  
Samples Received: 08/22/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

Report To: Katie Teague  
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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.







<b>Cp: Cover Page</b>	<b>1</b>
<b>Tc: Table of Contents</b>	<b>2</b>
<b>Ss: Sample Summary</b>	<b>3</b>
<b>Cn: Case Narrative</b>	<b>5</b>
<b>Sr: Sample Results</b>	<b>6</b>
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WMW-17-20190821 L1131642-03	10
DUP-01-20190821 L1131642-04	11
TB-04-20190821 L1131642-05	12
<b>Qc: Quality Control Summary</b>	<b>14</b>
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Wet Chemistry by Method 9056A	18
Metals (ICPMS) by Method 6020B	19
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Volatile Organic Compounds (GC/MS) by Method 8260C	23
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<b>Gl: Glossary of Terms</b>	<b>33</b>
<b>Al: Accreditations &amp; Locations</b>	<b>34</b>
<b>Sc: Sample Chain of Custody</b>	<b>35</b>



# SAMPLE SUMMARY



## RMD-2-20190821 L1131642-01 GW

				Collected by	Collected date/time	Received date/time
					08/21/19 11:38	08/22/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:31	08/26/19 17:31	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1336289	1	08/29/19 09:25	08/29/19 09:25	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1332977	1	08/23/19 10:32	08/23/19 10:32	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/22/19 21:42	08/22/19 21:42	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 13:59	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1333662	1	08/23/19 13:19	08/23/19 13:19	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335026	1	08/26/19 19:08	08/28/19 13:36	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335027	1	08/26/19 16:52	08/27/19 21:44	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335040	1	08/26/19 17:44	08/27/19 09:39	DMG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## RMD-3-20190821 L1131642-02 GW

				Collected by	Collected date/time	Received date/time
					08/21/19 10:15	08/22/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:36	08/26/19 17:36	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1336289	1	08/29/19 09:28	08/29/19 09:28	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:04	08/23/19 15:04	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/22/19 22:00	08/22/19 22:00	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:12	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1333662	1	08/23/19 13:22	08/23/19 13:22	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335026	1	08/26/19 19:08	08/28/19 13:59	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335040	1	08/26/19 17:44	08/27/19 10:01	DMG	Mt. Juliet, TN

## WMW-17-20190821 L1131642-03 GW

				Collected by	Collected date/time	Received date/time
					08/21/19 08:30	08/22/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:37	08/26/19 17:37	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1336289	1	08/29/19 09:29	08/29/19 09:29	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:04	08/23/19 15:04	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/22/19 22:53	08/22/19 22:53	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 17:18	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:15	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1334632	1	08/25/19 14:49	08/25/19 14:49	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1333662	1	08/23/19 13:26	08/23/19 13:26	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335026	1	08/26/19 19:08	08/28/19 14:22	JN	Mt. Juliet, TN

## DUP-01-20190821 L1131642-04 GW

				Collected by	Collected date/time	Received date/time
					08/21/19 08:30	08/22/19 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:39	08/26/19 17:39	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1336289	1	08/29/19 09:31	08/29/19 09:31	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:04	08/23/19 15:04	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/22/19 23:10	08/22/19 23:10	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 17:21	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:19	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1334632	1	08/25/19 15:13	08/25/19 15:13	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1333662	1	08/23/19 13:28	08/23/19 13:28	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335026	1	08/26/19 19:08	08/28/19 14:45	JN	Mt. Juliet, TN

# SAMPLE SUMMARY



TB-04-20190821 L1131642-05 GW

Collected by  
Collected date/time  
Received date/time

08/21/19 00:00  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 10:16	08/30/19 10:16	ADM	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>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

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





## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	190		100	1	08/26/2019 17:31	<a href="#">WG1334115</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND	J5	100	1	08/29/2019 09:25	<a href="#">WG1336289</a>

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	08/23/2019 10:32	<a href="#">WG1332977</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	08/22/2019 21:42	<a href="#">WG1333320</a>

7 Gl

8 Al

## Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	6370		100	1	08/24/2019 13:59	<a href="#">WG1333547</a>
Manganese,Dissolved	3360	V	5.00	1	08/24/2019 13:59	<a href="#">WG1333547</a>

9 Sc

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	5680		10.0	1	08/23/2019 13:19	<a href="#">WG1333662</a>
Ethane	ND		13.0	1	08/23/2019 13:19	<a href="#">WG1333662</a>
Ethene	ND		13.0	1	08/23/2019 13:19	<a href="#">WG1333662</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	7020		200	1	08/28/2019 13:36	<a href="#">WG1335026</a>
Residual Range Organics (RRO)	4170		250	1	08/28/2019 13:36	<a href="#">WG1335026</a>
(S) o-Terphenyl	97.4		52.0-156		08/28/2019 13:36	<a href="#">WG1335026</a>

## Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/27/2019 21:44	<a href="#">WG1335027</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 21:44	<a href="#">WG1335027</a>
(S) o-Terphenyl	65.3		52.0-156		08/27/2019 21:44	<a href="#">WG1335027</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Acenaphthene	0.108		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Chrysene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Fluoranthene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Fluorene	0.263		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Naphthalene	ND		0.250	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Phenanthrene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
Pyrene	ND		0.0500	1	08/27/2019 09:39	<a href="#">WG1335040</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 09:39	<a href="#">WG1335040</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 09:39	<a href="#">WG1335040</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 09:39	<a href="#">WG1335040</a>
(S) Nitrobenzene-d5	109		31.0-160		08/27/2019 09:39	<a href="#">WG1335040</a>
(S) 2-Fluorobiphenyl	89.5		48.0-148		08/27/2019 09:39	<a href="#">WG1335040</a>
(S) p-Terphenyl-d14	101		37.0-146		08/27/2019 09:39	<a href="#">WG1335040</a>

- 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	110		100	1	08/26/2019 17:36	<a href="#">WG1334115</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/29/2019 09:28	<a href="#">WG1336289</a>

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	08/23/2019 15:04	<a href="#">WG1333747</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	23200		5000	1	08/22/2019 22:00	<a href="#">WG1333320</a>

7 Gl

8 Al

## Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	2130		100	1	08/24/2019 14:12	<a href="#">WG1333547</a>
Manganese,Dissolved	543		5.00	1	08/24/2019 14:12	<a href="#">WG1333547</a>

9 Sc

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	84.2		10.0	1	08/23/2019 13:22	<a href="#">WG1333662</a>
Ethane	ND		13.0	1	08/23/2019 13:22	<a href="#">WG1333662</a>
Ethene	ND		13.0	1	08/23/2019 13:22	<a href="#">WG1333662</a>

## 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	08/28/2019 13:59	<a href="#">WG1335026</a>
Residual Range Organics (RRO)	266		250	1	08/28/2019 13:59	<a href="#">WG1335026</a>
(S) o-Terphenyl	73.2		52.0-156		08/28/2019 13:59	<a href="#">WG1335026</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Acenaphthene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Chrysene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Fluoranthene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Fluorene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Naphthalene	ND		0.250	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Phenanthrene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
Pyrene	ND		0.0500	1	08/27/2019 10:01	<a href="#">WG1335040</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 10:01	<a href="#">WG1335040</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 10:01	<a href="#">WG1335040</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 10:01	<a href="#">WG1335040</a>
(S) Nitrobenzene-d5	116		31.0-160		08/27/2019 10:01	<a href="#">WG1335040</a>
(S) 2-Fluorobiphenyl	93.2		48.0-148		08/27/2019 10:01	<a href="#">WG1335040</a>
(S) p-Terphenyl-d14	94.7		37.0-146		08/27/2019 10:01	<a href="#">WG1335040</a>

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	08/26/2019 17:37	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/29/2019 09:29	<a href="#">WG1336289</a>

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	08/23/2019 15:04	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	08/22/2019 22:53	<a href="#">WG1333320</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.83		2.00	1	08/23/2019 17:18	<a href="#">WG1333542</a>
Arsenic,Dissolved	4.29		2.00	1	08/24/2019 14:15	<a href="#">WG1333547</a>
Iron,Dissolved	471	B	100	1	08/24/2019 14:15	<a href="#">WG1333547</a>
Manganese,Dissolved	280		5.00	1	08/24/2019 14:15	<a href="#">WG1333547</a>

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	08/25/2019 14:49	<a href="#">WG1334632</a>
(S) a,a,a-Trifluorotoluene(FID)	113		78.0-120		08/25/2019 14:49	<a href="#">WG1334632</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	155		10.0	1	08/23/2019 13:26	<a href="#">WG1333662</a>
Ethane	ND		13.0	1	08/23/2019 13:26	<a href="#">WG1333662</a>
Ethene	ND		13.0	1	08/23/2019 13:26	<a href="#">WG1333662</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	310		200	1	08/28/2019 14:22	<a href="#">WG1335026</a>
Residual Range Organics (RRO)	517		250	1	08/28/2019 14:22	<a href="#">WG1335026</a>
(S) o-Terphenyl	74.2		52.0-156		08/28/2019 14:22	<a href="#">WG1335026</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 17:39	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/29/2019 09:31	<a href="#">WG1336289</a>

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	08/23/2019 15:04	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	08/22/2019 23:10	<a href="#">WG1333320</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.05		2.00	1	08/23/2019 17:21	<a href="#">WG1333542</a>
Arsenic,Dissolved	4.26		2.00	1	08/24/2019 14:19	<a href="#">WG1333547</a>
Iron,Dissolved	482	B	100	1	08/24/2019 14:19	<a href="#">WG1333547</a>
Manganese,Dissolved	290		5.00	1	08/24/2019 14:19	<a href="#">WG1333547</a>

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	08/25/2019 15:13	<a href="#">WG1334632</a>
(S) a,a,a-Trifluorotoluene(FID)	114		78.0-120		08/25/2019 15:13	<a href="#">WG1334632</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	132		10.0	1	08/23/2019 13:28	<a href="#">WG1333662</a>
Ethane	ND		13.0	1	08/23/2019 13:28	<a href="#">WG1333662</a>
Ethene	ND		13.0	1	08/23/2019 13:28	<a href="#">WG1333662</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	318		200	1	08/28/2019 14:45	<a href="#">WG1335026</a>
Residual Range Organics (RRO)	529		250	1	08/28/2019 14:45	<a href="#">WG1335026</a>
(S) o-Terphenyl	72.6		52.0-156		08/28/2019 14:45	<a href="#">WG1335026</a>



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	08/30/2019 10:16	<a href="#">WG1336242</a>
Acrolein	ND		50.0	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Acrylonitrile	ND		10.0	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Benzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Bromobenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Bromodichloromethane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Bromoform	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Bromomethane	ND		5.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
n-Butylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
sec-Butylbenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
tert-Butylbenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Carbon tetrachloride	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Chlorobenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Chlorodibromomethane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Chloroethane	ND		5.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Chloroform	ND		5.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Chloromethane	ND		2.50	1	08/30/2019 10:16	<a href="#">WG1336242</a>
2-Chlorotoluene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
4-Chlorotoluene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,2-Dibromoethane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Dibromomethane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,4-Dichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,1-Dichloroethane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,2-Dichloroethane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,1-Dichloroethene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,2-Dichloropropane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,1-Dichloropropene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,3-Dichloropropane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
2,2-Dichloropropane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Di-isopropyl ether	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Ethylbenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Hexachloro-1,3-butadiene	ND	<u>JO</u>	1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Isopropylbenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
p-Isopropyltoluene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
2-Butanone (MEK)	ND		10.0	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Methylene Chloride	ND		5.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Naphthalene	ND		5.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
n-Propylbenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Styrene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Tetrachloroethene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Toluene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,2,3-Trichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>

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	08/30/2019 10:16	<a href="#">WG1336242</a>
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Trichloroethene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Trichlorofluoromethane	ND		5.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
1,3,5-Trimethylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
Vinyl chloride	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
o-Xylene	ND		1.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
m&p-Xylene	ND		2.00	1	08/30/2019 10:16	<a href="#">WG1336242</a>
(S) Toluene-d8	103		80.0-120		08/30/2019 10:16	<a href="#">WG1336242</a>
(S) 4-Bromofluorobenzene	95.7		77.0-126		08/30/2019 10:16	<a href="#">WG1336242</a>
(S) 1,2-Dichloroethane-d4	116		70.0-130		08/30/2019 10:16	<a href="#">WG1336242</a>

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





Method Blank (MB)

(MB) R3444476-1 08/26/19 17:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131625-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131625-02 08/26/19 17:28 • (DUP) R3444476-3 08/26/19 17:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	4790	4820	1	0.624		10

L1131661-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-01 08/26/19 17:53 • (DUP) R3444476-6 08/26/19 17:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3444476-2 08/26/19 17:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	6980	93.0	90.0-110	

L1131642-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131642-01 08/26/19 17:31 • (MS) R3444476-4 08/26/19 17:33 • (MSD) R3444476-5 08/26/19 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	190	4900	4900	94.2	94.1	1	90.0-110			0.102	10

L1131661-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131661-02 08/26/19 17:57 • (MS) R3444476-7 08/26/19 17:58

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4780	95.6	1	90.0-110	



Method Blank (MB)

(MB) R3445465-1 08/29/19 09:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131627-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131627-03 08/29/19 09:22 • (DUP) R3445465-3 08/29/19 09:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	317	318	1	0.315		20

L1131652-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1131652-05 08/29/19 09:44 • (DUP) R3445465-5 08/29/19 09:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	3110	3120	1	0.321		20

Laboratory Control Sample (LCS)

(LCS) R3445465-2 08/29/19 09:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	4030	101	90.0-110	

L1131642-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131642-01 08/29/19 09:25 • (MS) R3445465-4 08/29/19 09:26

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	ND	2820	113	1	90.0-110	J5

L1132128-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132128-01 08/29/19 09:47 • (MS) R3445465-6 08/29/19 09:49 • (MSD) R3445465-7 08/29/19 09:50

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	1190	3960	3910	111	109	1	90.0-110	J5		1.17	20



Method Blank (MB)

(MB) R3443510-1 08/23/19 10:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131076-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131076-01 08/23/19 10:24 • (DUP) R3443510-3 08/23/19 10:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

L1131506-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131506-03 08/23/19 10:28 • (DUP) R3443510-6 08/23/19 10:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3443510-2 08/23/19 10:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	500	100	85.0-115	

L1131076-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131076-05 08/23/19 10:25 • (MS) R3443510-4 08/23/19 10:25 • (MSD) R3443510-5 08/23/19 10:25

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	U	905	930	90.5	93.0	1	80.0-120			2.72	20



Method Blank (MB)

(MB) R3443702-1 08/23/19 15:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131642-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131642-02 08/23/19 15:04 • (DUP) R3443702-3 08/23/19 15:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1131661-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-03 08/23/19 15:07 • (DUP) R3443702-4 08/23/19 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3443702-2 08/23/19 15:03

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	462	92.4	85.0-115	

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 15:09 • (MS) R3443702-5 08/23/19 15:10 • (MSD) R3443702-6 08/23/19 15:10

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	875	850	87.5	85.0	1	80.0-120			2.90	20



Method Blank (MB)

(MB) R3443477-1 08/22/19 08:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131540-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131540-01 08/22/19 20:14 • (DUP) R3443477-3 08/22/19 20:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	18400	18400	1	0.376		15

L1131661-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-05 08/23/19 02:42 • (DUP) R3443477-6 08/23/19 02:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	24000	24100	1	0.146		15

Laboratory Control Sample (LCS)

(LCS) R3443477-2 08/22/19 08:41

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	39400	98.5	80.0-120	

L1131540-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131540-01 08/22/19 20:14 • (MS) R3443477-4 08/22/19 20:49 • (MSD) R3443477-5 08/22/19 21:07

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	18400	62200	62300	87.6	87.7	1	80.0-120			0.0887	15

L1131661-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131661-05 08/23/19 02:42 • (MS) R3443477-7 08/23/19 03:17

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	24000	73600	99.2	1	80.0-120	



Method Blank (MB)

(MB) R3443784-1 08/23/19 16:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		0.250	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3443784-2 08/23/19 16:35 • (LCSD) R3443784-3 08/23/19 16:38

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 %
Arsenic	50.0	50.6	50.9	101	102	80.0-120			0.592	20

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 16:41 • (MS) R3443784-5 08/23/19 16:48 • (MSD) R3443784-6 08/23/19 16:51

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	4.62	54.7	54.6	100	99.9	1	75.0-125			0.213	20

L1131850-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131850-04 08/23/19 16:55 • (MS) R3443784-7 08/23/19 16:58 • (MSD) R3443784-8 08/23/19 17:01

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 %
Arsenic	50.0	0.339	50.3	48.5	99.9	96.4	1	75.0-125			3.52	20



Method Blank (MB)

(MB) R3443863-1 08/24/19 13:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		0.250	2.00
Iron,Dissolved	68.8	↓	15.0	100
Manganese,Dissolved	0.278	↓	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) R3443863-2 08/24/19 13:52 • (LCSD) R3443863-3 08/24/19 13:55

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	51.3	52.2	103	104	80.0-120			1.77	20
Iron,Dissolved	5000	5470	5360	109	107	80.0-120			2.07	20
Manganese,Dissolved	50.0	50.7	52.2	101	104	80.0-120			2.91	20

L1131642-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131642-01 08/24/19 13:59 • (MS) R3443863-5 08/24/19 14:05 • (MSD) R3443863-6 08/24/19 14:09

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	48.3	105	105	112	114	1	75.0-125			0.554	20
Iron,Dissolved	5000	6370	11900	12000	110	112	1	75.0-125			0.796	20
Manganese,Dissolved	50.0	3360	3500	3520	293	324	1	75.0-125	↓	↓	0.438	20



Method Blank (MB)

(MB) R3444316-3 08/25/19 12:56

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)	113			78.0-120

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS)

(LCS) R3444316-1 08/25/19 11:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5450	99.0	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			95.5	78.0-120	

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3443651-1 08/23/19 13:11

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

L1131506-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1131506-04 08/23/19 13:35 • (DUP) R3443651-2 08/23/19 13:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	U	0.000	1	0.000		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3443651-3 08/23/19 14:06 • (LCSD) R3443651-4 08/23/19 14:09

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	%	%	%			%	%
Methane	67.8	76.7	72.2	113	106	85.0-115			6.02	20
Ethane	129	119	117	92.4	90.5	85.0-115			2.11	20
Ethene	127	118	116	92.7	91.0	85.0-115			1.78	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3446209-2 08/30/19 09:24

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	0.779	U	0.256	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3446209-2 08/30/19 09:24

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) 4-Bromofluorobenzene	93.7			77.0-126
(S) 1,2-Dichloroethane-d4	116			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	156	125	19.0-160	
Acrolein	125	134	107	10.0-160	
Acrylonitrile	125	151	121	55.0-149	



Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	25.0	23.9	95.8	70.0-123	
Bromobenzene	25.0	25.4	102	73.0-121	
Bromodichloromethane	25.0	27.0	108	75.0-120	
Bromoform	25.0	25.9	104	68.0-132	
Bromomethane	25.0	23.2	92.7	10.0-160	
n-Butylbenzene	25.0	19.6	78.5	73.0-125	
sec-Butylbenzene	25.0	20.2	80.9	75.0-125	
tert-Butylbenzene	25.0	21.5	86.0	76.0-124	
Carbon tetrachloride	25.0	26.9	108	68.0-126	
Chlorobenzene	25.0	24.3	97.1	80.0-121	
Chlorodibromomethane	25.0	26.6	106	77.0-125	
Chloroethane	25.0	22.3	89.3	47.0-150	
Chloroform	25.0	25.7	103	73.0-120	
Chloromethane	25.0	29.0	116	41.0-142	
2-Chlorotoluene	25.0	23.6	94.3	76.0-123	
4-Chlorotoluene	25.0	24.6	98.3	75.0-122	
1,2-Dibromo-3-Chloropropane	25.0	26.5	106	58.0-134	
1,2-Dibromoethane	25.0	26.5	106	80.0-122	
Dibromomethane	25.0	27.2	109	80.0-120	
1,2-Dichlorobenzene	25.0	23.4	93.5	79.0-121	
1,3-Dichlorobenzene	25.0	22.9	91.5	79.0-120	
1,4-Dichlorobenzene	25.0	19.9	79.6	79.0-120	
Dichlorodifluoromethane	25.0	32.5	130	51.0-149	
1,1-Dichloroethane	25.0	26.1	104	70.0-126	
1,2-Dichloroethane	25.0	27.5	110	70.0-128	
1,1-Dichloroethene	25.0	23.8	95.1	71.0-124	
cis-1,2-Dichloroethene	25.0	22.9	91.7	73.0-120	
trans-1,2-Dichloroethene	25.0	22.9	91.5	73.0-120	
1,2-Dichloropropane	25.0	27.1	108	77.0-125	
1,1-Dichloropropene	25.0	25.9	104	74.0-126	
1,3-Dichloropropane	25.0	27.2	109	80.0-120	
cis-1,3-Dichloropropene	25.0	26.7	107	80.0-123	
trans-1,3-Dichloropropene	25.0	28.6	114	78.0-124	
2,2-Dichloropropane	25.0	24.6	98.3	58.0-130	
Di-isopropyl ether	25.0	27.5	110	58.0-138	
Ethylbenzene	25.0	23.4	93.5	79.0-123	
Hexachloro-1,3-butadiene	25.0	19.6	78.2	54.0-138	
Isopropylbenzene	25.0	21.9	87.5	76.0-127	
p-Isopropyltoluene	25.0	21.2	84.7	76.0-125	
2-Butanone (MEK)	125	165	132	44.0-160	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methylene Chloride	25.0	22.6	90.2	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	147	118	68.0-142	
Methyl tert-butyl ether	25.0	24.0	95.8	68.0-125	
Naphthalene	25.0	23.2	92.8	54.0-135	
n-Propylbenzene	25.0	22.2	88.8	77.0-124	
Styrene	25.0	24.5	98.1	73.0-130	
1,1,1,2-Tetrachloroethane	25.0	25.7	103	75.0-125	
1,1,2,2-Tetrachloroethane	25.0	26.7	107	65.0-130	
Tetrachloroethene	25.0	23.9	95.6	72.0-132	
Toluene	25.0	23.5	94.1	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	23.7	95.0	69.0-132	
1,2,3-Trichlorobenzene	25.0	19.4	77.8	50.0-138	
1,2,4-Trichlorobenzene	25.0	20.3	81.0	57.0-137	
1,1,1-Trichloroethane	25.0	25.9	104	73.0-124	
1,1,2-Trichloroethane	25.0	25.1	100	80.0-120	
Trichloroethene	25.0	23.5	94.0	78.0-124	
Trichlorofluoromethane	25.0	28.2	113	59.0-147	
1,2,3-Trichloropropane	25.0	30.3	121	73.0-130	
1,2,3-Trimethylbenzene	25.0	22.9	91.7	77.0-120	
1,2,4-Trimethylbenzene	25.0	22.7	90.8	76.0-121	
1,3,5-Trimethylbenzene	25.0	19.5	78.0	76.0-122	
Vinyl chloride	25.0	26.1	105	67.0-131	
o-Xylene	25.0	22.9	91.6	80.0-122	
m&p-Xylenes	50.0	46.5	93.1	80.0-122	
(S) Toluene-d8			101	80.0-120	
(S) 4-Bromofluorobenzene			96.5	77.0-126	
(S) 1,2-Dichloroethane-d4			119	70.0-130	

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

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	125	ND	149	178	119	142	1	10.0-160			17.4	35
Acrolein	125	ND	245	288	196	231	1	10.0-160	J5	J5	16.3	39
Acrylonitrile	125	ND	144	166	115	133	1	21.0-160			14.6	32
Benzene	25.0	ND	21.5	22.8	85.9	91.0	1	17.0-158			5.76	27
Bromobenzene	25.0	ND	24.8	23.8	99.3	95.3	1	30.0-149			4.19	28
Bromodichloromethane	25.0	ND	25.2	26.8	101	107	1	31.0-150			6.35	27



L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	25.0	ND	24.4	26.3	97.4	105	1	29.0-150			7.63	29
Bromomethane	25.0	ND	16.4	19.4	65.6	77.5	1	10.0-160			16.6	38
n-Butylbenzene	25.0	ND	15.6	18.7	62.4	74.8	1	31.0-150			18.2	30
sec-Butylbenzene	25.0	ND	17.2	19.5	68.8	77.9	1	33.0-155			12.4	29
tert-Butylbenzene	25.0	ND	18.9	20.9	75.8	83.4	1	34.0-153			9.61	28
Carbon tetrachloride	25.0	ND	25.7	29.0	103	116	1	23.0-159			11.9	28
Chlorobenzene	25.0	ND	21.4	23.1	85.7	92.4	1	33.0-152			7.50	27
Chlorodibromomethane	25.0	ND	24.2	25.9	96.7	104	1	37.0-149			7.00	27
Chloroethane	25.0	ND	16.6	18.8	66.3	75.4	1	10.0-160			12.8	30
Chloroform	25.0	ND	23.6	25.3	94.6	101	1	29.0-154			6.90	28
Chloromethane	25.0	ND	21.4	25.7	85.5	103	1	10.0-160			18.3	29
2-Chlorotoluene	25.0	ND	21.4	22.4	85.6	89.4	1	32.0-153			4.32	28
4-Chlorotoluene	25.0	ND	20.7	23.0	82.9	92.1	1	32.0-150			10.5	28
1,2-Dibromo-3-Chloropropane	25.0	ND	23.9	25.6	95.5	102	1	22.0-151			6.84	34
1,2-Dibromoethane	25.0	ND	23.1	24.6	92.2	98.6	1	34.0-147			6.61	27
Dibromomethane	25.0	ND	24.1	25.5	96.5	102	1	30.0-151			5.71	27
1,2-Dichlorobenzene	25.0	ND	19.9	21.8	79.4	87.4	1	34.0-149			9.55	28
1,3-Dichlorobenzene	25.0	ND	19.5	21.6	78.0	86.6	1	36.0-146			10.4	27
1,4-Dichlorobenzene	25.0	ND	18.0	19.7	71.8	78.7	1	35.0-142			9.11	27
Dichlorodifluoromethane	25.0	ND	20.8	27.5	83.2	110	1	10.0-160			27.6	29
1,1-Dichloroethane	25.0	ND	24.9	29.1	99.5	116	1	25.0-158			15.7	27
1,2-Dichloroethane	25.0	ND	25.1	27.0	100	108	1	29.0-151			7.54	27
1,1-Dichloroethene	25.0	ND	21.1	25.4	84.5	102	1	11.0-160			18.6	29
cis-1,2-Dichloroethene	25.0	ND	21.0	24.3	83.9	97.0	1	10.0-160			14.5	27
trans-1,2-Dichloroethene	25.0	ND	19.4	23.5	77.7	93.9	1	17.0-153			18.9	27
1,2-Dichloropropane	25.0	ND	25.3	26.1	101	104	1	30.0-156			2.82	27
1,1-Dichloropropene	25.0	ND	22.1	24.5	88.4	98.0	1	25.0-158			10.4	27
1,3-Dichloropropane	25.0	ND	24.2	25.3	97.0	101	1	38.0-147			4.31	27
cis-1,3-Dichloropropene	25.0	ND	23.6	25.2	94.6	101	1	34.0-149			6.34	28
trans-1,3-Dichloropropene	25.0	ND	25.3	26.9	101	108	1	32.0-149			6.19	28
2,2-Dichloropropane	25.0	ND	23.3	26.1	93.0	105	1	24.0-152			11.7	29
Di-isopropyl ether	25.0	ND	27.3	32.2	109	129	1	21.0-160			16.5	28
Ethylbenzene	25.0	ND	20.6	22.0	82.5	87.9	1	30.0-155			6.31	27
Hexachloro-1,3-butadiene	25.0	ND	15.8	19.5	63.2	78.0	1	20.0-154			21.0	34
Isopropylbenzene	25.0	ND	19.6	21.8	78.5	87.0	1	28.0-157			10.2	27
p-Isopropyltoluene	25.0	ND	17.8	20.3	71.3	81.2	1	30.0-154			13.0	29
2-Butanone (MEK)	125	ND	160	155	128	124	1	10.0-160			3.13	32
Methylene Chloride	25.0	ND	20.4	24.0	81.5	96.1	1	23.0-144			16.5	28
4-Methyl-2-pentanone (MIBK)	125	ND	148	145	118	116	1	29.0-160			2.01	29
Methyl tert-butyl ether	25.0	ND	21.4	26.1	85.6	104	1	28.0-150			19.9	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	25.0	ND	20.1	22.1	80.2	88.5	1	12.0-156			9.77	35
n-Propylbenzene	25.0	ND	20.7	21.0	82.9	83.9	1	31.0-154			1.23	28
Styrene	25.0	ND	22.0	23.4	88.1	93.8	1	33.0-155			6.27	28
1,1,1,2-Tetrachloroethane	25.0	ND	23.7	25.6	95.0	102	1	36.0-151			7.50	29
1,1,2,2-Tetrachloroethane	25.0	ND	26.9	25.6	107	102	1	33.0-150			4.95	28
Tetrachloroethene	25.0	ND	19.7	22.7	78.8	90.8	1	10.0-160			14.1	27
Toluene	25.0	ND	20.9	22.1	83.7	88.4	1	26.0-154			5.50	28
1,1,2-Trichlorotrifluoroethane	25.0	ND	19.6	26.7	78.4	107	1	23.0-160		J3	30.5	30
1,2,3-Trichlorobenzene	25.0	ND	15.9	18.7	63.7	75.0	1	17.0-150			16.3	36
1,2,4-Trichlorobenzene	25.0	ND	16.1	19.5	64.3	77.8	1	24.0-150			19.1	33
1,1,1-Trichloroethane	25.0	ND	24.9	27.4	99.6	109	1	23.0-160			9.48	28
1,1,2-Trichloroethane	25.0	ND	23.1	24.0	92.5	95.9	1	35.0-147			3.68	27
Trichloroethene	25.0	ND	20.3	22.3	81.1	89.1	1	10.0-160			9.45	25
Trichlorofluoromethane	25.0	ND	21.6	26.2	86.5	105	1	17.0-160			19.3	31
1,2,3-Trichloropropane	25.0	ND	27.2	28.6	109	114	1	34.0-151			5.00	29
1,2,3-Trimethylbenzene	25.0	ND	19.9	21.7	79.6	86.8	1	32.0-149			8.57	28
1,2,4-Trimethylbenzene	25.0	ND	19.3	21.5	77.1	86.1	1	26.0-154			11.1	27
1,3,5-Trimethylbenzene	25.0	ND	18.1	19.8	72.3	79.2	1	28.0-153			9.11	27
Vinyl chloride	25.0	ND	19.5	22.8	78.2	91.1	1	10.0-160			15.3	27
o-Xylene	25.0	ND	20.4	21.8	81.7	87.3	1	45.0-144			6.62	26
m&p-Xylenes	50.0	ND	40.2	44.0	80.4	87.9	1	43.0-146			8.95	26
(S) Toluene-d8					104	99.8		80.0-120				
(S) 4-Bromofluorobenzene					98.8	97.6		77.0-126				
(S) 1,2-Dichloroethane-d4					122	122		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3445222-1 08/28/19 13:13

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
<i>(S) o-Terphenyl</i>	56.5			52.0-156

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

(LCS) R3445222-2 08/28/19 22:14 • (LCSD) R3445222-3 08/28/19 22:37

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)	1500	1380	1390	92.0	92.7	50.0-150			0.722	20
<i>(S) o-Terphenyl</i>				107	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) R3444924-1 08/27/19 16:00

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>	59.5			52.0-156

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

(LCS) R3444924-2 08/27/19 21:04 • (LCSD) R3444924-3 08/27/19 21:24

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)	1500	992	1070	66.1	71.3	50.0-150			7.57	20
<i>(S) o-Terphenyl</i>				71.0	70.0	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) R3444682-2 08/27/19 07:51

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	104			31.0-160
(S) 2-Fluorobiphenyl	79.5			48.0-148
(S) p-Terphenyl-d14	86.5			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)

(LCS) R3444682-1 08/27/19 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	2.00	2.14	107	67.0-150	
Acenaphthene	2.00	1.86	93.0	65.0-138	
Acenaphthylene	2.00	1.89	94.5	66.0-140	
Benzo(a)anthracene	2.00	1.79	89.5	61.0-140	
Benzo(a)pyrene	2.00	1.82	91.0	60.0-143	
Benzo(b)fluoranthene	2.00	1.73	86.5	58.0-141	
Benzo(g,h,i)perylene	2.00	1.77	88.5	52.0-153	
Benzo(k)fluoranthene	2.00	1.94	97.0	58.0-148	
Chrysene	2.00	2.01	100	64.0-144	
Dibenz(a,h)anthracene	2.00	1.65	82.5	52.0-155	
Fluoranthene	2.00	2.08	104	69.0-153	



Laboratory Control Sample (LCS)

(LCS) R3444682-1 08/27/19 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	2.00	1.77	88.5	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.69	84.5	54.0-153	
Naphthalene	2.00	1.79	89.5	61.0-137	
Phenanthrene	2.00	1.80	90.0	62.0-137	
Pyrene	2.00	1.69	84.5	60.0-142	
1-Methylnaphthalene	2.00	1.71	85.5	66.0-142	
2-Methylnaphthalene	2.00	1.62	81.0	62.0-136	
2-Chloronaphthalene	2.00	1.82	91.0	64.0-140	
<i>(S) Nitrobenzene-d5</i>			111	31.0-160	
<i>(S) 2-Fluorobiphenyl</i>			89.5	48.0-148	
<i>(S) p-Terphenyl-d14</i>			90.5	37.0-146	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 08:34 • (MS) R3444682-3 08/27/19 08:56 • (MSD) R3444682-4 08/27/19 09:18

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	ND	1.98	2.03	104	107	1	56.0-156			2.49	20
Acenaphthene	1.90	ND	1.81	1.83	95.3	96.3	1	44.0-153			1.10	20
Acenaphthylene	1.90	ND	1.86	1.89	97.9	99.5	1	53.0-150			1.60	20
Benzo(a)anthracene	1.90	ND	1.82	1.86	95.8	97.9	1	47.0-151			2.17	20
Benzo(a)pyrene	1.90	ND	1.72	1.75	90.5	92.1	1	45.0-146			1.73	20
Benzo(b)fluoranthene	1.90	ND	1.71	1.72	90.0	90.5	1	43.0-142			0.583	20
Benzo(g,h,i)perylene	1.90	ND	1.68	1.71	88.4	90.0	1	40.0-147			1.77	20
Benzo(k)fluoranthene	1.90	ND	1.73	1.79	91.1	94.2	1	43.0-148			3.41	21
Chrysene	1.90	ND	1.82	1.87	95.8	98.4	1	50.0-148			2.71	20
Dibenz(a,h)anthracene	1.90	ND	1.59	1.63	83.7	85.8	1	37.0-151			2.48	20
Fluoranthene	1.90	ND	2.06	2.13	108	112	1	56.0-157			3.34	20
Fluorene	1.90	ND	1.72	1.75	89.9	91.5	1	48.0-148			1.73	20
Indeno(1,2,3-cd)pyrene	1.90	ND	1.61	1.63	84.7	85.8	1	41.0-148			1.23	20
Naphthalene	1.90	ND	1.78	1.80	92.6	93.7	1	10.0-160			1.12	20
Phenanthrene	1.90	ND	1.76	1.80	92.6	94.7	1	47.0-147			2.25	20
Pyrene	1.90	ND	1.73	1.77	91.1	93.2	1	51.0-148			2.29	20
1-Methylnaphthalene	1.90	ND	1.69	1.71	88.9	90.0	1	21.0-160			1.18	20
2-Methylnaphthalene	1.90	ND	1.62	1.63	84.7	85.2	1	31.0-160			0.615	20
2-Chloronaphthalene	1.90	ND	1.80	1.81	94.7	95.3	1	52.0-148			0.554	20
<i>(S) Nitrobenzene-d5</i>					110	115		31.0-160				
<i>(S) 2-Fluorobiphenyl</i>					94.7	94.2		48.0-148				
<i>(S) p-Terphenyl-d14</i>					95.8	98.4		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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### 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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration method criteria.
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.
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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

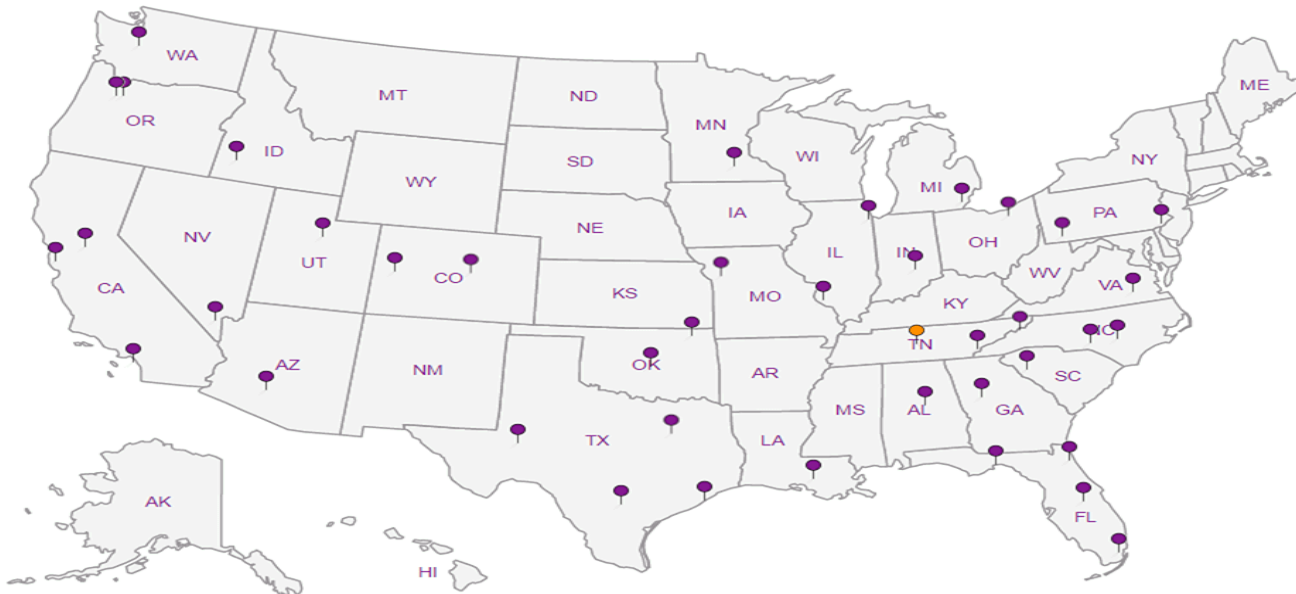
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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 1 of 2



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



Report to:  
**Katie Teague**

Email To: [KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com);  
[RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com);

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

City/State  
Collected: **Wishram, WA**

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

Client Project #  
**1996120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Collected by (print):

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 #

Immediately Packed on Ice N \_\_\_ Y \_\_\_

Date Results Needed

No. of  
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss M6020RCRA8 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	Remarks	Sample # (lab only)	
RMD-2-20190821	Grab	GW	-	8/21/19	1138	12		X	X	X	X		X	X	X	X			01
RMD-3-20190821	↓	GW	↓	↓	1015	10		X	X		X		X	X	X	X			02
NMW-17-20190821	↓	GW	↓	↓	0830	13		X	X		X	X	X	X	X	X		see pg 2	03
DVP-01-20190821	↓	GW	↓	↓	0830	13		X	X		X	X		X	X	X		↓	04
TB-04-20190821		GW		↓	-	1													05
		GW																	
		GW																	
		GW																	
		GW																	
		GW																	

L# **1131642**  
**H188**

Acctnum: **BNSF1KEN**  
Template: **T149555**  
Prelogin: **P723325**  
TSR: **134 - Mark W. Beasley**  
PB: **8-7-196m**

Shipped Via: **FedEx Ground**

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:  
pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_  
1070 0201 2883  
Samples returned via: \_\_\_\_\_ Tracking # **8CN1 VIG FEDX**

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

**RAD SCREEN: <0.5 mR/hr**

Relinquished by: (Signature) <i>[Signature]</i>	Date: 8/21/19	Time: 2:00p	Received by: (Signature) <i>[Signature]</i>	Trip Blank Received: <input checked="" type="checkbox"/> Yes / No HCL / MeOH TBR	Temp: °C 34.0-34.5	Bottles Received: 98	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: 8/22/19	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

Email To: KatieTeague@kennedyjenks.com;  
RyanHultgren@kennedyjenks.com;

Report to:  
Katie Teague

Project  
Description: BNSF - Wishram Railyard, WA

City/State  
Collected: *Wishram, WA*

Lab Project #  
BNSF1KEN-WISHRAM

P.O. #

Quote #

Phone: 253-835-6400  
Fax:

Client Project #  
1996120\*00

Collected by (print):

Site/Facility ID #



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 \_\_\_

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl	Other
RMD-2-20190821	Grab	GW	—	8/21/19	1138	12						
RMD-3-20190821	↓	GW	↓	↓	1015	10						
WMW-17-20190821	↓	GW	↓	↓	0830	13	X				X	
DUP-01-20190821	↓	GW	↓	↓	0830	13	X				X	
TB-04-20190821		GW				1					X	
		GW										
		GW										
		GW										
		GW										

Analysis / Container / Preservative		Chain of Custody	Page ___ of ___
Total As 6020 250mlHDPE-HNO3		 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859	
Total M6020RCRA8 250mlHDPE-HNO3			
Total Pb 6020 250mlHDPE-HNO3			
V8260BTEXC 40mlAmb-HCl			
V8260C 40mlAmb-HCl			
Dissolved AS 6020		L # <i>1131612</i>	
		Table #	
		Acctnum: BNSF1KEN	
		Template: T149555	
		Prelogin: P723325	
		TSR: 134 - Mark W. Beasley	
		PB: <i>8-2-196m</i>	
		Shipped Via: FedEX Ground	
Remarks	Sample # (lab only)		

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

Remarks: *sent via FED-X*

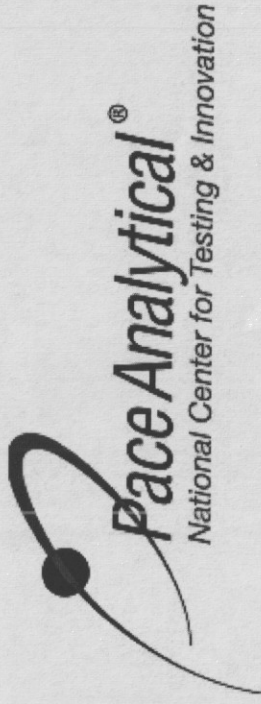
pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

Sample Receipt Checklist	
COC Seal Present/Intact:	<input checked="" type="checkbox"/> NP <input 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 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	Temp:	Bottles Received:	If preservation required by Login: Date/Time
<i>Gloria Gander</i>	08/21/19	2:00P		Yes/No HCl/MeOH TBR			
					3.1+0.3.45m	46	
			<i>H. S. H.</i>		8/22/19	84C	

Condition:  
NCF / OK

**Matt Shacklock**



<b>Login #:1131642</b>	<b>Client: BNSF1KEN</b>	<b>Date:8/22</b>	<b>Evaluated by:Kesley</b>

**Non-Conformance (check applicable items)**

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

**Login Comments: SULFIDE for RMD-2 and RMD-3 at a 10. Preserved in lab**

<b>Client informed by:</b>	Call	Email	Voice Mail	Date: 8/22/19	Time: 1345
<b>TSR Initials: MB</b>	<b>Client Contact:</b>				

**Login Instructions:**

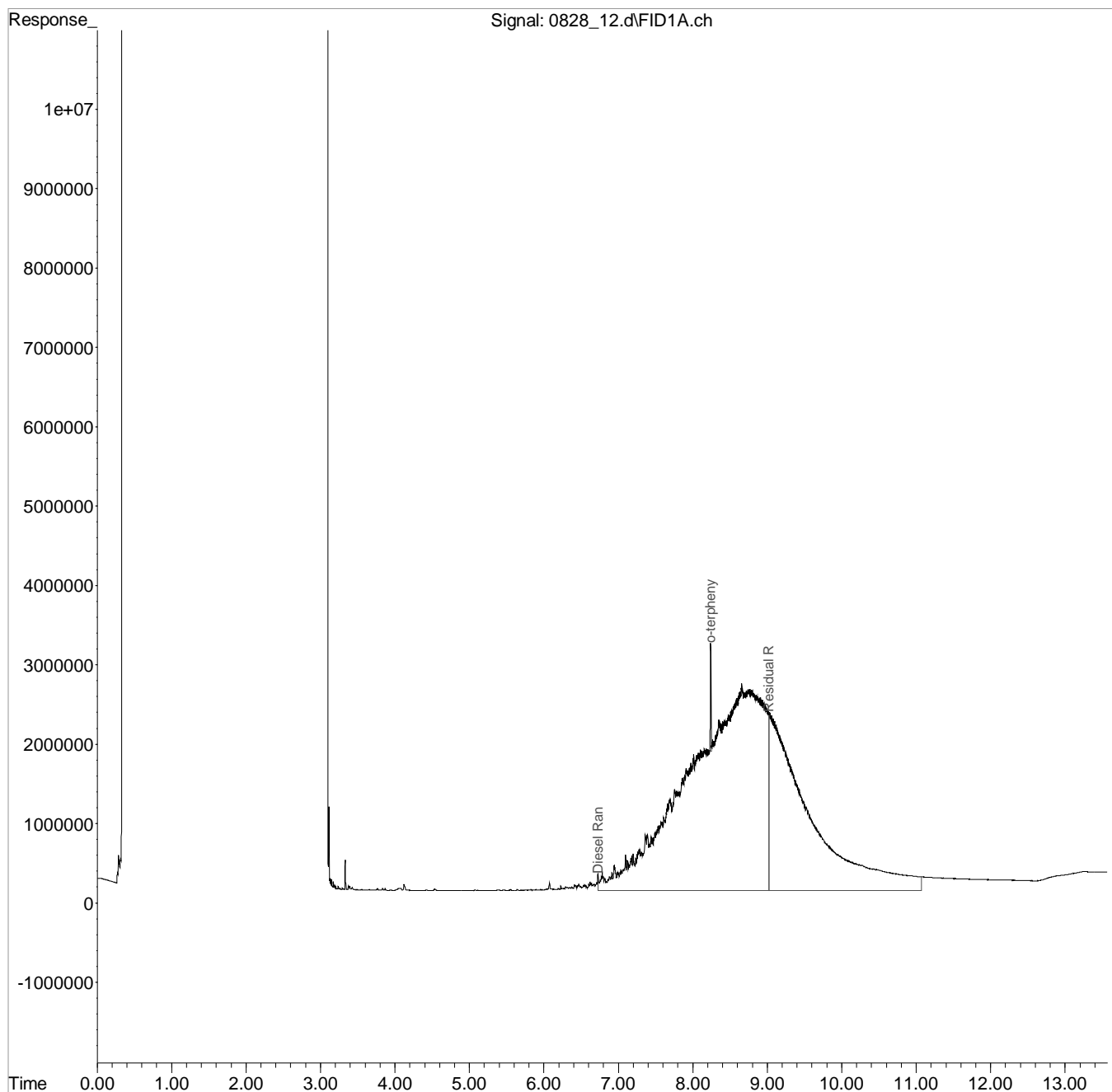
Run as rec'd



Data Path : C:\msdchem\1\data\082819\  
Data File : 0828 12.d  
Signal(s) : FID1A.ch  
Acq On : 28 Aug 2019 1:36 pm  
Operator : 843  
Sample : L1131642-01 1x WG1335026  
Misc : M.I.s on ranges are corrections  
ALS Vial : 9 Sample Multiplier: 1  
InstName : SVGC21

Integration File: events.e  
Quant Time: Aug 28 13:57:10 2019  
Quant Method : C:\msdchem\1\methods\DM21H20S.M  
Quant Title : DROLVI  
QLast Update : Wed Aug 21 10:05:32 2019  
Response via : Initial Calibration  
Integrator: ChemStation

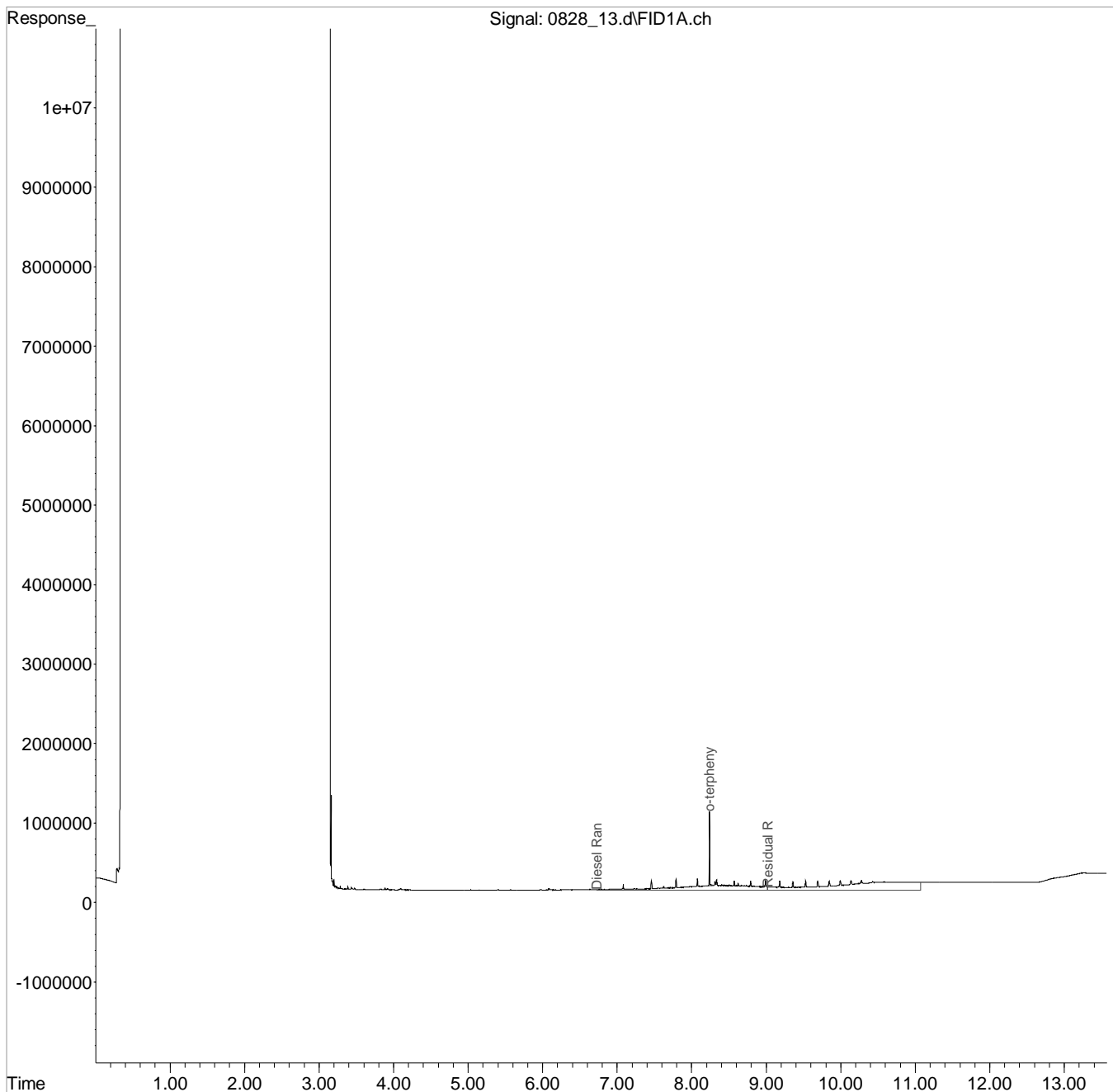
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082819\  
Data File : 0828 13.d  
Signal(s) : FID1A.ch  
Acq On : 28 Aug 2019 1:59 pm  
Operator : 843  
Sample : L1131642-02 1x WG1335026  
Misc : M.I.s on ranges are corrections  
ALS Vial : 10 Sample Multiplier: 1  
InstName : SVGC21

Integration File: events.e  
Quant Time: Aug 28 14:21:22 2019  
Quant Method : C:\msdchem\1\methods\DM21H20S.M  
Quant Title : DROLVI  
QLast Update : Wed Aug 21 10:05:32 2019  
Response via : Initial Calibration  
Integrator: ChemStation

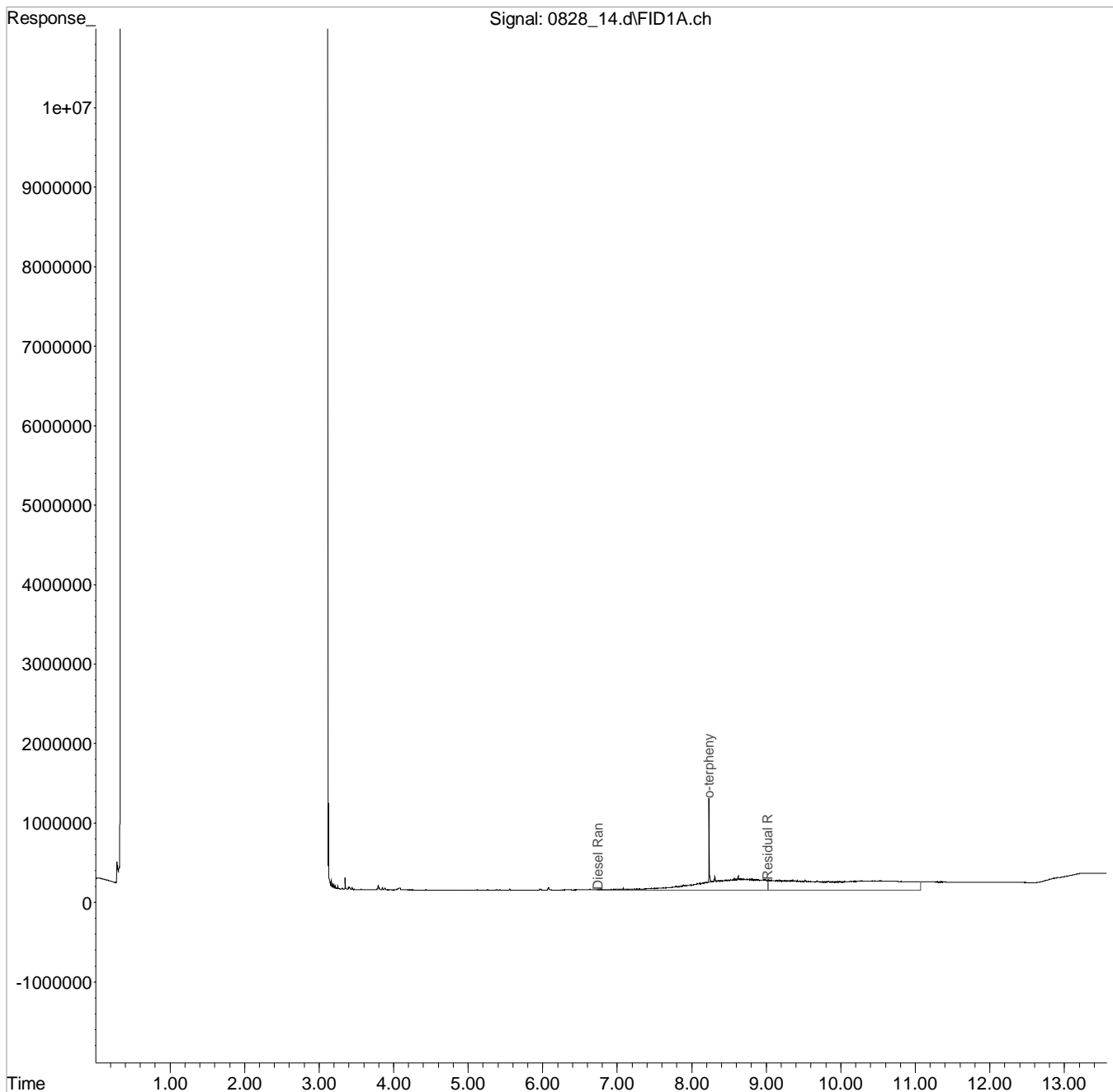
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082819\  
 Data File : 0828 14.d  
 Signal(s) : FID1A.ch  
 Acq On : 28 Aug 2019 2:22 pm  
 Operator : 843  
 Sample : L1131642-03 1x WG1335026  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 11 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: Aug 29 13:04:39 2019  
 Quant Method : C:\msdchem\1\methods\DM21H20S.M  
 Quant Title : DROLVI  
 QLast Update : Wed Aug 21 10:05:32 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

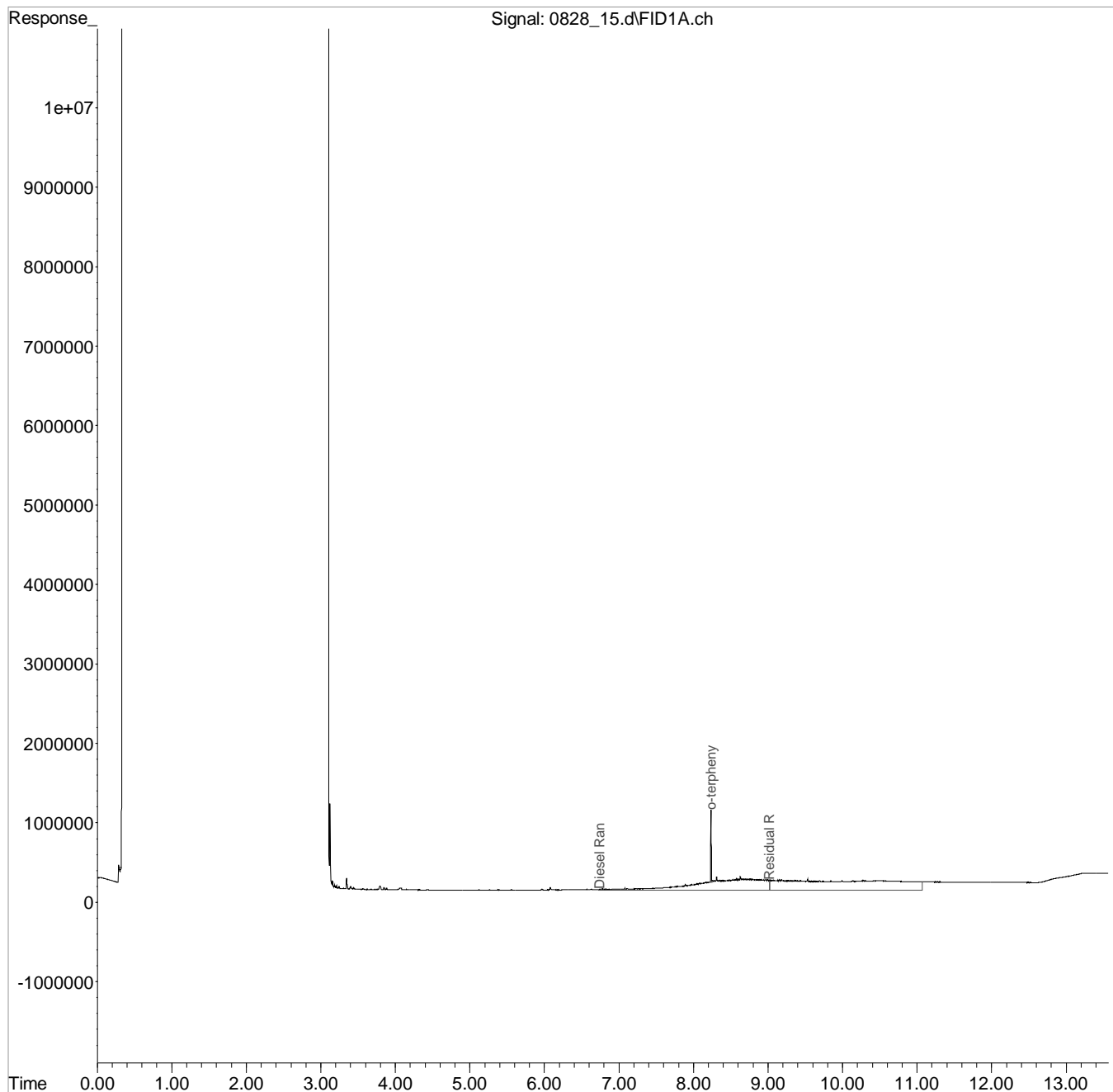
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\082819\  
Data File : 0828 15.d  
Signal(s) : FID1A.ch  
Acq On : 28 Aug 2019 2:45 pm  
Operator : 843  
Sample : L1131642-04 1x WG1335026  
Misc : M.I.s on ranges are corrections  
ALS Vial : 12 Sample Multiplier: 1  
InstName : SVGC21

Integration File: events.e  
Quant Time: Aug 28 15:44:42 2019  
Quant Method : C:\msdchem\1\methods\DM21H20S.M  
Quant Title : DROLVI  
QLast Update : Wed Aug 21 10:05:32 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :



## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1131652  
Samples Received: 08/22/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

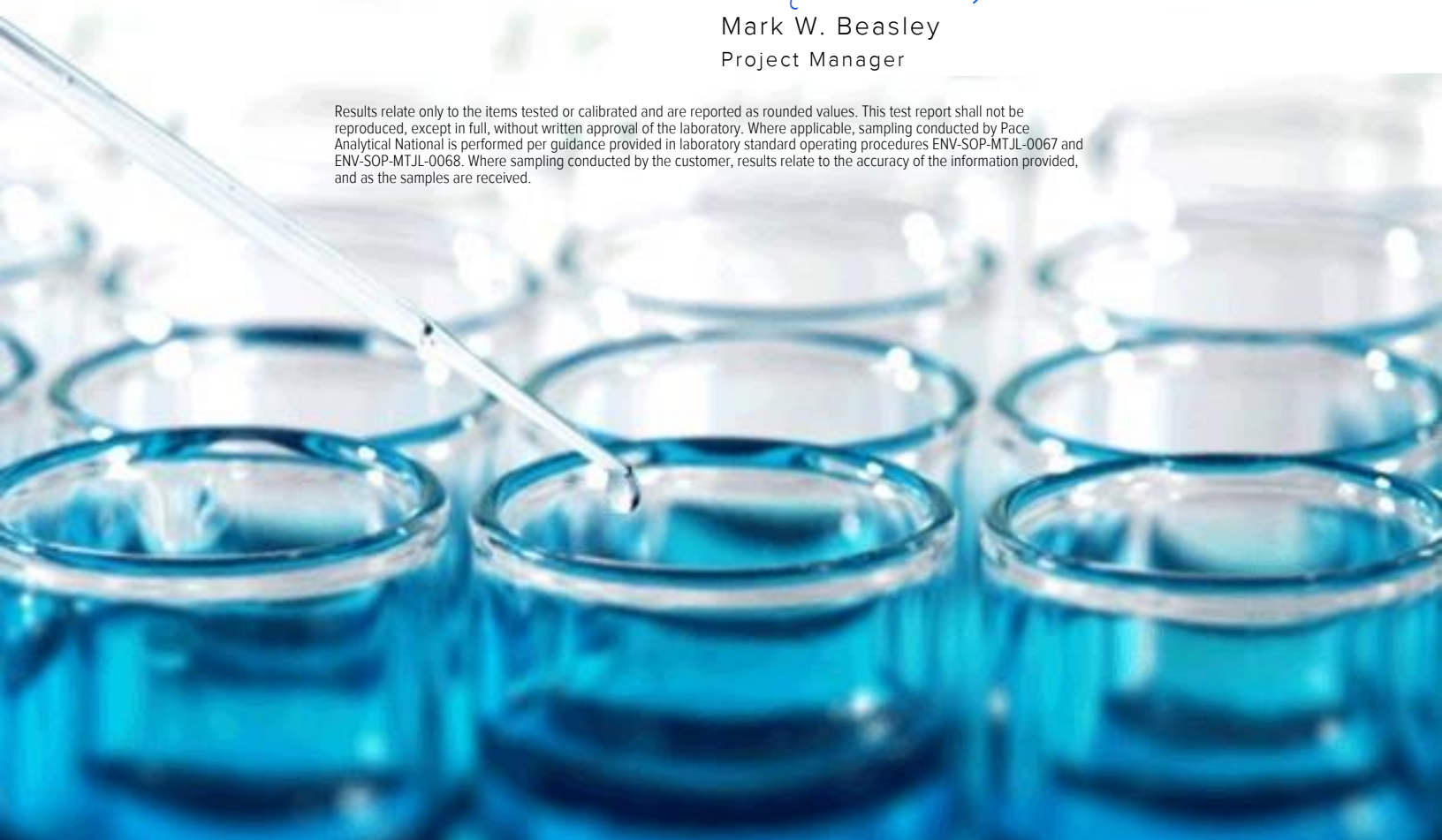
Report To: Katie Teague  
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

Entire Report Reviewed By:



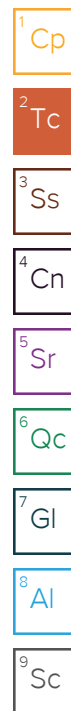
Mark W. Beasley  
Project Manager

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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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# SAMPLE SUMMARY



## WMW-20-20190820 L1131652-01 GW

Collected by  
Collected date/time  
Received date/time

08/20/19 15:50    08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:45	08/26/19 17:45	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1336289	1	08/29/19 09:38	08/29/19 09:38	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:05	08/23/19 15:05	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/22/19 23:28	08/22/19 23:28	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1333344	1	08/22/19 19:30	08/23/19 08:47	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1333413	1	08/22/19 19:30	08/23/19 09:49	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 17:24	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:33	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334470	1	08/25/19 06:33	08/25/19 06:33	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1335888	1	08/28/19 05:36	08/28/19 05:36	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1334642	1	08/26/19 08:17	08/27/19 06:24	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335039	1	08/26/19 17:47	08/27/19 16:32	LEA	Mt. Juliet, TN

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

## WMW-21-20190820 L1131652-02 GW

Collected by  
Collected date/time  
Received date/time

08/20/19 11:45    08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:47	08/26/19 17:47	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1336289	1	08/29/19 09:40	08/29/19 09:40	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:05	08/23/19 15:05	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/22/19 23:45	08/22/19 23:45	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1333344	1	08/22/19 19:30	08/23/19 08:48	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1333413	1	08/22/19 19:30	08/23/19 09:51	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 17:28	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:36	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334470	1	08/25/19 06:38	08/25/19 06:38	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1335888	1	08/28/19 05:55	08/28/19 05:55	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1334642	1	08/26/19 08:17	08/27/19 06:44	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335265	1	08/25/19 17:16	08/27/19 17:03	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335039	1	08/26/19 17:47	08/27/19 16:55	LEA	Mt. Juliet, TN

## WMW-22-20190820 L1131652-03 GW

Collected by  
Collected date/time  
Received date/time

08/20/19 10:00    08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:49	08/26/19 17:49	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1336289	1	08/29/19 09:41	08/29/19 09:41	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:05	08/23/19 15:05	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/23/19 00:03	08/23/19 00:03	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1333344	1	08/22/19 19:30	08/23/19 08:54	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1333413	1	08/22/19 19:30	08/23/19 09:52	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 17:31	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:39	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334470	1	08/25/19 06:40	08/25/19 06:40	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1335888	1	08/28/19 06:15	08/28/19 06:15	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1334642	1	08/26/19 08:17	08/27/19 07:04	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335265	1	08/25/19 17:16	08/27/19 17:23	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335039	1	08/26/19 17:47	08/27/19 17:17	LEA	Mt. Juliet, TN

# SAMPLE SUMMARY

## WMW-23-20190820 L1131652-04 GW

Collected by  
Collected date/time  
Received date/time

08/20/19 08:25    08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:50	08/26/19 17:50	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1336289	5	08/29/19 10:07	08/29/19 10:07	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:06	08/23/19 15:06	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/23/19 00:21	08/23/19 00:21	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1333344	1	08/22/19 19:30	08/23/19 08:56	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1333413	1	08/22/19 19:30	08/23/19 09:54	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 17:34	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:43	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334470	1	08/25/19 07:22	08/25/19 07:22	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1335888	1	08/28/19 06:35	08/28/19 06:35	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1334642	1	08/26/19 08:17	08/27/19 07:25	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335040	1	08/26/19 17:44	08/27/19 10:23	DMG	Mt. Juliet, TN

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

## RMD-6-20190820 L1131652-05 GW

Collected by  
Collected date/time  
Received date/time

08/20/19 14:20    08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:52	08/26/19 17:52	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1336289	1	08/29/19 09:44	08/29/19 09:44	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:06	08/23/19 15:06	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/23/19 00:38	08/23/19 00:38	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1333344	1	08/22/19 19:30	08/23/19 08:58	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1333413	1	08/22/19 19:30	08/23/19 09:56	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 17:38	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:46	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334470	1	08/25/19 07:24	08/25/19 07:24	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1335888	1	08/28/19 06:55	08/28/19 06:55	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1334642	1	08/26/19 08:17	08/27/19 07:45	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335265	1	08/25/19 17:16	08/27/19 17:43	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335040	1	08/26/19 17:44	08/27/19 10:45	DMG	Mt. Juliet, TN

## TB-03-20190821 L1131652-06 GW

Collected by  
Collected date/time  
Received date/time

08/21/19 00:00    08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 10:38	08/30/19 10:38	ADM	Mt. Juliet, TN





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

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 17:45	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	243		100	1	08/29/2019 09:38	<a href="#">WG1336289</a>

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	08/23/2019 15:05	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	15000		5000	1	08/22/2019 23:28	<a href="#">WG1333320</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	08/23/2019 08:47	<a href="#">WG1333344</a>
Mercury,Dissolved	ND		0.200	1	08/23/2019 09:49	<a href="#">WG1333413</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	2.35		2.00	1	08/23/2019 17:24	<a href="#">WG1333542</a>
Arsenic,Dissolved	2.21		2.00	1	08/24/2019 14:33	<a href="#">WG1333547</a>
Barium	32.1		5.00	1	08/23/2019 17:24	<a href="#">WG1333542</a>
Barium,Dissolved	26.5		5.00	1	08/24/2019 14:33	<a href="#">WG1333547</a>
Cadmium	ND		1.00	1	08/23/2019 17:24	<a href="#">WG1333542</a>
Cadmium,Dissolved	ND		1.00	1	08/24/2019 14:33	<a href="#">WG1333547</a>
Chromium	ND		2.00	1	08/23/2019 17:24	<a href="#">WG1333542</a>
Chromium,Dissolved	ND		2.00	1	08/24/2019 14:33	<a href="#">WG1333547</a>
Iron,Dissolved	ND		100	1	08/24/2019 14:33	<a href="#">WG1333547</a>
Lead	ND		2.00	1	08/23/2019 17:24	<a href="#">WG1333542</a>
Lead,Dissolved	ND		2.00	1	08/24/2019 14:33	<a href="#">WG1333547</a>
Manganese,Dissolved	37.2		5.00	1	08/24/2019 14:33	<a href="#">WG1333547</a>
Selenium	ND		2.00	1	08/23/2019 17:24	<a href="#">WG1333542</a>
Selenium,Dissolved	ND		2.00	1	08/24/2019 14:33	<a href="#">WG1333547</a>
Silver	ND		2.00	1	08/23/2019 17:24	<a href="#">WG1333542</a>
Silver,Dissolved	ND		2.00	1	08/24/2019 14:33	<a href="#">WG1333547</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	31.2		10.0	1	08/25/2019 06:33	<a href="#">WG1334470</a>
Ethane	ND		13.0	1	08/25/2019 06:33	<a href="#">WG1334470</a>
Ethene	ND		13.0	1	08/25/2019 06:33	<a href="#">WG1334470</a>



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	08/28/2019 05:36	<a href="#">WG1335888</a>
Toluene	ND		1.00	1	08/28/2019 05:36	<a href="#">WG1335888</a>
Ethylbenzene	ND		1.00	1	08/28/2019 05:36	<a href="#">WG1335888</a>
o-Xylene	ND		1.00	1	08/28/2019 05:36	<a href="#">WG1335888</a>
m&p-Xylene	ND		2.00	1	08/28/2019 05:36	<a href="#">WG1335888</a>
(S) Toluene-d8	114		80.0-120		08/28/2019 05:36	<a href="#">WG1335888</a>
(S) 4-Bromofluorobenzene	99.5		77.0-126		08/28/2019 05:36	<a href="#">WG1335888</a>
(S) 1,2-Dichloroethane-d4	81.5		70.0-130		08/28/2019 05:36	<a href="#">WG1335888</a>

1 Cp

2 Tc

3 Ss

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)	ND		200	1	08/27/2019 06:24	<a href="#">WG1334642</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 06:24	<a href="#">WG1334642</a>
(S) o-Terphenyl	92.6		52.0-156		08/27/2019 06:24	<a href="#">WG1334642</a>

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	08/27/2019 16:32	<a href="#">WG1335039</a>
Acenaphthene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Chrysene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Fluoranthene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Fluorene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Naphthalene	ND		0.250	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Phenanthrene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
Pyrene	ND		0.0500	1	08/27/2019 16:32	<a href="#">WG1335039</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 16:32	<a href="#">WG1335039</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 16:32	<a href="#">WG1335039</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 16:32	<a href="#">WG1335039</a>
(S) Nitrobenzene-d5	90.5		31.0-160		08/27/2019 16:32	<a href="#">WG1335039</a>
(S) 2-Fluorobiphenyl	107		48.0-148		08/27/2019 16:32	<a href="#">WG1335039</a>
(S) p-Terphenyl-d14	108		37.0-146		08/27/2019 16:32	<a href="#">WG1335039</a>

9 Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 17:47	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4340		100	1	08/29/2019 09:40	<a href="#">WG1336289</a>

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	08/23/2019 15:05	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	20800		5000	1	08/22/2019 23:45	<a href="#">WG1333320</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	08/23/2019 08:48	<a href="#">WG1333344</a>
Mercury,Dissolved	ND		0.200	1	08/23/2019 09:51	<a href="#">WG1333413</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	6.43		2.00	1	08/23/2019 17:28	<a href="#">WG1333542</a>
Arsenic,Dissolved	6.76		2.00	1	08/24/2019 14:36	<a href="#">WG1333547</a>
Barium	19.8		5.00	1	08/23/2019 17:28	<a href="#">WG1333542</a>
Barium,Dissolved	20.0		5.00	1	08/24/2019 14:36	<a href="#">WG1333547</a>
Cadmium	ND		1.00	1	08/23/2019 17:28	<a href="#">WG1333542</a>
Cadmium,Dissolved	ND		1.00	1	08/24/2019 14:36	<a href="#">WG1333547</a>
Chromium	ND		2.00	1	08/23/2019 17:28	<a href="#">WG1333542</a>
Chromium,Dissolved	ND		2.00	1	08/24/2019 14:36	<a href="#">WG1333547</a>
Iron,Dissolved	ND		100	1	08/24/2019 14:36	<a href="#">WG1333547</a>
Lead	ND		2.00	1	08/23/2019 17:28	<a href="#">WG1333542</a>
Lead,Dissolved	ND		2.00	1	08/24/2019 14:36	<a href="#">WG1333547</a>
Manganese,Dissolved	ND		5.00	1	08/24/2019 14:36	<a href="#">WG1333547</a>
Selenium	ND		2.00	1	08/23/2019 17:28	<a href="#">WG1333542</a>
Selenium,Dissolved	ND		2.00	1	08/24/2019 14:36	<a href="#">WG1333547</a>
Silver	ND		2.00	1	08/23/2019 17:28	<a href="#">WG1333542</a>
Silver,Dissolved	ND		2.00	1	08/24/2019 14:36	<a href="#">WG1333547</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/25/2019 06:38	<a href="#">WG1334470</a>
Ethane	ND		13.0	1	08/25/2019 06:38	<a href="#">WG1334470</a>
Ethene	ND		13.0	1	08/25/2019 06:38	<a href="#">WG1334470</a>



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	08/28/2019 05:55	<a href="#">WG1335888</a>
Toluene	ND		1.00	1	08/28/2019 05:55	<a href="#">WG1335888</a>
Ethylbenzene	ND		1.00	1	08/28/2019 05:55	<a href="#">WG1335888</a>
o-Xylene	ND		1.00	1	08/28/2019 05:55	<a href="#">WG1335888</a>
m&p-Xylene	ND		2.00	1	08/28/2019 05:55	<a href="#">WG1335888</a>
(S) Toluene-d8	115		80.0-120		08/28/2019 05:55	<a href="#">WG1335888</a>
(S) 4-Bromofluorobenzene	98.8		77.0-126		08/28/2019 05:55	<a href="#">WG1335888</a>
(S) 1,2-Dichloroethane-d4	81.0		70.0-130		08/28/2019 05:55	<a href="#">WG1335888</a>

1 Cp

2 Tc

3 Ss

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)	ND		200	1	08/27/2019 06:44	<a href="#">WG1334642</a>
Residual Range Organics (RRO)	263		250	1	08/27/2019 06:44	<a href="#">WG1334642</a>
(S) o-Terphenyl	92.6		52.0-156		08/27/2019 06:44	<a href="#">WG1334642</a>

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)	ND		200	1	08/27/2019 17:03	<a href="#">WG1335265</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 17:03	<a href="#">WG1335265</a>
(S) o-Terphenyl	124		52.0-156		08/27/2019 17:03	<a href="#">WG1335265</a>

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	08/27/2019 16:55	<a href="#">WG1335039</a>
Acenaphthene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Chrysene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Fluoranthene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Fluorene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Naphthalene	ND		0.250	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Phenanthrene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
Pyrene	ND		0.0500	1	08/27/2019 16:55	<a href="#">WG1335039</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 16:55	<a href="#">WG1335039</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 16:55	<a href="#">WG1335039</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 16:55	<a href="#">WG1335039</a>
(S) Nitrobenzene-d5	88.4		31.0-160		08/27/2019 16:55	<a href="#">WG1335039</a>
(S) 2-Fluorobiphenyl	105		48.0-148		08/27/2019 16:55	<a href="#">WG1335039</a>
(S) p-Terphenyl-d14	108		37.0-146		08/27/2019 16:55	<a href="#">WG1335039</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	08/26/2019 17:49	<a href="#">WG1334115</a>

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	2300		100	1	08/29/2019 09:41	<a href="#">WG1336289</a>

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	08/23/2019 15:05	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	20500		5000	1	08/23/2019 00:03	<a href="#">WG1333320</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/23/2019 08:54	<a href="#">WG1333344</a>
Mercury,Dissolved	ND		0.200	1	08/23/2019 09:52	<a href="#">WG1333413</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	3.79		2.00	1	08/23/2019 17:31	<a href="#">WG1333542</a>
Arsenic,Dissolved	3.83		2.00	1	08/24/2019 14:39	<a href="#">WG1333547</a>
Barium	20.9		5.00	1	08/23/2019 17:31	<a href="#">WG1333542</a>
Barium,Dissolved	19.8		5.00	1	08/24/2019 14:39	<a href="#">WG1333547</a>
Cadmium	ND		1.00	1	08/23/2019 17:31	<a href="#">WG1333542</a>
Cadmium,Dissolved	ND		1.00	1	08/24/2019 14:39	<a href="#">WG1333547</a>
Chromium	ND		2.00	1	08/23/2019 17:31	<a href="#">WG1333542</a>
Chromium,Dissolved	ND		2.00	1	08/24/2019 14:39	<a href="#">WG1333547</a>
Iron,Dissolved	ND		100	1	08/24/2019 14:39	<a href="#">WG1333547</a>
Lead	ND		2.00	1	08/23/2019 17:31	<a href="#">WG1333542</a>
Lead,Dissolved	ND		2.00	1	08/24/2019 14:39	<a href="#">WG1333547</a>
Manganese,Dissolved	ND		5.00	1	08/24/2019 14:39	<a href="#">WG1333547</a>
Selenium	ND		2.00	1	08/23/2019 17:31	<a href="#">WG1333542</a>
Selenium,Dissolved	ND		2.00	1	08/24/2019 14:39	<a href="#">WG1333547</a>
Silver	ND		2.00	1	08/23/2019 17:31	<a href="#">WG1333542</a>
Silver,Dissolved	ND		2.00	1	08/24/2019 14:39	<a href="#">WG1333547</a>

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	08/25/2019 06:40	<a href="#">WG1334470</a>
Ethane	ND		13.0	1	08/25/2019 06:40	<a href="#">WG1334470</a>
Ethene	ND		13.0	1	08/25/2019 06:40	<a href="#">WG1334470</a>



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	08/28/2019 06:15	<a href="#">WG1335888</a>
Toluene	ND		1.00	1	08/28/2019 06:15	<a href="#">WG1335888</a>
Ethylbenzene	ND		1.00	1	08/28/2019 06:15	<a href="#">WG1335888</a>
o-Xylene	ND		1.00	1	08/28/2019 06:15	<a href="#">WG1335888</a>
m&p-Xylene	ND		2.00	1	08/28/2019 06:15	<a href="#">WG1335888</a>
(S) Toluene-d8	115		80.0-120		08/28/2019 06:15	<a href="#">WG1335888</a>
(S) 4-Bromofluorobenzene	99.8		77.0-126		08/28/2019 06:15	<a href="#">WG1335888</a>
(S) 1,2-Dichloroethane-d4	81.9		70.0-130		08/28/2019 06:15	<a href="#">WG1335888</a>

1 Cp

2 Tc

3 Ss

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)	ND		200	1	08/27/2019 07:04	<a href="#">WG1334642</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 07:04	<a href="#">WG1334642</a>
(S) o-Terphenyl	88.4		52.0-156		08/27/2019 07:04	<a href="#">WG1334642</a>

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)	ND		200	1	08/27/2019 17:23	<a href="#">WG1335265</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 17:23	<a href="#">WG1335265</a>
(S) o-Terphenyl	65.3		52.0-156		08/27/2019 17:23	<a href="#">WG1335265</a>

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	08/27/2019 17:17	<a href="#">WG1335039</a>
Acenaphthene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Chrysene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Fluoranthene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Fluorene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Naphthalene	ND		0.250	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Phenanthrene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
Pyrene	ND		0.0500	1	08/27/2019 17:17	<a href="#">WG1335039</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 17:17	<a href="#">WG1335039</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 17:17	<a href="#">WG1335039</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 17:17	<a href="#">WG1335039</a>
(S) Nitrobenzene-d5	96.3		31.0-160		08/27/2019 17:17	<a href="#">WG1335039</a>
(S) 2-Fluorobiphenyl	114		48.0-148		08/27/2019 17:17	<a href="#">WG1335039</a>
(S) p-Terphenyl-d14	116		37.0-146		08/27/2019 17:17	<a href="#">WG1335039</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 17:50	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	8260		500	5	08/29/2019 10:07	<a href="#">WG1336289</a>

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	08/23/2019 15:06	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	36200		5000	1	08/23/2019 00:21	<a href="#">WG1333320</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	08/23/2019 08:56	<a href="#">WG1333344</a>
Mercury,Dissolved	ND		0.200	1	08/23/2019 09:54	<a href="#">WG1333413</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	14.5		2.00	1	08/23/2019 17:34	<a href="#">WG1333542</a>
Arsenic,Dissolved	10.7		2.00	1	08/24/2019 14:43	<a href="#">WG1333547</a>
Barium	23.2		5.00	1	08/23/2019 17:34	<a href="#">WG1333542</a>
Barium,Dissolved	22.3		5.00	1	08/24/2019 14:43	<a href="#">WG1333547</a>
Cadmium	ND		1.00	1	08/23/2019 17:34	<a href="#">WG1333542</a>
Cadmium,Dissolved	ND		1.00	1	08/24/2019 14:43	<a href="#">WG1333547</a>
Chromium	ND		2.00	1	08/23/2019 17:34	<a href="#">WG1333542</a>
Chromium,Dissolved	ND		2.00	1	08/24/2019 14:43	<a href="#">WG1333547</a>
Iron,Dissolved	ND		100	1	08/24/2019 14:43	<a href="#">WG1333547</a>
Lead	ND		2.00	1	08/23/2019 17:34	<a href="#">WG1333542</a>
Lead,Dissolved	ND		2.00	1	08/24/2019 14:43	<a href="#">WG1333547</a>
Manganese,Dissolved	ND		5.00	1	08/24/2019 14:43	<a href="#">WG1333547</a>
Selenium	ND		2.00	1	08/23/2019 17:34	<a href="#">WG1333542</a>
Selenium,Dissolved	ND		2.00	1	08/24/2019 14:43	<a href="#">WG1333547</a>
Silver	ND		2.00	1	08/23/2019 17:34	<a href="#">WG1333542</a>
Silver,Dissolved	ND		2.00	1	08/24/2019 14:43	<a href="#">WG1333547</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/25/2019 07:22	<a href="#">WG1334470</a>
Ethane	ND		13.0	1	08/25/2019 07:22	<a href="#">WG1334470</a>
Ethene	ND		13.0	1	08/25/2019 07:22	<a href="#">WG1334470</a>





Collected date/time: 08/20/19 08:25

L1131652

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	08/28/2019 06:35	<a href="#">WG1335888</a>
Toluene	ND		1.00	1	08/28/2019 06:35	<a href="#">WG1335888</a>
Ethylbenzene	ND		1.00	1	08/28/2019 06:35	<a href="#">WG1335888</a>
o-Xylene	ND		1.00	1	08/28/2019 06:35	<a href="#">WG1335888</a>
m&p-Xylene	ND		2.00	1	08/28/2019 06:35	<a href="#">WG1335888</a>
(S) Toluene-d8	115		80.0-120		08/28/2019 06:35	<a href="#">WG1335888</a>
(S) 4-Bromofluorobenzene	98.8		77.0-126		08/28/2019 06:35	<a href="#">WG1335888</a>
(S) 1,2-Dichloroethane-d4	82.1		70.0-130		08/28/2019 06:35	<a href="#">WG1335888</a>

- 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	08/27/2019 07:25	<a href="#">WG1334642</a>
Residual Range Organics (RRO)	285		250	1	08/27/2019 07:25	<a href="#">WG1334642</a>
(S) o-Terphenyl	97.4		52.0-156		08/27/2019 07:25	<a href="#">WG1334642</a>

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	08/27/2019 10:23	<a href="#">WG1335040</a>
Acenaphthene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Chrysene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Fluoranthene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Fluorene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Naphthalene	ND		0.250	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Phenanthrene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
Pyrene	ND		0.0500	1	08/27/2019 10:23	<a href="#">WG1335040</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 10:23	<a href="#">WG1335040</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 10:23	<a href="#">WG1335040</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 10:23	<a href="#">WG1335040</a>
(S) Nitrobenzene-d5	114		31.0-160		08/27/2019 10:23	<a href="#">WG1335040</a>
(S) 2-Fluorobiphenyl	94.7		48.0-148		08/27/2019 10:23	<a href="#">WG1335040</a>
(S) p-Terphenyl-d14	96.3		37.0-146		08/27/2019 10:23	<a href="#">WG1335040</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 17:52	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3110		100	1	08/29/2019 09:44	<a href="#">WG1336289</a>

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	08/23/2019 15:06	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	68800		5000	1	08/23/2019 00:38	<a href="#">WG1333320</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	08/23/2019 08:58	<a href="#">WG1333344</a>
Mercury,Dissolved	ND		0.200	1	08/23/2019 09:56	<a href="#">WG1333413</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	14.5		2.00	1	08/23/2019 17:38	<a href="#">WG1333542</a>
Arsenic,Dissolved	14.8		2.00	1	08/24/2019 14:46	<a href="#">WG1333547</a>
Barium	29.2		5.00	1	08/23/2019 17:38	<a href="#">WG1333542</a>
Barium,Dissolved	28.7		5.00	1	08/24/2019 14:46	<a href="#">WG1333547</a>
Cadmium	ND		1.00	1	08/23/2019 17:38	<a href="#">WG1333542</a>
Cadmium,Dissolved	ND		1.00	1	08/24/2019 14:46	<a href="#">WG1333547</a>
Chromium	ND		2.00	1	08/23/2019 17:38	<a href="#">WG1333542</a>
Chromium,Dissolved	ND		2.00	1	08/24/2019 14:46	<a href="#">WG1333547</a>
Iron,Dissolved	ND		100	1	08/24/2019 14:46	<a href="#">WG1333547</a>
Lead	ND		2.00	1	08/23/2019 17:38	<a href="#">WG1333542</a>
Lead,Dissolved	ND		2.00	1	08/24/2019 14:46	<a href="#">WG1333547</a>
Manganese,Dissolved	108		5.00	1	08/24/2019 14:46	<a href="#">WG1333547</a>
Selenium	ND		2.00	1	08/23/2019 17:38	<a href="#">WG1333542</a>
Selenium,Dissolved	ND		2.00	1	08/24/2019 14:46	<a href="#">WG1333547</a>
Silver	ND		2.00	1	08/23/2019 17:38	<a href="#">WG1333542</a>
Silver,Dissolved	ND		2.00	1	08/24/2019 14:46	<a href="#">WG1333547</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/25/2019 07:24	<a href="#">WG1334470</a>
Ethane	ND		13.0	1	08/25/2019 07:24	<a href="#">WG1334470</a>
Ethene	ND		13.0	1	08/25/2019 07:24	<a href="#">WG1334470</a>



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	08/28/2019 06:55	<a href="#">WG1335888</a>
Toluene	ND		1.00	1	08/28/2019 06:55	<a href="#">WG1335888</a>
Ethylbenzene	ND		1.00	1	08/28/2019 06:55	<a href="#">WG1335888</a>
o-Xylene	ND		1.00	1	08/28/2019 06:55	<a href="#">WG1335888</a>
m&p-Xylene	ND		2.00	1	08/28/2019 06:55	<a href="#">WG1335888</a>
(S) Toluene-d8	115		80.0-120		08/28/2019 06:55	<a href="#">WG1335888</a>
(S) 4-Bromofluorobenzene	102		77.0-126		08/28/2019 06:55	<a href="#">WG1335888</a>
(S) 1,2-Dichloroethane-d4	81.9		70.0-130		08/28/2019 06:55	<a href="#">WG1335888</a>

1 Cp

2 Tc

3 Ss

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)	ND		200	1	08/27/2019 07:45	<a href="#">WG1334642</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 07:45	<a href="#">WG1334642</a>
(S) o-Terphenyl	92.1		52.0-156		08/27/2019 07:45	<a href="#">WG1334642</a>

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)	ND		200	1	08/27/2019 17:43	<a href="#">WG1335265</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 17:43	<a href="#">WG1335265</a>
(S) o-Terphenyl	67.4		52.0-156		08/27/2019 17:43	<a href="#">WG1335265</a>

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	08/27/2019 10:45	<a href="#">WG1335040</a>
Acenaphthene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Chrysene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Fluoranthene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Fluorene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Naphthalene	ND		0.250	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Phenanthrene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
Pyrene	ND		0.0500	1	08/27/2019 10:45	<a href="#">WG1335040</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 10:45	<a href="#">WG1335040</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 10:45	<a href="#">WG1335040</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 10:45	<a href="#">WG1335040</a>
(S) Nitrobenzene-d5	107		31.0-160		08/27/2019 10:45	<a href="#">WG1335040</a>
(S) 2-Fluorobiphenyl	92.1		48.0-148		08/27/2019 10:45	<a href="#">WG1335040</a>
(S) p-Terphenyl-d14	87.9		37.0-146		08/27/2019 10:45	<a href="#">WG1335040</a>



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	08/30/2019 10:38	<a href="#">WG1336242</a>
Acrolein	ND		50.0	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Acrylonitrile	ND		10.0	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Benzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Bromobenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Bromodichloromethane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Bromoform	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Bromomethane	ND		5.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
n-Butylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
sec-Butylbenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
tert-Butylbenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Carbon tetrachloride	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Chlorobenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Chlorodibromomethane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Chloroethane	ND		5.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Chloroform	ND		5.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Chloromethane	ND		2.50	1	08/30/2019 10:38	<a href="#">WG1336242</a>
2-Chlorotoluene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
4-Chlorotoluene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,2-Dibromoethane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Dibromomethane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,4-Dichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,1-Dichloroethane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,2-Dichloroethane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,1-Dichloroethene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,2-Dichloropropane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,1-Dichloropropene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,3-Dichloropropane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
2,2-Dichloropropane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Di-isopropyl ether	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Ethylbenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Hexachloro-1,3-butadiene	ND	<u>JO</u>	1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Isopropylbenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
p-Isopropyltoluene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
2-Butanone (MEK)	ND		10.0	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Methylene Chloride	ND		5.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Naphthalene	ND		5.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
n-Propylbenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Styrene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Tetrachloroethene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Toluene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,2,3-Trichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>

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	08/30/2019 10:38	<a href="#">WG1336242</a>
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Trichloroethene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Trichlorofluoromethane	ND		5.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
1,3,5-Trimethylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
Vinyl chloride	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
o-Xylene	ND		1.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
m&p-Xylene	ND		2.00	1	08/30/2019 10:38	<a href="#">WG1336242</a>
(S) Toluene-d8	101		80.0-120		08/30/2019 10:38	<a href="#">WG1336242</a>
(S) 4-Bromofluorobenzene	94.5		77.0-126		08/30/2019 10:38	<a href="#">WG1336242</a>
(S) 1,2-Dichloroethane-d4	122		70.0-130		08/30/2019 10:38	<a href="#">WG1336242</a>

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



Method Blank (MB)

(MB) R3444476-1 08/26/19 17:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131625-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131625-02 08/26/19 17:28 • (DUP) R3444476-3 08/26/19 17:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	4790	4820	1	0.624		10

L1131661-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-01 08/26/19 17:53 • (DUP) R3444476-6 08/26/19 17:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3444476-2 08/26/19 17:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	6980	93.0	90.0-110	

L1131642-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131642-01 08/26/19 17:31 • (MS) R3444476-4 08/26/19 17:33 • (MSD) R3444476-5 08/26/19 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	190	4900	4900	94.2	94.1	1	90.0-110			0.102	10

L1131661-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131661-02 08/26/19 17:57 • (MS) R3444476-7 08/26/19 17:58

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4780	95.6	1	90.0-110	



Method Blank (MB)

(MB) R3445465-1 08/29/19 09:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131627-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131627-03 08/29/19 09:22 • (DUP) R3445465-3 08/29/19 09:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	317	318	1	0.315		20

L1131652-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1131652-05 08/29/19 09:44 • (DUP) R3445465-5 08/29/19 09:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	3110	3120	1	0.321		20

Laboratory Control Sample (LCS)

(LCS) R3445465-2 08/29/19 09:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	4030	101	90.0-110	

L1131642-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131642-01 08/29/19 09:25 • (MS) R3445465-4 08/29/19 09:26

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	ND	2820	113	1	90.0-110	<u>J5</u>

L1132128-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132128-01 08/29/19 09:47 • (MS) R3445465-6 08/29/19 09:49 • (MSD) R3445465-7 08/29/19 09:50

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	1190	3960	3910	111	109	1	90.0-110	<u>J5</u>		1.17	20



Method Blank (MB)

(MB) R3443702-1 08/23/19 15:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131642-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131642-02 08/23/19 15:04 • (DUP) R3443702-3 08/23/19 15:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1131661-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-03 08/23/19 15:07 • (DUP) R3443702-4 08/23/19 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3443702-2 08/23/19 15:03

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	462	92.4	85.0-115	

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 15:09 • (MS) R3443702-5 08/23/19 15:10 • (MSD) R3443702-6 08/23/19 15:10

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	875	850	87.5	85.0	1	80.0-120			2.90	20





Method Blank (MB)

(MB) R3443477-1 08/22/19 08:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131540-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131540-01 08/22/19 20:14 • (DUP) R3443477-3 08/22/19 20:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	18400	18400	1	0.376		15

L1131661-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-05 08/23/19 02:42 • (DUP) R3443477-6 08/23/19 02:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	24000	24100	1	0.146		15

Laboratory Control Sample (LCS)

(LCS) R3443477-2 08/22/19 08:41

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	39400	98.5	80.0-120	

L1131540-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131540-01 08/22/19 20:14 • (MS) R3443477-4 08/22/19 20:49 • (MSD) R3443477-5 08/22/19 21:07

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	18400	62200	62300	87.6	87.7	1	80.0-120			0.0887	15

L1131661-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131661-05 08/23/19 02:42 • (MS) R3443477-7 08/23/19 03:17

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	24000	73600	99.2	1	80.0-120	



Method Blank (MB)

(MB) R3443515-1 08/23/19 08:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	0.0682	<u>J</u>	0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3443515-2 08/23/19 08:33 • (LCSD) R3443515-3 08/23/19 08:35

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	3.04	3.19	101	106	80.0-120			4.76	20

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 08:37 • (MS) R3443515-4 08/23/19 08:39 • (MSD) R3443515-5 08/23/19 08:41

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 %
Mercury	3.00	ND	2.18	3.02	71.0	99.0	1	75.0-125	<u>J6</u>	<u>J3</u>	32.3	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3443516-1 08/23/19 09:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	0.0700	J	0.0490	0.200

1 Cp

2 Tc

3 Ss

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

(LCS) R3443516-2 08/23/19 09:30 • (LCSD) R3443516-3 08/23/19 09:32

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 %
Mercury,Dissolved	3.00	3.27	2.97	109	98.9	80.0-120			9.77	20

4 Cn

5 Sr

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 09:34 • (MS) R3443516-4 08/23/19 09:36 • (MSD) R3443516-5 08/23/19 09:47

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	3.23	2.37	106	77.2	1	75.0-125		J3	30.7	20

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3443784-1 08/23/19 16:31

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	1.55	J	0.540	2.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Silver	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3443784-2 08/23/19 16:35 • (LCSD) R3443784-3 08/23/19 16:38

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	%	%	%			%	%
Arsenic	50.0	50.6	50.9	101	102	80.0-120			0.592	20
Barium	50.0	51.3	51.0	103	102	80.0-120			0.533	20
Cadmium	50.0	51.8	53.2	104	106	80.0-120			2.59	20
Chromium	50.0	51.5	52.0	103	104	80.0-120			0.959	20
Lead	50.0	49.0	49.2	97.9	98.4	80.0-120			0.526	20
Selenium	50.0	52.2	52.6	104	105	80.0-120			0.871	20
Silver	50.0	50.7	51.0	101	102	80.0-120			0.676	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 16:41 • (MS) R3443784-5 08/23/19 16:48 • (MSD) R3443784-6 08/23/19 16:51

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	50.0	4.62	54.7	54.6	100	99.9	1	75.0-125			0.213	20
Barium	50.0	25.5	75.1	75.4	99.3	99.8	1	75.0-125			0.381	20
Cadmium	50.0	ND	52.3	52.8	104	105	1	75.0-125			0.823	20
Chromium	50.0	ND	51.5	51.7	99.6	99.9	1	75.0-125			0.311	20
Lead	50.0	ND	51.0	49.8	101	98.2	1	75.0-125			2.49	20
Selenium	50.0	ND	53.2	53.4	104	105	1	75.0-125			0.371	20
Silver	50.0	ND	51.1	51.7	102	103	1	75.0-125			1.20	20



L1131850-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131850-04 08/23/19 16:55 • (MS) R3443784-7 08/23/19 16:58 • (MSD) R3443784-8 08/23/19 17:01

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 %
Arsenic	50.0	0.339	50.3	48.5	99.9	96.4	1	75.0-125			3.52	20
Barium	50.0	25.6	77.9	75.9	105	101	1	75.0-125			2.60	20
Cadmium	50.0	0.232	52.3	51.1	104	102	1	75.0-125			2.32	20
Chromium	50.0	0.978	50.7	48.7	99.5	95.5	1	75.0-125			4.00	20
Lead	50.0	0.338	50.1	48.0	99.6	95.3	1	75.0-125			4.40	20
Selenium	50.0	0.411	54.0	51.7	107	103	1	75.0-125			4.42	20
Silver	50.0	U	52.0	51.8	104	104	1	75.0-125			0.393	20

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



Method Blank (MB)

(MB) R3443863-1 08/24/19 13:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		0.250	2.00
Barium,Dissolved	0.431	U	0.360	5.00
Cadmium,Dissolved	U		0.160	1.00
Chromium,Dissolved	0.602	U	0.540	2.00
Iron,Dissolved	68.8	U	15.0	100
Lead,Dissolved	0.762	U	0.240	2.00
Manganese,Dissolved	0.278	U	0.250	5.00
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) R3443863-2 08/24/19 13:52 • (LCSD) R3443863-3 08/24/19 13:55

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	51.3	52.2	103	104	80.0-120			1.77	20
Barium,Dissolved	50.0	50.2	48.4	100	96.9	80.0-120			3.60	20
Cadmium,Dissolved	50.0	52.5	52.3	105	105	80.0-120			0.421	20
Chromium,Dissolved	50.0	52.5	53.7	105	107	80.0-120			2.33	20
Iron,Dissolved	5000	5470	5360	109	107	80.0-120			2.07	20
Lead,Dissolved	50.0	51.6	52.7	103	105	80.0-120			2.13	20
Manganese,Dissolved	50.0	50.7	52.2	101	104	80.0-120			2.91	20
Selenium,Dissolved	50.0	50.9	50.8	102	102	80.0-120			0.247	20
Silver,Dissolved	50.0	52.9	52.9	106	106	80.0-120			0.00899	20

L1131642-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131642-01 08/24/19 13:59 • (MS) R3443863-5 08/24/19 14:05 • (MSD) R3443863-6 08/24/19 14:09

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	48.3	105	105	112	114	1	75.0-125			0.554	20
Barium,Dissolved	50.0	74.7	129	132	109	114	1	75.0-125			1.67	20
Cadmium,Dissolved	50.0	ND	54.2	55.7	108	111	1	75.0-125			2.85	20
Chromium,Dissolved	50.0	ND	55.4	55.2	109	109	1	75.0-125			0.279	20
Iron,Dissolved	5000	6370	11900	12000	110	112	1	75.0-125			0.796	20
Lead,Dissolved	50.0	ND	54.2	55.5	108	110	1	75.0-125			2.46	20
Manganese,Dissolved	50.0	3360	3500	3520	293	324	1	75.0-125	U	U	0.438	20
Selenium,Dissolved	50.0	ND	55.1	54.6	110	109	1	75.0-125			0.811	20
Silver,Dissolved	50.0	ND	55.5	57.0	111	114	1	75.0-125			2.66	20



Method Blank (MB)

(MB) R3443903-1 08/25/19 06:30

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

L1131652-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131652-01 08/25/19 06:33 • (DUP) R3443903-2 08/25/19 07:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	31.2	30.0	1	4.21		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1131685-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1131685-10 08/25/19 08:43 • (DUP) R3443903-3 08/25/19 08:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	U	0.000	1	0.000		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3443903-4 08/25/19 08:50 • (LCSD) R3443903-5 08/25/19 08:55

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	70.9	69.7	105	103	85.0-115			1.71	20
Ethane	129	115	114	89.3	88.1	85.0-115			1.30	20
Ethene	127	114	114	89.7	89.7	85.0-115			0.0212	20



Method Blank (MB)

(MB) R3445202-2 08/28/19 00:02

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>	114			80.0-120
<i>(S) 4-Bromofluorobenzene</i>	97.1			77.0-126
<i>(S) 1,2-Dichloroethane-d4</i>	84.5			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3445202-1 08/27/19 21:37

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Benzene	25.0	22.0	88.1	70.0-123	
Ethylbenzene	25.0	27.9	112	79.0-123	
o-Xylene	25.0	26.2	105	80.0-122	
m&p-Xylenes	50.0	53.6	107	80.0-122	
Toluene	25.0	25.4	102	79.0-120	
<i>(S) Toluene-d8</i>			115	80.0-120	
<i>(S) 4-Bromofluorobenzene</i>			99.6	77.0-126	
<i>(S) 1,2-Dichloroethane-d4</i>			83.3	70.0-130	





Method Blank (MB)

(MB) R3446209-2 08/30/19 09:24

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	0.779	U	0.256	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3446209-2 08/30/19 09:24

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) 4-Bromofluorobenzene	93.7			77.0-126
(S) 1,2-Dichloroethane-d4	116			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	156	125	19.0-160	
Acrolein	125	134	107	10.0-160	
Acrylonitrile	125	151	121	55.0-149	



Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	25.0	23.9	95.8	70.0-123	
Bromobenzene	25.0	25.4	102	73.0-121	
Bromodichloromethane	25.0	27.0	108	75.0-120	
Bromoform	25.0	25.9	104	68.0-132	
Bromomethane	25.0	23.2	92.7	10.0-160	
n-Butylbenzene	25.0	19.6	78.5	73.0-125	
sec-Butylbenzene	25.0	20.2	80.9	75.0-125	
tert-Butylbenzene	25.0	21.5	86.0	76.0-124	
Carbon tetrachloride	25.0	26.9	108	68.0-126	
Chlorobenzene	25.0	24.3	97.1	80.0-121	
Chlorodibromomethane	25.0	26.6	106	77.0-125	
Chloroethane	25.0	22.3	89.3	47.0-150	
Chloroform	25.0	25.7	103	73.0-120	
Chloromethane	25.0	29.0	116	41.0-142	
2-Chlorotoluene	25.0	23.6	94.3	76.0-123	
4-Chlorotoluene	25.0	24.6	98.3	75.0-122	
1,2-Dibromo-3-Chloropropane	25.0	26.5	106	58.0-134	
1,2-Dibromoethane	25.0	26.5	106	80.0-122	
Dibromomethane	25.0	27.2	109	80.0-120	
1,2-Dichlorobenzene	25.0	23.4	93.5	79.0-121	
1,3-Dichlorobenzene	25.0	22.9	91.5	79.0-120	
1,4-Dichlorobenzene	25.0	19.9	79.6	79.0-120	
Dichlorodifluoromethane	25.0	32.5	130	51.0-149	
1,1-Dichloroethane	25.0	26.1	104	70.0-126	
1,2-Dichloroethane	25.0	27.5	110	70.0-128	
1,1-Dichloroethene	25.0	23.8	95.1	71.0-124	
cis-1,2-Dichloroethene	25.0	22.9	91.7	73.0-120	
trans-1,2-Dichloroethene	25.0	22.9	91.5	73.0-120	
1,2-Dichloropropane	25.0	27.1	108	77.0-125	
1,1-Dichloropropene	25.0	25.9	104	74.0-126	
1,3-Dichloropropane	25.0	27.2	109	80.0-120	
cis-1,3-Dichloropropene	25.0	26.7	107	80.0-123	
trans-1,3-Dichloropropene	25.0	28.6	114	78.0-124	
2,2-Dichloropropane	25.0	24.6	98.3	58.0-130	
Di-isopropyl ether	25.0	27.5	110	58.0-138	
Ethylbenzene	25.0	23.4	93.5	79.0-123	
Hexachloro-1,3-butadiene	25.0	19.6	78.2	54.0-138	
Isopropylbenzene	25.0	21.9	87.5	76.0-127	
p-Isopropyltoluene	25.0	21.2	84.7	76.0-125	
2-Butanone (MEK)	125	165	132	44.0-160	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methylene Chloride	25.0	22.6	90.2	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	147	118	68.0-142	
Methyl tert-butyl ether	25.0	24.0	95.8	68.0-125	
Naphthalene	25.0	23.2	92.8	54.0-135	
n-Propylbenzene	25.0	22.2	88.8	77.0-124	
Styrene	25.0	24.5	98.1	73.0-130	
1,1,1,2-Tetrachloroethane	25.0	25.7	103	75.0-125	
1,1,2,2-Tetrachloroethane	25.0	26.7	107	65.0-130	
Tetrachloroethene	25.0	23.9	95.6	72.0-132	
Toluene	25.0	23.5	94.1	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	23.7	95.0	69.0-132	
1,2,3-Trichlorobenzene	25.0	19.4	77.8	50.0-138	
1,2,4-Trichlorobenzene	25.0	20.3	81.0	57.0-137	
1,1,1-Trichloroethane	25.0	25.9	104	73.0-124	
1,1,2-Trichloroethane	25.0	25.1	100	80.0-120	
Trichloroethene	25.0	23.5	94.0	78.0-124	
Trichlorofluoromethane	25.0	28.2	113	59.0-147	
1,2,3-Trichloropropane	25.0	30.3	121	73.0-130	
1,2,3-Trimethylbenzene	25.0	22.9	91.7	77.0-120	
1,2,4-Trimethylbenzene	25.0	22.7	90.8	76.0-121	
1,3,5-Trimethylbenzene	25.0	19.5	78.0	76.0-122	
Vinyl chloride	25.0	26.1	105	67.0-131	
o-Xylene	25.0	22.9	91.6	80.0-122	
m&p-Xylenes	50.0	46.5	93.1	80.0-122	
(S) Toluene-d8			101	80.0-120	
(S) 4-Bromofluorobenzene			96.5	77.0-126	
(S) 1,2-Dichloroethane-d4			119	70.0-130	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	125	ND	149	178	119	142	1	10.0-160			17.4	35
Acrolein	125	ND	245	288	196	231	1	10.0-160	J5	J5	16.3	39
Acrylonitrile	125	ND	144	166	115	133	1	21.0-160			14.6	32
Benzene	25.0	ND	21.5	22.8	85.9	91.0	1	17.0-158			5.76	27
Bromobenzene	25.0	ND	24.8	23.8	99.3	95.3	1	30.0-149			4.19	28
Bromodichloromethane	25.0	ND	25.2	26.8	101	107	1	31.0-150			6.35	27



L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	25.0	ND	24.4	26.3	97.4	105	1	29.0-150			7.63	29
Bromomethane	25.0	ND	16.4	19.4	65.6	77.5	1	10.0-160			16.6	38
n-Butylbenzene	25.0	ND	15.6	18.7	62.4	74.8	1	31.0-150			18.2	30
sec-Butylbenzene	25.0	ND	17.2	19.5	68.8	77.9	1	33.0-155			12.4	29
tert-Butylbenzene	25.0	ND	18.9	20.9	75.8	83.4	1	34.0-153			9.61	28
Carbon tetrachloride	25.0	ND	25.7	29.0	103	116	1	23.0-159			11.9	28
Chlorobenzene	25.0	ND	21.4	23.1	85.7	92.4	1	33.0-152			7.50	27
Chlorodibromomethane	25.0	ND	24.2	25.9	96.7	104	1	37.0-149			7.00	27
Chloroethane	25.0	ND	16.6	18.8	66.3	75.4	1	10.0-160			12.8	30
Chloroform	25.0	ND	23.6	25.3	94.6	101	1	29.0-154			6.90	28
Chloromethane	25.0	ND	21.4	25.7	85.5	103	1	10.0-160			18.3	29
2-Chlorotoluene	25.0	ND	21.4	22.4	85.6	89.4	1	32.0-153			4.32	28
4-Chlorotoluene	25.0	ND	20.7	23.0	82.9	92.1	1	32.0-150			10.5	28
1,2-Dibromo-3-Chloropropane	25.0	ND	23.9	25.6	95.5	102	1	22.0-151			6.84	34
1,2-Dibromoethane	25.0	ND	23.1	24.6	92.2	98.6	1	34.0-147			6.61	27
Dibromomethane	25.0	ND	24.1	25.5	96.5	102	1	30.0-151			5.71	27
1,2-Dichlorobenzene	25.0	ND	19.9	21.8	79.4	87.4	1	34.0-149			9.55	28
1,3-Dichlorobenzene	25.0	ND	19.5	21.6	78.0	86.6	1	36.0-146			10.4	27
1,4-Dichlorobenzene	25.0	ND	18.0	19.7	71.8	78.7	1	35.0-142			9.11	27
Dichlorodifluoromethane	25.0	ND	20.8	27.5	83.2	110	1	10.0-160			27.6	29
1,1-Dichloroethane	25.0	ND	24.9	29.1	99.5	116	1	25.0-158			15.7	27
1,2-Dichloroethane	25.0	ND	25.1	27.0	100	108	1	29.0-151			7.54	27
1,1-Dichloroethene	25.0	ND	21.1	25.4	84.5	102	1	11.0-160			18.6	29
cis-1,2-Dichloroethene	25.0	ND	21.0	24.3	83.9	97.0	1	10.0-160			14.5	27
trans-1,2-Dichloroethene	25.0	ND	19.4	23.5	77.7	93.9	1	17.0-153			18.9	27
1,2-Dichloropropane	25.0	ND	25.3	26.1	101	104	1	30.0-156			2.82	27
1,1-Dichloropropene	25.0	ND	22.1	24.5	88.4	98.0	1	25.0-158			10.4	27
1,3-Dichloropropane	25.0	ND	24.2	25.3	97.0	101	1	38.0-147			4.31	27
cis-1,3-Dichloropropene	25.0	ND	23.6	25.2	94.6	101	1	34.0-149			6.34	28
trans-1,3-Dichloropropene	25.0	ND	25.3	26.9	101	108	1	32.0-149			6.19	28
2,2-Dichloropropane	25.0	ND	23.3	26.1	93.0	105	1	24.0-152			11.7	29
Di-isopropyl ether	25.0	ND	27.3	32.2	109	129	1	21.0-160			16.5	28
Ethylbenzene	25.0	ND	20.6	22.0	82.5	87.9	1	30.0-155			6.31	27
Hexachloro-1,3-butadiene	25.0	ND	15.8	19.5	63.2	78.0	1	20.0-154			21.0	34
Isopropylbenzene	25.0	ND	19.6	21.8	78.5	87.0	1	28.0-157			10.2	27
p-Isopropyltoluene	25.0	ND	17.8	20.3	71.3	81.2	1	30.0-154			13.0	29
2-Butanone (MEK)	125	ND	160	155	128	124	1	10.0-160			3.13	32
Methylene Chloride	25.0	ND	20.4	24.0	81.5	96.1	1	23.0-144			16.5	28
4-Methyl-2-pentanone (MIBK)	125	ND	148	145	118	116	1	29.0-160			2.01	29
Methyl tert-butyl ether	25.0	ND	21.4	26.1	85.6	104	1	28.0-150			19.9	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	25.0	ND	20.1	22.1	80.2	88.5	1	12.0-156			9.77	35
n-Propylbenzene	25.0	ND	20.7	21.0	82.9	83.9	1	31.0-154			1.23	28
Styrene	25.0	ND	22.0	23.4	88.1	93.8	1	33.0-155			6.27	28
1,1,1,2-Tetrachloroethane	25.0	ND	23.7	25.6	95.0	102	1	36.0-151			7.50	29
1,1,2,2-Tetrachloroethane	25.0	ND	26.9	25.6	107	102	1	33.0-150			4.95	28
Tetrachloroethene	25.0	ND	19.7	22.7	78.8	90.8	1	10.0-160			14.1	27
Toluene	25.0	ND	20.9	22.1	83.7	88.4	1	26.0-154			5.50	28
1,1,2-Trichlorotrifluoroethane	25.0	ND	19.6	26.7	78.4	107	1	23.0-160		J3	30.5	30
1,2,3-Trichlorobenzene	25.0	ND	15.9	18.7	63.7	75.0	1	17.0-150			16.3	36
1,2,4-Trichlorobenzene	25.0	ND	16.1	19.5	64.3	77.8	1	24.0-150			19.1	33
1,1,1-Trichloroethane	25.0	ND	24.9	27.4	99.6	109	1	23.0-160			9.48	28
1,1,2-Trichloroethane	25.0	ND	23.1	24.0	92.5	95.9	1	35.0-147			3.68	27
Trichloroethene	25.0	ND	20.3	22.3	81.1	89.1	1	10.0-160			9.45	25
Trichlorofluoromethane	25.0	ND	21.6	26.2	86.5	105	1	17.0-160			19.3	31
1,2,3-Trichloropropane	25.0	ND	27.2	28.6	109	114	1	34.0-151			5.00	29
1,2,3-Trimethylbenzene	25.0	ND	19.9	21.7	79.6	86.8	1	32.0-149			8.57	28
1,2,4-Trimethylbenzene	25.0	ND	19.3	21.5	77.1	86.1	1	26.0-154			11.1	27
1,3,5-Trimethylbenzene	25.0	ND	18.1	19.8	72.3	79.2	1	28.0-153			9.11	27
Vinyl chloride	25.0	ND	19.5	22.8	78.2	91.1	1	10.0-160			15.3	27
o-Xylene	25.0	ND	20.4	21.8	81.7	87.3	1	45.0-144			6.62	26
m&p-Xylenes	50.0	ND	40.2	44.0	80.4	87.9	1	43.0-146			8.95	26
(S) Toluene-d8					104	99.8		80.0-120				
(S) 4-Bromofluorobenzene					98.8	97.6		77.0-126				
(S) 1,2-Dichloroethane-d4					122	122		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3444579-1 08/26/19 17:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
(S) o-Terphenyl	82.5			52.0-156

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

(LCS) R3444579-2 08/26/19 17:40 • (LCSD) R3444579-3 08/26/19 18:00

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)	1500	1440	1380	96.0	92.0	50.0-150			4.26	20
(S) o-Terphenyl				85.5	77.0	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) R3444925-1 08/27/19 15:40

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>	62.0			52.0-156

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

(LCS) R3444925-2 08/27/19 16:20 • (LCSD) R3444925-3 08/27/19 16:43

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 %
Diesel Range Organics (DRO)	1500	1220	1190	81.3	79.3	50.0-150			2.49	20
<i>(S) o-Terphenyl</i>				72.0	71.5	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) R3444692-3 08/27/19 09:48

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	0.0226	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	0.0119	U	0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	95.5			31.0-160
(S) 2-Fluorobiphenyl	105			48.0-148
(S) p-Terphenyl-d14	113			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3444692-1 08/27/19 09:03 • (LCSD) R3444692-2 08/27/19 09:25

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	1.84	1.89	92.0	94.5	67.0-150			2.68	20
Acenaphthene	2.00	1.69	1.73	84.5	86.5	65.0-138			2.34	20
Acenaphthylene	2.00	1.90	1.94	95.0	97.0	66.0-140			2.08	20
Benzo(a)anthracene	2.00	1.93	2.00	96.5	100	61.0-140			3.56	20
Benzo(a)pyrene	2.00	1.85	1.92	92.5	96.0	60.0-143			3.71	20
Benzo(b)fluoranthene	2.00	1.74	1.82	87.0	91.0	58.0-141			4.49	20
Benzo(g,h,i)perylene	2.00	1.87	1.93	93.5	96.5	52.0-153			3.16	20
Benzo(k)fluoranthene	2.00	1.85	1.90	92.5	95.0	58.0-148			2.67	20
Chrysene	2.00	1.82	1.87	91.0	93.5	64.0-144			2.71	20
Dibenz(a,h)anthracene	2.00	1.97	2.04	98.5	102	52.0-155			3.49	20
Fluoranthene	2.00	1.94	2.00	97.0	100	69.0-153			3.05	20



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

(LCS) R3444692-1 08/27/19 09:03 • (LCSD) R3444692-2 08/27/19 09:25

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	1.87	1.91	93.5	95.5	64.0-136			2.12	20
Indeno(1,2,3-cd)pyrene	2.00	1.94	2.02	97.0	101	54.0-153			4.04	20
Naphthalene	2.00	1.73	1.72	86.5	86.0	61.0-137			0.580	20
Phenanthrene	2.00	1.79	1.85	89.5	92.5	62.0-137			3.30	20
Pyrene	2.00	1.70	1.74	85.0	87.0	60.0-142			2.33	20
1-Methylnaphthalene	2.00	1.86	1.84	93.0	92.0	66.0-142			1.08	20
2-Methylnaphthalene	2.00	1.73	1.71	86.5	85.5	62.0-136			1.16	20
2-Chloronaphthalene	2.00	1.66	1.67	83.0	83.5	64.0-140			0.601	20
<i>(S) Nitrobenzene-d5</i>				89.0	90.5	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				96.0	99.0	48.0-148				
<i>(S) p-Terphenyl-d14</i>				103	106	37.0-146				

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3444682-2 08/27/19 07:51

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	104			31.0-160
(S) 2-Fluorobiphenyl	79.5			48.0-148
(S) p-Terphenyl-d14	86.5			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)

(LCS) R3444682-1 08/27/19 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	2.00	2.14	107	67.0-150	
Acenaphthene	2.00	1.86	93.0	65.0-138	
Acenaphthylene	2.00	1.89	94.5	66.0-140	
Benzo(a)anthracene	2.00	1.79	89.5	61.0-140	
Benzo(a)pyrene	2.00	1.82	91.0	60.0-143	
Benzo(b)fluoranthene	2.00	1.73	86.5	58.0-141	
Benzo(g,h,i)perylene	2.00	1.77	88.5	52.0-153	
Benzo(k)fluoranthene	2.00	1.94	97.0	58.0-148	
Chrysene	2.00	2.01	100	64.0-144	
Dibenz(a,h)anthracene	2.00	1.65	82.5	52.0-155	
Fluoranthene	2.00	2.08	104	69.0-153	



Laboratory Control Sample (LCS)

(LCS) R3444682-1 08/27/19 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	2.00	1.77	88.5	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.69	84.5	54.0-153	
Naphthalene	2.00	1.79	89.5	61.0-137	
Phenanthrene	2.00	1.80	90.0	62.0-137	
Pyrene	2.00	1.69	84.5	60.0-142	
1-Methylnaphthalene	2.00	1.71	85.5	66.0-142	
2-Methylnaphthalene	2.00	1.62	81.0	62.0-136	
2-Chloronaphthalene	2.00	1.82	91.0	64.0-140	
<i>(S) Nitrobenzene-d5</i>			111	31.0-160	
<i>(S) 2-Fluorobiphenyl</i>			89.5	48.0-148	
<i>(S) p-Terphenyl-d14</i>			90.5	37.0-146	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 08:34 • (MS) R3444682-3 08/27/19 08:56 • (MSD) R3444682-4 08/27/19 09:18

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	ND	1.98	2.03	104	107	1	56.0-156			2.49	20
Acenaphthene	1.90	ND	1.81	1.83	95.3	96.3	1	44.0-153			1.10	20
Acenaphthylene	1.90	ND	1.86	1.89	97.9	99.5	1	53.0-150			1.60	20
Benzo(a)anthracene	1.90	ND	1.82	1.86	95.8	97.9	1	47.0-151			2.17	20
Benzo(a)pyrene	1.90	ND	1.72	1.75	90.5	92.1	1	45.0-146			1.73	20
Benzo(b)fluoranthene	1.90	ND	1.71	1.72	90.0	90.5	1	43.0-142			0.583	20
Benzo(g,h,i)perylene	1.90	ND	1.68	1.71	88.4	90.0	1	40.0-147			1.77	20
Benzo(k)fluoranthene	1.90	ND	1.73	1.79	91.1	94.2	1	43.0-148			3.41	21
Chrysene	1.90	ND	1.82	1.87	95.8	98.4	1	50.0-148			2.71	20
Dibenz(a,h)anthracene	1.90	ND	1.59	1.63	83.7	85.8	1	37.0-151			2.48	20
Fluoranthene	1.90	ND	2.06	2.13	108	112	1	56.0-157			3.34	20
Fluorene	1.90	ND	1.72	1.75	89.9	91.5	1	48.0-148			1.73	20
Indeno(1,2,3-cd)pyrene	1.90	ND	1.61	1.63	84.7	85.8	1	41.0-148			1.23	20
Naphthalene	1.90	ND	1.78	1.80	92.6	93.7	1	10.0-160			1.12	20
Phenanthrene	1.90	ND	1.76	1.80	92.6	94.7	1	47.0-147			2.25	20
Pyrene	1.90	ND	1.73	1.77	91.1	93.2	1	51.0-148			2.29	20
1-Methylnaphthalene	1.90	ND	1.69	1.71	88.9	90.0	1	21.0-160			1.18	20
2-Methylnaphthalene	1.90	ND	1.62	1.63	84.7	85.2	1	31.0-160			0.615	20
2-Chloronaphthalene	1.90	ND	1.80	1.81	94.7	95.3	1	52.0-148			0.554	20
<i>(S) Nitrobenzene-d5</i>					110	115		31.0-160				
<i>(S) 2-Fluorobiphenyl</i>					94.7	94.2		48.0-148				
<i>(S) p-Terphenyl-d14</i>					95.8	98.4		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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration method criteria.
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.



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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

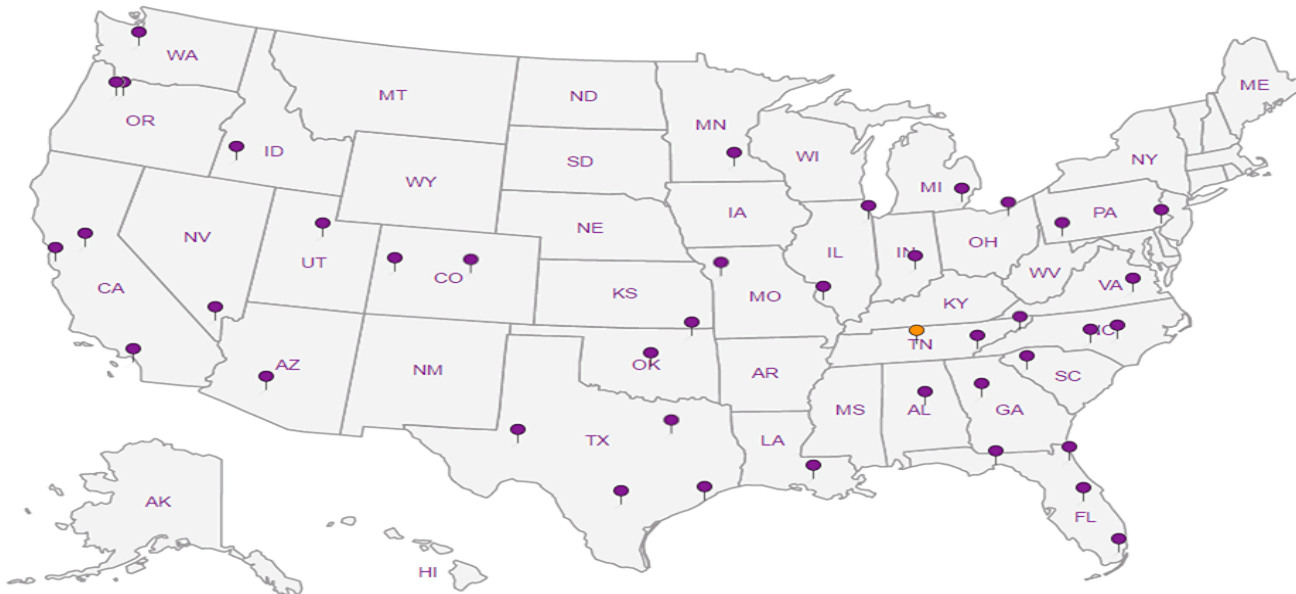
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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

Fres  
Chk

Analysis / Container / Preservative

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



Report to:  
**Katie Teague**

Email To: KatieTeague@kennedyjenks.com;  
RyanHultgren@kennedyjenks.com;

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

City/State Collected: **Wishram, WA**

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

Client Project #  
**1996120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (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	Analysis / Container / Preservative										Remarks	Sample # (lab)					
WMW-20-20190820	Grab	GW		8/20/19	1550	15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	see pg 2	61
WMW-21-20190820		GW			1145	17	X	X	X	X	X	X	X	X	X	X	X	X	X	X		62
WMW-22-20190820		GW			1000	17	X	X	X	X	X	X	X	X	X	X	X	X	X	X		63
WMW-23-20190820		GW			0825	15	X	X	X	X	X	X	X	X	X	X	X	X	X	X		64
RMD-6-20190820		GW			1420	17	X	X	X	X	X	X	X	X	X	X	X	X	X	X		65
TB-03-20190821		GW		8/21/19		1																66
		GW																				
		GW																				
		GW																				
		GW																				

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other \_\_\_\_\_

Remarks:

sent via FED-X

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:

UPS  FedEx  Courier \_\_\_\_\_

Tracking # **1070 0201 2872**

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  
**RAD SCREEN: <0.5 mR/hr**

Relinquished by: (Signature)  
*[Signature]*

Date: **8/21/19**  
Time: **2:00p**

Received by: (Signature)  
*[Signature]*

Trip Blank Received: Yes  No   
HCl/MeOH  
TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received by: (Signature)

Temp: \_\_\_\_\_ °C  
Bottles Received: **3810.3.435 81**

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received for lab by: (Signature)  
*[Signature]*

Date: **8/22/19**  
Time: **845**

Hold: \_\_\_\_\_  
Condition: NCF **10X**



# Kennedy/Jenks Con-BNSF Region 1

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

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



Email To: KatieTeague@kennedyjenks.com;  
RyanHultgren@kennedyjenks.com;

Report to:  
**Katie Teague**

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

City/State  
Collected: **Wishram, WA**

Phone: **253-835-6400**

Client Project #  
**1996120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Fax:

Site/Facility ID #

P.O. #

Collected by (print):

Quote #

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

No.  
of  
Cnts

Total As 6020 250mlHDPE-HNO3

Total M6020RCRA8 250mlHDPE-HNO3

Total Pb 6020 250mlHDPE-HNO3

V8260BTEXC 40mlAmb-HCl

V8260C 40mlAmb-HCl

Immediately  
Packed on Ice N  Y

L# **1131652**  
Table #  
Acctnum: **BNSF1KEN**  
Template: **T149555**  
Prelogin: **P723325**  
TSR: **134 - Mark W. Beasley**  
PB: **8-7-19**  
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl	Remarks	Sample # (lab only)
WMW-20-20190820	Grab	GW	—	8/20/19	1550	15	X	X	X				21
WMW-21-20190820	↓	GW	↓	↓	1145	17	X	X	X				02
WMW-22-20190820	↓	GW	↓	↓	1000	17	X	X	X				03
WMW-23-20190820	↓	GW	↓	↓	0825	15	X	X	X				04
RMD-6-20190820	↓	GW	↓	↓	1420	17	X	X	X		X		05
IB-03-20190821		GW		8/21/19	—	1							06
		GW											
		GW											
		GW											
		GW											

\* Matrix:  
SS - Soil    AIR - Air    F - Filter  
GW - Groundwater    B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \_\_\_\_\_ pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  UPS  FedEx  Courier \_\_\_\_\_ Tracking # **via FedEx**

**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

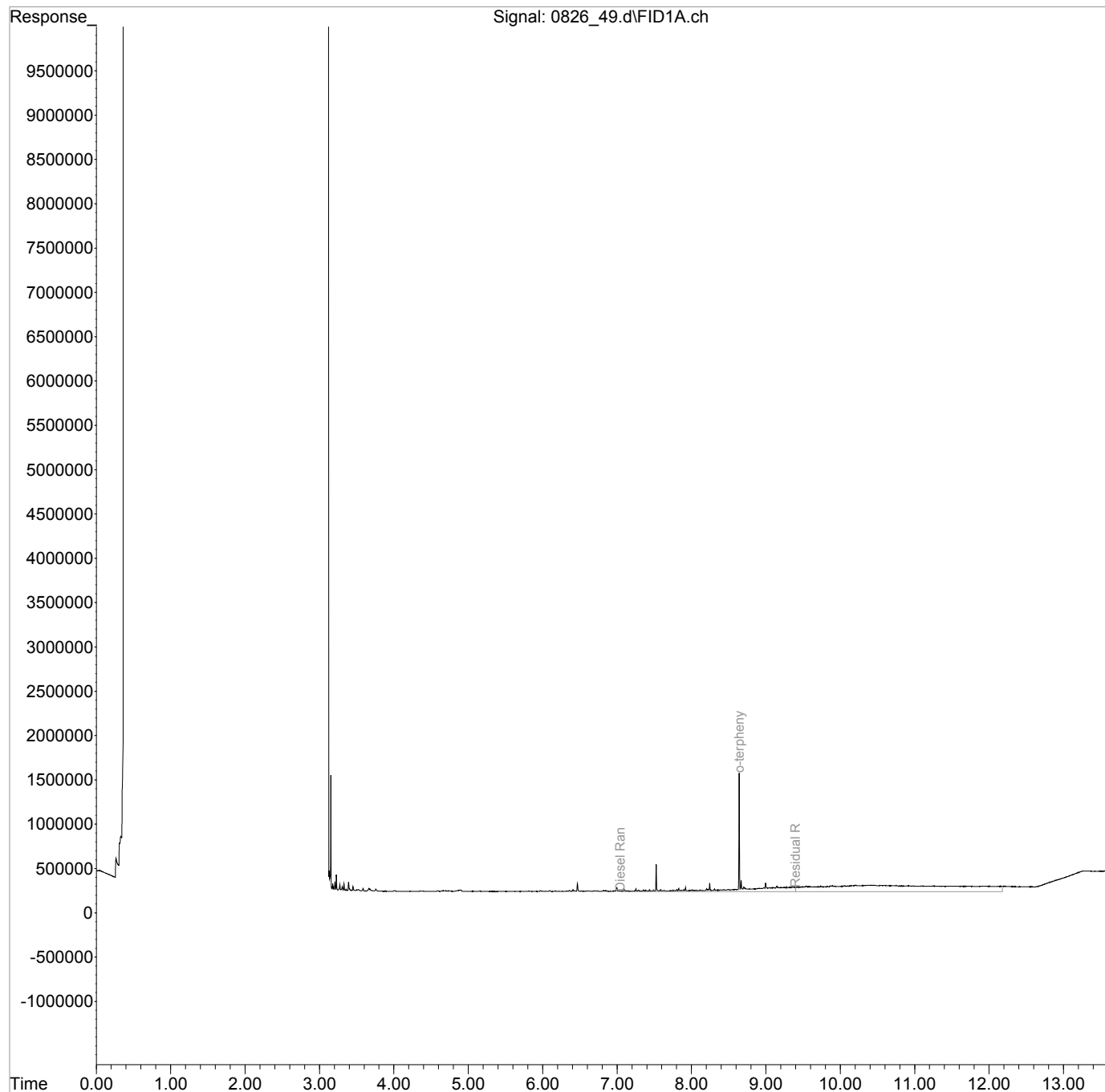
Relinquished by: (Signature) <i>[Signature]</i>	Date: <b>8/21/19</b>	Time: <b>2:00p</b>	Received by: (Signature)	Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>1</b> HCl / MeOH TBR	Bottles Received: <b>81</b>	Rad Screen: <b>&lt;0.5 mB/hr</b>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C	Bottles Received: <b>81</b>	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <b>8/22/19</b>	Time: <b>845</b>	Hold: _____ Condition: <b>NCF / OK</b>



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_49.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 6:24 am  
Operator : 843  
Sample : L1131652-01 1x WG1334642  
Misc : M.I.s on ranges are corrections  
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 09:22:33 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

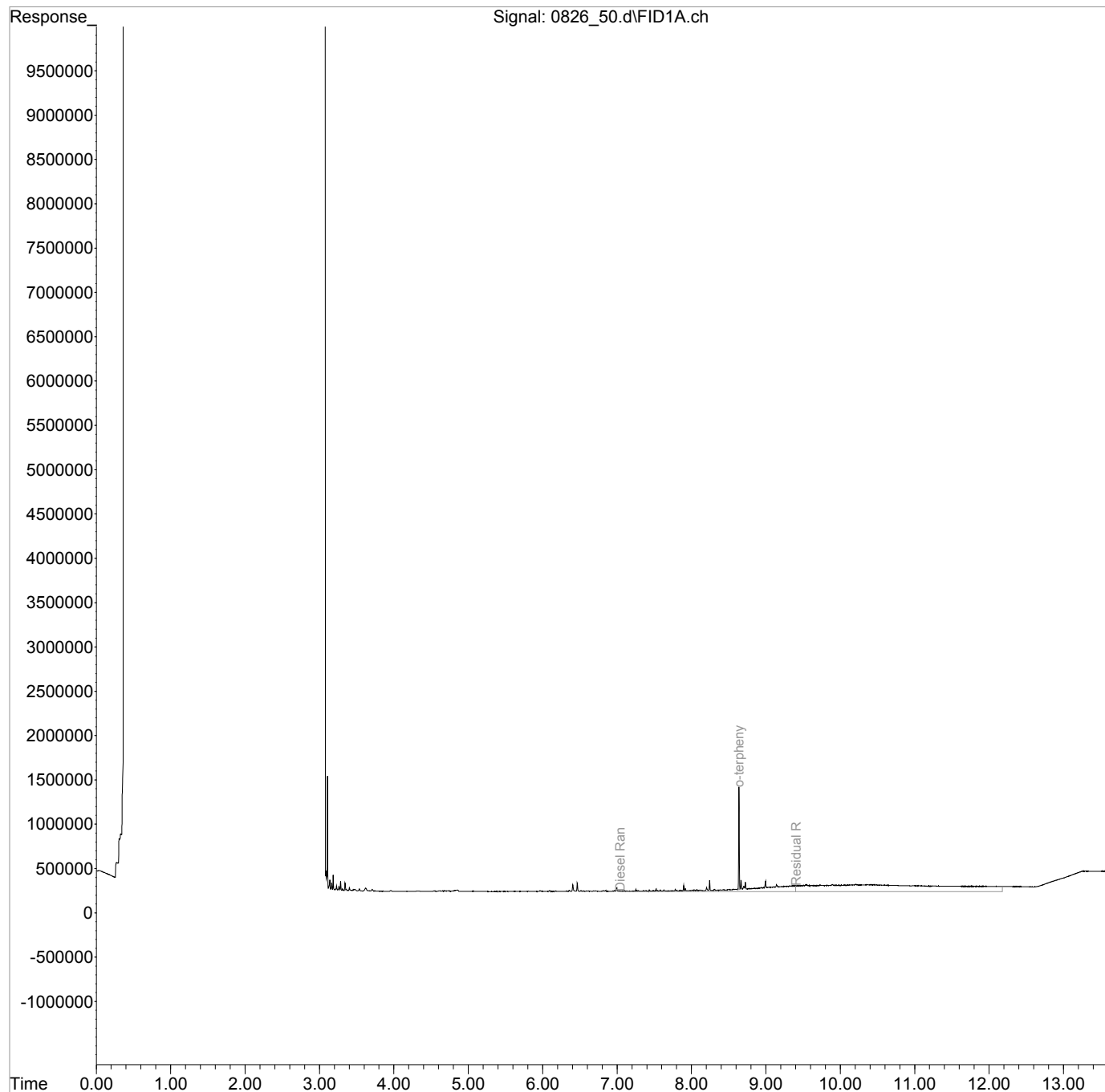
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_50.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 6:44 am  
Operator : 843  
Sample : L1131652-02 1x WG1334642  
Misc : M.I.s on ranges are corrections  
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 09:23:17 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

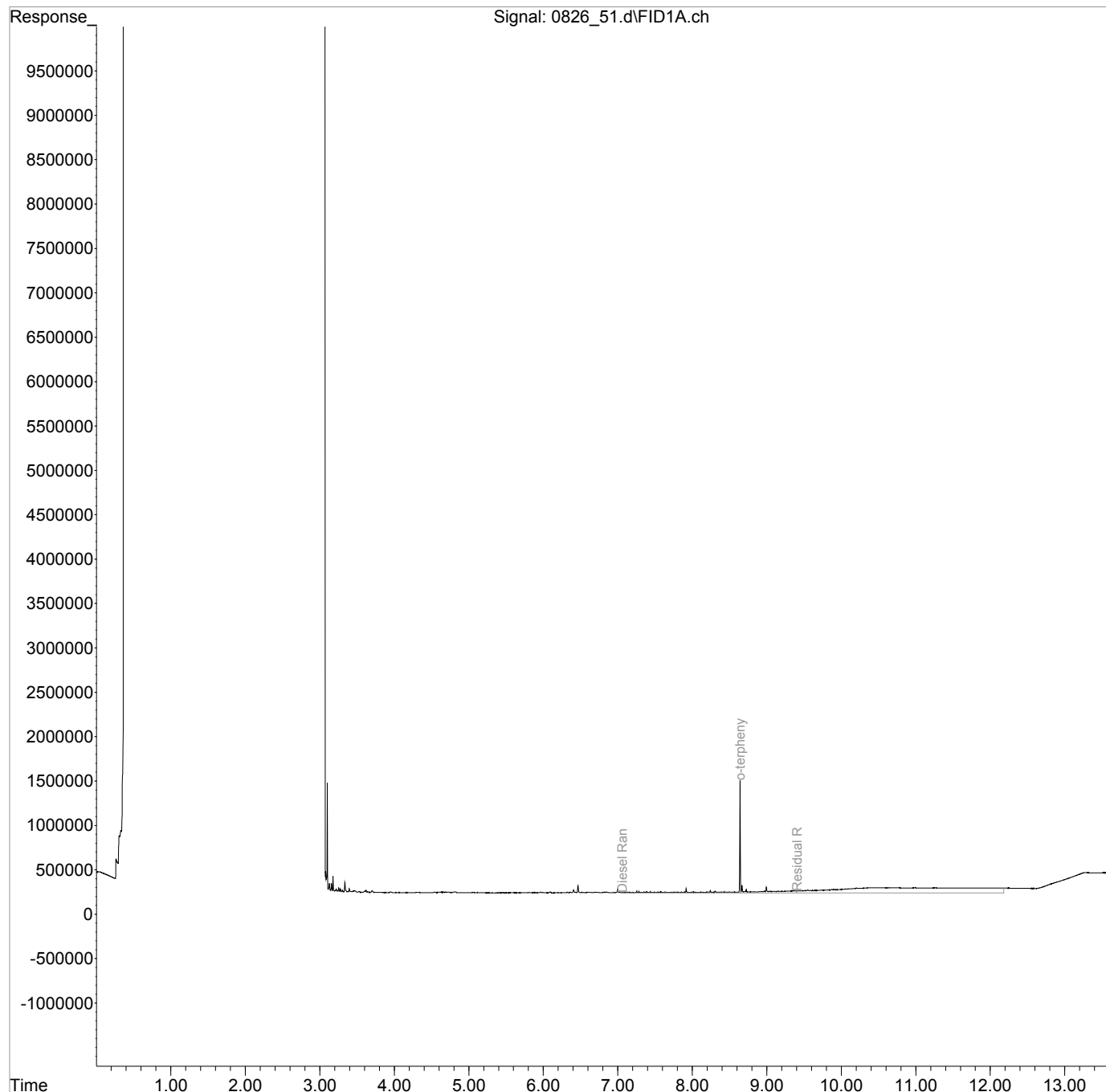
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_51.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 7:04 am  
Operator : 843  
Sample : L1131652-03 1x WG1334642  
Misc : M.I.s on ranges are corrections  
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 09:58:57 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

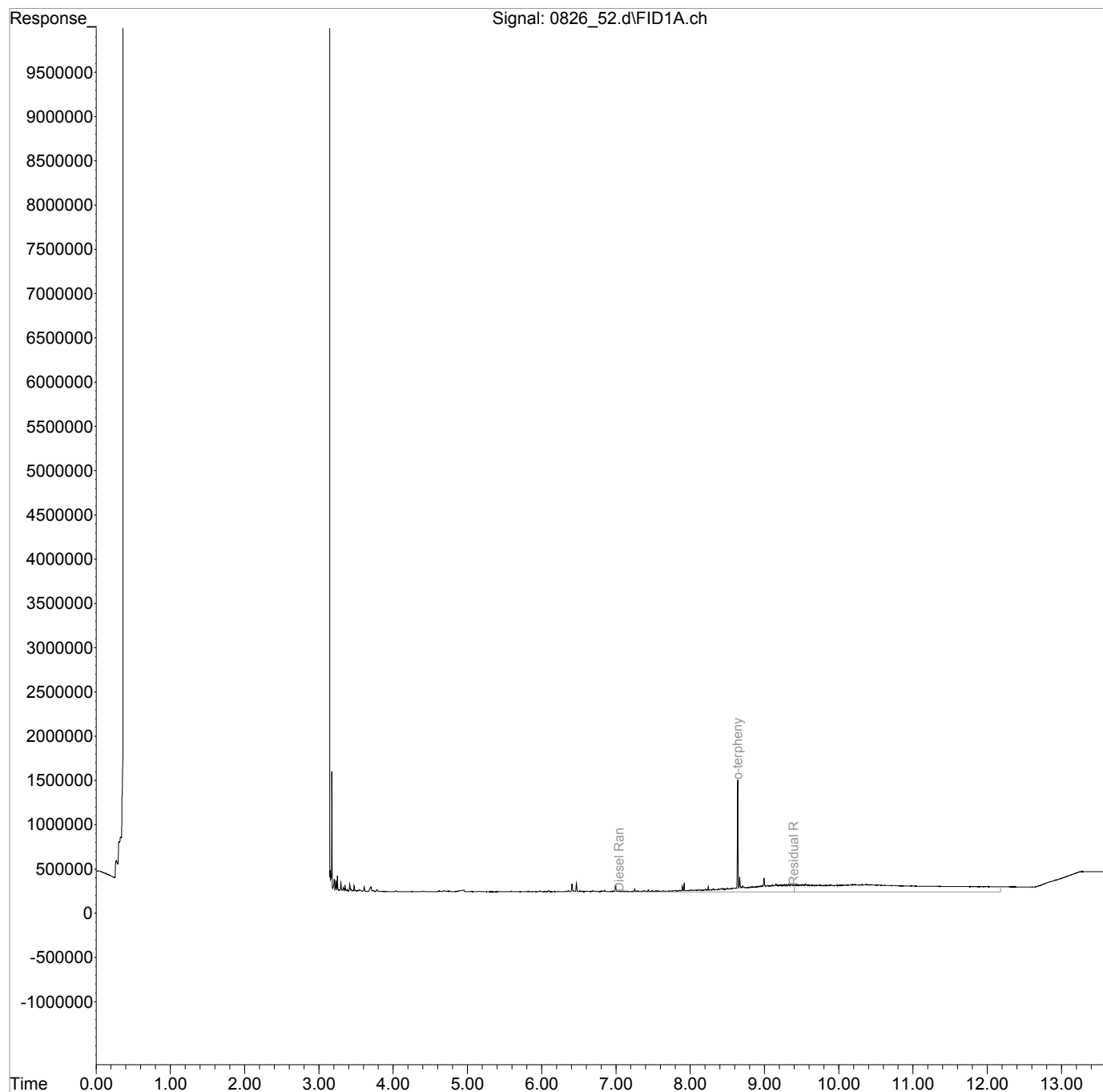
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_52.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 7:25 am  
Operator : 843  
Sample : L1131652-04 1x WG1334642  
Misc : M.I.s on ranges are corrections  
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 09:59:46 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

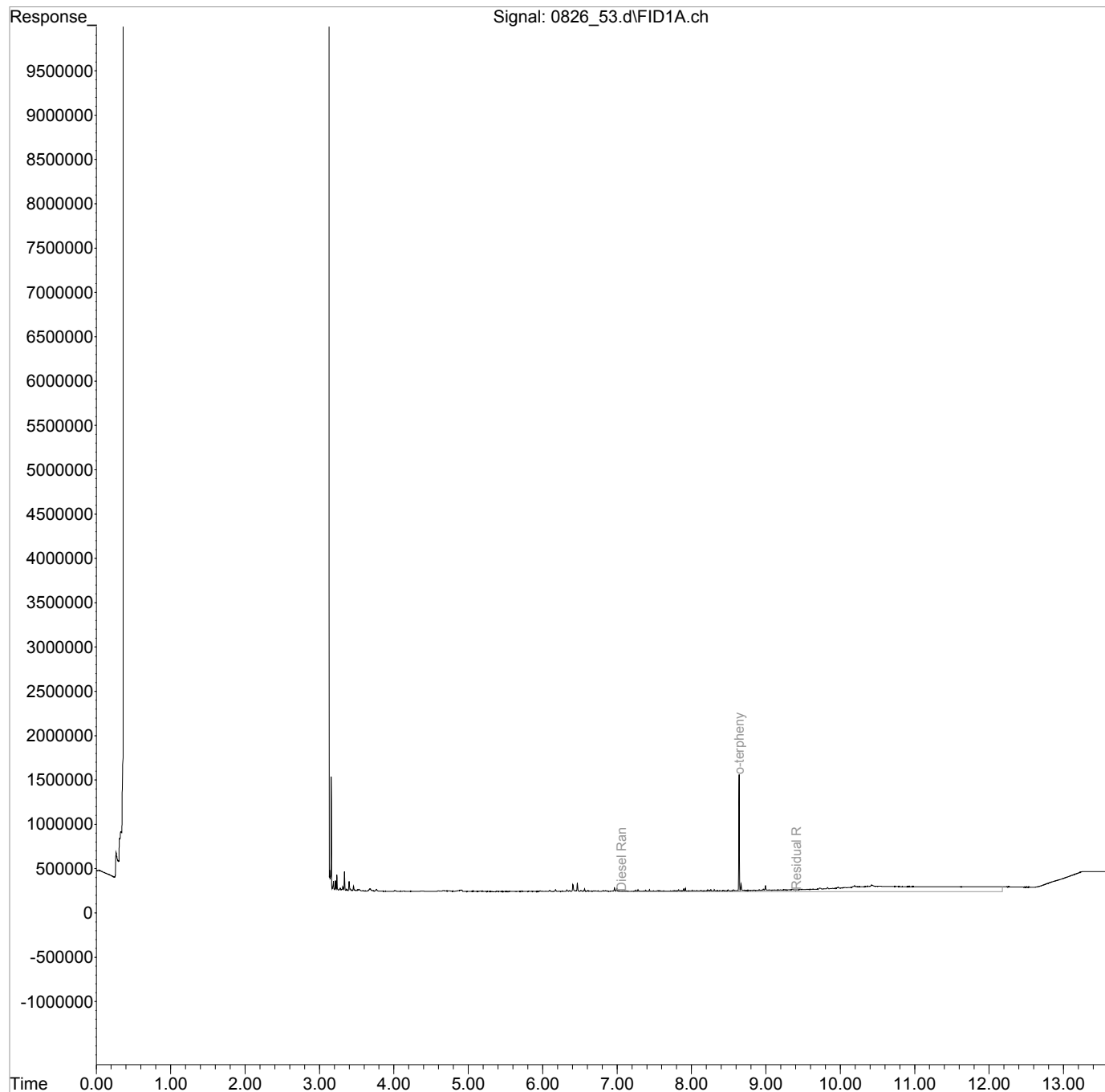
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_53.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 7:45 am  
Operator : 843  
Sample : L1131652-05 1x WG1334642  
Misc : M.I.s on ranges are corrections  
ALS Vial : 26 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 10:40:40 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

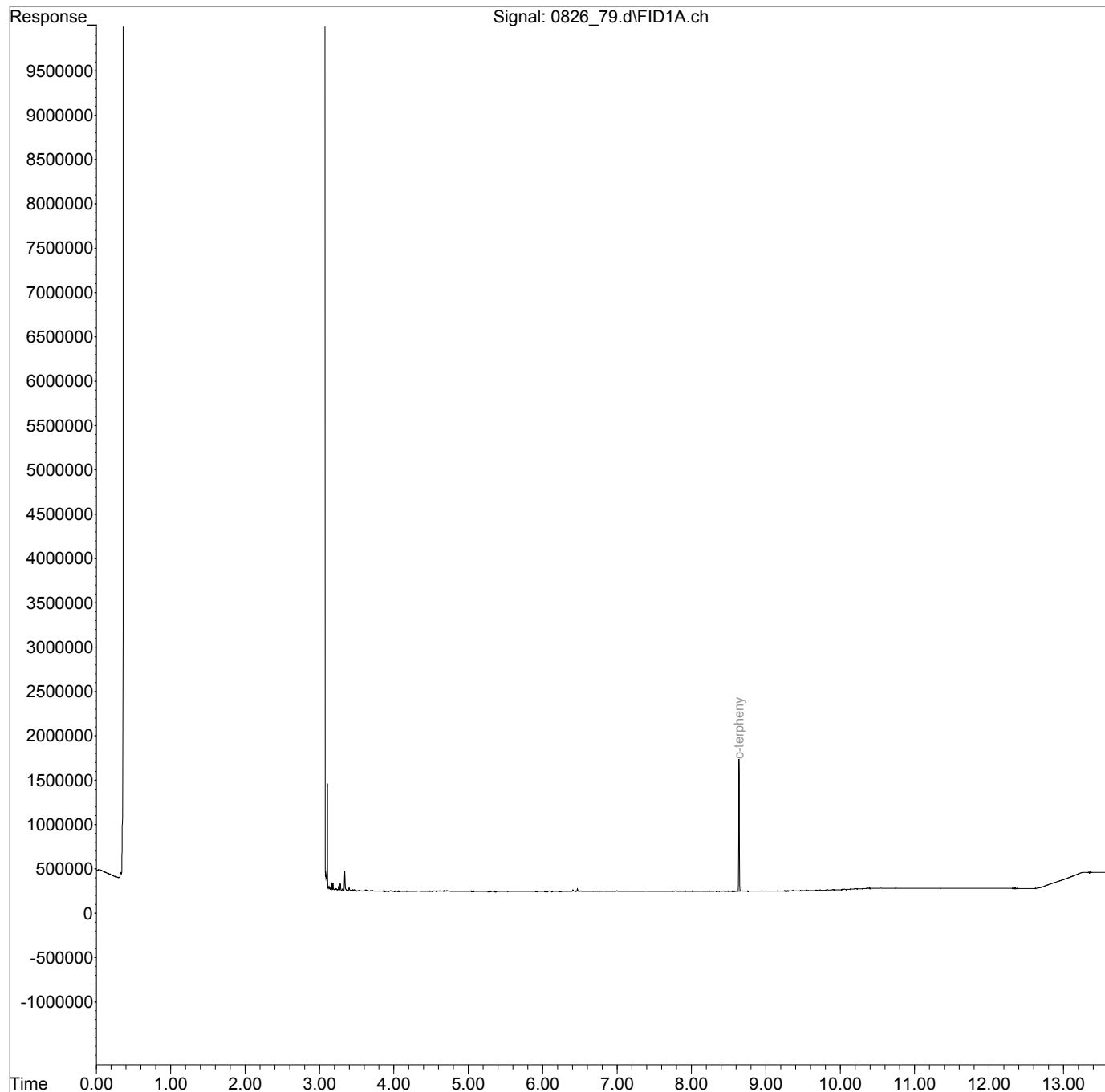
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_79.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 5:03 pm  
Operator : 843  
Sample : L1131652-02 1x WG1335265  
Misc : M.I.s on ranges are corrections  
ALS Vial : 47 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 17:44:17 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

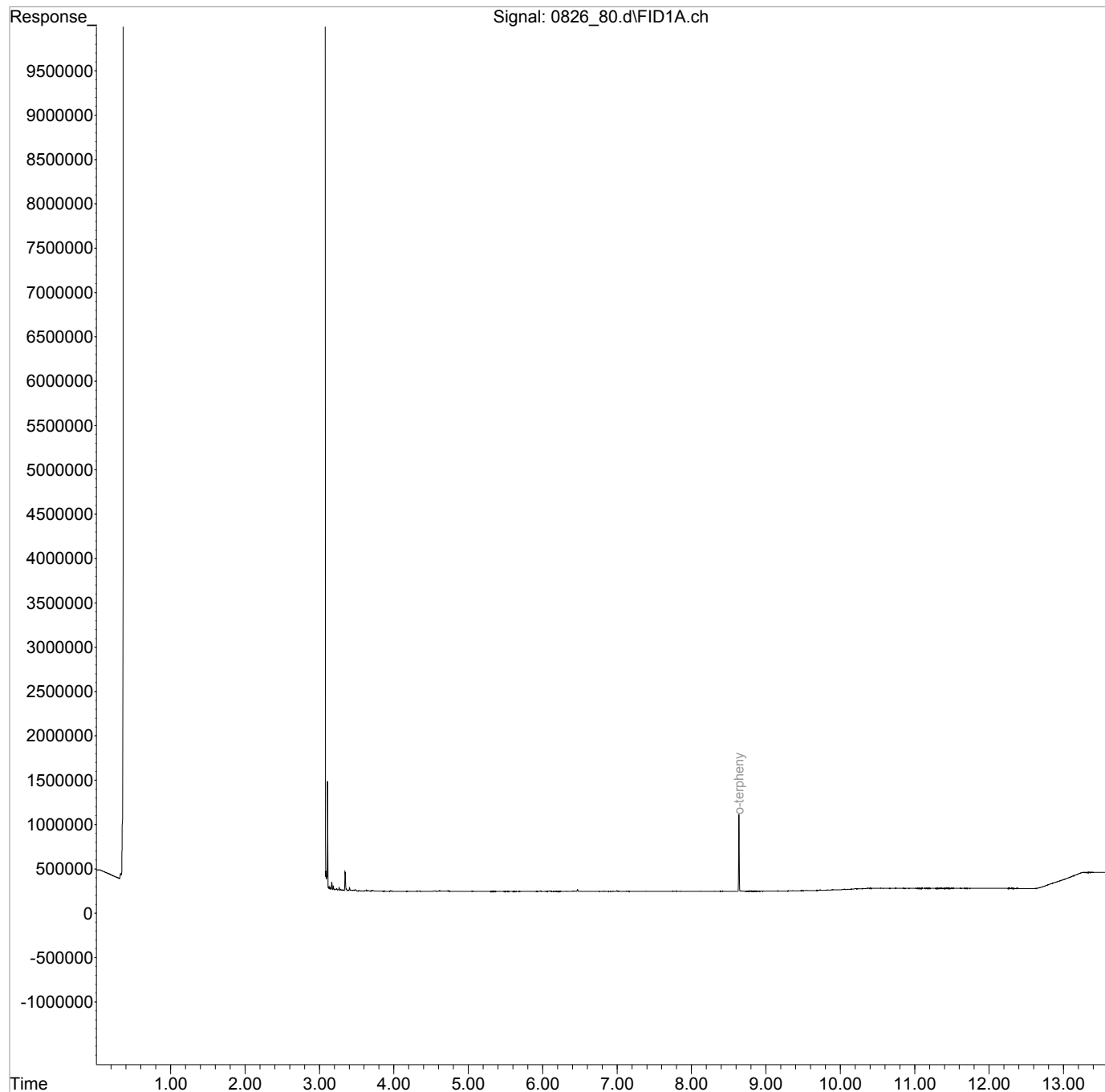
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_80.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 5:23 pm  
Operator : 843  
Sample : L1131652-03 1x WG1335265  
Misc : M.I.s on ranges are corrections  
ALS Vial : 48 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 17:44:47 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

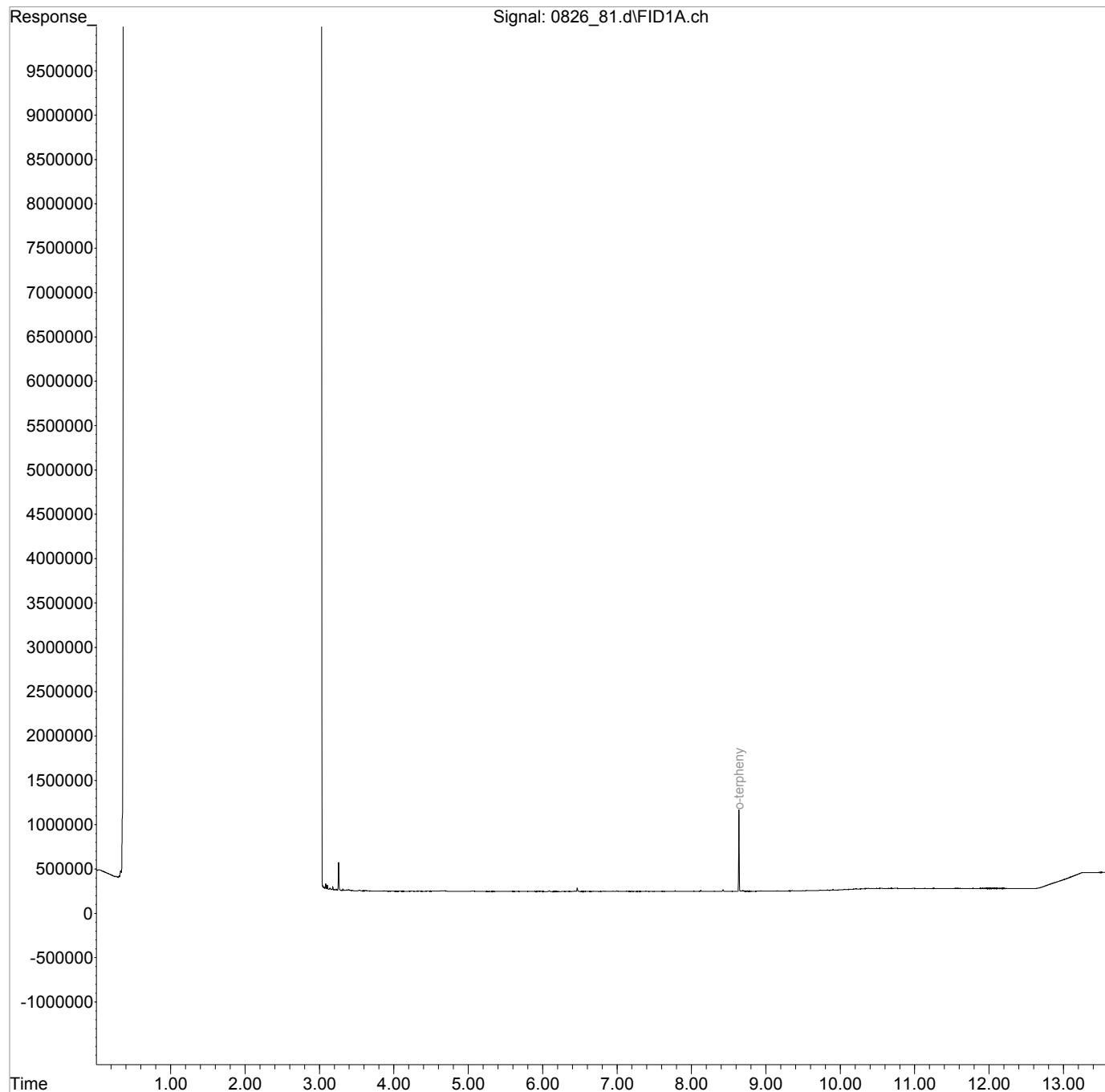
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_81.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 5:43 pm  
Operator : 843  
Sample : L1131652-05 1x WG1335265  
Misc : M.I.s on ranges are corrections  
ALS Vial : 49 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 18:33:46 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :





September 03, 2019

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Kennedy/Jenks Con-BNSF Region 1

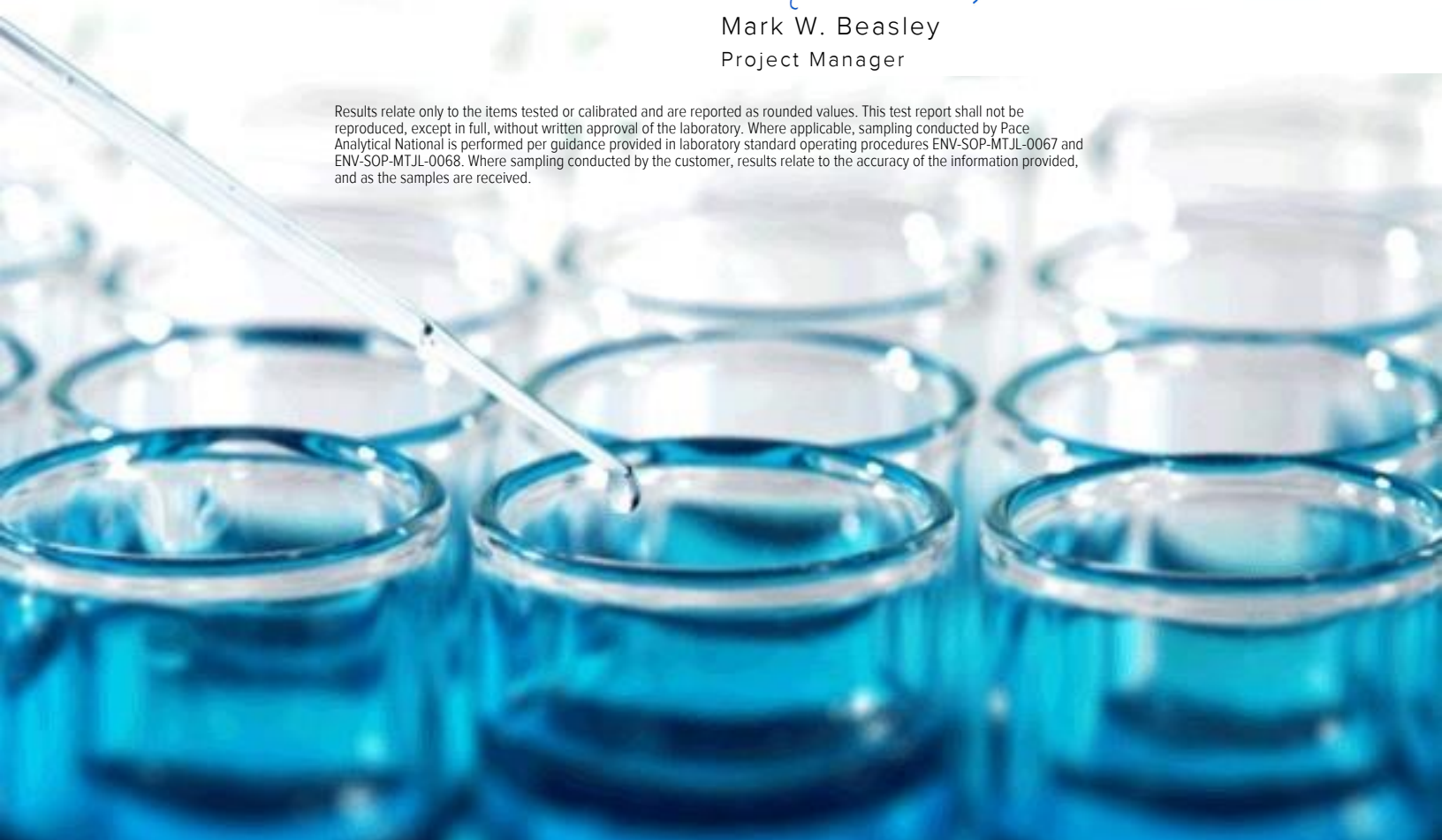
Sample Delivery Group: L1131661  
Samples Received: 08/22/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

Report To: Katie Teague  
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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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# SAMPLE SUMMARY



## WMW-05-20190820 L1131661-01 GW

Collected by  
K. Teague  
Collected date/time  
08/20/19 12:55  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:53	08/26/19 17:53	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	1	08/29/19 10:20	08/29/19 10:20	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:06	08/23/19 15:06	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/23/19 00:56	08/23/19 00:56	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:49	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334470	1	08/25/19 07:28	08/25/19 07:28	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1334642	1	08/26/19 08:17	08/27/19 08:05	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335265	1	08/25/19 17:16	08/27/19 18:03	JN	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

## WMW-24-20190820 L1131661-02 GW

Collected by  
K. Teague  
Collected date/time  
08/20/19 14:20  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 17:57	08/26/19 17:57	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	2	08/29/19 11:12	08/29/19 11:12	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:07	08/23/19 15:07	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/23/19 01:14	08/23/19 01:14	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1333344	1	08/22/19 19:30	08/23/19 09:00	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1334621	1	08/26/19 12:45	08/26/19 21:02	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 17:55	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:53	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 11:14	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334470	1	08/25/19 07:31	08/25/19 07:31	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 11:26	08/30/19 11:26	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335024	1	08/26/19 19:04	08/29/19 07:32	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335040	1	08/26/19 17:44	08/27/19 11:06	DMG	Mt. Juliet, TN

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-26-20190820 L1131661-03 GW

Collected by  
K. Teague  
Collected date/time  
08/20/19 08:30  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 18:00	08/26/19 18:00	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	1	08/29/19 10:25	08/29/19 10:25	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:07	08/23/19 15:07	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/23/19 01:31	08/23/19 01:31	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1333344	1	08/22/19 19:30	08/23/19 09:02	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1334621	1	08/26/19 12:45	08/26/19 21:04	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 17:58	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:56	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 11:18	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334470	1	08/25/19 07:33	08/25/19 07:33	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 11:47	08/30/19 11:47	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1337161	1	08/29/19 20:59	08/30/19 14:50	FM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335265	1	08/25/19 17:16	08/27/19 18:23	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335040	1	08/26/19 17:44	08/27/19 11:28	DMG	Mt. Juliet, TN

## WMW-29-20190820 L1131661-04 GW

Collected by  
K. Teague  
Collected date/time  
08/20/19 07:45  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 18:06	08/26/19 18:06	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	1	08/29/19 10:26	08/29/19 10:26	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:07	08/23/19 15:07	MJA	Mt. Juliet, TN

# SAMPLE SUMMARY

## WMW-29-20190820 L1131661-04 GW

Collected by  
K. Teague  
Collected date/time  
08/20/19 07:45  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1333320	1	08/23/19 02:24	08/23/19 02:24	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1333344	1	08/22/19 19:30	08/23/19 09:04	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1334621	1	08/26/19 12:45	08/26/19 21:07	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 18:02	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 14:59	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 11:22	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334470	1	08/25/19 07:41	08/25/19 07:41	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 12:09	08/30/19 12:09	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335024	1	08/26/19 19:04	08/29/19 08:51	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335024	5	08/26/19 19:04	08/29/19 18:00	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335040	1	08/26/19 17:44	08/27/19 11:50	DMG	Mt. Juliet, TN

1  
Cp

2  
Tc

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Ss

4  
Cn

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Sr

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Qc

7  
Gl

8  
Al

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Sc

## WMW-30-20190820 L1131661-05 GW

Collected by  
K. Teague  
Collected date/time  
08/20/19 09:50  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 18:08	08/26/19 18:08	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	1	08/29/19 10:28	08/29/19 10:28	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:08	08/23/19 15:08	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333320	1	08/23/19 02:42	08/23/19 02:42	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1333344	1	08/22/19 19:30	08/23/19 09:06	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1334621	1	08/26/19 12:45	08/26/19 21:09	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 18:05	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	100	08/23/19 09:22	08/23/19 18:18	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 15:03	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 11:36	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334470	1	08/25/19 07:52	08/25/19 07:52	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 12:31	08/30/19 12:31	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1337161	1	08/29/19 20:59	08/30/19 15:07	FM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335265	1	08/25/19 17:16	08/27/19 18:43	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335040	1	08/26/19 17:44	08/27/19 12:11	DMG	Mt. Juliet, TN

## TB-01-20190821 L1131661-06 GW

Collected by  
K. Teague  
Collected date/time  
08/21/19 00:00  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 12:52	08/30/19 12:52	ADM	Mt. Juliet, TN



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

Sample Delivery Group (SDG) Narrative

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VOC pH outside of method requirement.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
<a href="#">L1131661-04</a>	<a href="#">WMW-29-20190820</a>	8260C

- 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	08/26/2019 17:53	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2440		100	1	08/29/2019 10:20	<a href="#">WG1335355</a>

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	08/23/2019 15:06	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	18300		5000	1	08/23/2019 00:56	<a href="#">WG1333320</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/24/2019 14:49	<a href="#">WG1333547</a>
Manganese,Dissolved	ND		5.00	1	08/24/2019 14:49	<a href="#">WG1333547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/25/2019 07:28	<a href="#">WG1334470</a>
Ethane	ND		13.0	1	08/25/2019 07:28	<a href="#">WG1334470</a>
Ethene	ND		13.0	1	08/25/2019 07:28	<a href="#">WG1334470</a>

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	08/27/2019 08:05	<a href="#">WG1334642</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 08:05	<a href="#">WG1334642</a>
(S) o-Terphenyl	95.3		52.0-156		08/27/2019 08:05	<a href="#">WG1334642</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/27/2019 18:03	<a href="#">WG1335265</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 18:03	<a href="#">WG1335265</a>
(S) o-Terphenyl	68.9		52.0-156		08/27/2019 18:03	<a href="#">WG1335265</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 17:57	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5660		200	2	08/29/2019 11:12	<a href="#">WG1335355</a>

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	08/23/2019 15:07	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	31100		5000	1	08/23/2019 01:14	<a href="#">WG1333320</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	08/23/2019 09:00	<a href="#">WG1333344</a>
Mercury,Dissolved	ND		0.200	1	08/26/2019 21:02	<a href="#">WG1334621</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	33.5		2.00	1	08/23/2019 17:55	<a href="#">WG1333542</a>
Arsenic,Dissolved	30.7		2.00	1	08/27/2019 11:14	<a href="#">WG1334768</a>
Barium	34.2		5.00	1	08/23/2019 17:55	<a href="#">WG1333542</a>
Barium,Dissolved	32.1		5.00	1	08/27/2019 11:14	<a href="#">WG1334768</a>
Cadmium	ND		1.00	1	08/23/2019 17:55	<a href="#">WG1333542</a>
Cadmium,Dissolved	ND		1.00	1	08/27/2019 11:14	<a href="#">WG1334768</a>
Chromium	9.12	<u>B</u>	2.00	1	08/23/2019 17:55	<a href="#">WG1333542</a>
Chromium,Dissolved	8.92		2.00	1	08/27/2019 11:14	<a href="#">WG1334768</a>
Iron,Dissolved	ND		100	1	08/24/2019 14:53	<a href="#">WG1333547</a>
Lead	ND		2.00	1	08/23/2019 17:55	<a href="#">WG1333542</a>
Lead,Dissolved	ND		2.00	1	08/27/2019 11:14	<a href="#">WG1334768</a>
Manganese,Dissolved	220		5.00	1	08/24/2019 14:53	<a href="#">WG1333547</a>
Selenium	ND		2.00	1	08/23/2019 17:55	<a href="#">WG1333542</a>
Selenium,Dissolved	ND	<u>J4</u>	2.00	1	08/27/2019 11:14	<a href="#">WG1334768</a>
Silver	ND		2.00	1	08/23/2019 17:55	<a href="#">WG1333542</a>
Silver,Dissolved	ND		2.00	1	08/27/2019 11:14	<a href="#">WG1334768</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/25/2019 07:31	<a href="#">WG1334470</a>
Ethane	ND		13.0	1	08/25/2019 07:31	<a href="#">WG1334470</a>
Ethene	ND		13.0	1	08/25/2019 07:31	<a href="#">WG1334470</a>





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	08/30/2019 11:26	WG1336242
Acrolein	ND		50.0	1	08/30/2019 11:26	WG1336242
Acrylonitrile	ND		10.0	1	08/30/2019 11:26	WG1336242
Benzene	ND		1.00	1	08/30/2019 11:26	WG1336242
Bromobenzene	ND		1.00	1	08/30/2019 11:26	WG1336242
Bromodichloromethane	ND		1.00	1	08/30/2019 11:26	WG1336242
Bromoform	ND		1.00	1	08/30/2019 11:26	WG1336242
Bromomethane	ND		5.00	1	08/30/2019 11:26	WG1336242
n-Butylbenzene	ND	JO	1.00	1	08/30/2019 11:26	WG1336242
sec-Butylbenzene	ND		1.00	1	08/30/2019 11:26	WG1336242
tert-Butylbenzene	ND		1.00	1	08/30/2019 11:26	WG1336242
Carbon tetrachloride	ND		1.00	1	08/30/2019 11:26	WG1336242
Chlorobenzene	ND		1.00	1	08/30/2019 11:26	WG1336242
Chlorodibromomethane	ND		1.00	1	08/30/2019 11:26	WG1336242
Chloroethane	ND		5.00	1	08/30/2019 11:26	WG1336242
Chloroform	ND		5.00	1	08/30/2019 11:26	WG1336242
Chloromethane	ND		2.50	1	08/30/2019 11:26	WG1336242
2-Chlorotoluene	ND		1.00	1	08/30/2019 11:26	WG1336242
4-Chlorotoluene	ND		1.00	1	08/30/2019 11:26	WG1336242
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 11:26	WG1336242
1,2-Dibromoethane	ND		1.00	1	08/30/2019 11:26	WG1336242
Dibromomethane	ND		1.00	1	08/30/2019 11:26	WG1336242
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 11:26	WG1336242
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 11:26	WG1336242
1,4-Dichlorobenzene	ND	JO	1.00	1	08/30/2019 11:26	WG1336242
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 11:26	WG1336242
1,1-Dichloroethane	ND		1.00	1	08/30/2019 11:26	WG1336242
1,2-Dichloroethane	ND		1.00	1	08/30/2019 11:26	WG1336242
1,1-Dichloroethene	ND		1.00	1	08/30/2019 11:26	WG1336242
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 11:26	WG1336242
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 11:26	WG1336242
1,2-Dichloropropane	ND		1.00	1	08/30/2019 11:26	WG1336242
1,1-Dichloropropene	ND		1.00	1	08/30/2019 11:26	WG1336242
1,3-Dichloropropane	ND		1.00	1	08/30/2019 11:26	WG1336242
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 11:26	WG1336242
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 11:26	WG1336242
2,2-Dichloropropane	ND		1.00	1	08/30/2019 11:26	WG1336242
Di-isopropyl ether	ND		1.00	1	08/30/2019 11:26	WG1336242
Ethylbenzene	ND		1.00	1	08/30/2019 11:26	WG1336242
Hexachloro-1,3-butadiene	ND	JO	1.00	1	08/30/2019 11:26	WG1336242
Isopropylbenzene	ND		1.00	1	08/30/2019 11:26	WG1336242
p-Isopropyltoluene	ND		1.00	1	08/30/2019 11:26	WG1336242
2-Butanone (MEK)	ND		10.0	1	08/30/2019 11:26	WG1336242
Methylene Chloride	ND		5.00	1	08/30/2019 11:26	WG1336242
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 11:26	WG1336242
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 11:26	WG1336242
Naphthalene	ND		5.00	1	08/30/2019 11:26	WG1336242
n-Propylbenzene	ND		1.00	1	08/30/2019 11:26	WG1336242
Styrene	ND		1.00	1	08/30/2019 11:26	WG1336242
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 11:26	WG1336242
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 11:26	WG1336242
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/30/2019 11:26	WG1336242
Tetrachloroethene	ND		1.00	1	08/30/2019 11:26	WG1336242
Toluene	ND		1.00	1	08/30/2019 11:26	WG1336242
1,2,3-Trichlorobenzene	ND	JO	1.00	1	08/30/2019 11:26	WG1336242
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 11:26	WG1336242

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	08/30/2019 11:26	<a href="#">WG1336242</a>
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 11:26	<a href="#">WG1336242</a>
Trichloroethene	ND		1.00	1	08/30/2019 11:26	<a href="#">WG1336242</a>
Trichlorofluoromethane	ND		5.00	1	08/30/2019 11:26	<a href="#">WG1336242</a>
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 11:26	<a href="#">WG1336242</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 11:26	<a href="#">WG1336242</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 11:26	<a href="#">WG1336242</a>
1,3,5-Trimethylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 11:26	<a href="#">WG1336242</a>
Vinyl chloride	ND		1.00	1	08/30/2019 11:26	<a href="#">WG1336242</a>
o-Xylene	ND		1.00	1	08/30/2019 11:26	<a href="#">WG1336242</a>
m&p-Xylene	ND		2.00	1	08/30/2019 11:26	<a href="#">WG1336242</a>
(S) Toluene-d8	102		80.0-120		08/30/2019 11:26	<a href="#">WG1336242</a>
(S) 4-Bromofluorobenzene	93.7		77.0-126		08/30/2019 11:26	<a href="#">WG1336242</a>
(S) 1,2-Dichloroethane-d4	119		70.0-130		08/30/2019 11:26	<a href="#">WG1336242</a>

- 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	08/29/2019 07:32	<a href="#">WG1335024</a>
Residual Range Organics (RRO)	ND		250	1	08/29/2019 07:32	<a href="#">WG1335024</a>
(S) o-Terphenyl	80.5		52.0-156		08/29/2019 07:32	<a href="#">WG1335024</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Acenaphthene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Chrysene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Fluoranthene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Fluorene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Naphthalene	ND		0.250	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Phenanthrene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
Pyrene	ND		0.0500	1	08/27/2019 11:06	<a href="#">WG1335040</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 11:06	<a href="#">WG1335040</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 11:06	<a href="#">WG1335040</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 11:06	<a href="#">WG1335040</a>
(S) Nitrobenzene-d5	107		31.0-160		08/27/2019 11:06	<a href="#">WG1335040</a>
(S) 2-Fluorobiphenyl	93.7		48.0-148		08/27/2019 11:06	<a href="#">WG1335040</a>
(S) p-Terphenyl-d14	90.5		37.0-146		08/27/2019 11:06	<a href="#">WG1335040</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 18:00	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2320		100	1	08/29/2019 10:25	<a href="#">WG1335355</a>

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	08/23/2019 15:07	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	19300		5000	1	08/23/2019 01:31	<a href="#">WG1333320</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	08/23/2019 09:02	<a href="#">WG1333344</a>
Mercury,Dissolved	ND		0.200	1	08/26/2019 21:04	<a href="#">WG1334621</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	2.27		2.00	1	08/23/2019 17:58	<a href="#">WG1333542</a>
Arsenic,Dissolved	2.32		2.00	1	08/27/2019 11:18	<a href="#">WG1334768</a>
Barium	55.1		5.00	1	08/23/2019 17:58	<a href="#">WG1333542</a>
Barium,Dissolved	58.8		5.00	1	08/27/2019 11:18	<a href="#">WG1334768</a>
Cadmium	ND		1.00	1	08/23/2019 17:58	<a href="#">WG1333542</a>
Cadmium,Dissolved	ND		1.00	1	08/27/2019 11:18	<a href="#">WG1334768</a>
Chromium	3.02	B	2.00	1	08/23/2019 17:58	<a href="#">WG1333542</a>
Chromium,Dissolved	5.00		2.00	1	08/27/2019 11:18	<a href="#">WG1334768</a>
Iron,Dissolved	ND		100	1	08/24/2019 14:56	<a href="#">WG1333547</a>
Lead	ND		2.00	1	08/23/2019 17:58	<a href="#">WG1333542</a>
Lead,Dissolved	ND		2.00	1	08/27/2019 11:18	<a href="#">WG1334768</a>
Manganese,Dissolved	141		5.00	1	08/24/2019 14:56	<a href="#">WG1333547</a>
Selenium	ND		2.00	1	08/23/2019 17:58	<a href="#">WG1333542</a>
Selenium,Dissolved	ND	J4	2.00	1	08/27/2019 11:18	<a href="#">WG1334768</a>
Silver	ND		2.00	1	08/23/2019 17:58	<a href="#">WG1333542</a>
Silver,Dissolved	ND		2.00	1	08/27/2019 11:18	<a href="#">WG1334768</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/25/2019 07:33	<a href="#">WG1334470</a>
Ethane	ND		13.0	1	08/25/2019 07:33	<a href="#">WG1334470</a>
Ethene	ND		13.0	1	08/25/2019 07:33	<a href="#">WG1334470</a>



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	08/30/2019 11:47	WG1336242
Acrolein	ND		50.0	1	08/30/2019 11:47	WG1336242
Acrylonitrile	ND		10.0	1	08/30/2019 11:47	WG1336242
Benzene	ND		1.00	1	08/30/2019 11:47	WG1336242
Bromobenzene	ND		1.00	1	08/30/2019 11:47	WG1336242
Bromodichloromethane	ND		1.00	1	08/30/2019 11:47	WG1336242
Bromoform	ND		1.00	1	08/30/2019 11:47	WG1336242
Bromomethane	ND		5.00	1	08/30/2019 11:47	WG1336242
n-Butylbenzene	ND	JO	1.00	1	08/30/2019 11:47	WG1336242
sec-Butylbenzene	ND		1.00	1	08/30/2019 11:47	WG1336242
tert-Butylbenzene	ND		1.00	1	08/30/2019 11:47	WG1336242
Carbon tetrachloride	ND		1.00	1	08/30/2019 11:47	WG1336242
Chlorobenzene	ND		1.00	1	08/30/2019 11:47	WG1336242
Chlorodibromomethane	ND		1.00	1	08/30/2019 11:47	WG1336242
Chloroethane	ND		5.00	1	08/30/2019 11:47	WG1336242
Chloroform	ND		5.00	1	08/30/2019 11:47	WG1336242
Chloromethane	ND		2.50	1	08/30/2019 11:47	WG1336242
2-Chlorotoluene	ND		1.00	1	08/30/2019 11:47	WG1336242
4-Chlorotoluene	ND		1.00	1	08/30/2019 11:47	WG1336242
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 11:47	WG1336242
1,2-Dibromoethane	ND		1.00	1	08/30/2019 11:47	WG1336242
Dibromomethane	ND		1.00	1	08/30/2019 11:47	WG1336242
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 11:47	WG1336242
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 11:47	WG1336242
1,4-Dichlorobenzene	ND	JO	1.00	1	08/30/2019 11:47	WG1336242
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 11:47	WG1336242
1,1-Dichloroethane	ND		1.00	1	08/30/2019 11:47	WG1336242
1,2-Dichloroethane	ND		1.00	1	08/30/2019 11:47	WG1336242
1,1-Dichloroethene	ND		1.00	1	08/30/2019 11:47	WG1336242
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 11:47	WG1336242
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 11:47	WG1336242
1,2-Dichloropropane	ND		1.00	1	08/30/2019 11:47	WG1336242
1,1-Dichloropropene	ND		1.00	1	08/30/2019 11:47	WG1336242
1,3-Dichloropropane	ND		1.00	1	08/30/2019 11:47	WG1336242
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 11:47	WG1336242
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 11:47	WG1336242
2,2-Dichloropropane	ND		1.00	1	08/30/2019 11:47	WG1336242
Di-isopropyl ether	ND		1.00	1	08/30/2019 11:47	WG1336242
Ethylbenzene	ND		1.00	1	08/30/2019 11:47	WG1336242
Hexachloro-1,3-butadiene	ND	JO	1.00	1	08/30/2019 11:47	WG1336242
Isopropylbenzene	ND		1.00	1	08/30/2019 11:47	WG1336242
p-Isopropyltoluene	ND		1.00	1	08/30/2019 11:47	WG1336242
2-Butanone (MEK)	ND		10.0	1	08/30/2019 11:47	WG1336242
Methylene Chloride	ND		5.00	1	08/30/2019 11:47	WG1336242
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 11:47	WG1336242
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 11:47	WG1336242
Naphthalene	ND		5.00	1	08/30/2019 11:47	WG1336242
n-Propylbenzene	ND		1.00	1	08/30/2019 11:47	WG1336242
Styrene	ND		1.00	1	08/30/2019 11:47	WG1336242
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 11:47	WG1336242
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 11:47	WG1336242
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/30/2019 11:47	WG1336242
Tetrachloroethene	ND		1.00	1	08/30/2019 11:47	WG1336242
Toluene	ND		1.00	1	08/30/2019 11:47	WG1336242
1,2,3-Trichlorobenzene	ND	JO	1.00	1	08/30/2019 11:47	WG1336242
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 11:47	WG1336242

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	08/30/2019 11:47	<a href="#">WG1336242</a>
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 11:47	<a href="#">WG1336242</a>
Trichloroethene	ND		1.00	1	08/30/2019 11:47	<a href="#">WG1336242</a>
Trichlorofluoromethane	ND		5.00	1	08/30/2019 11:47	<a href="#">WG1336242</a>
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 11:47	<a href="#">WG1336242</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 11:47	<a href="#">WG1336242</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 11:47	<a href="#">WG1336242</a>
1,3,5-Trimethylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 11:47	<a href="#">WG1336242</a>
Vinyl chloride	ND		1.00	1	08/30/2019 11:47	<a href="#">WG1336242</a>
o-Xylene	ND		1.00	1	08/30/2019 11:47	<a href="#">WG1336242</a>
m&p-Xylene	ND		2.00	1	08/30/2019 11:47	<a href="#">WG1336242</a>
(S) Toluene-d8	102		80.0-120		08/30/2019 11:47	<a href="#">WG1336242</a>
(S) 4-Bromofluorobenzene	94.3		77.0-126		08/30/2019 11:47	<a href="#">WG1336242</a>
(S) 1,2-Dichloroethane-d4	119		70.0-130		08/30/2019 11:47	<a href="#">WG1336242</a>

- 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)	386		200	1	08/30/2019 14:50	<a href="#">WG1337161</a>
Residual Range Organics (RRO)	747		250	1	08/30/2019 14:50	<a href="#">WG1337161</a>
(S) o-Terphenyl	84.2		52.0-156		08/30/2019 14:50	<a href="#">WG1337161</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/27/2019 18:23	<a href="#">WG1335265</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 18:23	<a href="#">WG1335265</a>
(S) o-Terphenyl	66.8		52.0-156		08/27/2019 18:23	<a href="#">WG1335265</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Acenaphthene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Chrysene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Fluoranthene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Fluorene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Naphthalene	ND		0.250	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Phenanthrene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
Pyrene	ND		0.0500	1	08/27/2019 11:28	<a href="#">WG1335040</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 11:28	<a href="#">WG1335040</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 11:28	<a href="#">WG1335040</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 11:28	<a href="#">WG1335040</a>
(S) Nitrobenzene-d5	109		31.0-160		08/27/2019 11:28	<a href="#">WG1335040</a>
(S) 2-Fluorobiphenyl	93.7		48.0-148		08/27/2019 11:28	<a href="#">WG1335040</a>
(S) p-Terphenyl-d14	95.8		37.0-146		08/27/2019 11:28	<a href="#">WG1335040</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 18:06	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	281		100	1	08/29/2019 10:26	<a href="#">WG1335355</a>

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	08/23/2019 15:07	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	17200		5000	1	08/23/2019 02:24	<a href="#">WG1333320</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	08/23/2019 09:04	<a href="#">WG1333344</a>
Mercury,Dissolved	ND		0.200	1	08/26/2019 21:07	<a href="#">WG1334621</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	2.19		2.00	1	08/23/2019 18:02	<a href="#">WG1333542</a>
Arsenic,Dissolved	ND		2.00	1	08/27/2019 11:22	<a href="#">WG1334768</a>
Barium	141		5.00	1	08/23/2019 18:02	<a href="#">WG1333542</a>
Barium,Dissolved	131		5.00	1	08/27/2019 11:22	<a href="#">WG1334768</a>
Cadmium	ND		1.00	1	08/23/2019 18:02	<a href="#">WG1333542</a>
Cadmium,Dissolved	ND		1.00	1	08/27/2019 11:22	<a href="#">WG1334768</a>
Chromium	ND		2.00	1	08/23/2019 18:02	<a href="#">WG1333542</a>
Chromium,Dissolved	ND		2.00	1	08/27/2019 11:22	<a href="#">WG1334768</a>
Iron,Dissolved	ND		100	1	08/24/2019 14:59	<a href="#">WG1333547</a>
Lead	ND		2.00	1	08/23/2019 18:02	<a href="#">WG1333542</a>
Lead,Dissolved	ND		2.00	1	08/27/2019 11:22	<a href="#">WG1334768</a>
Manganese,Dissolved	4320		5.00	1	08/24/2019 14:59	<a href="#">WG1333547</a>
Selenium	ND		2.00	1	08/23/2019 18:02	<a href="#">WG1333542</a>
Selenium,Dissolved	ND	J4	2.00	1	08/27/2019 11:22	<a href="#">WG1334768</a>
Silver	ND		2.00	1	08/23/2019 18:02	<a href="#">WG1333542</a>
Silver,Dissolved	ND		2.00	1	08/27/2019 11:22	<a href="#">WG1334768</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/25/2019 07:41	<a href="#">WG1334470</a>
Ethane	ND		13.0	1	08/25/2019 07:41	<a href="#">WG1334470</a>
Ethene	ND		13.0	1	08/25/2019 07:41	<a href="#">WG1334470</a>



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	08/30/2019 12:09	<a href="#">WG1336242</a>
Acrolein	ND		50.0	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Acrylonitrile	ND		10.0	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Benzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Bromobenzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Bromodichloromethane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Bromoform	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Bromomethane	ND		5.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
n-Butylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
sec-Butylbenzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
tert-Butylbenzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Carbon tetrachloride	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Chlorobenzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Chlorodibromomethane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Chloroethane	ND		5.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Chloroform	ND		5.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Chloromethane	ND		2.50	1	08/30/2019 12:09	<a href="#">WG1336242</a>
2-Chlorotoluene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
4-Chlorotoluene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,2-Dibromoethane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Dibromomethane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,4-Dichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,1-Dichloroethane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,2-Dichloroethane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,1-Dichloroethene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,2-Dichloropropane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,1-Dichloropropene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,3-Dichloropropane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
2,2-Dichloropropane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Di-isopropyl ether	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Ethylbenzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Hexachloro-1,3-butadiene	ND	<u>JO</u>	1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Isopropylbenzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
p-Isopropyltoluene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
2-Butanone (MEK)	ND		10.0	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Methylene Chloride	ND		5.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Naphthalene	ND		5.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
n-Propylbenzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Styrene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Tetrachloroethene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
Toluene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,2,3-Trichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 12:09	<a href="#">WG1336242</a>

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	08/30/2019 12:09	WG1336242
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 12:09	WG1336242
Trichloroethene	ND		1.00	1	08/30/2019 12:09	WG1336242
Trichlorofluoromethane	ND		5.00	1	08/30/2019 12:09	WG1336242
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 12:09	WG1336242
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 12:09	WG1336242
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 12:09	WG1336242
1,3,5-Trimethylbenzene	ND	JO	1.00	1	08/30/2019 12:09	WG1336242
Vinyl chloride	ND		1.00	1	08/30/2019 12:09	WG1336242
o-Xylene	ND		1.00	1	08/30/2019 12:09	WG1336242
m&p-Xylene	ND		2.00	1	08/30/2019 12:09	WG1336242
(S) Toluene-d8	105		80.0-120		08/30/2019 12:09	WG1336242
(S) 4-Bromofluorobenzene	98.4		77.0-126		08/30/2019 12:09	WG1336242
(S) 1,2-Dichloroethane-d4	124		70.0-130		08/30/2019 12:09	WG1336242

- 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)	3610		200	1	08/29/2019 08:51	WG1335024
Residual Range Organics (RRO)	3160		1250	5	08/29/2019 18:00	WG1335024
(S) o-Terphenyl	70.5		52.0-156		08/29/2019 18:00	WG1335024
(S) o-Terphenyl	65.8		52.0-156		08/29/2019 08:51	WG1335024

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	0.0737		0.0500	1	08/27/2019 11:50	WG1335040
Acenaphthene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Acenaphthylene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Chrysene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Fluoranthene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Fluorene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Naphthalene	ND		0.250	1	08/27/2019 11:50	WG1335040
Phenanthrene	ND		0.0500	1	08/27/2019 11:50	WG1335040
Pyrene	ND		0.0500	1	08/27/2019 11:50	WG1335040
1-Methylnaphthalene	ND		0.250	1	08/27/2019 11:50	WG1335040
2-Methylnaphthalene	ND		0.250	1	08/27/2019 11:50	WG1335040
2-Chloronaphthalene	ND		0.250	1	08/27/2019 11:50	WG1335040
(S) Nitrobenzene-d5	104		31.0-160		08/27/2019 11:50	WG1335040
(S) 2-Fluorobiphenyl	90.0		48.0-148		08/27/2019 11:50	WG1335040
(S) p-Terphenyl-d14	91.1		37.0-146		08/27/2019 11:50	WG1335040





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 18:08	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3140		100	1	08/29/2019 10:28	<a href="#">WG1335355</a>

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	08/23/2019 15:08	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	24000		5000	1	08/23/2019 02:42	<a href="#">WG1333320</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	08/23/2019 09:06	<a href="#">WG1333344</a>
Mercury,Dissolved	ND		0.200	1	08/26/2019 21:09	<a href="#">WG1334621</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.93		2.00	1	08/23/2019 18:05	<a href="#">WG1333542</a>
Arsenic,Dissolved	4.34		2.00	1	08/27/2019 11:36	<a href="#">WG1334768</a>
Barium	16500		500	100	08/23/2019 18:18	<a href="#">WG1333542</a>
Barium,Dissolved	40.9		5.00	1	08/27/2019 11:36	<a href="#">WG1334768</a>
Cadmium	ND		1.00	1	08/23/2019 18:05	<a href="#">WG1333542</a>
Cadmium,Dissolved	ND		1.00	1	08/27/2019 11:36	<a href="#">WG1334768</a>
Chromium	ND		2.00	1	08/23/2019 18:05	<a href="#">WG1333542</a>
Chromium,Dissolved	2.00		2.00	1	08/27/2019 11:36	<a href="#">WG1334768</a>
Iron,Dissolved	ND		100	1	08/24/2019 15:03	<a href="#">WG1333547</a>
Lead	ND		2.00	1	08/23/2019 18:05	<a href="#">WG1333542</a>
Lead,Dissolved	ND		2.00	1	08/27/2019 11:36	<a href="#">WG1334768</a>
Manganese,Dissolved	78.2		5.00	1	08/24/2019 15:03	<a href="#">WG1333547</a>
Selenium	ND		2.00	1	08/23/2019 18:05	<a href="#">WG1333542</a>
Selenium,Dissolved	ND	J4	2.00	1	08/27/2019 11:36	<a href="#">WG1334768</a>
Silver	ND		2.00	1	08/23/2019 18:05	<a href="#">WG1333542</a>
Silver,Dissolved	ND		2.00	1	08/27/2019 11:36	<a href="#">WG1334768</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/25/2019 07:52	<a href="#">WG1334470</a>
Ethane	ND		13.0	1	08/25/2019 07:52	<a href="#">WG1334470</a>
Ethene	ND		13.0	1	08/25/2019 07:52	<a href="#">WG1334470</a>





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	08/30/2019 12:31	<a href="#">WG1336242</a>
Acrolein	ND		50.0	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Acrylonitrile	ND		10.0	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Benzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Bromobenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Bromodichloromethane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Bromoform	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Bromomethane	ND		5.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
n-Butylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
sec-Butylbenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
tert-Butylbenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Carbon tetrachloride	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Chlorobenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Chlorodibromomethane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Chloroethane	ND		5.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Chloroform	ND		5.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Chloromethane	ND		2.50	1	08/30/2019 12:31	<a href="#">WG1336242</a>
2-Chlorotoluene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
4-Chlorotoluene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,2-Dibromoethane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Dibromomethane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,4-Dichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,1-Dichloroethane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,2-Dichloroethane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,1-Dichloroethene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,2-Dichloropropane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,1-Dichloropropene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,3-Dichloropropane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
2,2-Dichloropropane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Di-isopropyl ether	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Ethylbenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Hexachloro-1,3-butadiene	ND	<u>JO</u>	1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Isopropylbenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
p-Isopropyltoluene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
2-Butanone (MEK)	ND		10.0	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Methylene Chloride	ND		5.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Naphthalene	ND		5.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
n-Propylbenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Styrene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Tetrachloroethene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Toluene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,2,3-Trichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>

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	08/30/2019 12:31	<a href="#">WG1336242</a>
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Trichloroethene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Trichlorofluoromethane	ND		5.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
1,3,5-Trimethylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
Vinyl chloride	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
o-Xylene	ND		1.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
m&p-Xylene	ND		2.00	1	08/30/2019 12:31	<a href="#">WG1336242</a>
(S) Toluene-d8	99.2		80.0-120		08/30/2019 12:31	<a href="#">WG1336242</a>
(S) 4-Bromofluorobenzene	93.9		77.0-126		08/30/2019 12:31	<a href="#">WG1336242</a>
(S) 1,2-Dichloroethane-d4	122		70.0-130		08/30/2019 12:31	<a href="#">WG1336242</a>

- 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)	288		200	1	08/30/2019 15:07	<a href="#">WG1337161</a>
Residual Range Organics (RRO)	783		250	1	08/30/2019 15:07	<a href="#">WG1337161</a>
(S) o-Terphenyl	84.7		52.0-156		08/30/2019 15:07	<a href="#">WG1337161</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/27/2019 18:43	<a href="#">WG1335265</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 18:43	<a href="#">WG1335265</a>
(S) o-Terphenyl	65.8		52.0-156		08/27/2019 18:43	<a href="#">WG1335265</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Acenaphthene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Chrysene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Fluoranthene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Fluorene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Naphthalene	ND		0.250	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Phenanthrene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
Pyrene	ND		0.0500	1	08/27/2019 12:11	<a href="#">WG1335040</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 12:11	<a href="#">WG1335040</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 12:11	<a href="#">WG1335040</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 12:11	<a href="#">WG1335040</a>
(S) Nitrobenzene-d5	111		31.0-160		08/27/2019 12:11	<a href="#">WG1335040</a>
(S) 2-Fluorobiphenyl	94.2		48.0-148		08/27/2019 12:11	<a href="#">WG1335040</a>
(S) p-Terphenyl-d14	91.1		37.0-146		08/27/2019 12:11	<a href="#">WG1335040</a>



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	08/30/2019 12:52	<a href="#">WG1336242</a>
Acrolein	ND		50.0	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Acrylonitrile	ND		10.0	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Benzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Bromobenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Bromodichloromethane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Bromoform	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Bromomethane	ND		5.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
n-Butylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
sec-Butylbenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
tert-Butylbenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Carbon tetrachloride	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Chlorobenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Chlorodibromomethane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Chloroethane	ND		5.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Chloroform	ND		5.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Chloromethane	ND		2.50	1	08/30/2019 12:52	<a href="#">WG1336242</a>
2-Chlorotoluene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
4-Chlorotoluene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,2-Dibromoethane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Dibromomethane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,4-Dichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,1-Dichloroethane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,2-Dichloroethane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,1-Dichloroethene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,2-Dichloropropane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,1-Dichloropropene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,3-Dichloropropane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
2,2-Dichloropropane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Di-isopropyl ether	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Ethylbenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Hexachloro-1,3-butadiene	ND	<u>JO</u>	1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Isopropylbenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
p-Isopropyltoluene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
2-Butanone (MEK)	ND		10.0	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Methylene Chloride	ND		5.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Naphthalene	ND		5.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
n-Propylbenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Styrene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Tetrachloroethene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Toluene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,2,3-Trichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>

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	08/30/2019 12:52	<a href="#">WG1336242</a>
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Trichloroethene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Trichlorofluoromethane	ND		5.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
1,3,5-Trimethylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
Vinyl chloride	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
o-Xylene	ND		1.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
m&p-Xylene	ND		2.00	1	08/30/2019 12:52	<a href="#">WG1336242</a>
(S) Toluene-d8	104		80.0-120		08/30/2019 12:52	<a href="#">WG1336242</a>
(S) 4-Bromofluorobenzene	96.2		77.0-126		08/30/2019 12:52	<a href="#">WG1336242</a>
(S) 1,2-Dichloroethane-d4	122		70.0-130		08/30/2019 12:52	<a href="#">WG1336242</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3444476-1 08/26/19 17:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131625-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131625-02 08/26/19 17:28 • (DUP) R3444476-3 08/26/19 17:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	4790	4820	1	0.624		10

L1131661-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-01 08/26/19 17:53 • (DUP) R3444476-6 08/26/19 17:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3444476-2 08/26/19 17:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	6980	93.0	90.0-110	

L1131642-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131642-01 08/26/19 17:31 • (MS) R3444476-4 08/26/19 17:33 • (MSD) R3444476-5 08/26/19 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	190	4900	4900	94.2	94.1	1	90.0-110			0.102	10

L1131661-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131661-02 08/26/19 17:57 • (MS) R3444476-7 08/26/19 17:58

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4780	95.6	1	90.0-110	



Method Blank (MB)

(MB) R3445464-1 08/29/19 10:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131661-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-01 08/29/19 10:20 • (DUP) R3445464-3 08/29/19 10:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	2440	2440	1	0.328		20

L1131738-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131738-01 08/29/19 10:46 • (DUP) R3445464-6 08/29/19 10:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3445464-2 08/29/19 10:19

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	3900	97.6	90.0-110	

L1131738-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131738-02 08/29/19 10:49 • (MS) R3445464-8 08/29/19 11:28

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	ND	2890	115	1	90.0-110	J5

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/29/19 10:41 • (MS) R3445464-4 08/29/19 10:43 • (MSD) R3445464-5 08/29/19 10:44

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	1830	4150	4370	92.8	101	1	90.0-110			5.03	20



Method Blank (MB)

(MB) R3443702-1 08/23/19 15:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131642-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131642-02 08/23/19 15:04 • (DUP) R3443702-3 08/23/19 15:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1131661-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-03 08/23/19 15:07 • (DUP) R3443702-4 08/23/19 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3443702-2 08/23/19 15:03

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	462	92.4	85.0-115	

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 15:09 • (MS) R3443702-5 08/23/19 15:10 • (MSD) R3443702-6 08/23/19 15:10

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	875	850	87.5	85.0	1	80.0-120			2.90	20



Method Blank (MB)

(MB) R3443477-1 08/22/19 08:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131540-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131540-01 08/22/19 20:14 • (DUP) R3443477-3 08/22/19 20:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	18400	18400	1	0.376		15

L1131661-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-05 08/23/19 02:42 • (DUP) R3443477-6 08/23/19 02:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	24000	24100	1	0.146		15

Laboratory Control Sample (LCS)

(LCS) R3443477-2 08/22/19 08:41

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	39400	98.5	80.0-120	

L1131540-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131540-01 08/22/19 20:14 • (MS) R3443477-4 08/22/19 20:49 • (MSD) R3443477-5 08/22/19 21:07

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	18400	62200	62300	87.6	87.7	1	80.0-120			0.0887	15

L1131661-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131661-05 08/23/19 02:42 • (MS) R3443477-7 08/23/19 03:17

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	24000	73600	99.2	1	80.0-120	





Method Blank (MB)

(MB) R3443515-1 08/23/19 08:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	0.0682	<u>J</u>	0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

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

(LCS) R3443515-2 08/23/19 08:33 • (LCSD) R3443515-3 08/23/19 08:35

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	3.04	3.19	101	106	80.0-120			4.76	20

<sup>5</sup> Sr

<sup>6</sup> Qc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 08:37 • (MS) R3443515-4 08/23/19 08:39 • (MSD) R3443515-5 08/23/19 08:41

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 %
Mercury	3.00	ND	2.18	3.02	71.0	99.0	1	75.0-125	<u>J6</u>	<u>J3</u>	32.3	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3444399-1 08/26/19 20:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3444399-2 08/26/19 20:45 • (LCSD) R3444399-3 08/26/19 20:47

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	3.15	3.10	105	103	80.0-120			1.60	20

L1132725-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132725-02 08/26/19 20:49 • (MS) R3444399-4 08/26/19 20:51 • (MSD) R3444399-5 08/26/19 21:00

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	U	3.23	3.19	108	106	1	75.0-125			1.25	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3443784-1 08/23/19 16:31

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	1.55	J	0.540	2.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Silver	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3443784-2 08/23/19 16:35 • (LCSD) R3443784-3 08/23/19 16:38

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	%	%	%			%	%
Arsenic	50.0	50.6	50.9	101	102	80.0-120			0.592	20
Barium	50.0	51.3	51.0	103	102	80.0-120			0.533	20
Cadmium	50.0	51.8	53.2	104	106	80.0-120			2.59	20
Chromium	50.0	51.5	52.0	103	104	80.0-120			0.959	20
Lead	50.0	49.0	49.2	97.9	98.4	80.0-120			0.526	20
Selenium	50.0	52.2	52.6	104	105	80.0-120			0.871	20
Silver	50.0	50.7	51.0	101	102	80.0-120			0.676	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 16:41 • (MS) R3443784-5 08/23/19 16:48 • (MSD) R3443784-6 08/23/19 16:51

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	50.0	4.62	54.7	54.6	100	99.9	1	75.0-125			0.213	20
Barium	50.0	25.5	75.1	75.4	99.3	99.8	1	75.0-125			0.381	20
Cadmium	50.0	ND	52.3	52.8	104	105	1	75.0-125			0.823	20
Chromium	50.0	ND	51.5	51.7	99.6	99.9	1	75.0-125			0.311	20
Lead	50.0	ND	51.0	49.8	101	98.2	1	75.0-125			2.49	20
Selenium	50.0	ND	53.2	53.4	104	105	1	75.0-125			0.371	20
Silver	50.0	ND	51.1	51.7	102	103	1	75.0-125			1.20	20



L1131850-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131850-04 08/23/19 16:55 • (MS) R3443784-7 08/23/19 16:58 • (MSD) R3443784-8 08/23/19 17:01

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 %
Arsenic	50.0	0.339	50.3	48.5	99.9	96.4	1	75.0-125			3.52	20
Barium	50.0	25.6	77.9	75.9	105	101	1	75.0-125			2.60	20
Cadmium	50.0	0.232	52.3	51.1	104	102	1	75.0-125			2.32	20
Chromium	50.0	0.978	50.7	48.7	99.5	95.5	1	75.0-125			4.00	20
Lead	50.0	0.338	50.1	48.0	99.6	95.3	1	75.0-125			4.40	20
Selenium	50.0	0.411	54.0	51.7	107	103	1	75.0-125			4.42	20
Silver	50.0	U	52.0	51.8	104	104	1	75.0-125			0.393	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3443863-1 08/24/19 13:49

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Iron,Dissolved	68.8	↓	15.0	100
Manganese,Dissolved	0.278	↓	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) R3443863-2 08/24/19 13:52 • (LCSD) R3443863-3 08/24/19 13:55

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	%	%	%			%	%
Iron,Dissolved	5000	5470	5360	109	107	80.0-120			2.07	20
Manganese,Dissolved	50.0	50.7	52.2	101	104	80.0-120			2.91	20

L1131642-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131642-01 08/24/19 13:59 • (MS) R3443863-5 08/24/19 14:05 • (MSD) R3443863-6 08/24/19 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
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Iron,Dissolved	5000	6370	11900	12000	110	112	1	75.0-125			0.796	20
Manganese,Dissolved	50.0	3360	3500	3520	293	324	1	75.0-125	↓	↓	0.438	20



Method Blank (MB)

(MB) R3444512-1 08/27/19 10:48

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3444512-2 08/27/19 10:52 • (LCSD) R3444512-3 08/27/19 10:56

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	%	%	%			%	%
Arsenic,Dissolved	50.0	52.0	51.5	104	103	80.0-120			0.827	20
Barium,Dissolved	50.0	48.4	50.8	96.9	102	80.0-120			4.80	20
Cadmium,Dissolved	50.0	49.8	54.3	99.7	109	80.0-120			8.48	20
Chromium,Dissolved	50.0	54.3	53.2	109	106	80.0-120			2.18	20
Lead,Dissolved	50.0	49.2	50.9	98.3	102	80.0-120			3.49	20
Selenium,Dissolved	50.0	62.9	60.2	126	120	80.0-120	J4		4.31	20
Silver,Dissolved	50.0	53.0	55.4	106	111	80.0-120			4.42	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 10:59 • (MS) R3444512-5 08/27/19 11:07 • (MSD) R3444512-6 08/27/19 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
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Arsenic,Dissolved	50.0	4.68	55.0	55.0	101	101	1	75.0-125			0.0467	20
Barium,Dissolved	50.0	25.1	76.2	75.7	102	101	1	75.0-125			0.639	20
Cadmium,Dissolved	50.0	ND	53.9	52.3	108	105	1	75.0-125			2.89	20
Chromium,Dissolved	50.0	ND	52.7	52.7	102	102	1	75.0-125			0.0172	20
Lead,Dissolved	50.0	ND	49.9	49.0	99.7	98.0	1	75.0-125			1.77	20
Selenium,Dissolved	50.0	ND	67.4	63.7	133	125	1	75.0-125	J5		5.65	20
Silver,Dissolved	50.0	ND	53.6	54.7	107	109	1	75.0-125			1.98	20



Method Blank (MB)

(MB) R3443903-1 08/25/19 06:30

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

L1131652-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131652-01 08/25/19 06:33 • (DUP) R3443903-2 08/25/19 07:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	31.2	30.0	1	4.21		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1131685-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1131685-10 08/25/19 08:43 • (DUP) R3443903-3 08/25/19 08:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	U	0.000	1	0.000		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3443903-4 08/25/19 08:50 • (LCSD) R3443903-5 08/25/19 08:55

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	70.9	69.7	105	103	85.0-115			1.71	20
Ethane	129	115	114	89.3	88.1	85.0-115			1.30	20
Ethene	127	114	114	89.7	89.7	85.0-115			0.0212	20



Method Blank (MB)

(MB) R3446209-2 08/30/19 09:24

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	0.779	U	0.256	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Method Blank (MB)

(MB) R3446209-2 08/30/19 09:24

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) 4-Bromofluorobenzene	93.7			77.0-126
(S) 1,2-Dichloroethane-d4	116			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	156	125	19.0-160	
Acrolein	125	134	107	10.0-160	
Acrylonitrile	125	151	121	55.0-149	



Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	25.0	23.9	95.8	70.0-123	
Bromobenzene	25.0	25.4	102	73.0-121	
Bromodichloromethane	25.0	27.0	108	75.0-120	
Bromoform	25.0	25.9	104	68.0-132	
Bromomethane	25.0	23.2	92.7	10.0-160	
n-Butylbenzene	25.0	19.6	78.5	73.0-125	
sec-Butylbenzene	25.0	20.2	80.9	75.0-125	
tert-Butylbenzene	25.0	21.5	86.0	76.0-124	
Carbon tetrachloride	25.0	26.9	108	68.0-126	
Chlorobenzene	25.0	24.3	97.1	80.0-121	
Chlorodibromomethane	25.0	26.6	106	77.0-125	
Chloroethane	25.0	22.3	89.3	47.0-150	
Chloroform	25.0	25.7	103	73.0-120	
Chloromethane	25.0	29.0	116	41.0-142	
2-Chlorotoluene	25.0	23.6	94.3	76.0-123	
4-Chlorotoluene	25.0	24.6	98.3	75.0-122	
1,2-Dibromo-3-Chloropropane	25.0	26.5	106	58.0-134	
1,2-Dibromoethane	25.0	26.5	106	80.0-122	
Dibromomethane	25.0	27.2	109	80.0-120	
1,2-Dichlorobenzene	25.0	23.4	93.5	79.0-121	
1,3-Dichlorobenzene	25.0	22.9	91.5	79.0-120	
1,4-Dichlorobenzene	25.0	19.9	79.6	79.0-120	
Dichlorodifluoromethane	25.0	32.5	130	51.0-149	
1,1-Dichloroethane	25.0	26.1	104	70.0-126	
1,2-Dichloroethane	25.0	27.5	110	70.0-128	
1,1-Dichloroethene	25.0	23.8	95.1	71.0-124	
cis-1,2-Dichloroethene	25.0	22.9	91.7	73.0-120	
trans-1,2-Dichloroethene	25.0	22.9	91.5	73.0-120	
1,2-Dichloropropane	25.0	27.1	108	77.0-125	
1,1-Dichloropropene	25.0	25.9	104	74.0-126	
1,3-Dichloropropane	25.0	27.2	109	80.0-120	
cis-1,3-Dichloropropene	25.0	26.7	107	80.0-123	
trans-1,3-Dichloropropene	25.0	28.6	114	78.0-124	
2,2-Dichloropropane	25.0	24.6	98.3	58.0-130	
Di-isopropyl ether	25.0	27.5	110	58.0-138	
Ethylbenzene	25.0	23.4	93.5	79.0-123	
Hexachloro-1,3-butadiene	25.0	19.6	78.2	54.0-138	
Isopropylbenzene	25.0	21.9	87.5	76.0-127	
p-Isopropyltoluene	25.0	21.2	84.7	76.0-125	
2-Butanone (MEK)	125	165	132	44.0-160	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methylene Chloride	25.0	22.6	90.2	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	147	118	68.0-142	
Methyl tert-butyl ether	25.0	24.0	95.8	68.0-125	
Naphthalene	25.0	23.2	92.8	54.0-135	
n-Propylbenzene	25.0	22.2	88.8	77.0-124	
Styrene	25.0	24.5	98.1	73.0-130	
1,1,1,2-Tetrachloroethane	25.0	25.7	103	75.0-125	
1,1,2,2-Tetrachloroethane	25.0	26.7	107	65.0-130	
Tetrachloroethene	25.0	23.9	95.6	72.0-132	
Toluene	25.0	23.5	94.1	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	23.7	95.0	69.0-132	
1,2,3-Trichlorobenzene	25.0	19.4	77.8	50.0-138	
1,2,4-Trichlorobenzene	25.0	20.3	81.0	57.0-137	
1,1,1-Trichloroethane	25.0	25.9	104	73.0-124	
1,1,2-Trichloroethane	25.0	25.1	100	80.0-120	
Trichloroethene	25.0	23.5	94.0	78.0-124	
Trichlorofluoromethane	25.0	28.2	113	59.0-147	
1,2,3-Trichloropropane	25.0	30.3	121	73.0-130	
1,2,3-Trimethylbenzene	25.0	22.9	91.7	77.0-120	
1,2,4-Trimethylbenzene	25.0	22.7	90.8	76.0-121	
1,3,5-Trimethylbenzene	25.0	19.5	78.0	76.0-122	
Vinyl chloride	25.0	26.1	105	67.0-131	
o-Xylene	25.0	22.9	91.6	80.0-122	
m&p-Xylenes	50.0	46.5	93.1	80.0-122	
(S) Toluene-d8			101	80.0-120	
(S) 4-Bromofluorobenzene			96.5	77.0-126	
(S) 1,2-Dichloroethane-d4			119	70.0-130	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	125	ND	149	178	119	142	1	10.0-160			17.4	35
Acrolein	125	ND	245	288	196	231	1	10.0-160	J5	J5	16.3	39
Acrylonitrile	125	ND	144	166	115	133	1	21.0-160			14.6	32
Benzene	25.0	ND	21.5	22.8	85.9	91.0	1	17.0-158			5.76	27
Bromobenzene	25.0	ND	24.8	23.8	99.3	95.3	1	30.0-149			4.19	28
Bromodichloromethane	25.0	ND	25.2	26.8	101	107	1	31.0-150			6.35	27



L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	25.0	ND	24.4	26.3	97.4	105	1	29.0-150			7.63	29
Bromomethane	25.0	ND	16.4	19.4	65.6	77.5	1	10.0-160			16.6	38
n-Butylbenzene	25.0	ND	15.6	18.7	62.4	74.8	1	31.0-150			18.2	30
sec-Butylbenzene	25.0	ND	17.2	19.5	68.8	77.9	1	33.0-155			12.4	29
tert-Butylbenzene	25.0	ND	18.9	20.9	75.8	83.4	1	34.0-153			9.61	28
Carbon tetrachloride	25.0	ND	25.7	29.0	103	116	1	23.0-159			11.9	28
Chlorobenzene	25.0	ND	21.4	23.1	85.7	92.4	1	33.0-152			7.50	27
Chlorodibromomethane	25.0	ND	24.2	25.9	96.7	104	1	37.0-149			7.00	27
Chloroethane	25.0	ND	16.6	18.8	66.3	75.4	1	10.0-160			12.8	30
Chloroform	25.0	ND	23.6	25.3	94.6	101	1	29.0-154			6.90	28
Chloromethane	25.0	ND	21.4	25.7	85.5	103	1	10.0-160			18.3	29
2-Chlorotoluene	25.0	ND	21.4	22.4	85.6	89.4	1	32.0-153			4.32	28
4-Chlorotoluene	25.0	ND	20.7	23.0	82.9	92.1	1	32.0-150			10.5	28
1,2-Dibromo-3-Chloropropane	25.0	ND	23.9	25.6	95.5	102	1	22.0-151			6.84	34
1,2-Dibromoethane	25.0	ND	23.1	24.6	92.2	98.6	1	34.0-147			6.61	27
Dibromomethane	25.0	ND	24.1	25.5	96.5	102	1	30.0-151			5.71	27
1,2-Dichlorobenzene	25.0	ND	19.9	21.8	79.4	87.4	1	34.0-149			9.55	28
1,3-Dichlorobenzene	25.0	ND	19.5	21.6	78.0	86.6	1	36.0-146			10.4	27
1,4-Dichlorobenzene	25.0	ND	18.0	19.7	71.8	78.7	1	35.0-142			9.11	27
Dichlorodifluoromethane	25.0	ND	20.8	27.5	83.2	110	1	10.0-160			27.6	29
1,1-Dichloroethane	25.0	ND	24.9	29.1	99.5	116	1	25.0-158			15.7	27
1,2-Dichloroethane	25.0	ND	25.1	27.0	100	108	1	29.0-151			7.54	27
1,1-Dichloroethene	25.0	ND	21.1	25.4	84.5	102	1	11.0-160			18.6	29
cis-1,2-Dichloroethene	25.0	ND	21.0	24.3	83.9	97.0	1	10.0-160			14.5	27
trans-1,2-Dichloroethene	25.0	ND	19.4	23.5	77.7	93.9	1	17.0-153			18.9	27
1,2-Dichloropropane	25.0	ND	25.3	26.1	101	104	1	30.0-156			2.82	27
1,1-Dichloropropene	25.0	ND	22.1	24.5	88.4	98.0	1	25.0-158			10.4	27
1,3-Dichloropropane	25.0	ND	24.2	25.3	97.0	101	1	38.0-147			4.31	27
cis-1,3-Dichloropropene	25.0	ND	23.6	25.2	94.6	101	1	34.0-149			6.34	28
trans-1,3-Dichloropropene	25.0	ND	25.3	26.9	101	108	1	32.0-149			6.19	28
2,2-Dichloropropane	25.0	ND	23.3	26.1	93.0	105	1	24.0-152			11.7	29
Di-isopropyl ether	25.0	ND	27.3	32.2	109	129	1	21.0-160			16.5	28
Ethylbenzene	25.0	ND	20.6	22.0	82.5	87.9	1	30.0-155			6.31	27
Hexachloro-1,3-butadiene	25.0	ND	15.8	19.5	63.2	78.0	1	20.0-154			21.0	34
Isopropylbenzene	25.0	ND	19.6	21.8	78.5	87.0	1	28.0-157			10.2	27
p-Isopropyltoluene	25.0	ND	17.8	20.3	71.3	81.2	1	30.0-154			13.0	29
2-Butanone (MEK)	125	ND	160	155	128	124	1	10.0-160			3.13	32
Methylene Chloride	25.0	ND	20.4	24.0	81.5	96.1	1	23.0-144			16.5	28
4-Methyl-2-pentanone (MIBK)	125	ND	148	145	118	116	1	29.0-160			2.01	29
Methyl tert-butyl ether	25.0	ND	21.4	26.1	85.6	104	1	28.0-150			19.9	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	25.0	ND	20.1	22.1	80.2	88.5	1	12.0-156			9.77	35
n-Propylbenzene	25.0	ND	20.7	21.0	82.9	83.9	1	31.0-154			1.23	28
Styrene	25.0	ND	22.0	23.4	88.1	93.8	1	33.0-155			6.27	28
1,1,1,2-Tetrachloroethane	25.0	ND	23.7	25.6	95.0	102	1	36.0-151			7.50	29
1,1,2,2-Tetrachloroethane	25.0	ND	26.9	25.6	107	102	1	33.0-150			4.95	28
Tetrachloroethene	25.0	ND	19.7	22.7	78.8	90.8	1	10.0-160			14.1	27
Toluene	25.0	ND	20.9	22.1	83.7	88.4	1	26.0-154			5.50	28
1,1,2-Trichlorotrifluoroethane	25.0	ND	19.6	26.7	78.4	107	1	23.0-160		J3	30.5	30
1,2,3-Trichlorobenzene	25.0	ND	15.9	18.7	63.7	75.0	1	17.0-150			16.3	36
1,2,4-Trichlorobenzene	25.0	ND	16.1	19.5	64.3	77.8	1	24.0-150			19.1	33
1,1,1-Trichloroethane	25.0	ND	24.9	27.4	99.6	109	1	23.0-160			9.48	28
1,1,2-Trichloroethane	25.0	ND	23.1	24.0	92.5	95.9	1	35.0-147			3.68	27
Trichloroethene	25.0	ND	20.3	22.3	81.1	89.1	1	10.0-160			9.45	25
Trichlorofluoromethane	25.0	ND	21.6	26.2	86.5	105	1	17.0-160			19.3	31
1,2,3-Trichloropropane	25.0	ND	27.2	28.6	109	114	1	34.0-151			5.00	29
1,2,3-Trimethylbenzene	25.0	ND	19.9	21.7	79.6	86.8	1	32.0-149			8.57	28
1,2,4-Trimethylbenzene	25.0	ND	19.3	21.5	77.1	86.1	1	26.0-154			11.1	27
1,3,5-Trimethylbenzene	25.0	ND	18.1	19.8	72.3	79.2	1	28.0-153			9.11	27
Vinyl chloride	25.0	ND	19.5	22.8	78.2	91.1	1	10.0-160			15.3	27
o-Xylene	25.0	ND	20.4	21.8	81.7	87.3	1	45.0-144			6.62	26
m&p-Xylenes	50.0	ND	40.2	44.0	80.4	87.9	1	43.0-146			8.95	26
(S) Toluene-d8					104	99.8		80.0-120				
(S) 4-Bromofluorobenzene					98.8	97.6		77.0-126				
(S) 1,2-Dichloroethane-d4					122	122		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3444579-1 08/26/19 17:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
(S) o-Terphenyl	82.5			52.0-156

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

(LCS) R3444579-2 08/26/19 17:40 • (LCSD) R3444579-3 08/26/19 18:00

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)	1500	1440	1380	96.0	92.0	50.0-150			4.26	20
(S) o-Terphenyl				85.5	77.0	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) R3444955-1 08/28/19 06:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
<i>(S) o-Terphenyl</i>	84.0			52.0-156

Laboratory Control Sample (LCS)

(LCS) R3444955-2 08/28/19 06:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Diesel Range Organics (DRO)	1500	1590	106	50.0-150	
<i>(S) o-Terphenyl</i>			97.0	52.0-156	

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/29/19 09:59 • (MS) R3445577-1 08/29/19 10:16 • (MSD) R3445577-2 08/29/19 10:33

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)	1430	ND	1590	1560	97.8	95.7	1	50.0-150			1.90	20
<i>(S) o-Terphenyl</i>					79.5	75.8		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) R3446165-1 08/30/19 13:59

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>	77.5			52.0-156

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

(LCS) R3446165-2 08/30/19 14:16 • (LCSD) R3446165-3 08/30/19 14:33

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 %
Diesel Range Organics (DRO)	1500	1160	1290	77.3	86.0	50.0-150			10.6	20
<i>(S) o-Terphenyl</i>				78.5	81.0	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) R3444925-1 08/27/19 15:40

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>	62.0			52.0-156

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

(LCS) R3444925-2 08/27/19 16:20 • (LCSD) R3444925-3 08/27/19 16:43

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	%	%	%			%	%
Diesel Range Organics (DRO)	1500	1220	1190	81.3	79.3	50.0-150			2.49	20
<i>(S) o-Terphenyl</i>				72.0	71.5	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) R3444682-2 08/27/19 07:51

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	104			31.0-160
(S) 2-Fluorobiphenyl	79.5			48.0-148
(S) p-Terphenyl-d14	86.5			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)

(LCS) R3444682-1 08/27/19 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	2.00	2.14	107	67.0-150	
Acenaphthene	2.00	1.86	93.0	65.0-138	
Acenaphthylene	2.00	1.89	94.5	66.0-140	
Benzo(a)anthracene	2.00	1.79	89.5	61.0-140	
Benzo(a)pyrene	2.00	1.82	91.0	60.0-143	
Benzo(b)fluoranthene	2.00	1.73	86.5	58.0-141	
Benzo(g,h,i)perylene	2.00	1.77	88.5	52.0-153	
Benzo(k)fluoranthene	2.00	1.94	97.0	58.0-148	
Chrysene	2.00	2.01	100	64.0-144	
Dibenz(a,h)anthracene	2.00	1.65	82.5	52.0-155	
Fluoranthene	2.00	2.08	104	69.0-153	



Laboratory Control Sample (LCS)

(LCS) R3444682-1 08/27/19 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	2.00	1.77	88.5	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.69	84.5	54.0-153	
Naphthalene	2.00	1.79	89.5	61.0-137	
Phenanthrene	2.00	1.80	90.0	62.0-137	
Pyrene	2.00	1.69	84.5	60.0-142	
1-Methylnaphthalene	2.00	1.71	85.5	66.0-142	
2-Methylnaphthalene	2.00	1.62	81.0	62.0-136	
2-Chloronaphthalene	2.00	1.82	91.0	64.0-140	
<i>(S) Nitrobenzene-d5</i>			111	31.0-160	
<i>(S) 2-Fluorobiphenyl</i>			89.5	48.0-148	
<i>(S) p-Terphenyl-d14</i>			90.5	37.0-146	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 08:34 • (MS) R3444682-3 08/27/19 08:56 • (MSD) R3444682-4 08/27/19 09:18

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	ND	1.98	2.03	104	107	1	56.0-156			2.49	20
Acenaphthene	1.90	ND	1.81	1.83	95.3	96.3	1	44.0-153			1.10	20
Acenaphthylene	1.90	ND	1.86	1.89	97.9	99.5	1	53.0-150			1.60	20
Benzo(a)anthracene	1.90	ND	1.82	1.86	95.8	97.9	1	47.0-151			2.17	20
Benzo(a)pyrene	1.90	ND	1.72	1.75	90.5	92.1	1	45.0-146			1.73	20
Benzo(b)fluoranthene	1.90	ND	1.71	1.72	90.0	90.5	1	43.0-142			0.583	20
Benzo(g,h,i)perylene	1.90	ND	1.68	1.71	88.4	90.0	1	40.0-147			1.77	20
Benzo(k)fluoranthene	1.90	ND	1.73	1.79	91.1	94.2	1	43.0-148			3.41	21
Chrysene	1.90	ND	1.82	1.87	95.8	98.4	1	50.0-148			2.71	20
Dibenz(a,h)anthracene	1.90	ND	1.59	1.63	83.7	85.8	1	37.0-151			2.48	20
Fluoranthene	1.90	ND	2.06	2.13	108	112	1	56.0-157			3.34	20
Fluorene	1.90	ND	1.72	1.75	89.9	91.5	1	48.0-148			1.73	20
Indeno(1,2,3-cd)pyrene	1.90	ND	1.61	1.63	84.7	85.8	1	41.0-148			1.23	20
Naphthalene	1.90	ND	1.78	1.80	92.6	93.7	1	10.0-160			1.12	20
Phenanthrene	1.90	ND	1.76	1.80	92.6	94.7	1	47.0-147			2.25	20
Pyrene	1.90	ND	1.73	1.77	91.1	93.2	1	51.0-148			2.29	20
1-Methylnaphthalene	1.90	ND	1.69	1.71	88.9	90.0	1	21.0-160			1.18	20
2-Methylnaphthalene	1.90	ND	1.62	1.63	84.7	85.2	1	31.0-160			0.615	20
2-Chloronaphthalene	1.90	ND	1.80	1.81	94.7	95.3	1	52.0-148			0.554	20
<i>(S) Nitrobenzene-d5</i>					110	115		31.0-160				
<i>(S) 2-Fluorobiphenyl</i>					94.7	94.2		48.0-148				
<i>(S) p-Terphenyl-d14</i>					95.8	98.4		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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### 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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration method criteria.
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.



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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

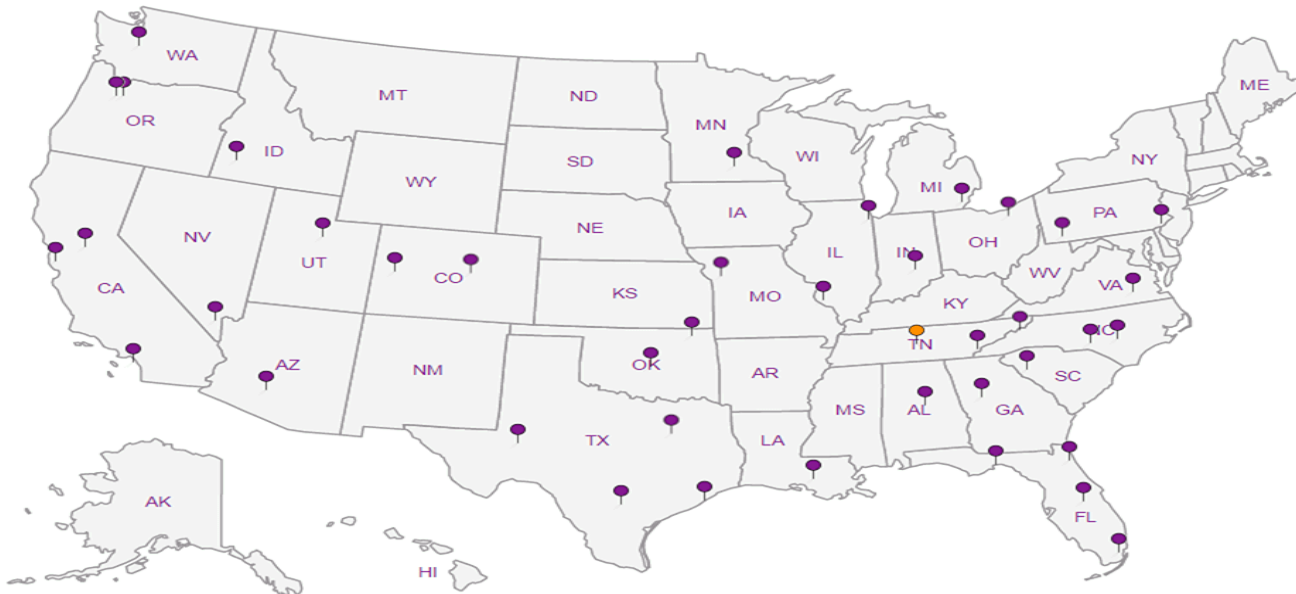
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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 1 of 2



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



Report to:  
**Katie Teague**

Email To: [KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com);  
[RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com);

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

City/State  
Collected: **Wishram, WA**

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

Client Project #  
**1996120\*00**

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	Cnts	Diss M6020RCRA8 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	Remarks	Sample # (lab only)
WMW-05-20190820	Grab	GW	—	8/20/19	1255	10		X	X	X	X			X	X	X		01
WMW-24-20190820	↓	GW	↓		1420	15	X	X	X		X		X	X	X	X		see pg 2 02
WMW-26-20190820	↓	GW	↓		0830	17	X	X	X	X	X		X	X	X	X		03
WMW-29-20190820	↓	GW	↓		0745	15	X	X	X		X		X	X	X	X		04
WMW-30-20190820	↓	GW	↓		080950	17	X	X	X	X	X		X	X	X	X		05
TB-01-20190821		GW		8/21/19	—	1												06
		GW																
		GW																
		GW																
		GW																

\* 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 # **1070 0261 289**

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

**RAD SCREEN: <0.5 mR/hr**

Relinquished by: (Signature)

Date: **8/21/19** Time: **1400**

Received by: (Signature)

**FedEx**

Trip Blank Received:  Yes  No  
HCL / MeOH  
TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature)

Temp: \_\_\_\_\_ °C  
Bottles Received: **4.910-4.915**

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by: (Signature)

Date: **8/22/19** Time: **845**

Hold: \_\_\_\_\_ Condition: **NGF / 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:  
**Katie Teague**

Email To: [KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com);  
[RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com);

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

City/State  
Collected: **Wishram, WA**

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

Client Project #  
**1996120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Collected by (print):  
**K. Teague**

Site/Facility ID #

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Quote #

Date Results Needed

Immediately  
Packed on Ice N  Y

Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

No.  
of  
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl									
WMW-24-20190820	Grab	GW	—	148/2019	1420	15	X				X									02
WMW-26-20190820	↓	GW	↓	↓	0830	17	X				X									03
WMW-29-20190820	↓	GW	↓	↓	0745	15	X				X									04
WMW-30-20190820	↓	GW	↓	↓	0950	17	X				X									05
TB-01-20190821		GW		8/21/19	—	1					X									06
		GW																		
		GW																		
		GW																		
		GW																		
		GW																		

\* 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 #

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  
VQA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature)  
*[Signature]*

Date: 8/21/19 Time: 1400

Received by: (Signature)  
FedEx

Trip Blank Received:  Yes  No  
HCL / MeOH  
TBR

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp: °C Bottles Received: 4.110-4.032

If preservation required by Login: Date/Time

Relinquished by: (Signature)

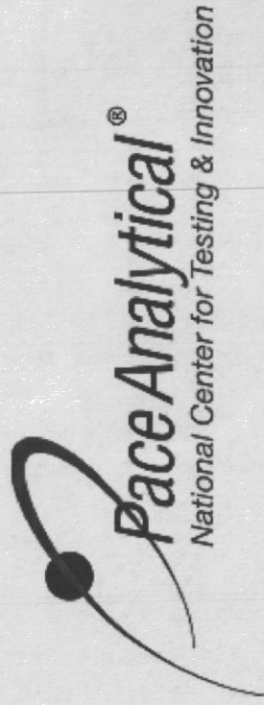
Date: Time:

Received for lab by: (Signature)  
*[Signature]*

Date: 8/22/19 Time: 845

Hold: Condition: MCF / OK

**Matt Shacklock**



<b>Login #:1131661</b>	<b>Client: BNSF1KEN</b>	<b>Date:8/22</b>	<b>Evaluated by:Kelsey</b>
------------------------	-------------------------	------------------	----------------------------

**Non-Conformance (check applicable items)**

<b>Sample Integrity</b>	<b>Chain of Custody Clarification</b>	<b>If Broken Container:</b>
Parameter(s) past holding time	Login Clarification Needed	Insufficient packing material around container
Temperature not in range	Chain of custody is incomplete	Insufficient packing material inside cooler
Improper container type	Please specify Metals requested.	
x pH not in range.	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.	<b>If no Chain of Custody:</b>
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 WMW-30 SULFIDE for at pH 10. Preserved in lab**

<b>Client informed by:</b>	<b>Call</b>	<b>Email</b>	<b>Voice Mail</b>	<b>Date: 8/22/19</b>	<b>Time: 1450</b>
<b>TSR Initials: MB</b>	<b>Client Contact:</b>				

**Login Instructions:**

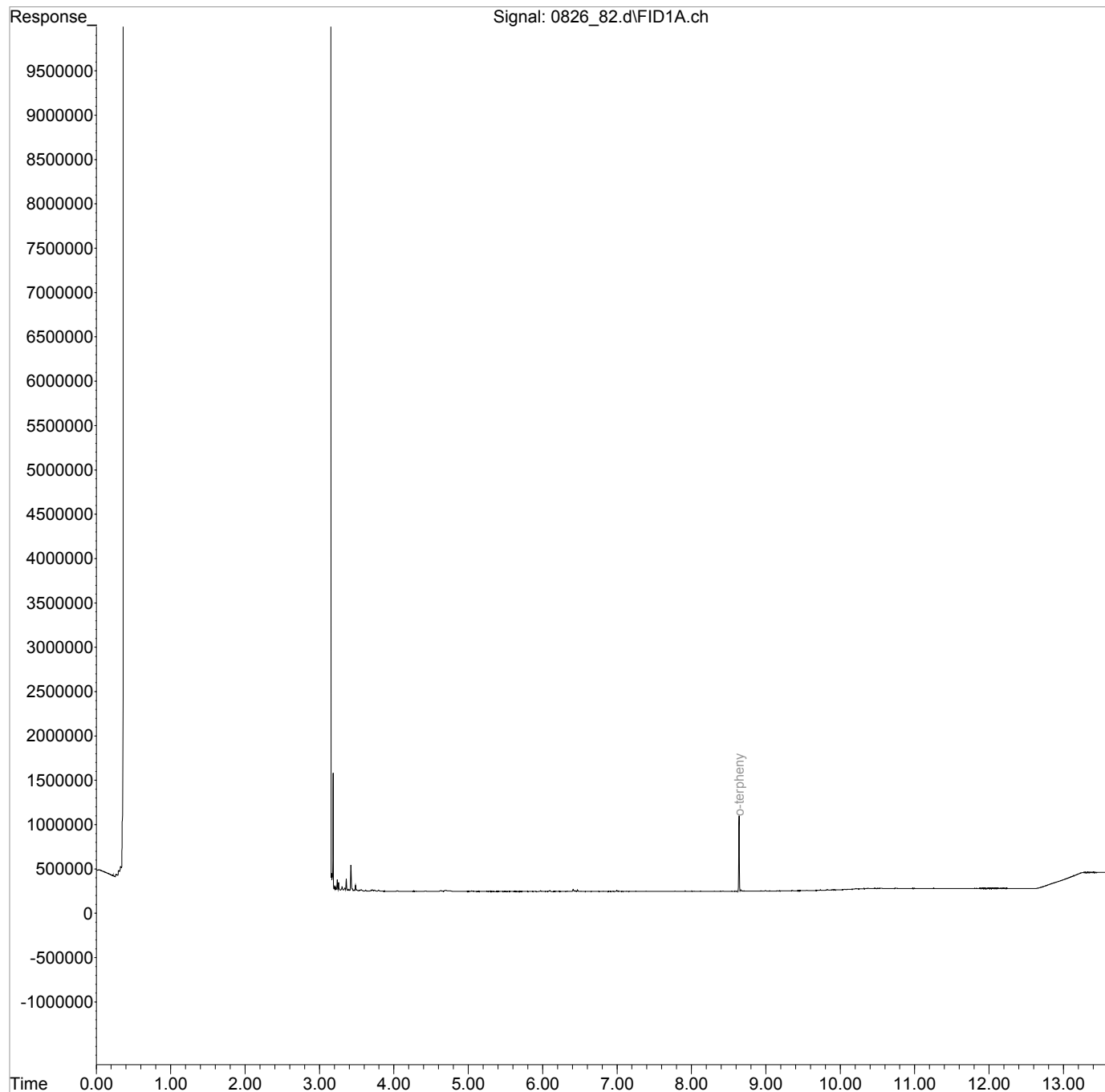
Run as rec'd



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_82.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 6:03 pm  
Operator : 843  
Sample : L1131661-01 1x WG1335265  
Misc : M.I.s on ranges are corrections  
ALS Vial : 50 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 18:34:08 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

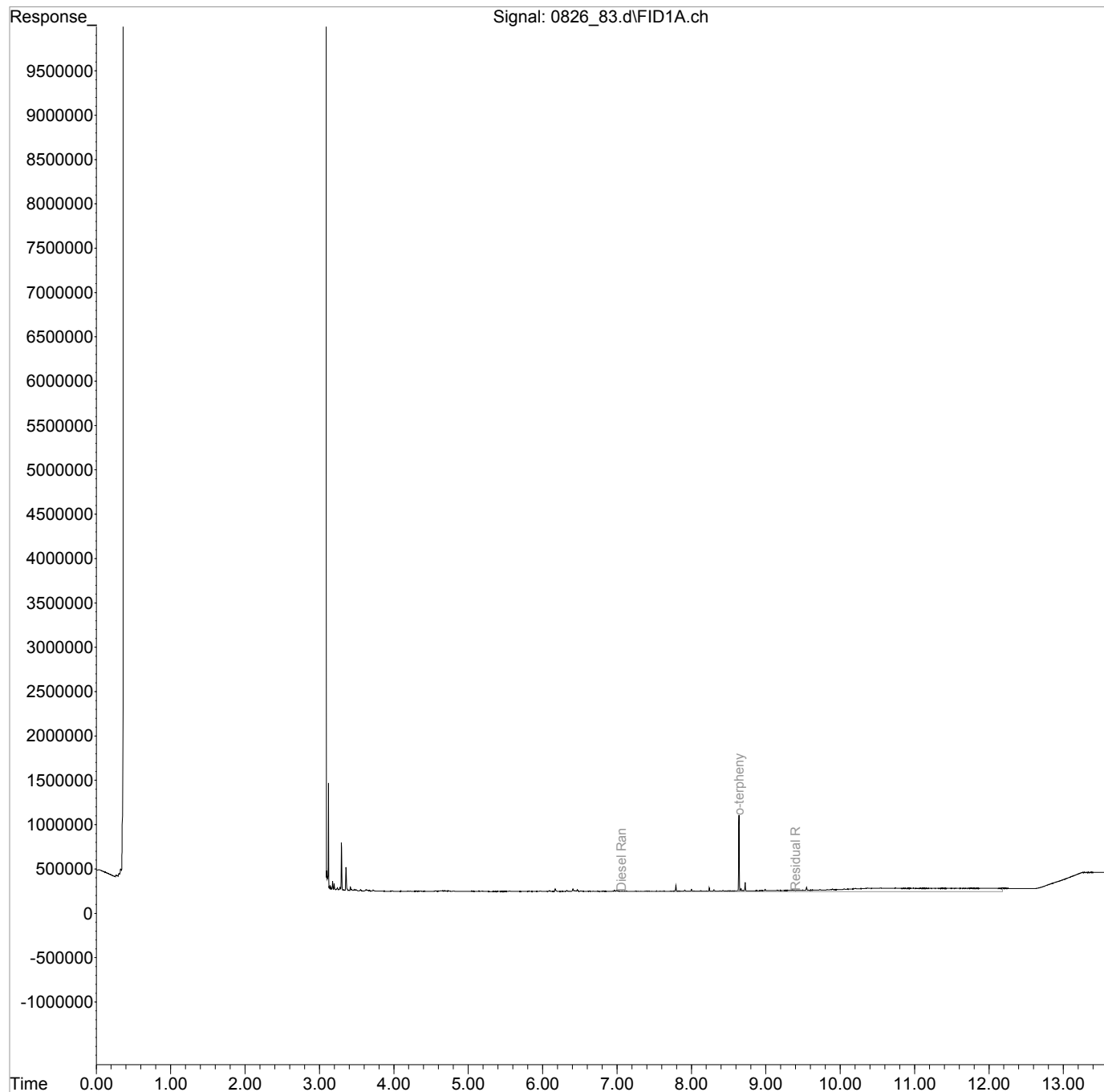
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_83.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 6:23 pm  
Operator : 843  
Sample : L1131661-03 1x WG1335265  
Misc : M.I.s on ranges are corrections  
ALS Vial : 51 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 20:05:41 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

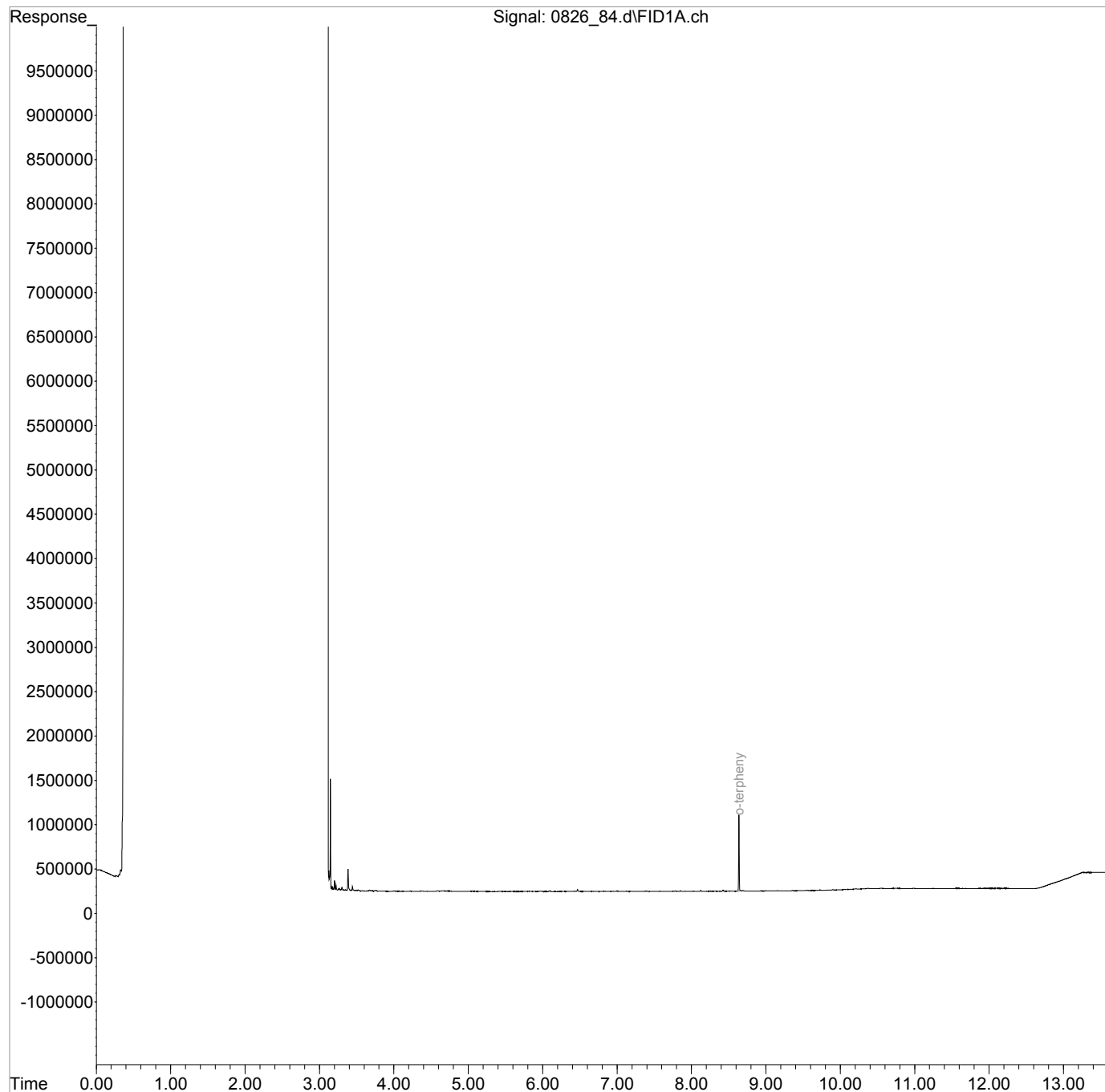
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_84.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 6:43 pm  
Operator : 843  
Sample : L1131661-05 1x WG1335265  
Misc : M.I.s on ranges are corrections  
ALS Vial : 52 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 27 20:06:03 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

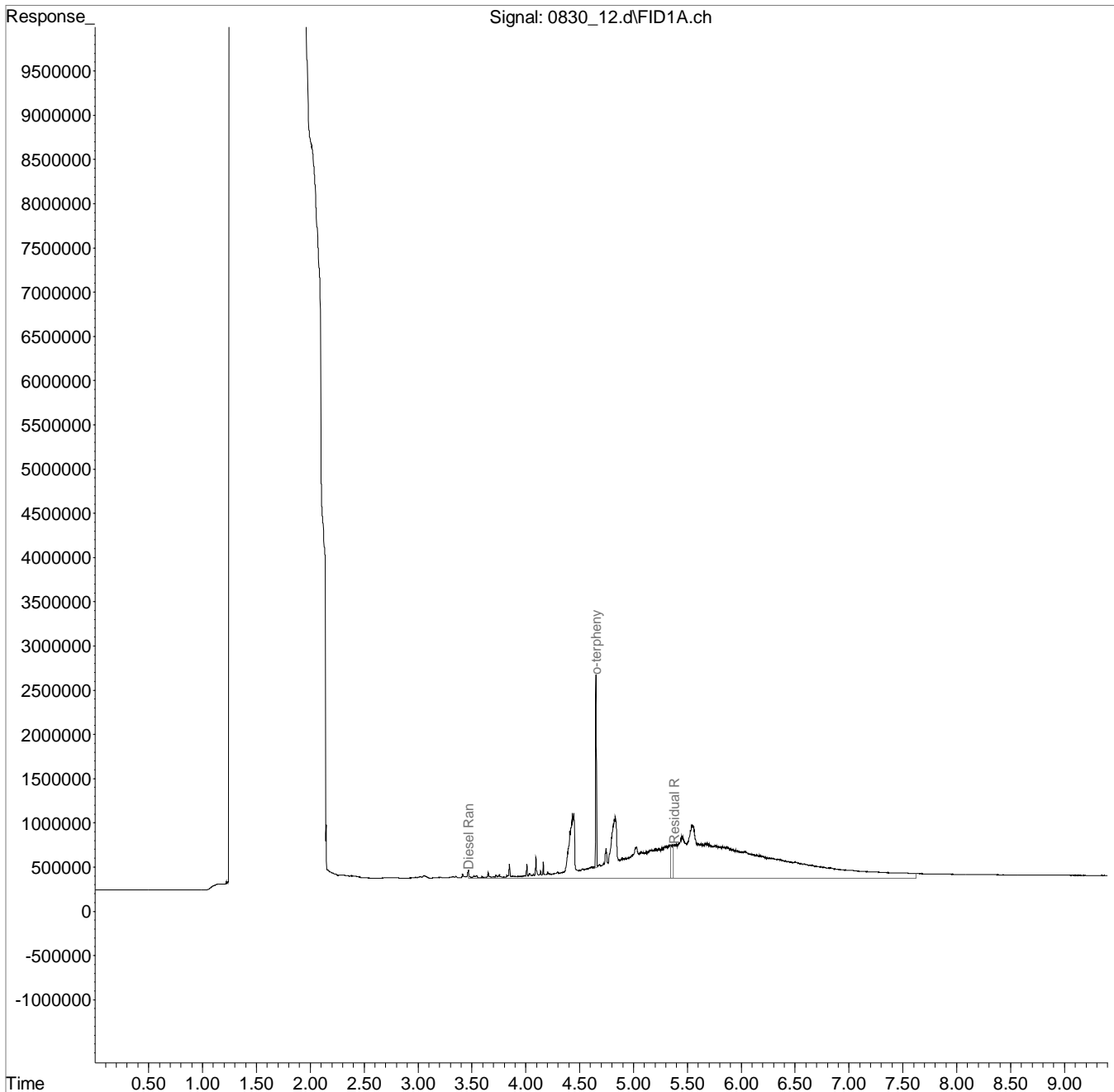
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\083019\  
 Data File : 0830 12.d  
 Signal(s) : FID1A.ch  
 Acq On : 30 Aug 2019 2:50 pm  
 Operator : 773  
 Sample : L1131661-03 1x WG1337161  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 10 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: Aug 30 16:10:45 2019  
 Quant Method : C:\msdchem\1\methods\DM31H28AS.M  
 Quant Title :  
 QLast Update : Thu Aug 29 10:36:06 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

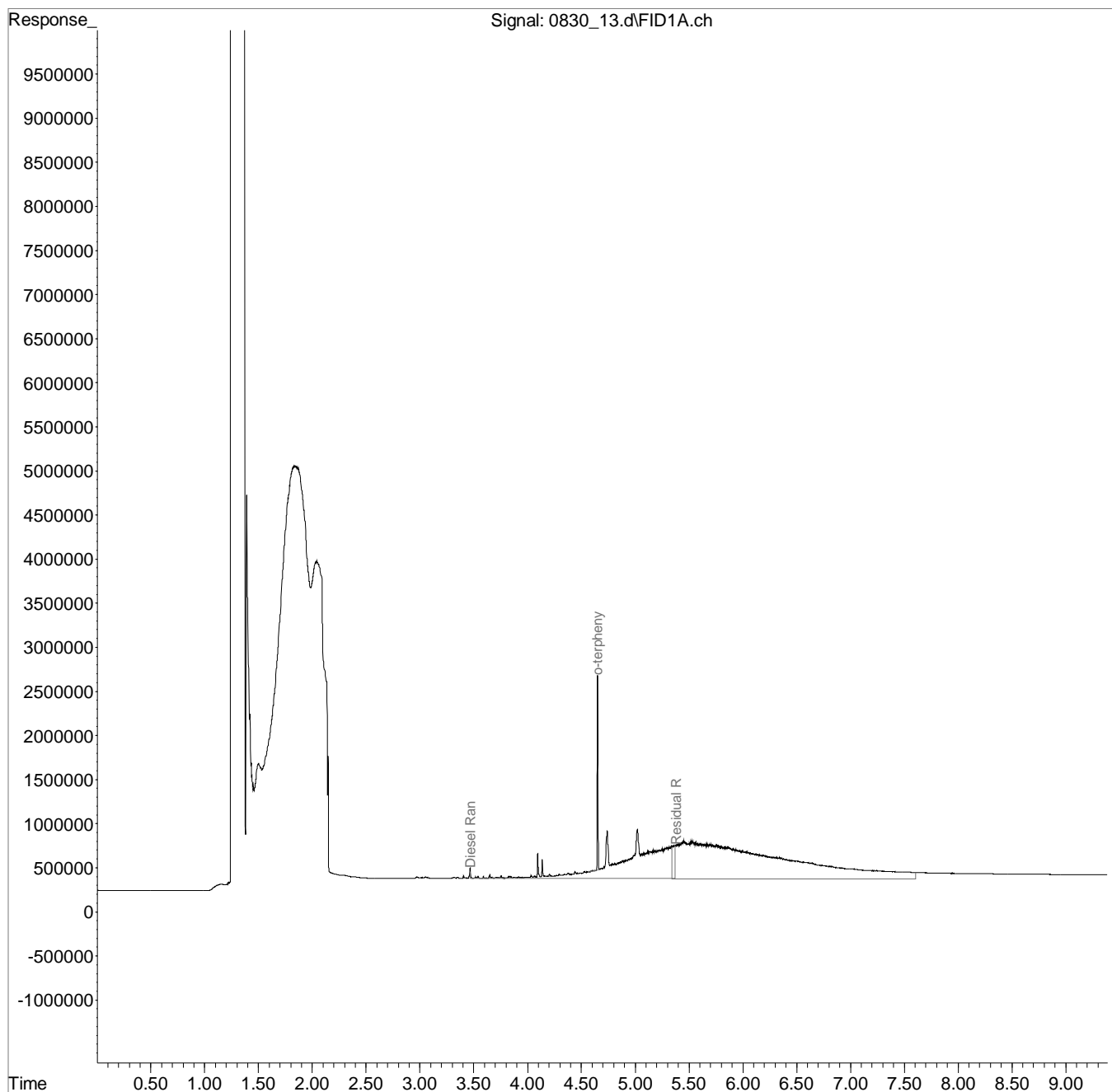
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\083019\  
Data File : 0830 13.d  
Signal(s) : FID1A.ch  
Acq On : 30 Aug 2019 3:07 pm  
Operator : 773  
Sample : L1131661-05 1x WG1337161  
Misc : M.I.s on ranges are corrections  
ALS Vial : 11 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: Aug 30 16:11:05 2019  
Quant Method : C:\msdchem\1\methods\DM31H28AS.M  
Quant Title :  
QLast Update : Thu Aug 29 10:36:06 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :



September 06, 2019

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1131721  
Samples Received: 08/22/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

Report To: Katie Teague  
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

Entire Report Reviewed By:

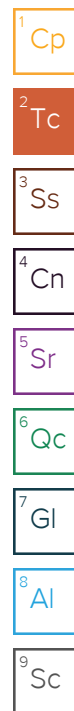
Jason Romer  
Project Manager

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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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# SAMPLE SUMMARY

## WMW-13-2019820 L1131721-01 GW

Collected by  
K. Teague  
Collected date/time  
08/20/19 16:15  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 18:11	08/26/19 18:11	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	2	08/29/19 10:38	08/29/19 10:38	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:08	08/23/19 15:08	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333379	1	08/23/19 04:12	08/23/19 04:12	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 11:40	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1335221	1	08/27/19 14:04	08/27/19 14:04	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335024	1	08/26/19 19:04	08/29/19 09:25	SHG	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## WMW-09-2019820 L1131721-02 GW

Collected by  
K. Teague  
Collected date/time  
08/20/19 15:25  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1334115	1	08/26/19 18:12	08/26/19 18:12	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	1	08/29/19 10:40	08/29/19 10:40	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:09	08/23/19 15:09	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333379	1	08/23/19 04:22	08/23/19 04:22	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 11:43	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1335221	1	08/27/19 14:06	08/27/19 14:06	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335024	1	08/26/19 19:04	08/29/19 09:42	SHG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335265	1	08/25/19 17:16	09/04/19 21:42	SHG	Mt. Juliet, TN

## WMW-27-2019820 L1131721-03 GW

Collected by  
K. Teague  
Collected date/time  
08/20/19 11:05  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335156	1	08/27/19 11:24	08/27/19 11:24	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	1	08/29/19 10:41	08/29/19 10:41	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:09	08/23/19 15:09	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333679	1	08/23/19 09:44	08/23/19 09:44	LDC	Mt. Juliet, TN
Mercury by Method 7470A	WG1333344	1	08/22/19 19:30	08/23/19 08:37	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1333413	1	08/22/19 19:30	08/23/19 09:34	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 16:41	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 10:59	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1335221	1	08/27/19 14:09	08/27/19 14:09	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 13:13	08/30/19 13:13	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335024	1	08/26/19 19:04	08/29/19 09:59	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335040	1	08/26/19 17:44	08/27/19 08:34	DMG	Mt. Juliet, TN

## TB-02-20190821 L1131721-04 GW

Collected by  
K. Teague  
Collected date/time  
08/21/19 00:00  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 13:34	08/30/19 13:34	ADM	Mt. Juliet, TN





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.

Jason Romer  
Project Manager

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 18:11	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5220		200	2	08/29/2019 10:38	<a href="#">WG1335355</a>

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	08/23/2019 15:08	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	24300		5000	1	08/23/2019 04:12	<a href="#">WG1333379</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/27/2019 11:40	<a href="#">WG1334768</a>
Manganese,Dissolved	ND		5.00	1	08/27/2019 11:40	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/27/2019 14:04	<a href="#">WG1335221</a>
Ethane	ND		13.0	1	08/27/2019 14:04	<a href="#">WG1335221</a>
Ethene	ND		13.0	1	08/27/2019 14:04	<a href="#">WG1335221</a>

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	08/29/2019 09:25	<a href="#">WG1335024</a>
Residual Range Organics (RRO)	ND		250	1	08/29/2019 09:25	<a href="#">WG1335024</a>
(S) o-Terphenyl	61.6		52.0-156		08/29/2019 09:25	<a href="#">WG1335024</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/26/2019 18:12	<a href="#">WG1334115</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3190		100	1	08/29/2019 10:40	<a href="#">WG1335355</a>

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	08/23/2019 15:09	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	15900		5000	1	08/23/2019 04:22	<a href="#">WG1333379</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/27/2019 11:43	<a href="#">WG1334768</a>
Manganese,Dissolved	989		5.00	1	08/27/2019 11:43	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/27/2019 14:06	<a href="#">WG1335221</a>
Ethane	ND		13.0	1	08/27/2019 14:06	<a href="#">WG1335221</a>
Ethene	ND		13.0	1	08/27/2019 14:06	<a href="#">WG1335221</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	557		200	1	08/29/2019 09:42	<a href="#">WG1335024</a>
Residual Range Organics (RRO)	792		250	1	08/29/2019 09:42	<a href="#">WG1335024</a>
(S) o-Terphenyl	58.4		52.0-156		08/29/2019 09:42	<a href="#">WG1335024</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	09/04/2019 21:42	<a href="#">WG1335265</a>
Residual Range Organics (RRO)	ND		250	1	09/04/2019 21:42	<a href="#">WG1335265</a>
(S) o-Terphenyl	84.2		52.0-156		09/04/2019 21:42	<a href="#">WG1335265</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND	J3 J6	100	1	08/27/2019 11:24	WG1335156

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1830		100	1	08/29/2019 10:41	WG1335355

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	08/23/2019 15:09	WG1333747

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	8370		5000	1	08/23/2019 09:44	WG1333679

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND	J3 J6	0.200	1	08/23/2019 08:37	WG1333344
Mercury,Dissolved	ND	J3	0.200	1	08/23/2019 09:34	WG1333413

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.62		2.00	1	08/23/2019 16:41	WG1333542
Arsenic,Dissolved	4.68		2.00	1	08/27/2019 10:59	WG1334768
Barium	25.5		5.00	1	08/23/2019 16:41	WG1333542
Barium,Dissolved	25.1		5.00	1	08/27/2019 10:59	WG1334768
Cadmium	ND		1.00	1	08/23/2019 16:41	WG1333542
Cadmium,Dissolved	ND		1.00	1	08/27/2019 10:59	WG1334768
Chromium	ND		2.00	1	08/23/2019 16:41	WG1333542
Chromium,Dissolved	ND		2.00	1	08/27/2019 10:59	WG1334768
Iron,Dissolved	ND		100	1	08/27/2019 10:59	WG1334768
Lead	ND		2.00	1	08/23/2019 16:41	WG1333542
Lead,Dissolved	ND		2.00	1	08/27/2019 10:59	WG1334768
Manganese,Dissolved	5.23		5.00	1	08/27/2019 10:59	WG1334768
Selenium	ND		2.00	1	08/23/2019 16:41	WG1333542
Selenium,Dissolved	ND	J4 J5	2.00	1	08/27/2019 10:59	WG1334768
Silver	ND		2.00	1	08/23/2019 16:41	WG1333542
Silver,Dissolved	ND		2.00	1	08/27/2019 10:59	WG1334768

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	08/27/2019 14:09	WG1335221
Ethane	ND		13.0	1	08/27/2019 14:09	WG1335221
Ethene	ND		13.0	1	08/27/2019 14:09	WG1335221



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	08/30/2019 13:13	WG1336242
Acrolein	ND	J5	50.0	1	08/30/2019 13:13	WG1336242
Acrylonitrile	ND		10.0	1	08/30/2019 13:13	WG1336242
Benzene	ND		1.00	1	08/30/2019 13:13	WG1336242
Bromobenzene	ND		1.00	1	08/30/2019 13:13	WG1336242
Bromodichloromethane	ND		1.00	1	08/30/2019 13:13	WG1336242
Bromoform	ND		1.00	1	08/30/2019 13:13	WG1336242
Bromomethane	ND		5.00	1	08/30/2019 13:13	WG1336242
n-Butylbenzene	ND	J0	1.00	1	08/30/2019 13:13	WG1336242
sec-Butylbenzene	ND		1.00	1	08/30/2019 13:13	WG1336242
tert-Butylbenzene	ND		1.00	1	08/30/2019 13:13	WG1336242
Carbon tetrachloride	ND		1.00	1	08/30/2019 13:13	WG1336242
Chlorobenzene	ND		1.00	1	08/30/2019 13:13	WG1336242
Chlorodibromomethane	ND		1.00	1	08/30/2019 13:13	WG1336242
Chloroethane	ND		5.00	1	08/30/2019 13:13	WG1336242
Chloroform	ND		5.00	1	08/30/2019 13:13	WG1336242
Chloromethane	ND		2.50	1	08/30/2019 13:13	WG1336242
2-Chlorotoluene	ND		1.00	1	08/30/2019 13:13	WG1336242
4-Chlorotoluene	ND		1.00	1	08/30/2019 13:13	WG1336242
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 13:13	WG1336242
1,2-Dibromoethane	ND		1.00	1	08/30/2019 13:13	WG1336242
Dibromomethane	ND		1.00	1	08/30/2019 13:13	WG1336242
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 13:13	WG1336242
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 13:13	WG1336242
1,4-Dichlorobenzene	ND	J0	1.00	1	08/30/2019 13:13	WG1336242
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 13:13	WG1336242
1,1-Dichloroethane	ND		1.00	1	08/30/2019 13:13	WG1336242
1,2-Dichloroethane	ND		1.00	1	08/30/2019 13:13	WG1336242
1,1-Dichloroethene	ND		1.00	1	08/30/2019 13:13	WG1336242
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 13:13	WG1336242
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 13:13	WG1336242
1,2-Dichloropropane	ND		1.00	1	08/30/2019 13:13	WG1336242
1,1-Dichloropropene	ND		1.00	1	08/30/2019 13:13	WG1336242
1,3-Dichloropropane	ND		1.00	1	08/30/2019 13:13	WG1336242
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 13:13	WG1336242
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 13:13	WG1336242
2,2-Dichloropropane	ND		1.00	1	08/30/2019 13:13	WG1336242
Di-isopropyl ether	ND		1.00	1	08/30/2019 13:13	WG1336242
Ethylbenzene	ND		1.00	1	08/30/2019 13:13	WG1336242
Hexachloro-1,3-butadiene	ND	J0	1.00	1	08/30/2019 13:13	WG1336242
Isopropylbenzene	ND		1.00	1	08/30/2019 13:13	WG1336242
p-Isopropyltoluene	ND		1.00	1	08/30/2019 13:13	WG1336242
2-Butanone (MEK)	ND		10.0	1	08/30/2019 13:13	WG1336242
Methylene Chloride	ND		5.00	1	08/30/2019 13:13	WG1336242
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 13:13	WG1336242
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 13:13	WG1336242
Naphthalene	ND		5.00	1	08/30/2019 13:13	WG1336242
n-Propylbenzene	ND		1.00	1	08/30/2019 13:13	WG1336242
Styrene	ND		1.00	1	08/30/2019 13:13	WG1336242
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 13:13	WG1336242
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 13:13	WG1336242
1,1,2-Trichlorotrifluoroethane	ND	J3	1.00	1	08/30/2019 13:13	WG1336242
Tetrachloroethene	ND		1.00	1	08/30/2019 13:13	WG1336242
Toluene	ND		1.00	1	08/30/2019 13:13	WG1336242
1,2,3-Trichlorobenzene	ND	J0	1.00	1	08/30/2019 13:13	WG1336242
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 13:13	WG1336242

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	08/30/2019 13:13	<a href="#">WG1336242</a>
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 13:13	<a href="#">WG1336242</a>
Trichloroethene	ND		1.00	1	08/30/2019 13:13	<a href="#">WG1336242</a>
Trichlorofluoromethane	ND		5.00	1	08/30/2019 13:13	<a href="#">WG1336242</a>
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 13:13	<a href="#">WG1336242</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 13:13	<a href="#">WG1336242</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 13:13	<a href="#">WG1336242</a>
1,3,5-Trimethylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 13:13	<a href="#">WG1336242</a>
Vinyl chloride	ND		1.00	1	08/30/2019 13:13	<a href="#">WG1336242</a>
o-Xylene	ND		1.00	1	08/30/2019 13:13	<a href="#">WG1336242</a>
m&p-Xylene	ND		2.00	1	08/30/2019 13:13	<a href="#">WG1336242</a>
(S) Toluene-d8	101		80.0-120		08/30/2019 13:13	<a href="#">WG1336242</a>
(S) 4-Bromofluorobenzene	93.7		77.0-126		08/30/2019 13:13	<a href="#">WG1336242</a>
(S) 1,2-Dichloroethane-d4	123		70.0-130		08/30/2019 13:13	<a href="#">WG1336242</a>

- 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	08/29/2019 09:59	<a href="#">WG1335024</a>
Residual Range Organics (RRO)	ND		250	1	08/29/2019 09:59	<a href="#">WG1335024</a>
(S) o-Terphenyl	65.3		52.0-156		08/29/2019 09:59	<a href="#">WG1335024</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Acenaphthene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Chrysene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Fluoranthene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Fluorene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Naphthalene	ND		0.250	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Phenanthrene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
Pyrene	ND		0.0500	1	08/27/2019 08:34	<a href="#">WG1335040</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 08:34	<a href="#">WG1335040</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 08:34	<a href="#">WG1335040</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 08:34	<a href="#">WG1335040</a>
(S) Nitrobenzene-d5	108		31.0-160		08/27/2019 08:34	<a href="#">WG1335040</a>
(S) 2-Fluorobiphenyl	94.7		48.0-148		08/27/2019 08:34	<a href="#">WG1335040</a>
(S) p-Terphenyl-d14	93.2		37.0-146		08/27/2019 08:34	<a href="#">WG1335040</a>



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	08/30/2019 13:34	<a href="#">WG1336242</a>
Acrolein	ND		50.0	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Acrylonitrile	ND		10.0	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Benzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Bromobenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Bromodichloromethane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Bromoform	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Bromomethane	ND		5.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
n-Butylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
sec-Butylbenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
tert-Butylbenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Carbon tetrachloride	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Chlorobenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Chlorodibromomethane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Chloroethane	ND		5.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Chloroform	ND		5.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Chloromethane	ND		2.50	1	08/30/2019 13:34	<a href="#">WG1336242</a>
2-Chlorotoluene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
4-Chlorotoluene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,2-Dibromoethane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Dibromomethane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,4-Dichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,1-Dichloroethane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,2-Dichloroethane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,1-Dichloroethene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,2-Dichloropropane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,1-Dichloropropene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,3-Dichloropropane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
2,2-Dichloropropane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Di-isopropyl ether	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Ethylbenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Hexachloro-1,3-butadiene	ND	<u>JO</u>	1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Isopropylbenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
p-Isopropyltoluene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
2-Butanone (MEK)	ND		10.0	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Methylene Chloride	ND		5.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Naphthalene	ND		5.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
n-Propylbenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Styrene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Tetrachloroethene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Toluene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,2,3-Trichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>

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	08/30/2019 13:34	<a href="#">WG1336242</a>
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Trichloroethene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Trichlorofluoromethane	ND		5.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
1,3,5-Trimethylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
Vinyl chloride	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
o-Xylene	ND		1.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
m&p-Xylene	ND		2.00	1	08/30/2019 13:34	<a href="#">WG1336242</a>
(S) Toluene-d8	102		80.0-120		08/30/2019 13:34	<a href="#">WG1336242</a>
(S) 4-Bromofluorobenzene	93.8		77.0-126		08/30/2019 13:34	<a href="#">WG1336242</a>
(S) 1,2-Dichloroethane-d4	129		70.0-130		08/30/2019 13:34	<a href="#">WG1336242</a>

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





Method Blank (MB)

(MB) R3444476-1 08/26/19 17:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131625-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131625-02 08/26/19 17:28 • (DUP) R3444476-3 08/26/19 17:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	4790	4820	1	0.624		10

L1131661-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-01 08/26/19 17:53 • (DUP) R3444476-6 08/26/19 17:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3444476-2 08/26/19 17:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	6980	93.0	90.0-110	

L1131642-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131642-01 08/26/19 17:31 • (MS) R3444476-4 08/26/19 17:33 • (MSD) R3444476-5 08/26/19 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	190	4900	4900	94.2	94.1	1	90.0-110			0.102	10

L1131661-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131661-02 08/26/19 17:57 • (MS) R3444476-7 08/26/19 17:58

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4780	95.6	1	90.0-110	



Method Blank (MB)

(MB) R3444534-1 08/27/19 11:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1132503-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132503-01 08/27/19 11:29 • (DUP) R3444534-5 08/27/19 11:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1132521-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132521-01 08/27/19 11:54 • (DUP) R3444534-8 08/27/19 11:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	990	989	1	0.101		10

Laboratory Control Sample (LCS)

(LCS) R3444534-2 08/27/19 11:18

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	6890	91.8	90.0-110	

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 11:24 • (MS) R3444534-3 08/27/19 11:25 • (MSD) R3444534-4 08/27/19 11:27

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	3620	4740	72.5	94.9	1	90.0-110	J6	J3	26.8	10

L1132503-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132503-02 08/27/19 11:49 • (MS) R3444534-6 08/27/19 11:51 • (MSD) R3444534-7 08/27/19 11:52

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	4730	4660	94.6	93.2	1	90.0-110			1.49	10



Method Blank (MB)

(MB) R3445464-1 08/29/19 10:17

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

L1131661-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-01 08/29/19 10:20 • (DUP) R3445464-3 08/29/19 10:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	2440	2440	1	0.328		20

L1131738-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131738-01 08/29/19 10:46 • (DUP) R3445464-6 08/29/19 10:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3445464-2 08/29/19 10:19

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	3900	97.6	90.0-110	

L1131738-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131738-02 08/29/19 10:49 • (MS) R3445464-8 08/29/19 11:28

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	ND	2890	115	1	90.0-110	J5

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/29/19 10:41 • (MS) R3445464-4 08/29/19 10:43 • (MSD) R3445464-5 08/29/19 10:44

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	1830	4150	4370	92.8	101	1	90.0-110			5.03	20



Method Blank (MB)

(MB) R3443702-1 08/23/19 15:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131642-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131642-02 08/23/19 15:04 • (DUP) R3443702-3 08/23/19 15:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1131661-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-03 08/23/19 15:07 • (DUP) R3443702-4 08/23/19 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3443702-2 08/23/19 15:03

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	462	92.4	85.0-115	

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 15:09 • (MS) R3443702-5 08/23/19 15:10 • (MSD) R3443702-6 08/23/19 15:10

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	875	850	87.5	85.0	1	80.0-120			2.90	20



Method Blank (MB)

(MB) R3443464-1 08/22/19 22:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131721-02 08/23/19 04:22 • (DUP) R3443464-9 08/23/19 07:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	15900	15300	1	4.03		15

L1131685-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131685-01 08/23/19 04:55 • (DUP) R3443464-8 08/23/19 05:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	225000	221000	5	1.38		15

Laboratory Control Sample (LCS)

(LCS) R3443464-2 08/22/19 23:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	39900	99.9	80.0-120	

L1131685-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131685-04 08/23/19 00:32 • (MS) R3443464-4 08/23/19 00:43 • (MSD) R3443464-5 08/23/19 00:56

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	933000	967000	963000	67.5	59.5	1	80.0-120	<u>E V</u>	<u>E V</u>	0.412	15

L1131721-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131721-02 08/23/19 04:22 • (MS) R3443464-7 08/23/19 04:44

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	15900	65500	99.2	1	80.0-120	



Method Blank (MB)

(MB) R3443808-1 08/23/19 08:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131721-03 08/23/19 09:44 • (DUP) R3443808-3 08/23/19 10:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	8370	8420	1	0.580		15

L1131778-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1131778-10 08/23/19 14:55 • (DUP) R3443808-6 08/23/19 15:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	21200	20900	1	1.03		15

Laboratory Control Sample (LCS)

(LCS) R3443808-2 08/23/19 08:51

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	39000	97.5	80.0-120	

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 09:44 • (MS) R3443808-4 08/23/19 10:16 • (MSD) R3443808-5 08/23/19 10:33

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	8370	60200	59700	104	103	1	80.0-120			0.846	15

L1131778-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131778-10 08/23/19 14:55 • (MS) R3443808-7 08/23/19 16:01

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	21200	72000	102	1	80.0-120	



Method Blank (MB)

(MB) R3443515-1 08/23/19 08:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	0.0682	<u>J</u>	0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3443515-2 08/23/19 08:33 • (LCSD) R3443515-3 08/23/19 08:35

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	3.04	3.19	101	106	80.0-120			4.76	20

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 08:37 • (MS) R3443515-4 08/23/19 08:39 • (MSD) R3443515-5 08/23/19 08:41

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 %
Mercury	3.00	ND	2.18	3.02	71.0	99.0	1	75.0-125	<u>J6</u>	<u>J3</u>	32.3	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3443516-1 08/23/19 09:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	0.0700	<u>J</u>	0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3443516-2 08/23/19 09:30 • (LCSD) R3443516-3 08/23/19 09:32

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 %
Mercury,Dissolved	3.00	3.27	2.97	109	98.9	80.0-120			9.77	20

<sup>6</sup> Qc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 09:34 • (MS) R3443516-4 08/23/19 09:36 • (MSD) R3443516-5 08/23/19 09:47

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	3.23	2.37	106	77.2	1	75.0-125		<u>J3</u>	30.7	20

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Method Blank (MB)

(MB) R3443784-1 08/23/19 16:31

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	1.55	J	0.540	2.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Silver	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3443784-2 08/23/19 16:35 • (LCSD) R3443784-3 08/23/19 16:38

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	%	%	%			%	%
Arsenic	50.0	50.6	50.9	101	102	80.0-120			0.592	20
Barium	50.0	51.3	51.0	103	102	80.0-120			0.533	20
Cadmium	50.0	51.8	53.2	104	106	80.0-120			2.59	20
Chromium	50.0	51.5	52.0	103	104	80.0-120			0.959	20
Lead	50.0	49.0	49.2	97.9	98.4	80.0-120			0.526	20
Selenium	50.0	52.2	52.6	104	105	80.0-120			0.871	20
Silver	50.0	50.7	51.0	101	102	80.0-120			0.676	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 16:41 • (MS) R3443784-5 08/23/19 16:48 • (MSD) R3443784-6 08/23/19 16:51

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	50.0	4.62	54.7	54.6	100	99.9	1	75.0-125			0.213	20
Barium	50.0	25.5	75.1	75.4	99.3	99.8	1	75.0-125			0.381	20
Cadmium	50.0	ND	52.3	52.8	104	105	1	75.0-125			0.823	20
Chromium	50.0	ND	51.5	51.7	99.6	99.9	1	75.0-125			0.311	20
Lead	50.0	ND	51.0	49.8	101	98.2	1	75.0-125			2.49	20
Selenium	50.0	ND	53.2	53.4	104	105	1	75.0-125			0.371	20
Silver	50.0	ND	51.1	51.7	102	103	1	75.0-125			1.20	20



[L1131721-03](#)

L1131850-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131850-04 08/23/19 16:55 • (MS) R3443784-7 08/23/19 16:58 • (MSD) R3443784-8 08/23/19 17:01

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 %
Arsenic	50.0	0.339	50.3	48.5	99.9	96.4	1	75.0-125			3.52	20
Barium	50.0	25.6	77.9	75.9	105	101	1	75.0-125			2.60	20
Cadmium	50.0	0.232	52.3	51.1	104	102	1	75.0-125			2.32	20
Chromium	50.0	0.978	50.7	48.7	99.5	95.5	1	75.0-125			4.00	20
Lead	50.0	0.338	50.1	48.0	99.6	95.3	1	75.0-125			4.40	20
Selenium	50.0	0.411	54.0	51.7	107	103	1	75.0-125			4.42	20
Silver	50.0	U	52.0	51.8	104	104	1	75.0-125			0.393	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3444512-1 08/27/19 10:48

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
Iron,Dissolved	U		15.0	100
Lead,Dissolved	U		0.240	2.00
Manganese,Dissolved	U		0.250	5.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3444512-2 08/27/19 10:52 • (LCSD) R3444512-3 08/27/19 10:56

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	52.0	51.5	104	103	80.0-120			0.827	20
Barium,Dissolved	50.0	48.4	50.8	96.9	102	80.0-120			4.80	20
Cadmium,Dissolved	50.0	49.8	54.3	99.7	109	80.0-120			8.48	20
Chromium,Dissolved	50.0	54.3	53.2	109	106	80.0-120			2.18	20
Iron,Dissolved	5000	5330	5290	107	106	80.0-120			0.820	20
Lead,Dissolved	50.0	49.2	50.9	98.3	102	80.0-120			3.49	20
Manganese,Dissolved	50.0	52.6	52.2	105	104	80.0-120			0.739	20
Selenium,Dissolved	50.0	62.9	60.2	126	120	80.0-120	J4		4.31	20
Silver,Dissolved	50.0	53.0	55.4	106	111	80.0-120			4.42	20

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 10:59 • (MS) R3444512-5 08/27/19 11:07 • (MSD) R3444512-6 08/27/19 11:10

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	4.68	55.0	55.0	101	101	1	75.0-125			0.0467	20
Barium,Dissolved	50.0	25.1	76.2	75.7	102	101	1	75.0-125			0.639	20
Cadmium,Dissolved	50.0	ND	53.9	52.3	108	105	1	75.0-125			2.89	20
Chromium,Dissolved	50.0	ND	52.7	52.7	102	102	1	75.0-125			0.0172	20
Iron,Dissolved	5000	ND	5060	5090	101	102	1	75.0-125			0.685	20
Lead,Dissolved	50.0	ND	49.9	49.0	99.7	98.0	1	75.0-125			1.77	20
Manganese,Dissolved	50.0	5.23	54.9	54.3	99.4	98.2	1	75.0-125			1.12	20
Selenium,Dissolved	50.0	ND	67.4	63.7	133	125	1	75.0-125	J5		5.65	20
Silver,Dissolved	50.0	ND	53.6	54.7	107	109	1	75.0-125			1.98	20



Method Blank (MB)

(MB) R3444701-1 08/27/19 13:59

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

L1131778-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131778-02 08/27/19 14:23 • (DUP) R3444701-2 08/27/19 14:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	101	101	1	0.206		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1131778-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1131778-10 08/27/19 15:12 • (DUP) R3444701-3 08/27/19 15:31

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) R3444701-4 08/27/19 15:34 • (LCSD) R3444701-5 08/27/19 15:40

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	71.1	77.0	105	114	85.0-115			8.10	20
Ethane	129	115	117	89.3	90.6	85.0-115			1.55	20
Ethene	127	115	116	90.8	91.4	85.0-115			0.705	20



Method Blank (MB)

(MB) R3446209-2 08/30/19 09:24

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	0.779	U	0.256	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3446209-2 08/30/19 09:24

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) 4-Bromofluorobenzene	93.7			77.0-126
(S) 1,2-Dichloroethane-d4	116			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	156	125	19.0-160	
Acrolein	125	134	107	10.0-160	
Acrylonitrile	125	151	121	55.0-149	



Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	25.0	23.9	95.8	70.0-123	
Bromobenzene	25.0	25.4	102	73.0-121	
Bromodichloromethane	25.0	27.0	108	75.0-120	
Bromoform	25.0	25.9	104	68.0-132	
Bromomethane	25.0	23.2	92.7	10.0-160	
n-Butylbenzene	25.0	19.6	78.5	73.0-125	
sec-Butylbenzene	25.0	20.2	80.9	75.0-125	
tert-Butylbenzene	25.0	21.5	86.0	76.0-124	
Carbon tetrachloride	25.0	26.9	108	68.0-126	
Chlorobenzene	25.0	24.3	97.1	80.0-121	
Chlorodibromomethane	25.0	26.6	106	77.0-125	
Chloroethane	25.0	22.3	89.3	47.0-150	
Chloroform	25.0	25.7	103	73.0-120	
Chloromethane	25.0	29.0	116	41.0-142	
2-Chlorotoluene	25.0	23.6	94.3	76.0-123	
4-Chlorotoluene	25.0	24.6	98.3	75.0-122	
1,2-Dibromo-3-Chloropropane	25.0	26.5	106	58.0-134	
1,2-Dibromoethane	25.0	26.5	106	80.0-122	
Dibromomethane	25.0	27.2	109	80.0-120	
1,2-Dichlorobenzene	25.0	23.4	93.5	79.0-121	
1,3-Dichlorobenzene	25.0	22.9	91.5	79.0-120	
1,4-Dichlorobenzene	25.0	19.9	79.6	79.0-120	
Dichlorodifluoromethane	25.0	32.5	130	51.0-149	
1,1-Dichloroethane	25.0	26.1	104	70.0-126	
1,2-Dichloroethane	25.0	27.5	110	70.0-128	
1,1-Dichloroethene	25.0	23.8	95.1	71.0-124	
cis-1,2-Dichloroethene	25.0	22.9	91.7	73.0-120	
trans-1,2-Dichloroethene	25.0	22.9	91.5	73.0-120	
1,2-Dichloropropane	25.0	27.1	108	77.0-125	
1,1-Dichloropropene	25.0	25.9	104	74.0-126	
1,3-Dichloropropane	25.0	27.2	109	80.0-120	
cis-1,3-Dichloropropene	25.0	26.7	107	80.0-123	
trans-1,3-Dichloropropene	25.0	28.6	114	78.0-124	
2,2-Dichloropropane	25.0	24.6	98.3	58.0-130	
Di-isopropyl ether	25.0	27.5	110	58.0-138	
Ethylbenzene	25.0	23.4	93.5	79.0-123	
Hexachloro-1,3-butadiene	25.0	19.6	78.2	54.0-138	
Isopropylbenzene	25.0	21.9	87.5	76.0-127	
p-Isopropyltoluene	25.0	21.2	84.7	76.0-125	
2-Butanone (MEK)	125	165	132	44.0-160	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methylene Chloride	25.0	22.6	90.2	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	147	118	68.0-142	
Methyl tert-butyl ether	25.0	24.0	95.8	68.0-125	
Naphthalene	25.0	23.2	92.8	54.0-135	
n-Propylbenzene	25.0	22.2	88.8	77.0-124	
Styrene	25.0	24.5	98.1	73.0-130	
1,1,1,2-Tetrachloroethane	25.0	25.7	103	75.0-125	
1,1,2,2-Tetrachloroethane	25.0	26.7	107	65.0-130	
Tetrachloroethene	25.0	23.9	95.6	72.0-132	
Toluene	25.0	23.5	94.1	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	23.7	95.0	69.0-132	
1,2,3-Trichlorobenzene	25.0	19.4	77.8	50.0-138	
1,2,4-Trichlorobenzene	25.0	20.3	81.0	57.0-137	
1,1,1-Trichloroethane	25.0	25.9	104	73.0-124	
1,1,2-Trichloroethane	25.0	25.1	100	80.0-120	
Trichloroethene	25.0	23.5	94.0	78.0-124	
Trichlorofluoromethane	25.0	28.2	113	59.0-147	
1,2,3-Trichloropropane	25.0	30.3	121	73.0-130	
1,2,3-Trimethylbenzene	25.0	22.9	91.7	77.0-120	
1,2,4-Trimethylbenzene	25.0	22.7	90.8	76.0-121	
1,3,5-Trimethylbenzene	25.0	19.5	78.0	76.0-122	
Vinyl chloride	25.0	26.1	105	67.0-131	
o-Xylene	25.0	22.9	91.6	80.0-122	
m&p-Xylenes	50.0	46.5	93.1	80.0-122	
(S) Toluene-d8			101	80.0-120	
(S) 4-Bromofluorobenzene			96.5	77.0-126	
(S) 1,2-Dichloroethane-d4			119	70.0-130	

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

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	125	ND	149	178	119	142	1	10.0-160			17.4	35
Acrolein	125	ND	245	288	196	231	1	10.0-160	J5	J5	16.3	39
Acrylonitrile	125	ND	144	166	115	133	1	21.0-160			14.6	32
Benzene	25.0	ND	21.5	22.8	85.9	91.0	1	17.0-158			5.76	27
Bromobenzene	25.0	ND	24.8	23.8	99.3	95.3	1	30.0-149			4.19	28
Bromodichloromethane	25.0	ND	25.2	26.8	101	107	1	31.0-150			6.35	27





L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	25.0	ND	24.4	26.3	97.4	105	1	29.0-150			7.63	29
Bromomethane	25.0	ND	16.4	19.4	65.6	77.5	1	10.0-160			16.6	38
n-Butylbenzene	25.0	ND	15.6	18.7	62.4	74.8	1	31.0-150			18.2	30
sec-Butylbenzene	25.0	ND	17.2	19.5	68.8	77.9	1	33.0-155			12.4	29
tert-Butylbenzene	25.0	ND	18.9	20.9	75.8	83.4	1	34.0-153			9.61	28
Carbon tetrachloride	25.0	ND	25.7	29.0	103	116	1	23.0-159			11.9	28
Chlorobenzene	25.0	ND	21.4	23.1	85.7	92.4	1	33.0-152			7.50	27
Chlorodibromomethane	25.0	ND	24.2	25.9	96.7	104	1	37.0-149			7.00	27
Chloroethane	25.0	ND	16.6	18.8	66.3	75.4	1	10.0-160			12.8	30
Chloroform	25.0	ND	23.6	25.3	94.6	101	1	29.0-154			6.90	28
Chloromethane	25.0	ND	21.4	25.7	85.5	103	1	10.0-160			18.3	29
2-Chlorotoluene	25.0	ND	21.4	22.4	85.6	89.4	1	32.0-153			4.32	28
4-Chlorotoluene	25.0	ND	20.7	23.0	82.9	92.1	1	32.0-150			10.5	28
1,2-Dibromo-3-Chloropropane	25.0	ND	23.9	25.6	95.5	102	1	22.0-151			6.84	34
1,2-Dibromoethane	25.0	ND	23.1	24.6	92.2	98.6	1	34.0-147			6.61	27
Dibromomethane	25.0	ND	24.1	25.5	96.5	102	1	30.0-151			5.71	27
1,2-Dichlorobenzene	25.0	ND	19.9	21.8	79.4	87.4	1	34.0-149			9.55	28
1,3-Dichlorobenzene	25.0	ND	19.5	21.6	78.0	86.6	1	36.0-146			10.4	27
1,4-Dichlorobenzene	25.0	ND	18.0	19.7	71.8	78.7	1	35.0-142			9.11	27
Dichlorodifluoromethane	25.0	ND	20.8	27.5	83.2	110	1	10.0-160			27.6	29
1,1-Dichloroethane	25.0	ND	24.9	29.1	99.5	116	1	25.0-158			15.7	27
1,2-Dichloroethane	25.0	ND	25.1	27.0	100	108	1	29.0-151			7.54	27
1,1-Dichloroethene	25.0	ND	21.1	25.4	84.5	102	1	11.0-160			18.6	29
cis-1,2-Dichloroethene	25.0	ND	21.0	24.3	83.9	97.0	1	10.0-160			14.5	27
trans-1,2-Dichloroethene	25.0	ND	19.4	23.5	77.7	93.9	1	17.0-153			18.9	27
1,2-Dichloropropane	25.0	ND	25.3	26.1	101	104	1	30.0-156			2.82	27
1,1-Dichloropropene	25.0	ND	22.1	24.5	88.4	98.0	1	25.0-158			10.4	27
1,3-Dichloropropane	25.0	ND	24.2	25.3	97.0	101	1	38.0-147			4.31	27
cis-1,3-Dichloropropene	25.0	ND	23.6	25.2	94.6	101	1	34.0-149			6.34	28
trans-1,3-Dichloropropene	25.0	ND	25.3	26.9	101	108	1	32.0-149			6.19	28
2,2-Dichloropropane	25.0	ND	23.3	26.1	93.0	105	1	24.0-152			11.7	29
Di-isopropyl ether	25.0	ND	27.3	32.2	109	129	1	21.0-160			16.5	28
Ethylbenzene	25.0	ND	20.6	22.0	82.5	87.9	1	30.0-155			6.31	27
Hexachloro-1,3-butadiene	25.0	ND	15.8	19.5	63.2	78.0	1	20.0-154			21.0	34
Isopropylbenzene	25.0	ND	19.6	21.8	78.5	87.0	1	28.0-157			10.2	27
p-Isopropyltoluene	25.0	ND	17.8	20.3	71.3	81.2	1	30.0-154			13.0	29
2-Butanone (MEK)	125	ND	160	155	128	124	1	10.0-160			3.13	32
Methylene Chloride	25.0	ND	20.4	24.0	81.5	96.1	1	23.0-144			16.5	28
4-Methyl-2-pentanone (MIBK)	125	ND	148	145	118	116	1	29.0-160			2.01	29
Methyl tert-butyl ether	25.0	ND	21.4	26.1	85.6	104	1	28.0-150			19.9	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	25.0	ND	20.1	22.1	80.2	88.5	1	12.0-156			9.77	35
n-Propylbenzene	25.0	ND	20.7	21.0	82.9	83.9	1	31.0-154			1.23	28
Styrene	25.0	ND	22.0	23.4	88.1	93.8	1	33.0-155			6.27	28
1,1,1,2-Tetrachloroethane	25.0	ND	23.7	25.6	95.0	102	1	36.0-151			7.50	29
1,1,2,2-Tetrachloroethane	25.0	ND	26.9	25.6	107	102	1	33.0-150			4.95	28
Tetrachloroethene	25.0	ND	19.7	22.7	78.8	90.8	1	10.0-160			14.1	27
Toluene	25.0	ND	20.9	22.1	83.7	88.4	1	26.0-154			5.50	28
1,1,2-Trichlorotrifluoroethane	25.0	ND	19.6	26.7	78.4	107	1	23.0-160		J3	30.5	30
1,2,3-Trichlorobenzene	25.0	ND	15.9	18.7	63.7	75.0	1	17.0-150			16.3	36
1,2,4-Trichlorobenzene	25.0	ND	16.1	19.5	64.3	77.8	1	24.0-150			19.1	33
1,1,1-Trichloroethane	25.0	ND	24.9	27.4	99.6	109	1	23.0-160			9.48	28
1,1,2-Trichloroethane	25.0	ND	23.1	24.0	92.5	95.9	1	35.0-147			3.68	27
Trichloroethene	25.0	ND	20.3	22.3	81.1	89.1	1	10.0-160			9.45	25
Trichlorofluoromethane	25.0	ND	21.6	26.2	86.5	105	1	17.0-160			19.3	31
1,2,3-Trichloropropane	25.0	ND	27.2	28.6	109	114	1	34.0-151			5.00	29
1,2,3-Trimethylbenzene	25.0	ND	19.9	21.7	79.6	86.8	1	32.0-149			8.57	28
1,2,4-Trimethylbenzene	25.0	ND	19.3	21.5	77.1	86.1	1	26.0-154			11.1	27
1,3,5-Trimethylbenzene	25.0	ND	18.1	19.8	72.3	79.2	1	28.0-153			9.11	27
Vinyl chloride	25.0	ND	19.5	22.8	78.2	91.1	1	10.0-160			15.3	27
o-Xylene	25.0	ND	20.4	21.8	81.7	87.3	1	45.0-144			6.62	26
m&p-Xylenes	50.0	ND	40.2	44.0	80.4	87.9	1	43.0-146			8.95	26
(S) Toluene-d8					104	99.8		80.0-120				
(S) 4-Bromofluorobenzene					98.8	97.6		77.0-126				
(S) 1,2-Dichloroethane-d4					122	122		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3444955-1 08/28/19 06:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
(S) o-Terphenyl	84.0			52.0-156

Laboratory Control Sample (LCS)

(LCS) R3444955-2 08/28/19 06:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Diesel Range Organics (DRO)	1500	1590	106	50.0-150	
(S) o-Terphenyl			97.0	52.0-156	

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/29/19 09:59 • (MS) R3445577-1 08/29/19 10:16 • (MSD) R3445577-2 08/29/19 10:33

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Diesel Range Organics (DRO)	1430	ND	1590	1560	97.8	95.7	1	50.0-150			1.90	20
(S) o-Terphenyl					79.5	75.8		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) R3444925-1 08/27/19 15:40

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>	62.0			52.0-156

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

(LCS) R3444925-2 08/27/19 16:20 • (LCSD) R3444925-3 08/27/19 16:43

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 %
Diesel Range Organics (DRO)	1500	1220	1190	81.3	79.3	50.0-150			2.49	20
<i>(S) o-Terphenyl</i>				72.0	71.5	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) R3444682-2 08/27/19 07:51

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	104			31.0-160
(S) 2-Fluorobiphenyl	79.5			48.0-148
(S) p-Terphenyl-d14	86.5			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)

(LCS) R3444682-1 08/27/19 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	2.00	2.14	107	67.0-150	
Acenaphthene	2.00	1.86	93.0	65.0-138	
Acenaphthylene	2.00	1.89	94.5	66.0-140	
Benzo(a)anthracene	2.00	1.79	89.5	61.0-140	
Benzo(a)pyrene	2.00	1.82	91.0	60.0-143	
Benzo(b)fluoranthene	2.00	1.73	86.5	58.0-141	
Benzo(g,h,i)perylene	2.00	1.77	88.5	52.0-153	
Benzo(k)fluoranthene	2.00	1.94	97.0	58.0-148	
Chrysene	2.00	2.01	100	64.0-144	
Dibenz(a,h)anthracene	2.00	1.65	82.5	52.0-155	
Fluoranthene	2.00	2.08	104	69.0-153	



Laboratory Control Sample (LCS)

(LCS) R3444682-1 08/27/19 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	2.00	1.77	88.5	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.69	84.5	54.0-153	
Naphthalene	2.00	1.79	89.5	61.0-137	
Phenanthrene	2.00	1.80	90.0	62.0-137	
Pyrene	2.00	1.69	84.5	60.0-142	
1-Methylnaphthalene	2.00	1.71	85.5	66.0-142	
2-Methylnaphthalene	2.00	1.62	81.0	62.0-136	
2-Chloronaphthalene	2.00	1.82	91.0	64.0-140	
(S) Nitrobenzene-d5			111	31.0-160	
(S) 2-Fluorobiphenyl			89.5	48.0-148	
(S) p-Terphenyl-d14			90.5	37.0-146	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 08:34 • (MS) R3444682-3 08/27/19 08:56 • (MSD) R3444682-4 08/27/19 09:18

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	ND	1.98	2.03	104	107	1	56.0-156			2.49	20
Acenaphthene	1.90	ND	1.81	1.83	95.3	96.3	1	44.0-153			1.10	20
Acenaphthylene	1.90	ND	1.86	1.89	97.9	99.5	1	53.0-150			1.60	20
Benzo(a)anthracene	1.90	ND	1.82	1.86	95.8	97.9	1	47.0-151			2.17	20
Benzo(a)pyrene	1.90	ND	1.72	1.75	90.5	92.1	1	45.0-146			1.73	20
Benzo(b)fluoranthene	1.90	ND	1.71	1.72	90.0	90.5	1	43.0-142			0.583	20
Benzo(g,h,i)perylene	1.90	ND	1.68	1.71	88.4	90.0	1	40.0-147			1.77	20
Benzo(k)fluoranthene	1.90	ND	1.73	1.79	91.1	94.2	1	43.0-148			3.41	21
Chrysene	1.90	ND	1.82	1.87	95.8	98.4	1	50.0-148			2.71	20
Dibenz(a,h)anthracene	1.90	ND	1.59	1.63	83.7	85.8	1	37.0-151			2.48	20
Fluoranthene	1.90	ND	2.06	2.13	108	112	1	56.0-157			3.34	20
Fluorene	1.90	ND	1.72	1.75	89.9	91.5	1	48.0-148			1.73	20
Indeno(1,2,3-cd)pyrene	1.90	ND	1.61	1.63	84.7	85.8	1	41.0-148			1.23	20
Naphthalene	1.90	ND	1.78	1.80	92.6	93.7	1	10.0-160			1.12	20
Phenanthrene	1.90	ND	1.76	1.80	92.6	94.7	1	47.0-147			2.25	20
Pyrene	1.90	ND	1.73	1.77	91.1	93.2	1	51.0-148			2.29	20
1-Methylnaphthalene	1.90	ND	1.69	1.71	88.9	90.0	1	21.0-160			1.18	20
2-Methylnaphthalene	1.90	ND	1.62	1.63	84.7	85.2	1	31.0-160			0.615	20
2-Chloronaphthalene	1.90	ND	1.80	1.81	94.7	95.3	1	52.0-148			0.554	20
(S) Nitrobenzene-d5					110	115		31.0-160				
(S) 2-Fluorobiphenyl					94.7	94.2		48.0-148				
(S) p-Terphenyl-d14					95.8	98.4		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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### 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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration method criteria.
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.



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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

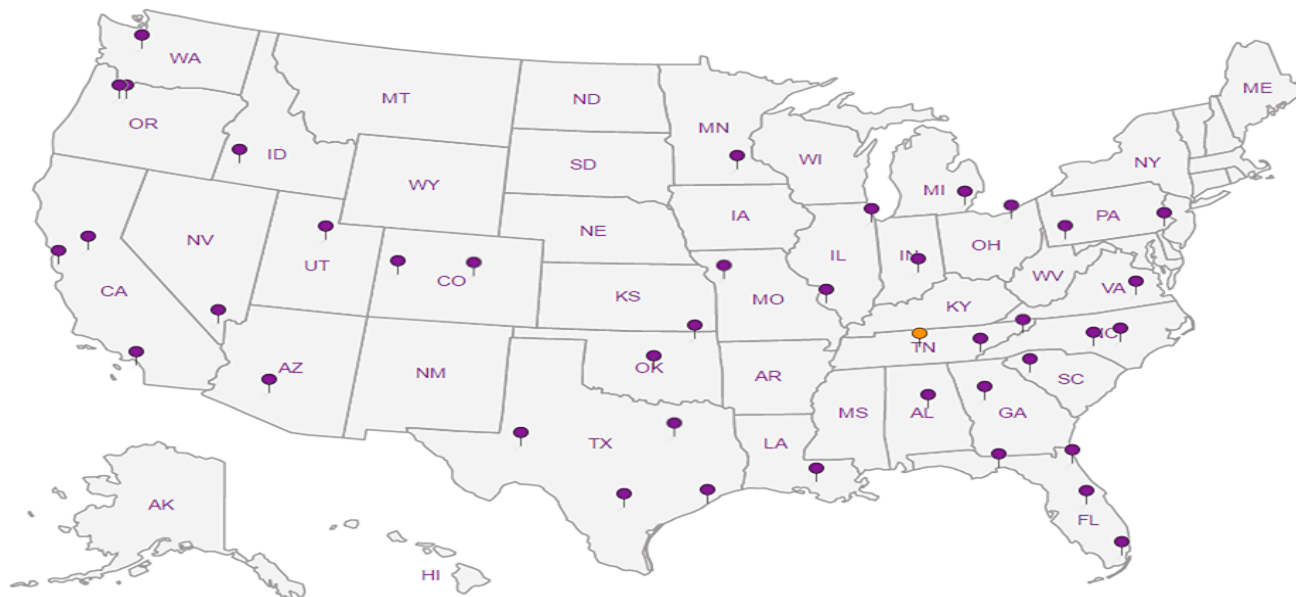
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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:  
**Katie Teague**

Email To: [KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com);  
[RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com);

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

City/State  
Collected: **Wishram, WA**

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

Client Project #  
**1996120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Collected by (print):  
*K. Teague*

Site/Facility ID #

P.O. #

Collected by (signature):  
*[Signature]*

**Rush?** (Lab MUST Be Notified)

Quote #

Date Results Needed

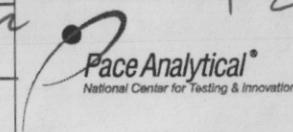
Immediately  
Packed on Ice N    Y X

Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2



L# **113121**  
**H191**  
Acctnum: **BNSF1KEN**  
Template: **T149555**  
Prelogin: **P723325**  
TSR: **134 - Mark W. Beasley**  
PB: **8-7-196**  
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Diss M6020RCRA8 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	Remarks	Sample # (lab only)
WMW-13-20190820	Grab	GW	—	8/20/19	1615	8		X	X	X	X			X	X	X		01
WMW-09-20190820	↓	GW	↓	↓	1525	10		X	X	X	X			X	X	X		02
WMW-27-20190820	↓	GW	↓	↓	110542	14	X	X	X	X	X		X	X	X	X	+MS/MSD	03
TB-02-20190820		GW		8/21/19	—	1												04
		GW																
		GW																
		GW																
		GW																
		GW																

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:  
pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_  
Samples returned via:  
 UPS  FedEx  Courier \_\_\_\_\_  
Tracking # **1070 0201 2840**

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: **8/21/19** Time: **1400** Received by: (Signature) *[Signature]* Trip Blank Received: Yes/No **1** (HCL/MeOH/TBR)  
Relinquished by: (Signature) Date: Time: Received by: (Signature) Temp: **23.0-23.5** °C Bottles Received: **60** If preservation required by Login: Date/Time  
Relinquished by: (Signature) Date: Time: Received for lab by: (Signature) *[Signature]* Date: **8/21/19** Time: **845** Hold: Condition: **NCF / OK**

# Kennedy/Jenks Con-BNSF Region 1

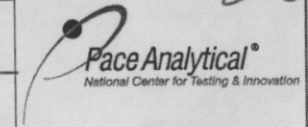
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

Billing Information:  
Accounts Payable  
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

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:  
**Katie Teague**

Email To: [KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com);  
[RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com);

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

City/State  
Collected: **Wishram, WA**

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

Client Project #  
**1996120\*00**

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	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl	Remarks	Sample # (lab only)
WMW-27-20190820	Arab	GW	—	8/20/19	1105		X		X		+MS/MSD	01
TB-02-20190821		GW		8/21/19	—				X			02
		GW										03
		GW										04
		GW										
		GW										
		GW										
		GW										
		GW										

\* 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:  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

Samples returned via:  
\_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier \_\_\_\_\_

Tracking # \_\_\_\_\_

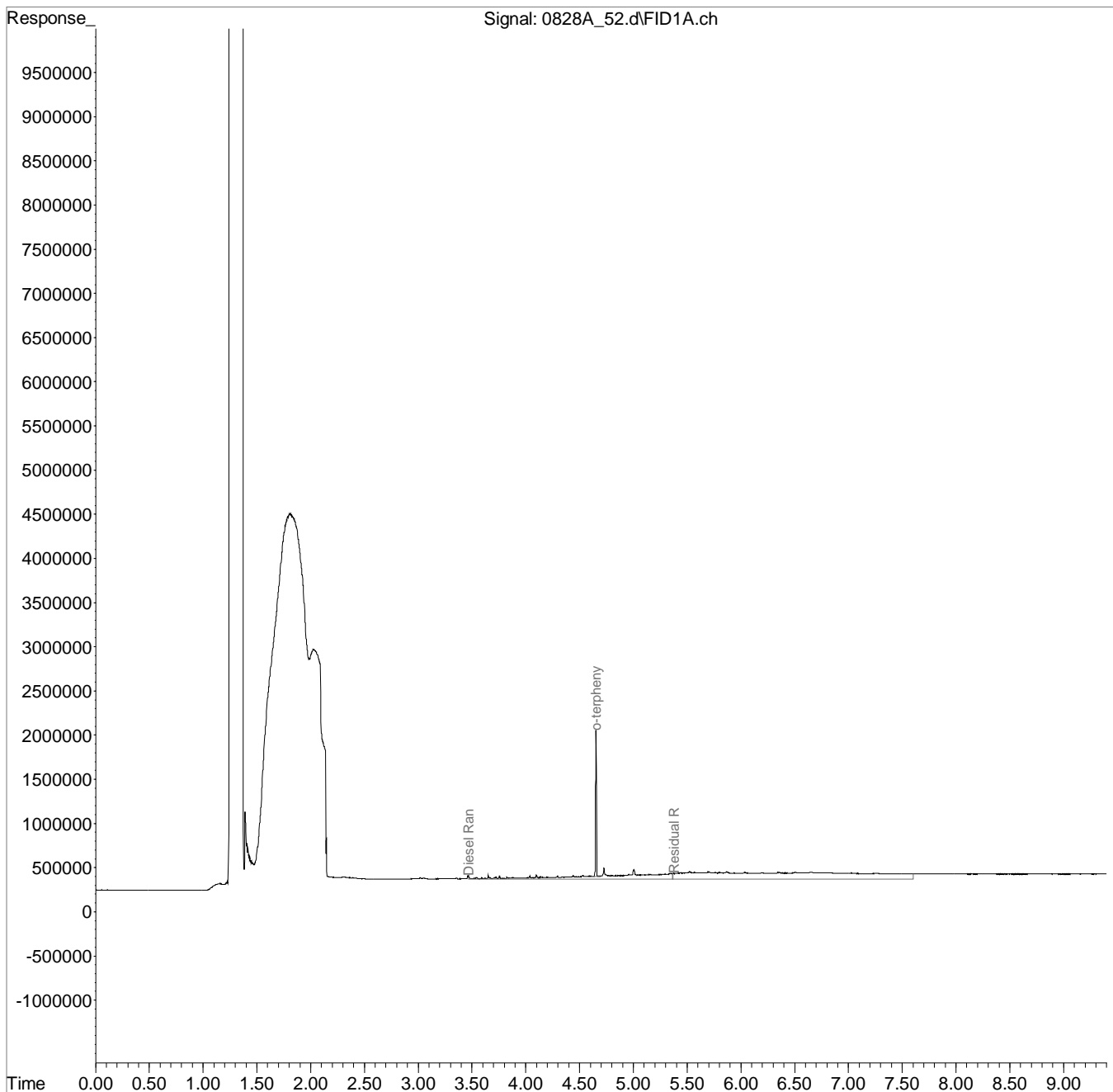
Relinquished by: (Signature) <i>[Signature]</i>	Date: 8/21/19	Time: 1400	Received by: (Signature) <b>FedEx</b>	Trip Blank Received: Yes/No HCL/MeOH TBR	Temp: °C 2.3+0=2.3 60	Hold:	Condition: NCF / <input checked="" type="checkbox"/>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Bottles Received:	If preservation required by Login: Date/Time		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 8/22/19	Time: 845		

**RAD SCREEN: <0.5 mR/hr**

Data Path : C:\msdchem\1\data\082819A\  
 Data File : 0828A 52.d  
 Signal(s) : FID1A.ch  
 Acq On : 29 Aug 2019 9:25 am  
 Operator : 773  
 Sample : L1131721-01 1x WG1335024  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 29 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: Aug 29 11:49:12 2019  
 Quant Method : C:\msdchem\1\methods\DM31H28AS.M  
 Quant Title :  
 QLast Update : Thu Aug 29 10:36:06 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

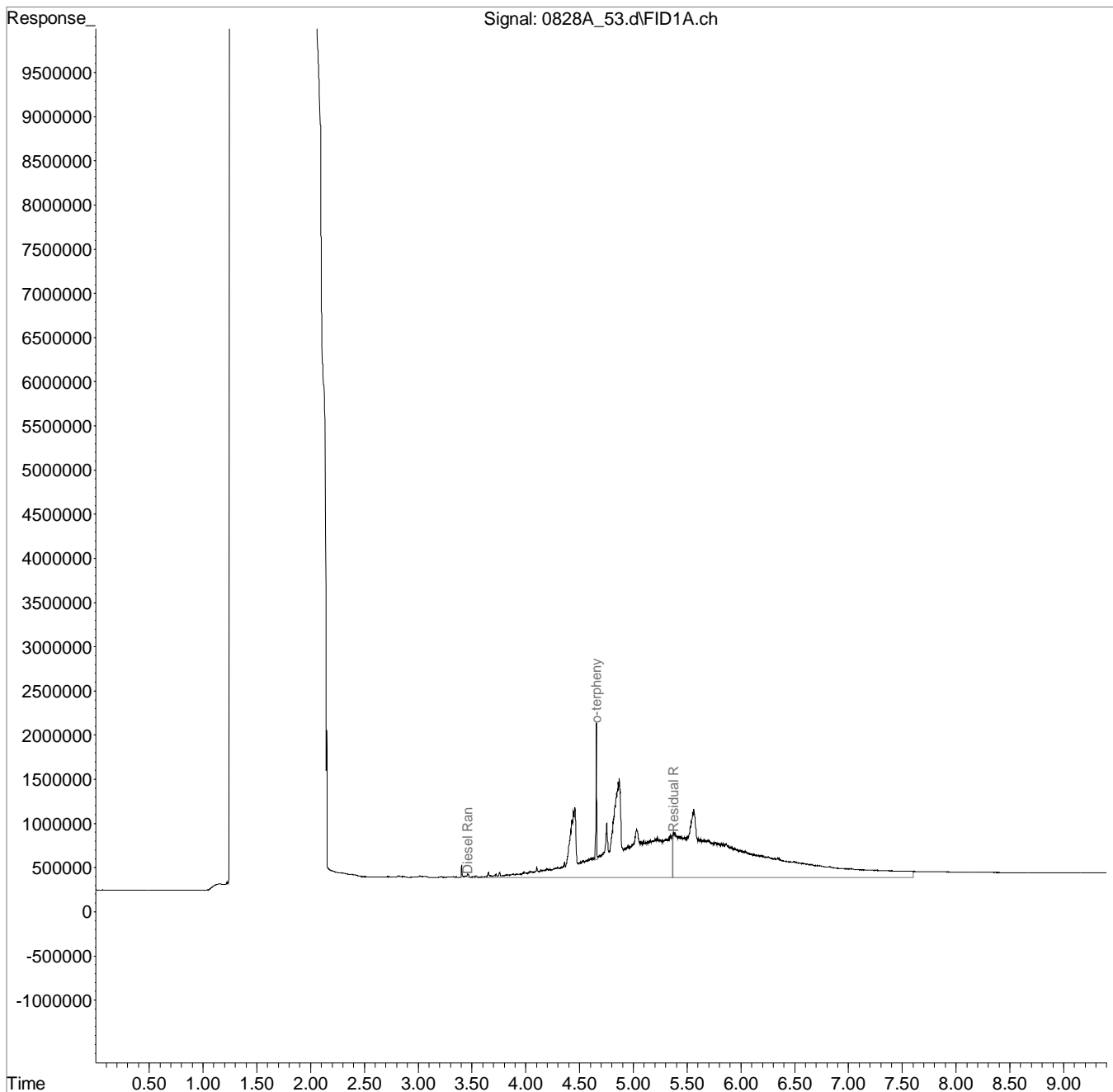
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\082819A\  
 Data File : 0828A 53.d  
 Signal(s) : FID1A.ch  
 Acq On : 29 Aug 2019 9:42 am  
 Operator : 773  
 Sample : L1131721-02 1x WG1335024  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 30 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: Aug 29 11:49:32 2019  
 Quant Method : C:\msdchem\1\methods\DM31H28AS.M  
 Quant Title :  
 QLast Update : Thu Aug 29 10:36:06 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

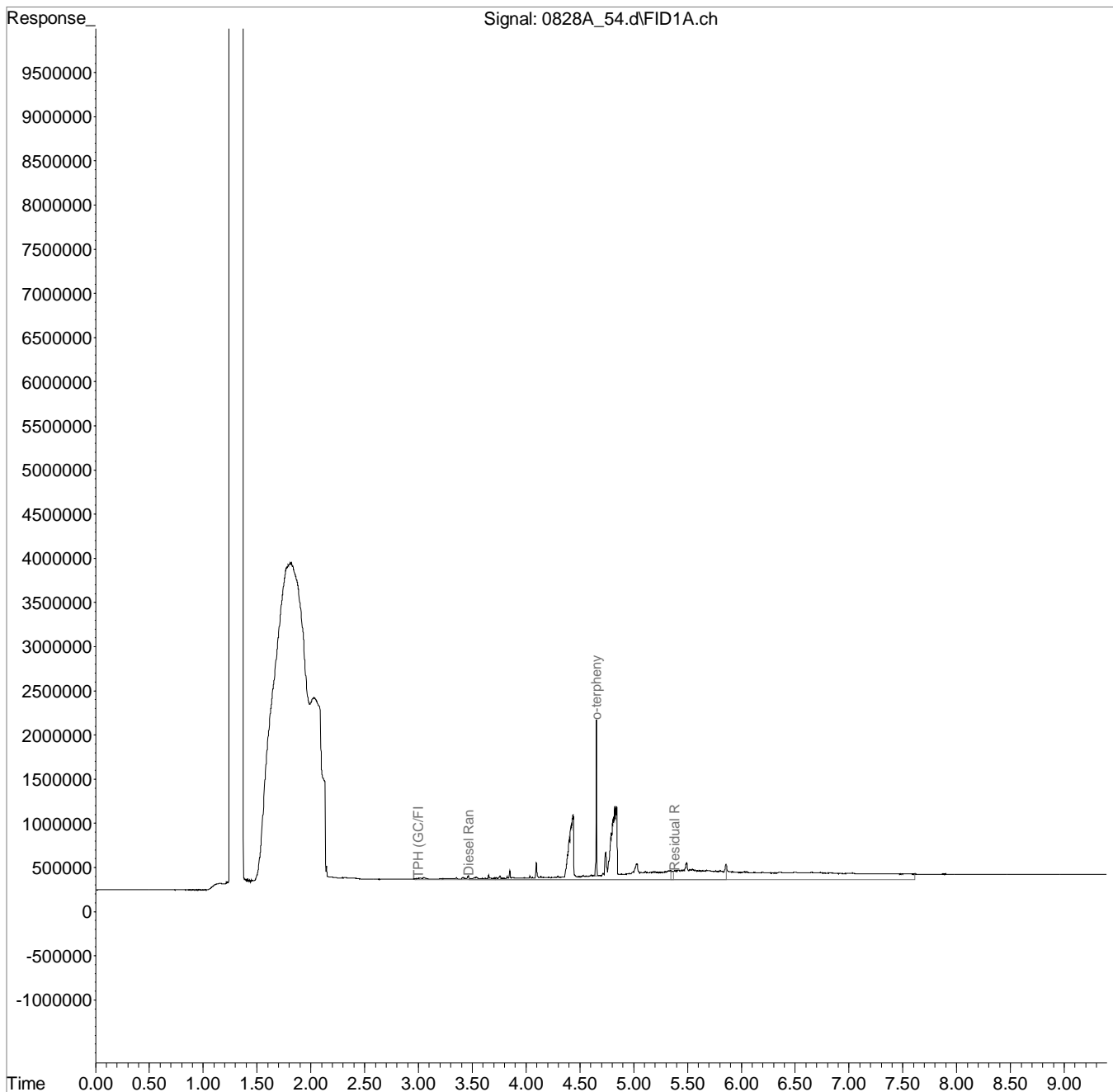
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\082819A\  
 Data File : 0828A 54.d  
 Signal(s) : FID1A.ch  
 Acq On : 29 Aug 2019 9:59 am  
 Operator : 773  
 Sample : L1131721-03 1x WG1335024  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 31 Sample Multiplier: 1  
 InstName : SVGC31

Integration File: events.e  
 Quant Time: Aug 29 11:50:42 2019  
 Quant Method : C:\msdchem\1\methods\DM31H28AS.M  
 Quant Title :  
 QLast Update : Thu Aug 29 10:36:06 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

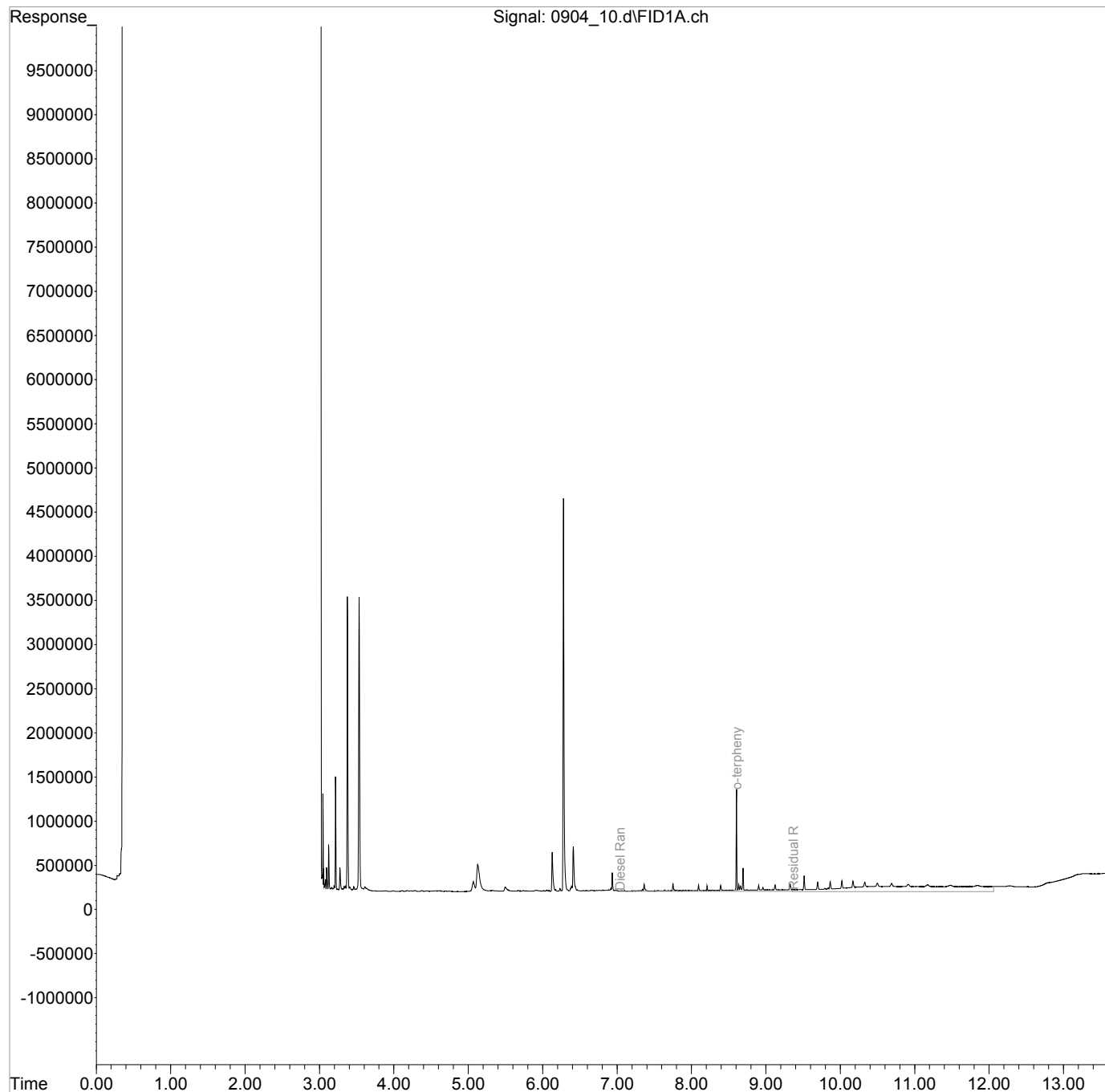
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\090419\  
Data File : 0904\_10.d  
Signal(s) : FID1A.ch  
Acq On : 4 Sep 2019 9:42 pm  
Operator : 773  
Sample : L1131721-02 1x WG1335265  
Misc : M.I.s on ranges are corrections  
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Sep 04 22:08:43 2019  
Quant Method : C:\msdchem\1\methods\DM34I02S.M  
Quant Title :  
QLast Update : Tue Sep 03 10:57:56 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :





September 03, 2019

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Kennedy/Jenks Con-BNSF Region 1

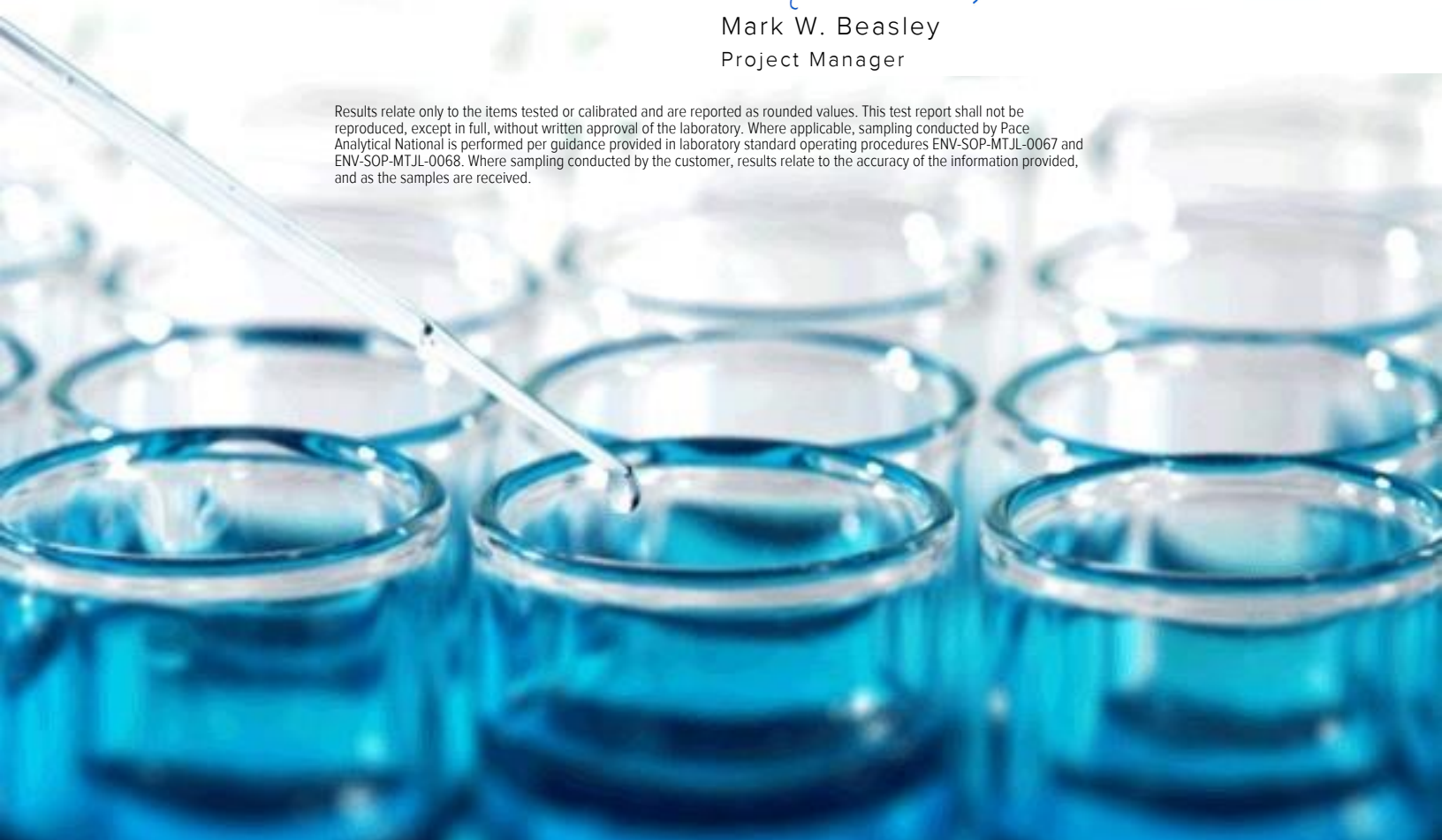
Sample Delivery Group: L1131738  
Samples Received: 08/22/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

Report To: Katie Teague  
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

Entire Report Reviewed By:

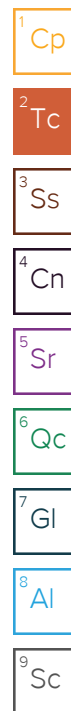
Mark W. Beasley  
Project Manager

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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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# SAMPLE SUMMARY

## WMW-01-20190821 L1131738-01 GW

Collected by  
K. Teague  
Collected date/time  
08/21/19 09:15  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG133417	1	08/26/19 18:38	08/26/19 18:38	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	1	08/29/19 10:46	08/29/19 10:46	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:10	08/23/19 15:10	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333679	1	08/23/19 10:49	08/23/19 10:49	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 15:21	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334471	1	08/25/19 09:06	08/25/19 09:06	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335026	1	08/26/19 19:08	08/28/19 15:08	JN	Mt. Juliet, TN

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

## WMW-03-20190821 L1131738-02 GW

Collected by  
K. Teague  
Collected date/time  
08/21/19 07:55  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG133417	1	08/26/19 18:44	08/26/19 18:44	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	1	08/29/19 10:49	08/29/19 10:49	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:10	08/23/19 15:10	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333679	1	08/23/19 11:06	08/23/19 11:06	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 15:24	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334471	1	08/25/19 09:08	08/25/19 09:08	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335026	5	08/26/19 19:08	08/28/19 16:22	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335027	1	08/26/19 16:52	08/27/19 22:04	JN	Mt. Juliet, TN

## WMW-31-20190821 L1131738-03 GW

Collected by  
K. Teague  
Collected date/time  
08/21/19 11:45  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG133417	1	08/26/19 18:46	08/26/19 18:46	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	2	08/29/19 10:52	08/29/19 10:52	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:11	08/23/19 15:11	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333679	1	08/23/19 11:22	08/23/19 11:22	LDC	Mt. Juliet, TN
Mercury by Method 7470A	WG1333411	1	08/23/19 09:14	08/26/19 17:51	TCT	Mt. Juliet, TN
Mercury by Method 7470A	WG1333413	1	08/22/19 19:30	08/23/19 09:58	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333542	1	08/23/19 09:22	08/23/19 17:41	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 15:28	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334471	1	08/25/19 09:34	08/25/19 09:34	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 13:56	08/30/19 13:56	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335026	1	08/26/19 19:08	08/28/19 15:35	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335040	1	08/26/19 17:44	08/27/19 12:55	DMG	Mt. Juliet, TN

## TB-05-20190821 L1131738-04 GW

Collected by  
K. Teague  
Collected date/time  
08/21/19 00:00  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1336242	1	08/30/19 14:17	08/30/19 14:17	ADM	Mt. Juliet, TN

## WMW-16-21090821 L1131738-05 GW

Collected by  
K. Teague  
Collected date/time  
08/21/19 12:35  
Received date/time  
08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG133417	1	08/26/19 18:47	08/26/19 18:47	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335355	1	08/29/19 10:59	08/29/19 10:59	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1333747	1	08/23/19 15:11	08/23/19 15:11	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1333679	1	08/23/19 11:38	08/23/19 11:38	LDC	Mt. Juliet, TN

# SAMPLE SUMMARY

WMW-16-21090821 L1131738-05 GW

Collected by: K. Teague  
 Collected date/time: 08/21/19 12:35  
 Received date/time: 08/22/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1333547	1	08/23/19 15:33	08/24/19 15:31	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1335657	1	08/28/19 14:20	08/28/19 14:20	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1334471	1	08/25/19 09:14	08/25/19 09:14	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335026	1	08/26/19 19:08	08/28/19 15:58	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335027	1	08/26/19 16:52	08/27/19 22:24	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1335514	1	08/27/19 13:56	08/28/19 14:45	LEA	Mt. Juliet, TN

- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Sr
- <sup>6</sup>Qc
- <sup>7</sup>Gl
- <sup>8</sup>Al
- <sup>9</sup>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

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	219		100	1	08/26/2019 18:38	<a href="#">WG1334117</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/29/2019 10:46	<a href="#">WG1335355</a>

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	08/23/2019 15:10	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	08/23/2019 10:49	<a href="#">WG1333679</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	6280		100	1	08/24/2019 15:21	<a href="#">WG1333547</a>
Manganese,Dissolved	868		5.00	1	08/24/2019 15:21	<a href="#">WG1333547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	4510		10.0	1	08/25/2019 09:06	<a href="#">WG1334471</a>
Ethane	ND		13.0	1	08/25/2019 09:06	<a href="#">WG1334471</a>
Ethene	ND		13.0	1	08/25/2019 09:06	<a href="#">WG1334471</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2630		200	1	08/28/2019 15:08	<a href="#">WG1335026</a>
Residual Range Organics (RRO)	2320		250	1	08/28/2019 15:08	<a href="#">WG1335026</a>
(S) o-Terphenyl	88.4		52.0-156		08/28/2019 15:08	<a href="#">WG1335026</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	390		100	1	08/26/2019 18:44	<a href="#">WG133417</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND	J5 J6	100	1	08/29/2019 10:49	<a href="#">WG1335355</a>

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	08/23/2019 15:10	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	7150		5000	1	08/23/2019 11:06	<a href="#">WG1333679</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	9540		100	1	08/24/2019 15:24	<a href="#">WG1333547</a>
Manganese,Dissolved	5900		5.00	1	08/24/2019 15:24	<a href="#">WG1333547</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	2230		10.0	1	08/25/2019 09:08	<a href="#">WG1334471</a>
Ethane	ND		13.0	1	08/25/2019 09:08	<a href="#">WG1334471</a>
Ethene	ND		13.0	1	08/25/2019 09:08	<a href="#">WG1334471</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	21700		1000	5	08/28/2019 16:22	<a href="#">WG1335026</a>
Residual Range Organics (RRO)	10500		1250	5	08/28/2019 16:22	<a href="#">WG1335026</a>
(S) o-Terphenyl	124		52.0-156		08/28/2019 16:22	<a href="#">WG1335026</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2480		200	1	08/27/2019 22:04	<a href="#">WG1335027</a>
Residual Range Organics (RRO)	269		250	1	08/27/2019 22:04	<a href="#">WG1335027</a>
(S) o-Terphenyl	65.3		52.0-156		08/27/2019 22:04	<a href="#">WG1335027</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ammonia Nitrogen	ND		100	1	08/26/2019 18:46	<a href="#">WG1334117</a>

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	4670		200	2	08/29/2019 10:52	<a href="#">WG1335355</a>

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	08/23/2019 15:11	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	13000		5000	1	08/23/2019 11:22	<a href="#">WG1333679</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2019 17:51	<a href="#">WG1333411</a>
Mercury,Dissolved	ND		0.200	1	08/23/2019 09:58	<a href="#">WG1333413</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	ND		2.00	1	08/23/2019 17:41	<a href="#">WG1333542</a>
Arsenic,Dissolved	ND		2.00	1	08/24/2019 15:28	<a href="#">WG1333547</a>
Barium	32.3		5.00	1	08/23/2019 17:41	<a href="#">WG1333542</a>
Barium,Dissolved	31.8		5.00	1	08/24/2019 15:28	<a href="#">WG1333547</a>
Cadmium	ND		1.00	1	08/23/2019 17:41	<a href="#">WG1333542</a>
Cadmium,Dissolved	ND		1.00	1	08/24/2019 15:28	<a href="#">WG1333547</a>
Chromium	ND		2.00	1	08/23/2019 17:41	<a href="#">WG1333542</a>
Chromium,Dissolved	ND		2.00	1	08/24/2019 15:28	<a href="#">WG1333547</a>
Iron,Dissolved	ND		100	1	08/24/2019 15:28	<a href="#">WG1333547</a>
Lead	ND		2.00	1	08/23/2019 17:41	<a href="#">WG1333542</a>
Lead,Dissolved	ND		2.00	1	08/24/2019 15:28	<a href="#">WG1333547</a>
Manganese,Dissolved	108		5.00	1	08/24/2019 15:28	<a href="#">WG1333547</a>
Selenium	ND		2.00	1	08/23/2019 17:41	<a href="#">WG1333542</a>
Selenium,Dissolved	ND		2.00	1	08/24/2019 15:28	<a href="#">WG1333547</a>
Silver	ND		2.00	1	08/23/2019 17:41	<a href="#">WG1333542</a>
Silver,Dissolved	ND		2.00	1	08/24/2019 15:28	<a href="#">WG1333547</a>

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	08/25/2019 09:34	<a href="#">WG1334471</a>
Ethane	ND		13.0	1	08/25/2019 09:34	<a href="#">WG1334471</a>
Ethene	ND		13.0	1	08/25/2019 09:34	<a href="#">WG1334471</a>



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	08/30/2019 13:56	WG1336242
Acrolein	ND		50.0	1	08/30/2019 13:56	WG1336242
Acrylonitrile	ND		10.0	1	08/30/2019 13:56	WG1336242
Benzene	ND		1.00	1	08/30/2019 13:56	WG1336242
Bromobenzene	ND		1.00	1	08/30/2019 13:56	WG1336242
Bromodichloromethane	ND		1.00	1	08/30/2019 13:56	WG1336242
Bromoform	ND		1.00	1	08/30/2019 13:56	WG1336242
Bromomethane	ND		5.00	1	08/30/2019 13:56	WG1336242
n-Butylbenzene	ND	JO	1.00	1	08/30/2019 13:56	WG1336242
sec-Butylbenzene	ND		1.00	1	08/30/2019 13:56	WG1336242
tert-Butylbenzene	ND		1.00	1	08/30/2019 13:56	WG1336242
Carbon tetrachloride	ND		1.00	1	08/30/2019 13:56	WG1336242
Chlorobenzene	ND		1.00	1	08/30/2019 13:56	WG1336242
Chlorodibromomethane	ND		1.00	1	08/30/2019 13:56	WG1336242
Chloroethane	ND		5.00	1	08/30/2019 13:56	WG1336242
Chloroform	ND		5.00	1	08/30/2019 13:56	WG1336242
Chloromethane	ND		2.50	1	08/30/2019 13:56	WG1336242
2-Chlorotoluene	ND		1.00	1	08/30/2019 13:56	WG1336242
4-Chlorotoluene	ND		1.00	1	08/30/2019 13:56	WG1336242
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 13:56	WG1336242
1,2-Dibromoethane	ND		1.00	1	08/30/2019 13:56	WG1336242
Dibromomethane	ND		1.00	1	08/30/2019 13:56	WG1336242
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 13:56	WG1336242
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 13:56	WG1336242
1,4-Dichlorobenzene	ND	JO	1.00	1	08/30/2019 13:56	WG1336242
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 13:56	WG1336242
1,1-Dichloroethane	ND		1.00	1	08/30/2019 13:56	WG1336242
1,2-Dichloroethane	ND		1.00	1	08/30/2019 13:56	WG1336242
1,1-Dichloroethene	ND		1.00	1	08/30/2019 13:56	WG1336242
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 13:56	WG1336242
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 13:56	WG1336242
1,2-Dichloropropane	ND		1.00	1	08/30/2019 13:56	WG1336242
1,1-Dichloropropene	ND		1.00	1	08/30/2019 13:56	WG1336242
1,3-Dichloropropane	ND		1.00	1	08/30/2019 13:56	WG1336242
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 13:56	WG1336242
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 13:56	WG1336242
2,2-Dichloropropane	ND		1.00	1	08/30/2019 13:56	WG1336242
Di-isopropyl ether	ND		1.00	1	08/30/2019 13:56	WG1336242
Ethylbenzene	ND		1.00	1	08/30/2019 13:56	WG1336242
Hexachloro-1,3-butadiene	ND	JO	1.00	1	08/30/2019 13:56	WG1336242
Isopropylbenzene	ND		1.00	1	08/30/2019 13:56	WG1336242
p-Isopropyltoluene	ND		1.00	1	08/30/2019 13:56	WG1336242
2-Butanone (MEK)	ND		10.0	1	08/30/2019 13:56	WG1336242
Methylene Chloride	ND		5.00	1	08/30/2019 13:56	WG1336242
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 13:56	WG1336242
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 13:56	WG1336242
Naphthalene	ND		5.00	1	08/30/2019 13:56	WG1336242
n-Propylbenzene	ND		1.00	1	08/30/2019 13:56	WG1336242
Styrene	ND		1.00	1	08/30/2019 13:56	WG1336242
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 13:56	WG1336242
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 13:56	WG1336242
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/30/2019 13:56	WG1336242
Tetrachloroethene	ND		1.00	1	08/30/2019 13:56	WG1336242
Toluene	ND		1.00	1	08/30/2019 13:56	WG1336242
1,2,3-Trichlorobenzene	ND	JO	1.00	1	08/30/2019 13:56	WG1336242
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 13:56	WG1336242

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	08/30/2019 13:56	<a href="#">WG1336242</a>
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 13:56	<a href="#">WG1336242</a>
Trichloroethene	ND		1.00	1	08/30/2019 13:56	<a href="#">WG1336242</a>
Trichlorofluoromethane	ND		5.00	1	08/30/2019 13:56	<a href="#">WG1336242</a>
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 13:56	<a href="#">WG1336242</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 13:56	<a href="#">WG1336242</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 13:56	<a href="#">WG1336242</a>
1,3,5-Trimethylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 13:56	<a href="#">WG1336242</a>
Vinyl chloride	ND		1.00	1	08/30/2019 13:56	<a href="#">WG1336242</a>
o-Xylene	ND		1.00	1	08/30/2019 13:56	<a href="#">WG1336242</a>
m&p-Xylene	ND		2.00	1	08/30/2019 13:56	<a href="#">WG1336242</a>
(S) Toluene-d8	101		80.0-120		08/30/2019 13:56	<a href="#">WG1336242</a>
(S) 4-Bromofluorobenzene	95.6		77.0-126		08/30/2019 13:56	<a href="#">WG1336242</a>
(S) 1,2-Dichloroethane-d4	123		70.0-130		08/30/2019 13:56	<a href="#">WG1336242</a>

- 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	08/28/2019 15:35	<a href="#">WG1335026</a>
Residual Range Organics (RRO)	262		250	1	08/28/2019 15:35	<a href="#">WG1335026</a>
(S) o-Terphenyl	67.9		52.0-156		08/28/2019 15:35	<a href="#">WG1335026</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Acenaphthene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Acenaphthylene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Benzo(a)anthracene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Benzo(a)pyrene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Chrysene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Fluoranthene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Fluorene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Naphthalene	ND		0.250	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Phenanthrene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
Pyrene	ND		0.0500	1	08/27/2019 12:55	<a href="#">WG1335040</a>
1-Methylnaphthalene	ND		0.250	1	08/27/2019 12:55	<a href="#">WG1335040</a>
2-Methylnaphthalene	ND		0.250	1	08/27/2019 12:55	<a href="#">WG1335040</a>
2-Chloronaphthalene	ND		0.250	1	08/27/2019 12:55	<a href="#">WG1335040</a>
(S) Nitrobenzene-d5	109		31.0-160		08/27/2019 12:55	<a href="#">WG1335040</a>
(S) 2-Fluorobiphenyl	88.4		48.0-148		08/27/2019 12:55	<a href="#">WG1335040</a>
(S) p-Terphenyl-d14	87.9		37.0-146		08/27/2019 12:55	<a href="#">WG1335040</a>





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	08/30/2019 14:17	<a href="#">WG1336242</a>
Acrolein	ND		50.0	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Acrylonitrile	ND		10.0	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Benzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Bromobenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Bromodichloromethane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Bromoform	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Bromomethane	ND		5.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
n-Butylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
sec-Butylbenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
tert-Butylbenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Carbon tetrachloride	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Chlorobenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Chlorodibromomethane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Chloroethane	ND		5.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Chloroform	ND		5.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Chloromethane	ND		2.50	1	08/30/2019 14:17	<a href="#">WG1336242</a>
2-Chlorotoluene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
4-Chlorotoluene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,2-Dibromoethane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Dibromomethane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,2-Dichlorobenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,3-Dichlorobenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,4-Dichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Dichlorodifluoromethane	ND		5.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,1-Dichloroethane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,2-Dichloroethane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,1-Dichloroethene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
cis-1,2-Dichloroethene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
trans-1,2-Dichloroethene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,2-Dichloropropane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,1-Dichloropropene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,3-Dichloropropane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
cis-1,3-Dichloropropene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
trans-1,3-Dichloropropene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
2,2-Dichloropropane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Di-isopropyl ether	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Ethylbenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Hexachloro-1,3-butadiene	ND	<u>JO</u>	1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Isopropylbenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
p-Isopropyltoluene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
2-Butanone (MEK)	ND		10.0	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Methylene Chloride	ND		5.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Methyl tert-butyl ether	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Naphthalene	ND		5.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
n-Propylbenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Styrene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Tetrachloroethene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Toluene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,2,3-Trichlorobenzene	ND	<u>JO</u>	1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,2,4-Trichlorobenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>

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	08/30/2019 14:17	<a href="#">WG1336242</a>
1,1,2-Trichloroethane	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Trichloroethene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Trichlorofluoromethane	ND		5.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,2,3-Trichloropropane	ND		2.50	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,2,4-Trimethylbenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,2,3-Trimethylbenzene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
1,3,5-Trimethylbenzene	ND	<u>JO</u>	1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
Vinyl chloride	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
o-Xylene	ND		1.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
m&p-Xylene	ND		2.00	1	08/30/2019 14:17	<a href="#">WG1336242</a>
(S) Toluene-d8	102		80.0-120		08/30/2019 14:17	<a href="#">WG1336242</a>
(S) 4-Bromofluorobenzene	95.0		77.0-126		08/30/2019 14:17	<a href="#">WG1336242</a>
(S) 1,2-Dichloroethane-d4	124		70.0-130		08/30/2019 14:17	<a href="#">WG1336242</a>

- 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	08/26/2019 18:47	<a href="#">WG1334117</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	341		100	1	08/29/2019 10:59	<a href="#">WG1335355</a>

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	08/23/2019 15:11	<a href="#">WG1333747</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	7730		5000	1	08/23/2019 11:38	<a href="#">WG1333679</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/24/2019 15:31	<a href="#">WG1333547</a>
Manganese,Dissolved	10.7		5.00	1	08/24/2019 15:31	<a href="#">WG1333547</a>

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	08/28/2019 14:20	<a href="#">WG1335657</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	108		78.0-120		08/28/2019 14:20	<a href="#">WG1335657</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	29.7		10.0	1	08/25/2019 09:14	<a href="#">WG1334471</a>
Ethane	ND		13.0	1	08/25/2019 09:14	<a href="#">WG1334471</a>
Ethene	ND		13.0	1	08/25/2019 09:14	<a href="#">WG1334471</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	516		200	1	08/28/2019 15:58	<a href="#">WG1335026</a>
Residual Range Organics (RRO)	884		250	1	08/28/2019 15:58	<a href="#">WG1335026</a>
(S) <i>o</i> -Terphenyl	77.9		52.0-156		08/28/2019 15:58	<a href="#">WG1335026</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/27/2019 22:24	<a href="#">WG1335027</a>
Residual Range Organics (RRO)	ND		250	1	08/27/2019 22:24	<a href="#">WG1335027</a>
(S) <i>o</i> -Terphenyl	61.6		52.0-156		08/27/2019 22:24	<a href="#">WG1335027</a>



Collected date/time: 08/21/19 12:35

L1131738

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	08/28/2019 14:45	WG1335514
Acenaphthene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Acenaphthylene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Benzo(a)anthracene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Benzo(a)pyrene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Benzo(b)fluoranthene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Benzo(g,h,i)perylene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Benzo(k)fluoranthene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Chrysene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Dibenz(a,h)anthracene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Fluoranthene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Fluorene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Naphthalene	ND		0.250	1	08/28/2019 14:45	WG1335514
Phenanthrene	ND		0.0500	1	08/28/2019 14:45	WG1335514
Pyrene	ND		0.0500	1	08/28/2019 14:45	WG1335514
1-Methylnaphthalene	ND		0.250	1	08/28/2019 14:45	WG1335514
2-Methylnaphthalene	ND		0.250	1	08/28/2019 14:45	WG1335514
2-Chloronaphthalene	ND		0.250	1	08/28/2019 14:45	WG1335514
(S) Nitrobenzene-d5	101		31.0-160		08/28/2019 14:45	WG1335514
(S) 2-Fluorobiphenyl	76.7		48.0-148		08/28/2019 14:45	WG1335514
(S) p-Terphenyl-d14	85.3		37.0-146		08/28/2019 14:45	WG1335514

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3444475-1 08/26/19 18:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131031-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131031-01 08/26/19 18:27 • (DUP) R3444475-3 08/26/19 18:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	392	401	1	2.27		10

L1131767-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1131767-04 08/26/19 18:52 • (DUP) R3444475-6 08/26/19 18:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	626	637	1	1.74		10

Laboratory Control Sample (LCS)

(LCS) R3444475-2 08/26/19 18:25

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	6940	92.5	90.0-110	

L1131033-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131033-01 08/26/19 18:30 • (MS) R3444475-4 08/26/19 18:31 • (MSD) R3444475-5 08/26/19 18:33

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	2500	131	2240	2840	84.2	108	1	90.0-110	<u>J6</u>	<u>J3 J6</u>	23.7	10

L1131767-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131767-05 08/26/19 18:55 • (MS) R3444475-7 08/26/19 18:57

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	2500	232	2520	91.7	1	90.0-110	<u>J6</u>



Method Blank (MB)

(MB) R3445464-1 08/29/19 10:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131661-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-01 08/29/19 10:20 • (DUP) R3445464-3 08/29/19 10:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	2440	2440	1	0.328		20

L1131738-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131738-01 08/29/19 10:46 • (DUP) R3445464-6 08/29/19 10:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3445464-2 08/29/19 10:19

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	3900	97.6	90.0-110	

L1131738-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131738-02 08/29/19 10:49 • (MS) R3445464-8 08/29/19 11:28

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	ND	2890	115	1	90.0-110	J5

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/29/19 10:41 • (MS) R3445464-4 08/29/19 10:43 • (MSD) R3445464-5 08/29/19 10:44

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	1830	4150	4370	92.8	101	1	90.0-110			5.03	20



Method Blank (MB)

(MB) R3443702-1 08/23/19 15:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131642-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1131642-02 08/23/19 15:04 • (DUP) R3443702-3 08/23/19 15:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1131661-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131661-03 08/23/19 15:07 • (DUP) R3443702-4 08/23/19 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3443702-2 08/23/19 15:03

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	462	92.4	85.0-115	

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 15:09 • (MS) R3443702-5 08/23/19 15:10 • (MSD) R3443702-6 08/23/19 15:10

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	875	850	87.5	85.0	1	80.0-120			2.90	20



Method Blank (MB)

(MB) R3443808-1 08/23/19 08:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131721-03 08/23/19 09:44 • (DUP) R3443808-3 08/23/19 10:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	8370	8420	1	0.580		15

L1131778-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1131778-10 08/23/19 14:55 • (DUP) R3443808-6 08/23/19 15:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	21200	20900	1	1.03		15

Laboratory Control Sample (LCS)

(LCS) R3443808-2 08/23/19 08:51

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	39000	97.5	80.0-120	

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 09:44 • (MS) R3443808-4 08/23/19 10:16 • (MSD) R3443808-5 08/23/19 10:33

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	8370	60200	59700	104	103	1	80.0-120			0.846	15

L1131778-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1131778-10 08/23/19 14:55 • (MS) R3443808-7 08/23/19 16:01

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	21200	72000	102	1	80.0-120	





Method Blank (MB)

(MB) R3444394-1 08/26/19 17:45

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) R3444394-2 08/26/19 17:47 • (LCSD) R3444394-3 08/26/19 17:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	3.16	3.17	105	106	80.0-120			0.316	20

7 Gl

8 Al

L1131738-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131738-03 08/26/19 17:51 • (MS) R3444394-4 08/26/19 17:54 • (MSD) R3444394-5 08/26/19 18:00

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	3.26	3.28	109	109	1	75.0-125			0.612	20

9 Sc



Method Blank (MB)

(MB) R3443516-1 08/23/19 09:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	0.0700	<u>J</u>	0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

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

(LCS) R3443516-2 08/23/19 09:30 • (LCSD) R3443516-3 08/23/19 09:32

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 %
Mercury,Dissolved	3.00	3.27	2.97	109	98.9	80.0-120			9.77	20

<sup>4</sup> Cn

<sup>5</sup> Sr

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 09:34 • (MS) R3443516-4 08/23/19 09:36 • (MSD) R3443516-5 08/23/19 09:47

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	3.23	2.37	106	77.2	1	75.0-125		<u>J3</u>	30.7	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3443784-1 08/23/19 16:31

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	1.55	J	0.540	2.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Silver	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3443784-2 08/23/19 16:35 • (LCSD) R3443784-3 08/23/19 16:38

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	%	%	%			%	%
Arsenic	50.0	50.6	50.9	101	102	80.0-120			0.592	20
Barium	50.0	51.3	51.0	103	102	80.0-120			0.533	20
Cadmium	50.0	51.8	53.2	104	106	80.0-120			2.59	20
Chromium	50.0	51.5	52.0	103	104	80.0-120			0.959	20
Lead	50.0	49.0	49.2	97.9	98.4	80.0-120			0.526	20
Selenium	50.0	52.2	52.6	104	105	80.0-120			0.871	20
Silver	50.0	50.7	51.0	101	102	80.0-120			0.676	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/23/19 16:41 • (MS) R3443784-5 08/23/19 16:48 • (MSD) R3443784-6 08/23/19 16:51

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	50.0	4.62	54.7	54.6	100	99.9	1	75.0-125			0.213	20
Barium	50.0	25.5	75.1	75.4	99.3	99.8	1	75.0-125			0.381	20
Cadmium	50.0	ND	52.3	52.8	104	105	1	75.0-125			0.823	20
Chromium	50.0	ND	51.5	51.7	99.6	99.9	1	75.0-125			0.311	20
Lead	50.0	ND	51.0	49.8	101	98.2	1	75.0-125			2.49	20
Selenium	50.0	ND	53.2	53.4	104	105	1	75.0-125			0.371	20
Silver	50.0	ND	51.1	51.7	102	103	1	75.0-125			1.20	20



L1131850-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131850-04 08/23/19 16:55 • (MS) R3443784-7 08/23/19 16:58 • (MSD) R3443784-8 08/23/19 17:01

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 %
Arsenic	50.0	0.339	50.3	48.5	99.9	96.4	1	75.0-125			3.52	20
Barium	50.0	25.6	77.9	75.9	105	101	1	75.0-125			2.60	20
Cadmium	50.0	0.232	52.3	51.1	104	102	1	75.0-125			2.32	20
Chromium	50.0	0.978	50.7	48.7	99.5	95.5	1	75.0-125			4.00	20
Lead	50.0	0.338	50.1	48.0	99.6	95.3	1	75.0-125			4.40	20
Selenium	50.0	0.411	54.0	51.7	107	103	1	75.0-125			4.42	20
Silver	50.0	U	52.0	51.8	104	104	1	75.0-125			0.393	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3443863-1 08/24/19 13:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		0.250	2.00
Barium,Dissolved	0.431	↓	0.360	5.00
Cadmium,Dissolved	U		0.160	1.00
Chromium,Dissolved	0.602	↓	0.540	2.00
Iron,Dissolved	68.8	↓	15.0	100
Lead,Dissolved	0.762	↓	0.240	2.00
Manganese,Dissolved	0.278	↓	0.250	5.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3443863-2 08/24/19 13:52 • (LCSD) R3443863-3 08/24/19 13:55

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	51.3	52.2	103	104	80.0-120			1.77	20
Barium,Dissolved	50.0	50.2	48.4	100	96.9	80.0-120			3.60	20
Cadmium,Dissolved	50.0	52.5	52.3	105	105	80.0-120			0.421	20
Chromium,Dissolved	50.0	52.5	53.7	105	107	80.0-120			2.33	20
Iron,Dissolved	5000	5470	5360	109	107	80.0-120			2.07	20
Lead,Dissolved	50.0	51.6	52.7	103	105	80.0-120			2.13	20
Manganese,Dissolved	50.0	50.7	52.2	101	104	80.0-120			2.91	20
Selenium,Dissolved	50.0	50.9	50.8	102	102	80.0-120			0.247	20
Silver,Dissolved	50.0	52.9	52.9	106	106	80.0-120			0.00899	20

L1131642-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131642-01 08/24/19 13:59 • (MS) R3443863-5 08/24/19 14:05 • (MSD) R3443863-6 08/24/19 14:09

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	48.3	105	105	112	114	1	75.0-125			0.554	20
Barium,Dissolved	50.0	74.7	129	132	109	114	1	75.0-125			1.67	20
Cadmium,Dissolved	50.0	ND	54.2	55.7	108	111	1	75.0-125			2.85	20
Chromium,Dissolved	50.0	ND	55.4	55.2	109	109	1	75.0-125			0.279	20
Iron,Dissolved	5000	6370	11900	12000	110	112	1	75.0-125			0.796	20
Lead,Dissolved	50.0	ND	54.2	55.5	108	110	1	75.0-125			2.46	20
Manganese,Dissolved	50.0	3360	3500	3520	293	324	1	75.0-125	↓	↓	0.438	20
Selenium,Dissolved	50.0	ND	55.1	54.6	110	109	1	75.0-125			0.811	20
Silver,Dissolved	50.0	ND	55.5	57.0	111	114	1	75.0-125			2.66	20



Method Blank (MB)

(MB) R3445183-3 08/28/19 12:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	46.7	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	108			78.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

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

(LCS) R3445183-2 08/28/19 11:43 • (LCSD) R3445183-4 08/28/19 20:43

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 %
Gasoline Range Organics-NWTPH	5500	5490	6350	99.9	115	70.0-124			14.4	20
(S) a,a,a-Trifluorotoluene(FID)				107	110	78.0-120				

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3443915-1 08/25/19 09:02

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

L1131738-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1131738-03 08/25/19 09:34 • (DUP) R3443915-2 08/25/19 09:39

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) R3443915-3 08/25/19 10:27 • (LCSD) R3443915-4 08/25/19 10:30

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	71.0	72.6	105	107	85.0-115			2.28	20
Ethane	129	116	118	90.1	91.7	85.0-115			1.73	20
Ethene	127	116	116	91.6	91.7	85.0-115			0.0920	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3446209-2 08/30/19 09:24

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	0.779	U	0.256	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Method Blank (MB)

(MB) R3446209-2 08/30/19 09:24

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) 4-Bromofluorobenzene	93.7			77.0-126
(S) 1,2-Dichloroethane-d4	116			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	156	125	19.0-160	
Acrolein	125	134	107	10.0-160	
Acrylonitrile	125	151	121	55.0-149	



Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	25.0	23.9	95.8	70.0-123	
Bromobenzene	25.0	25.4	102	73.0-121	
Bromodichloromethane	25.0	27.0	108	75.0-120	
Bromoform	25.0	25.9	104	68.0-132	
Bromomethane	25.0	23.2	92.7	10.0-160	
n-Butylbenzene	25.0	19.6	78.5	73.0-125	
sec-Butylbenzene	25.0	20.2	80.9	75.0-125	
tert-Butylbenzene	25.0	21.5	86.0	76.0-124	
Carbon tetrachloride	25.0	26.9	108	68.0-126	
Chlorobenzene	25.0	24.3	97.1	80.0-121	
Chlorodibromomethane	25.0	26.6	106	77.0-125	
Chloroethane	25.0	22.3	89.3	47.0-150	
Chloroform	25.0	25.7	103	73.0-120	
Chloromethane	25.0	29.0	116	41.0-142	
2-Chlorotoluene	25.0	23.6	94.3	76.0-123	
4-Chlorotoluene	25.0	24.6	98.3	75.0-122	
1,2-Dibromo-3-Chloropropane	25.0	26.5	106	58.0-134	
1,2-Dibromoethane	25.0	26.5	106	80.0-122	
Dibromomethane	25.0	27.2	109	80.0-120	
1,2-Dichlorobenzene	25.0	23.4	93.5	79.0-121	
1,3-Dichlorobenzene	25.0	22.9	91.5	79.0-120	
1,4-Dichlorobenzene	25.0	19.9	79.6	79.0-120	
Dichlorodifluoromethane	25.0	32.5	130	51.0-149	
1,1-Dichloroethane	25.0	26.1	104	70.0-126	
1,2-Dichloroethane	25.0	27.5	110	70.0-128	
1,1-Dichloroethene	25.0	23.8	95.1	71.0-124	
cis-1,2-Dichloroethene	25.0	22.9	91.7	73.0-120	
trans-1,2-Dichloroethene	25.0	22.9	91.5	73.0-120	
1,2-Dichloropropane	25.0	27.1	108	77.0-125	
1,1-Dichloropropene	25.0	25.9	104	74.0-126	
1,3-Dichloropropane	25.0	27.2	109	80.0-120	
cis-1,3-Dichloropropene	25.0	26.7	107	80.0-123	
trans-1,3-Dichloropropene	25.0	28.6	114	78.0-124	
2,2-Dichloropropane	25.0	24.6	98.3	58.0-130	
Di-isopropyl ether	25.0	27.5	110	58.0-138	
Ethylbenzene	25.0	23.4	93.5	79.0-123	
Hexachloro-1,3-butadiene	25.0	19.6	78.2	54.0-138	
Isopropylbenzene	25.0	21.9	87.5	76.0-127	
p-Isopropyltoluene	25.0	21.2	84.7	76.0-125	
2-Butanone (MEK)	125	165	132	44.0-160	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Laboratory Control Sample (LCS)

(LCS) R3446209-1 08/30/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methylene Chloride	25.0	22.6	90.2	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	147	118	68.0-142	
Methyl tert-butyl ether	25.0	24.0	95.8	68.0-125	
Naphthalene	25.0	23.2	92.8	54.0-135	
n-Propylbenzene	25.0	22.2	88.8	77.0-124	
Styrene	25.0	24.5	98.1	73.0-130	
1,1,1,2-Tetrachloroethane	25.0	25.7	103	75.0-125	
1,1,2,2-Tetrachloroethane	25.0	26.7	107	65.0-130	
Tetrachloroethene	25.0	23.9	95.6	72.0-132	
Toluene	25.0	23.5	94.1	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	23.7	95.0	69.0-132	
1,2,3-Trichlorobenzene	25.0	19.4	77.8	50.0-138	
1,2,4-Trichlorobenzene	25.0	20.3	81.0	57.0-137	
1,1,1-Trichloroethane	25.0	25.9	104	73.0-124	
1,1,2-Trichloroethane	25.0	25.1	100	80.0-120	
Trichloroethene	25.0	23.5	94.0	78.0-124	
Trichlorofluoromethane	25.0	28.2	113	59.0-147	
1,2,3-Trichloropropane	25.0	30.3	121	73.0-130	
1,2,3-Trimethylbenzene	25.0	22.9	91.7	77.0-120	
1,2,4-Trimethylbenzene	25.0	22.7	90.8	76.0-121	
1,3,5-Trimethylbenzene	25.0	19.5	78.0	76.0-122	
Vinyl chloride	25.0	26.1	105	67.0-131	
o-Xylene	25.0	22.9	91.6	80.0-122	
m&p-Xylenes	50.0	46.5	93.1	80.0-122	
(S) Toluene-d8			101	80.0-120	
(S) 4-Bromofluorobenzene			96.5	77.0-126	
(S) 1,2-Dichloroethane-d4			119	70.0-130	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	125	ND	149	178	119	142	1	10.0-160			17.4	35
Acrolein	125	ND	245	288	196	231	1	10.0-160	J5	J5	16.3	39
Acrylonitrile	125	ND	144	166	115	133	1	21.0-160			14.6	32
Benzene	25.0	ND	21.5	22.8	85.9	91.0	1	17.0-158			5.76	27
Bromobenzene	25.0	ND	24.8	23.8	99.3	95.3	1	30.0-149			4.19	28
Bromodichloromethane	25.0	ND	25.2	26.8	101	107	1	31.0-150			6.35	27



L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	25.0	ND	24.4	26.3	97.4	105	1	29.0-150			7.63	29
Bromomethane	25.0	ND	16.4	19.4	65.6	77.5	1	10.0-160			16.6	38
n-Butylbenzene	25.0	ND	15.6	18.7	62.4	74.8	1	31.0-150			18.2	30
sec-Butylbenzene	25.0	ND	17.2	19.5	68.8	77.9	1	33.0-155			12.4	29
tert-Butylbenzene	25.0	ND	18.9	20.9	75.8	83.4	1	34.0-153			9.61	28
Carbon tetrachloride	25.0	ND	25.7	29.0	103	116	1	23.0-159			11.9	28
Chlorobenzene	25.0	ND	21.4	23.1	85.7	92.4	1	33.0-152			7.50	27
Chlorodibromomethane	25.0	ND	24.2	25.9	96.7	104	1	37.0-149			7.00	27
Chloroethane	25.0	ND	16.6	18.8	66.3	75.4	1	10.0-160			12.8	30
Chloroform	25.0	ND	23.6	25.3	94.6	101	1	29.0-154			6.90	28
Chloromethane	25.0	ND	21.4	25.7	85.5	103	1	10.0-160			18.3	29
2-Chlorotoluene	25.0	ND	21.4	22.4	85.6	89.4	1	32.0-153			4.32	28
4-Chlorotoluene	25.0	ND	20.7	23.0	82.9	92.1	1	32.0-150			10.5	28
1,2-Dibromo-3-Chloropropane	25.0	ND	23.9	25.6	95.5	102	1	22.0-151			6.84	34
1,2-Dibromoethane	25.0	ND	23.1	24.6	92.2	98.6	1	34.0-147			6.61	27
Dibromomethane	25.0	ND	24.1	25.5	96.5	102	1	30.0-151			5.71	27
1,2-Dichlorobenzene	25.0	ND	19.9	21.8	79.4	87.4	1	34.0-149			9.55	28
1,3-Dichlorobenzene	25.0	ND	19.5	21.6	78.0	86.6	1	36.0-146			10.4	27
1,4-Dichlorobenzene	25.0	ND	18.0	19.7	71.8	78.7	1	35.0-142			9.11	27
Dichlorodifluoromethane	25.0	ND	20.8	27.5	83.2	110	1	10.0-160			27.6	29
1,1-Dichloroethane	25.0	ND	24.9	29.1	99.5	116	1	25.0-158			15.7	27
1,2-Dichloroethane	25.0	ND	25.1	27.0	100	108	1	29.0-151			7.54	27
1,1-Dichloroethene	25.0	ND	21.1	25.4	84.5	102	1	11.0-160			18.6	29
cis-1,2-Dichloroethene	25.0	ND	21.0	24.3	83.9	97.0	1	10.0-160			14.5	27
trans-1,2-Dichloroethene	25.0	ND	19.4	23.5	77.7	93.9	1	17.0-153			18.9	27
1,2-Dichloropropane	25.0	ND	25.3	26.1	101	104	1	30.0-156			2.82	27
1,1-Dichloropropene	25.0	ND	22.1	24.5	88.4	98.0	1	25.0-158			10.4	27
1,3-Dichloropropane	25.0	ND	24.2	25.3	97.0	101	1	38.0-147			4.31	27
cis-1,3-Dichloropropene	25.0	ND	23.6	25.2	94.6	101	1	34.0-149			6.34	28
trans-1,3-Dichloropropene	25.0	ND	25.3	26.9	101	108	1	32.0-149			6.19	28
2,2-Dichloropropane	25.0	ND	23.3	26.1	93.0	105	1	24.0-152			11.7	29
Di-isopropyl ether	25.0	ND	27.3	32.2	109	129	1	21.0-160			16.5	28
Ethylbenzene	25.0	ND	20.6	22.0	82.5	87.9	1	30.0-155			6.31	27
Hexachloro-1,3-butadiene	25.0	ND	15.8	19.5	63.2	78.0	1	20.0-154			21.0	34
Isopropylbenzene	25.0	ND	19.6	21.8	78.5	87.0	1	28.0-157			10.2	27
p-Isopropyltoluene	25.0	ND	17.8	20.3	71.3	81.2	1	30.0-154			13.0	29
2-Butanone (MEK)	125	ND	160	155	128	124	1	10.0-160			3.13	32
Methylene Chloride	25.0	ND	20.4	24.0	81.5	96.1	1	23.0-144			16.5	28
4-Methyl-2-pentanone (MIBK)	125	ND	148	145	118	116	1	29.0-160			2.01	29
Methyl tert-butyl ether	25.0	ND	21.4	26.1	85.6	104	1	28.0-150			19.9	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/30/19 13:13 • (MS) R3446209-3 08/30/19 17:52 • (MSD) R3446209-4 08/30/19 18:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	25.0	ND	20.1	22.1	80.2	88.5	1	12.0-156			9.77	35
n-Propylbenzene	25.0	ND	20.7	21.0	82.9	83.9	1	31.0-154			1.23	28
Styrene	25.0	ND	22.0	23.4	88.1	93.8	1	33.0-155			6.27	28
1,1,1,2-Tetrachloroethane	25.0	ND	23.7	25.6	95.0	102	1	36.0-151			7.50	29
1,1,2,2-Tetrachloroethane	25.0	ND	26.9	25.6	107	102	1	33.0-150			4.95	28
Tetrachloroethene	25.0	ND	19.7	22.7	78.8	90.8	1	10.0-160			14.1	27
Toluene	25.0	ND	20.9	22.1	83.7	88.4	1	26.0-154			5.50	28
1,1,2-Trichlorotrifluoroethane	25.0	ND	19.6	26.7	78.4	107	1	23.0-160		J3	30.5	30
1,2,3-Trichlorobenzene	25.0	ND	15.9	18.7	63.7	75.0	1	17.0-150			16.3	36
1,2,4-Trichlorobenzene	25.0	ND	16.1	19.5	64.3	77.8	1	24.0-150			19.1	33
1,1,1-Trichloroethane	25.0	ND	24.9	27.4	99.6	109	1	23.0-160			9.48	28
1,1,2-Trichloroethane	25.0	ND	23.1	24.0	92.5	95.9	1	35.0-147			3.68	27
Trichloroethene	25.0	ND	20.3	22.3	81.1	89.1	1	10.0-160			9.45	25
Trichlorofluoromethane	25.0	ND	21.6	26.2	86.5	105	1	17.0-160			19.3	31
1,2,3-Trichloropropane	25.0	ND	27.2	28.6	109	114	1	34.0-151			5.00	29
1,2,3-Trimethylbenzene	25.0	ND	19.9	21.7	79.6	86.8	1	32.0-149			8.57	28
1,2,4-Trimethylbenzene	25.0	ND	19.3	21.5	77.1	86.1	1	26.0-154			11.1	27
1,3,5-Trimethylbenzene	25.0	ND	18.1	19.8	72.3	79.2	1	28.0-153			9.11	27
Vinyl chloride	25.0	ND	19.5	22.8	78.2	91.1	1	10.0-160			15.3	27
o-Xylene	25.0	ND	20.4	21.8	81.7	87.3	1	45.0-144			6.62	26
m&p-Xylenes	50.0	ND	40.2	44.0	80.4	87.9	1	43.0-146			8.95	26
(S) Toluene-d8					104	99.8		80.0-120				
(S) 4-Bromofluorobenzene					98.8	97.6		77.0-126				
(S) 1,2-Dichloroethane-d4					122	122		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3445222-1 08/28/19 13:13

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
<i>(S) o-Terphenyl</i>	56.5			52.0-156

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

(LCS) R3445222-2 08/28/19 22:14 • (LCSD) R3445222-3 08/28/19 22:37

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)	1500	1380	1390	92.0	92.7	50.0-150			0.722	20
<i>(S) o-Terphenyl</i>				107	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) R3444924-1 08/27/19 16:00

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>	59.5			52.0-156

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

(LCS) R3444924-2 08/27/19 21:04 • (LCSD) R3444924-3 08/27/19 21:24

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)	1500	992	1070	66.1	71.3	50.0-150			7.57	20
<i>(S) o-Terphenyl</i>				71.0	70.0	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) R3444682-2 08/27/19 07:51

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	104			31.0-160
(S) 2-Fluorobiphenyl	79.5			48.0-148
(S) p-Terphenyl-d14	86.5			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3444682-1 08/27/19 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	2.00	2.14	107	67.0-150	
Acenaphthene	2.00	1.86	93.0	65.0-138	
Acenaphthylene	2.00	1.89	94.5	66.0-140	
Benzo(a)anthracene	2.00	1.79	89.5	61.0-140	
Benzo(a)pyrene	2.00	1.82	91.0	60.0-143	
Benzo(b)fluoranthene	2.00	1.73	86.5	58.0-141	
Benzo(g,h,i)perylene	2.00	1.77	88.5	52.0-153	
Benzo(k)fluoranthene	2.00	1.94	97.0	58.0-148	
Chrysene	2.00	2.01	100	64.0-144	
Dibenz(a,h)anthracene	2.00	1.65	82.5	52.0-155	
Fluoranthene	2.00	2.08	104	69.0-153	





Laboratory Control Sample (LCS)

(LCS) R3444682-1 08/27/19 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	2.00	1.77	88.5	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.69	84.5	54.0-153	
Naphthalene	2.00	1.79	89.5	61.0-137	
Phenanthrene	2.00	1.80	90.0	62.0-137	
Pyrene	2.00	1.69	84.5	60.0-142	
1-Methylnaphthalene	2.00	1.71	85.5	66.0-142	
2-Methylnaphthalene	2.00	1.62	81.0	62.0-136	
2-Chloronaphthalene	2.00	1.82	91.0	64.0-140	
(S) Nitrobenzene-d5			111	31.0-160	
(S) 2-Fluorobiphenyl			89.5	48.0-148	
(S) p-Terphenyl-d14			90.5	37.0-146	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 08:34 • (MS) R3444682-3 08/27/19 08:56 • (MSD) R3444682-4 08/27/19 09:18

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	ND	1.98	2.03	104	107	1	56.0-156			2.49	20
Acenaphthene	1.90	ND	1.81	1.83	95.3	96.3	1	44.0-153			1.10	20
Acenaphthylene	1.90	ND	1.86	1.89	97.9	99.5	1	53.0-150			1.60	20
Benzo(a)anthracene	1.90	ND	1.82	1.86	95.8	97.9	1	47.0-151			2.17	20
Benzo(a)pyrene	1.90	ND	1.72	1.75	90.5	92.1	1	45.0-146			1.73	20
Benzo(b)fluoranthene	1.90	ND	1.71	1.72	90.0	90.5	1	43.0-142			0.583	20
Benzo(g,h,i)perylene	1.90	ND	1.68	1.71	88.4	90.0	1	40.0-147			1.77	20
Benzo(k)fluoranthene	1.90	ND	1.73	1.79	91.1	94.2	1	43.0-148			3.41	21
Chrysene	1.90	ND	1.82	1.87	95.8	98.4	1	50.0-148			2.71	20
Dibenz(a,h)anthracene	1.90	ND	1.59	1.63	83.7	85.8	1	37.0-151			2.48	20
Fluoranthene	1.90	ND	2.06	2.13	108	112	1	56.0-157			3.34	20
Fluorene	1.90	ND	1.72	1.75	89.9	91.5	1	48.0-148			1.73	20
Indeno(1,2,3-cd)pyrene	1.90	ND	1.61	1.63	84.7	85.8	1	41.0-148			1.23	20
Naphthalene	1.90	ND	1.78	1.80	92.6	93.7	1	10.0-160			1.12	20
Phenanthrene	1.90	ND	1.76	1.80	92.6	94.7	1	47.0-147			2.25	20
Pyrene	1.90	ND	1.73	1.77	91.1	93.2	1	51.0-148			2.29	20
1-Methylnaphthalene	1.90	ND	1.69	1.71	88.9	90.0	1	21.0-160			1.18	20
2-Methylnaphthalene	1.90	ND	1.62	1.63	84.7	85.2	1	31.0-160			0.615	20
2-Chloronaphthalene	1.90	ND	1.80	1.81	94.7	95.3	1	52.0-148			0.554	20
(S) Nitrobenzene-d5					110	115		31.0-160				
(S) 2-Fluorobiphenyl					94.7	94.2		48.0-148				
(S) p-Terphenyl-d14					95.8	98.4		37.0-146				



Method Blank (MB)

(MB) R3445038-3 08/28/19 13:08

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	0.00242	U	0.00212	0.0500
Benzo(g,h,i)perylene	0.00590	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	0.0223	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	92.4			31.0-160
(S) 2-Fluorobiphenyl	73.7			48.0-148
(S) p-Terphenyl-d14	97.3			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3445038-1 08/28/19 12:23 • (LCSD) R3445038-2 08/28/19 12:45

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 %
Anthracene	48.0	43.2	44.7	90.0	93.1	67.0-150			3.41	20
Acenaphthene	48.0	47.9	46.8	99.8	97.5	65.0-138			2.32	20
Acenaphthylene	48.0	50.8	50.3	106	105	66.0-140			0.989	20
Benzo(a)anthracene	48.0	53.5	53.1	111	111	61.0-140			0.750	20
Benzo(a)pyrene	48.0	48.6	48.9	101	102	60.0-143			0.615	20
Benzo(b)fluoranthene	48.0	49.0	45.4	102	94.6	58.0-141			7.63	20
Benzo(g,h,i)perylene	48.0	47.7	48.9	99.4	102	52.0-153			2.48	20
Benzo(k)fluoranthene	48.0	43.6	47.0	90.8	97.9	58.0-148			7.51	20
Chrysene	48.0	49.7	49.2	104	102	64.0-144			1.01	20
Dibenz(a,h)anthracene	48.0	48.8	50.5	102	105	52.0-155			3.42	20
Fluoranthene	48.0	44.5	45.4	92.7	94.6	69.0-153			2.00	20



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

(LCS) R3445038-1 08/28/19 12:23 • (LCSD) R3445038-2 08/28/19 12:45

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	48.0	50.0	49.1	104	102	64.0-136			1.82	20
Indeno(1,2,3-cd)pyrene	48.0	49.1	50.2	102	105	54.0-153			2.22	20
Naphthalene	48.0	37.8	37.7	78.8	78.5	61.0-137			0.265	20
Phenanthrene	48.0	54.5	54.0	114	113	62.0-137			0.922	20
Pyrene	48.0	53.6	53.0	112	110	60.0-142			1.13	20
1-Methylnaphthalene	48.0	42.2	42.0	87.9	87.5	66.0-142			0.475	20
2-Methylnaphthalene	48.0	38.2	38.4	79.6	80.0	62.0-136			0.522	20
2-Chloronaphthalene	48.0	47.2	45.4	98.3	94.6	64.0-140			3.89	20
<i>(S) Nitrobenzene-d5</i>				100	99.6	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				76.1	74.8	48.0-148				
<i>(S) p-Terphenyl-d14</i>				100	98.9	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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration method criteria.
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.



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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

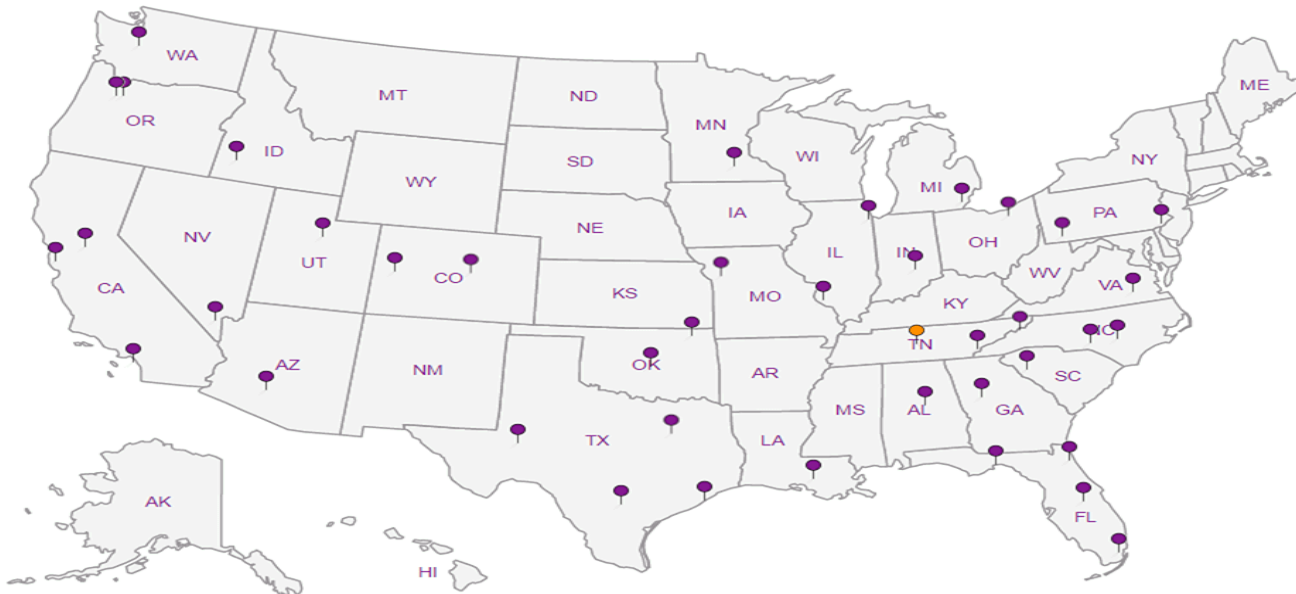
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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

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

Pres  
Chk

Report to:  
**Katie Teague**

Email To: [KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com);  
[RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com);

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

City/State  
Collected: **Wishram, WA**

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

Client Project #  
**1996120\*00**

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  
Cnts

Immediately  
Packed on Ice N  Y  X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Diss M6020RCRA8 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
WMW-01-20190821	Grab	GW	—	8/21/19	0915	8		X	X		X			X	X	X
WMW-03-20190821	↓	GW	↓	↓	0755	10		X	X	X	X			X	X	X
WMW-31-20190821	↓	GW	↓	↓	1145	15	X	X	X		X		X	X	X	X
TB-05-20190821	—	GW	—	↓	—	1										
WMW-10-20190821	Grab	GW	—	↓	1235	15	X	X	X	X	X	X	X	X	X	X
		GW														
		GW														
		GW														
		GW														
		GW														

\* Matrix:  
S - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
GW - Waste Water  
WW - Wastewater  
DW - Drinking Water  
OT - Other

Remarks:

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **7070 0201 2861**

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: **8/21/19**  
Time: **1400**

Received by: (Signature)  
**FedEx**

Trip Blank Received:  Yes  No  
**1**  MeOH  TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received by: (Signature)

Temp: **3.2 ± 0.1 = 33.4 ± 0.3 °C**  
Bottles Received: **96**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received for lab by: (Signature)  
*[Signature]*

Date: **8/22/19**  
Time: **845**

Hold: \_\_\_\_\_  
Condition: **NCE / OK**

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# **1131739**

Table #

Acctnum: **BNSF1KEN**  
Template: **T149555**  
Prelogin: **P723325**  
TSR: **134 - Mark W. Beasley**  
PB: **8-7-196**

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

Remarks	Sample # (lab only)
	01
	02
see pg 2	03
	04
	05



**Kennedy/Jenks Con-BNSF Region 1**

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

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

Pres  
Chk



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



Report to:  
**Katie Teague**

Email To: [KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com);  
[RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com);

Project  
Description: **BNSF - Wishram Rail yard, WA**

City/State  
Collected: **Wishram, WA**

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

Client Project #  
**1996120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Collected by (print):  
**K. Teague**

Site/Facility ID #

P.O. #

Collected by (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  
Cnts

Immediately  
Packed on Ice N  Y  X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl
WMW-31-20190821	Grab	GW	-	8/21/19	1145	15	X			X	
TB-05-20190821		GW		↓		1				X	
		GW									
		GW									
		GW									
		GW									
		GW									
		GW									
		GW									
		GW									

L# **1131730**  
Table #  
Acctnum: **BNSF1KEN**  
Template: **T149555**  
Prelogin: **P723325**  
TSR: **134 - Mark W. Beasley**  
PB: **8-7-19**  
Shipped Via: **FedEX Ground**

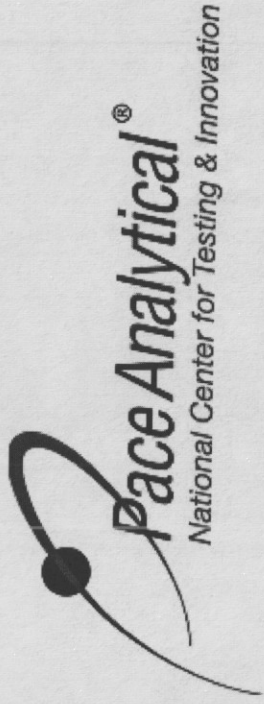
\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - Wastewater  
DW - Drinking Water  
OT - Other

Remarks:  
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  
VOA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature)	Date: <b>8/21/19</b>	Time: <b>1400</b>	Received by: (Signature) <b>FedEX</b>	Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <b>5.2+0.1=3.3°C</b> Bottles Received: <b>45</b>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: <b>8/22/19</b> Time: <b>845</b> Hold: Condition: <b>NCF / OK</b>

**Matt Shacklock**



<b>Login #:</b> 1131738	<b>Client:</b> BNSF1KEN	<b>Date:</b> 8/22	<b>Evaluated by:</b> Kelsey
-------------------------	-------------------------	-------------------	-----------------------------

**Non-Conformance (check applicable items)**

<b>Sample Integrity</b>	<b>Chain of Custody Clarification</b>	<b>If Broken Container:</b>
Parameter(s) past holding time	Login Clarification Needed	Insufficient packing material around container
Temperature not in range	Chain of custody is incomplete	Insufficient packing material inside cooler
Improper container type	Please specify Metals requested.	
x pH not in range.	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.	<b>If no Chain of Custody:</b>
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: Sulfide for WMW-03 received at a 9. Preserved in lab**

<b>Client informed by:</b>	Call	Email	Voice Mail	Date: 8/22/19	Time: 1535
<b>TSR Initials:</b> MB	<b>Client Contact:</b>				

**Login Instructions:**

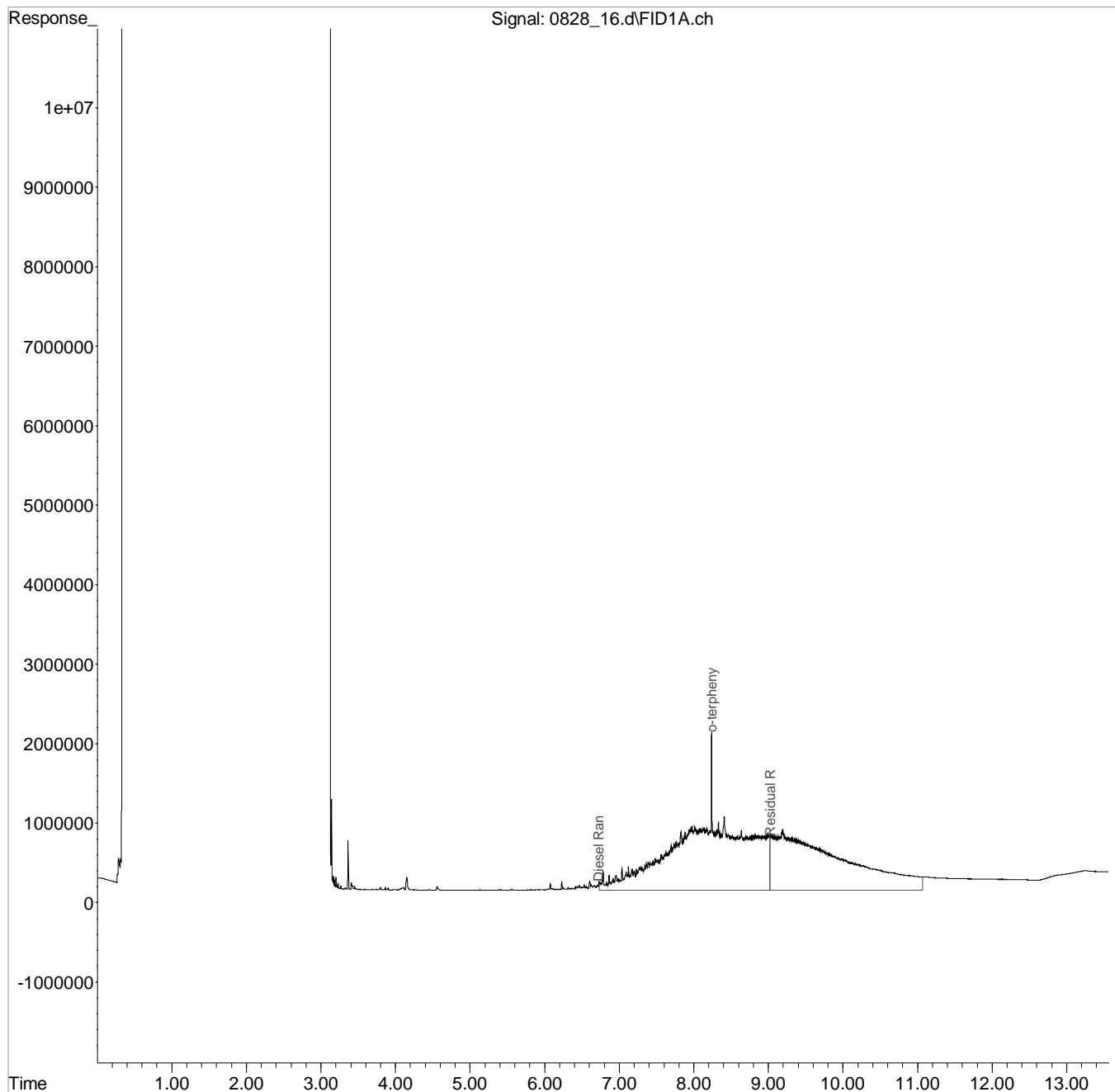
Run as rec'd



Data Path : C:\msdchem\1\data\082819\  
Data File : 0828 16.d  
Signal(s) : FID1A.ch  
Acq On : 28 Aug 2019 3:08 pm  
Operator : 843  
Sample : L1131738-01 1x WG1335026  
Misc : M.I.s on ranges are corrections  
ALS Vial : 13 Sample Multiplier: 1  
InstName : SVGC21

Integration File: events.e  
Quant Time: Aug 28 15:45:26 2019  
Quant Method : C:\msdchem\1\methods\DM21H20S.M  
Quant Title : DROLVI  
QLast Update : Wed Aug 21 10:05:32 2019  
Response via : Initial Calibration  
Integrator: ChemStation

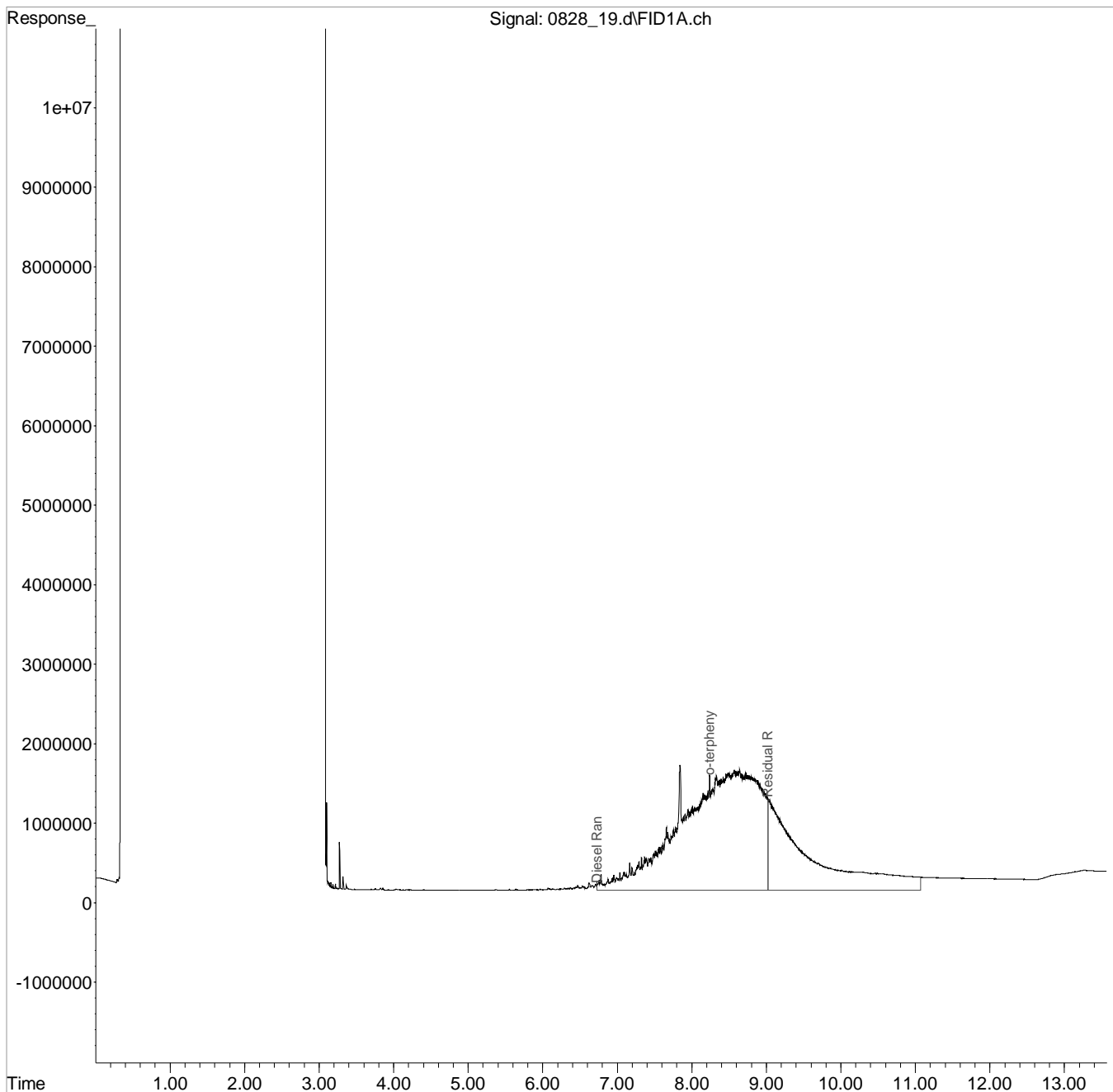
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082819\  
 Data File : 0828 19.d  
 Signal(s) : FID1A.ch  
 Acq On : 28 Aug 2019 4:22 pm  
 Operator : 843  
 Sample : L1131738-02 5x WG1335026  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 14 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: Aug 28 16:45:13 2019  
 Quant Method : C:\msdchem\1\methods\DM21H20S.M  
 Quant Title : DROLVI  
 QLast Update : Wed Aug 21 10:05:32 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

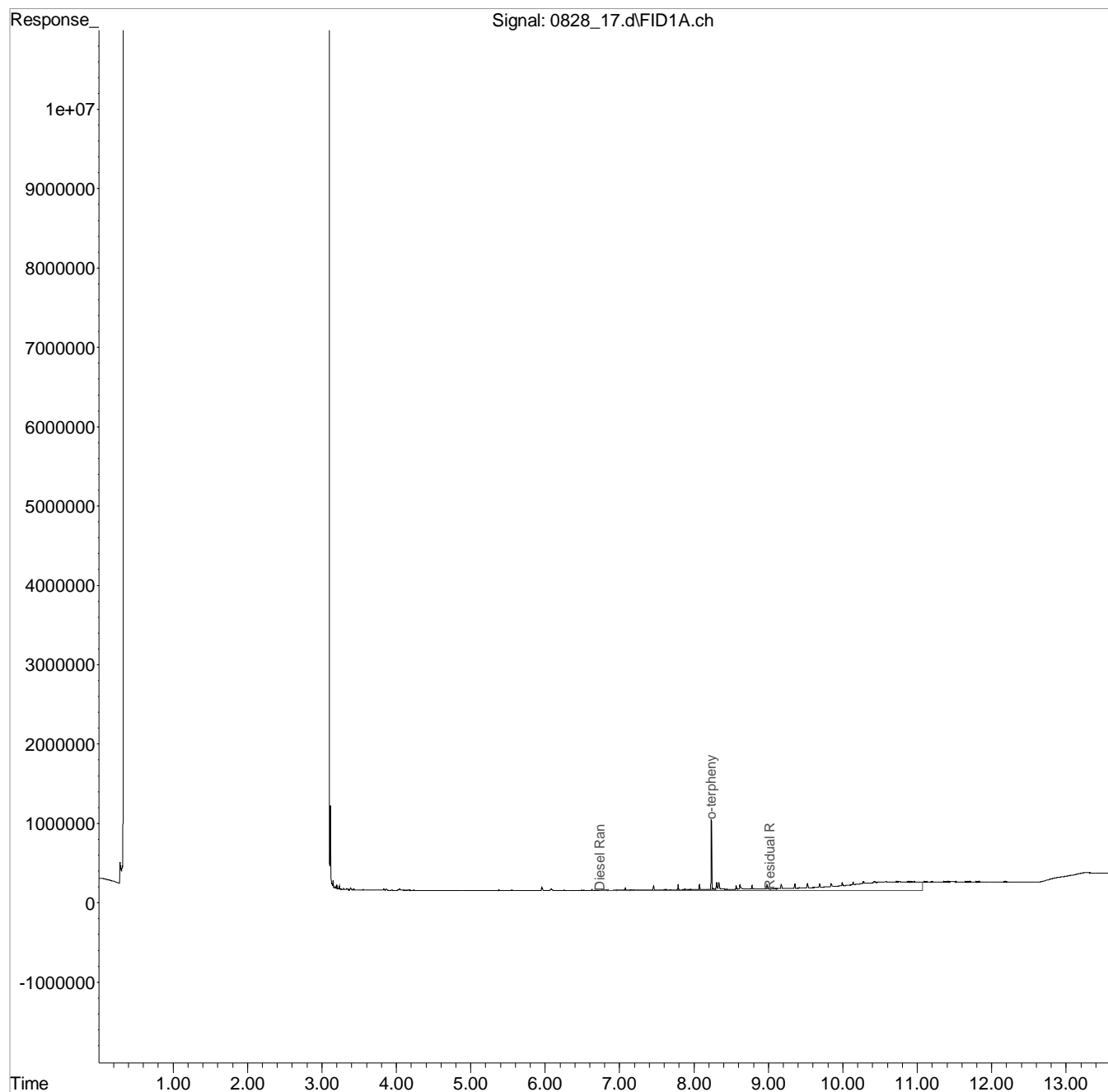
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\082819\  
 Data File : 0828 17.d  
 Signal(s) : FID1A.ch  
 Acq On : 28 Aug 2019 3:35 pm  
 Operator : 843  
 Sample : L1131738-03 1x WG1335026  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 15 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: Aug 28 15:57:20 2019  
 Quant Method : C:\msdchem\1\methods\DM21H20S.M  
 Quant Title : DROLVI  
 QLast Update : Wed Aug 21 10:05:32 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

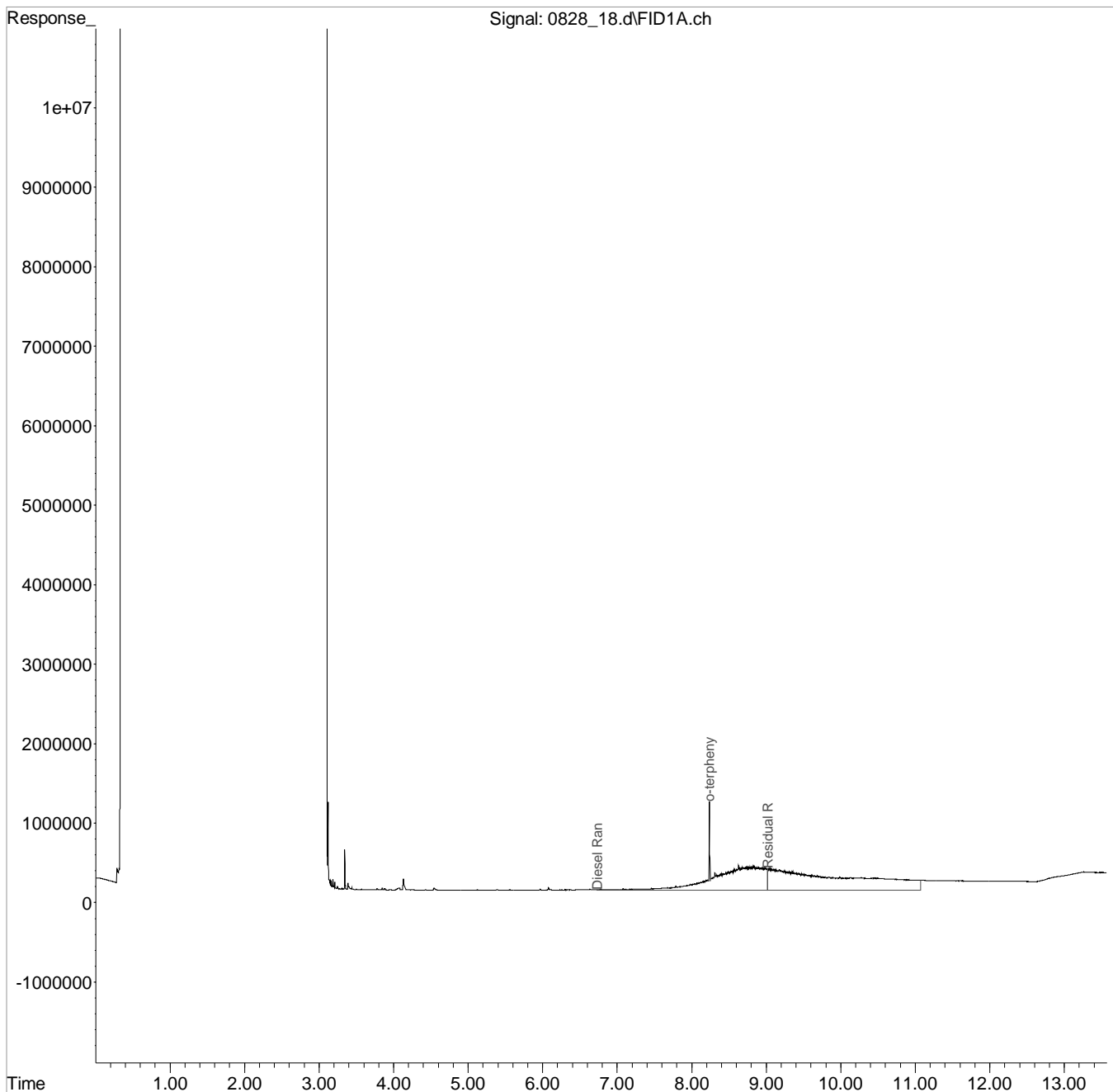
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\082819\  
 Data File : 0828 18.d  
 Signal(s) : FID1A.ch  
 Acq On : 28 Aug 2019 3:58 pm  
 Operator : 843  
 Sample : L1131738-05 1x WG1335026  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 16 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: Aug 28 16:18:33 2019  
 Quant Method : C:\msdchem\1\methods\DM21H20S.M  
 Quant Title : DROLVI  
 QLast Update : Wed Aug 21 10:05:32 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

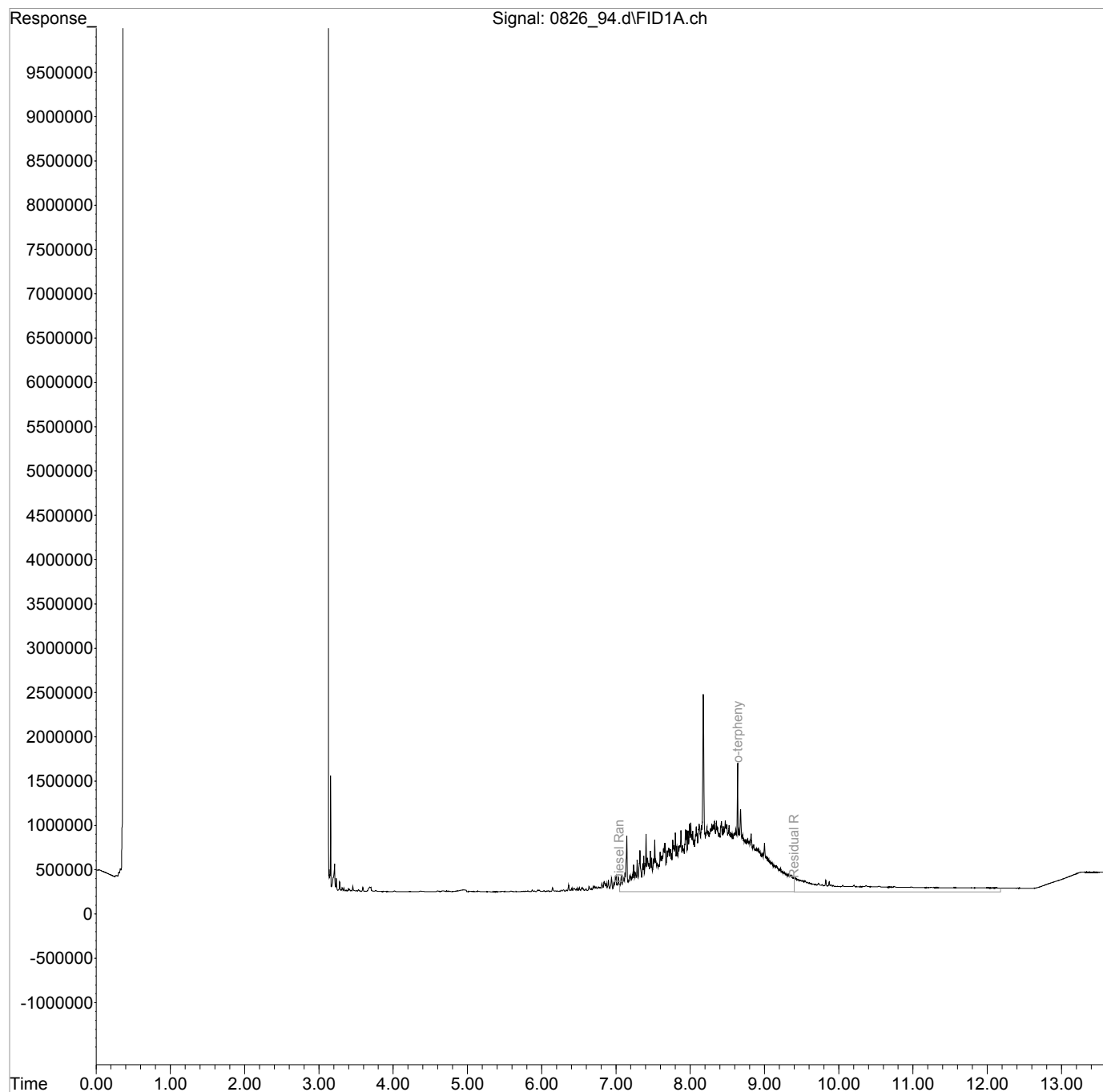
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_94.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 10:04 pm  
Operator : 843  
Sample : L1131738-02 1x WG1335027  
Misc : M.I.s on ranges are corrections  
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 28 10:18:34 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

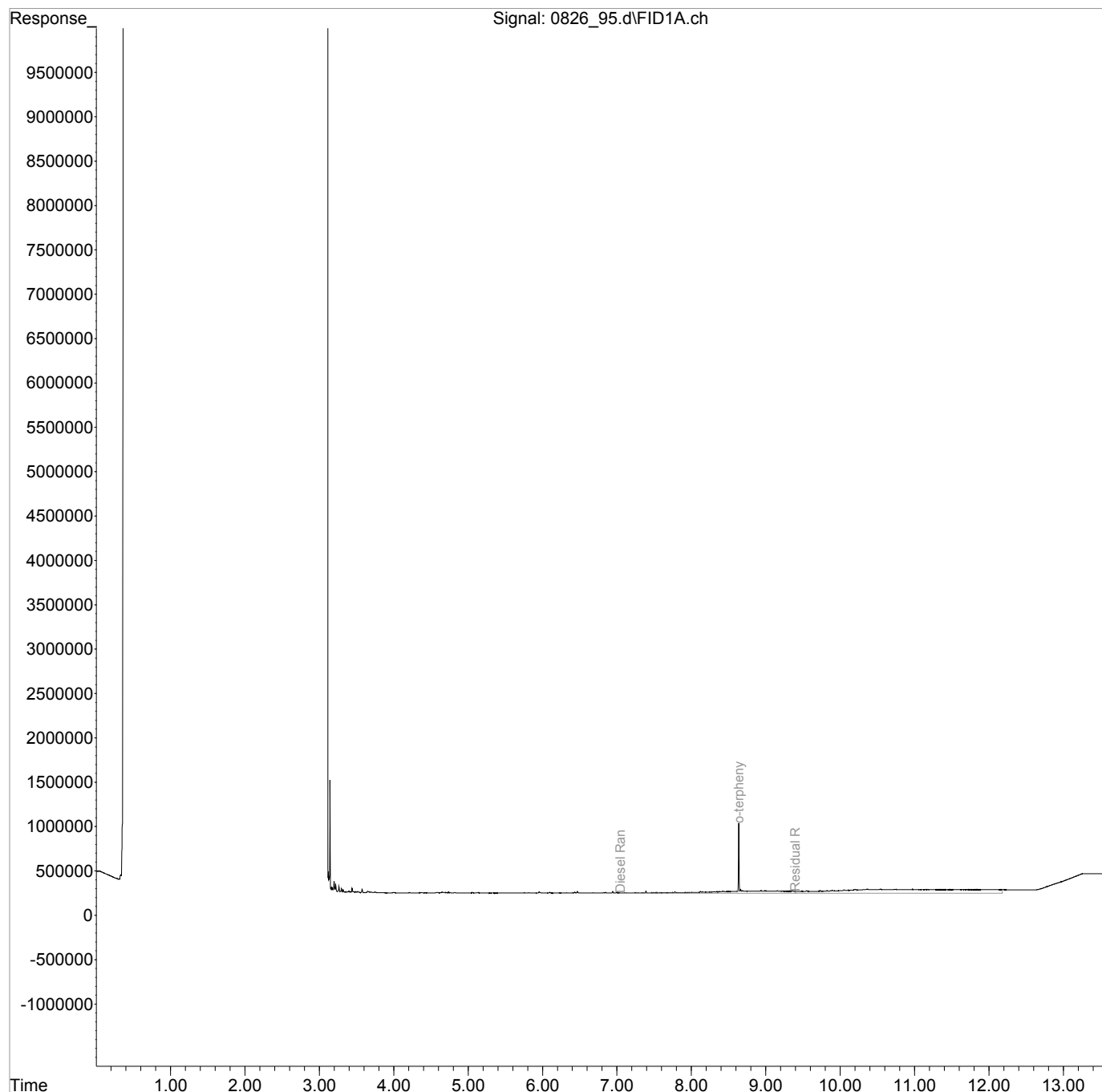
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082619\  
Data File : 0826\_95.d  
Signal(s) : FID1A.ch  
Acq On : 27 Aug 2019 10:24 pm  
Operator : 843  
Sample : L1131738-05 1x WG1335027  
Misc : M.I.s on ranges are corrections  
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 28 10:18:54 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :



## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1132612  
Samples Received: 08/24/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

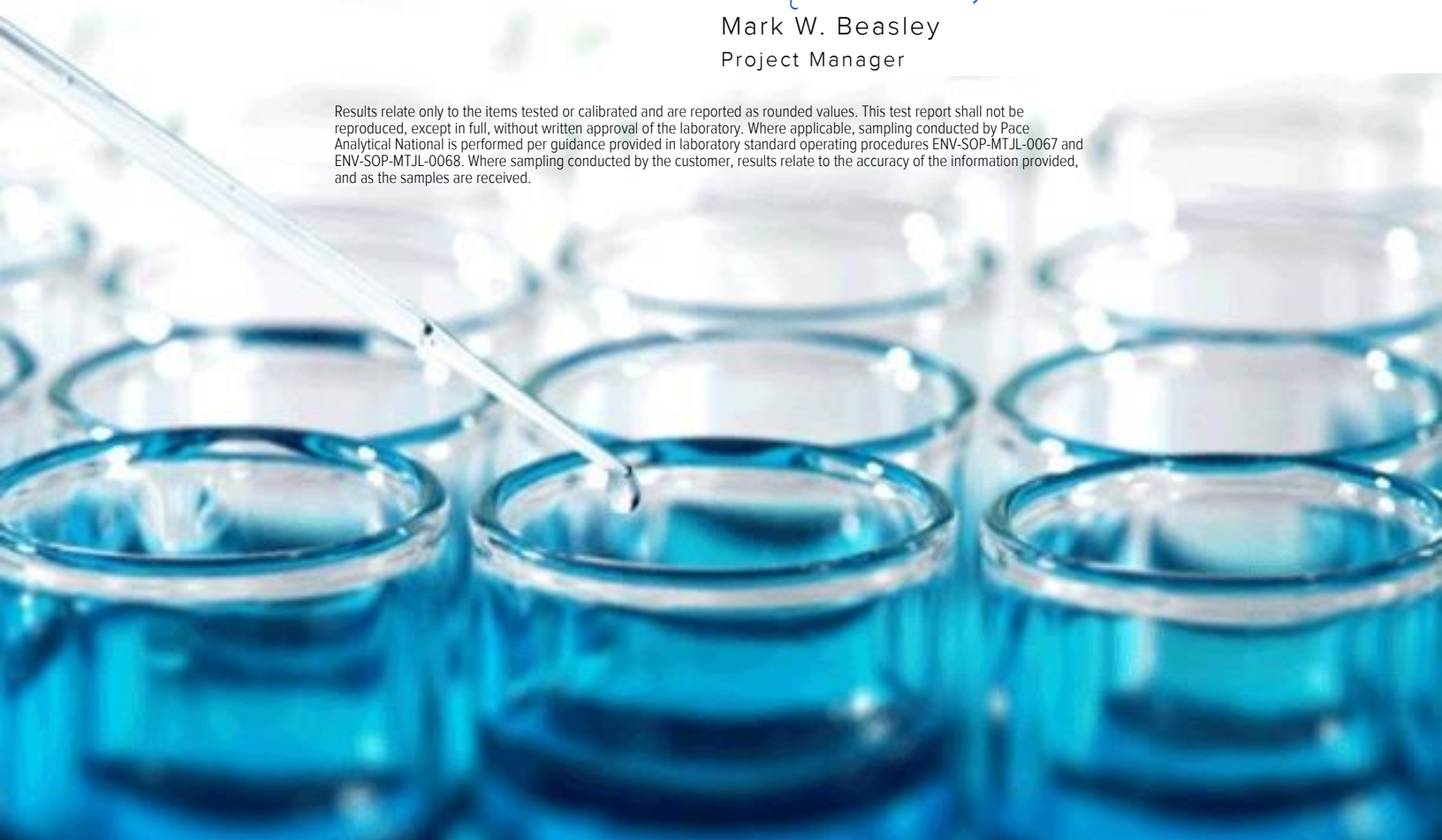
Report To: Katie Teague  
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

Entire Report Reviewed By:



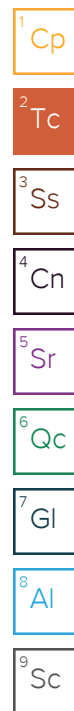
Mark W. Beasley  
Project Manager

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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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# SAMPLE SUMMARY

## WMW-28-20190822 L1132612-01 GW

Collected by  
K. Teague  
Collected date/time  
08/22/19 13:35  
Received date/time  
08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335502	1	08/27/19 16:10	08/27/19 16:10	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335361	1	08/30/19 17:09	08/30/19 17:09	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334786	1	08/26/19 12:47	08/26/19 12:47	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334824	1	08/26/19 23:07	08/26/19 23:07	LDC	Mt. Juliet, TN
Mercury by Method 7470A	WG1334619	1	08/26/19 18:00	08/27/19 10:55	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1334621	1	08/26/19 12:45	08/26/19 21:31	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 11:47	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334779	1	08/26/19 09:28	08/26/19 14:55	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1338950	1	09/03/19 13:37	09/03/19 13:37	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1338754	1	09/02/19 13:57	09/02/19 13:57	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1339598	1	09/04/19 14:00	09/04/19 14:00	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	08/30/19 21:26	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1336569	1	08/28/19 18:00	08/29/19 06:00	DMG	Mt. Juliet, TN

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

## WMW-32-20190822 L1132612-02 GW

Collected by  
K. Teague  
Collected date/time  
08/22/19 10:35  
Received date/time  
08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335502	1	08/27/19 16:13	08/27/19 16:13	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335361	10	08/30/19 17:19	08/30/19 17:19	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334786	1	08/26/19 12:48	08/26/19 12:48	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 12:59	08/26/19 12:59	LDC	Mt. Juliet, TN
Mercury by Method 7470A	WG1334619	1	08/26/19 18:00	08/27/19 10:58	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1334621	1	08/26/19 12:45	08/26/19 21:33	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 11:51	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334779	1	08/26/19 09:28	08/26/19 14:59	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1339137	1	09/03/19 13:48	09/03/19 13:48	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1338950	1	09/03/19 13:39	09/03/19 13:39	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1338754	1	09/02/19 14:18	09/02/19 14:18	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1339598	1	09/04/19 14:41	09/04/19 14:41	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	09/01/19 22:48	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1336569	1	08/28/19 18:00	08/29/19 06:23	DMG	Mt. Juliet, TN

## WMW-19-20190822 L1132612-03 GW

Collected by  
K. Teague  
Collected date/time  
08/22/19 12:15  
Received date/time  
08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335502	1	08/27/19 16:18	08/27/19 16:18	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335361	1	08/30/19 17:21	08/30/19 17:21	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334786	1	08/26/19 12:48	08/26/19 12:48	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 13:29	08/26/19 13:29	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 11:55	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334779	1	08/26/19 09:28	08/26/19 15:02	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1338950	1	09/03/19 13:52	09/03/19 13:52	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1338083	1	08/31/19 05:55	08/31/19 05:55	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	08/30/19 22:07	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1336569	1	08/28/19 18:00	08/29/19 06:47	DMG	Mt. Juliet, TN

# SAMPLE SUMMARY

## TB-06-20190823 L1132612-04 GW

Collected by  
K. Teague  
Collected date/time  
08/23/19 00:00  
Received date/time  
08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1338754	1	09/02/19 14:38	09/02/19 14:38	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1339598	1	09/04/19 15:01	09/04/19 15:01	ACG	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

## DUP-02-20190822 L1132612-05 GW

Collected by  
K. Teague  
Collected date/time  
08/22/19 13:40  
Received date/time  
08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1334619	1	08/26/19 18:00	08/27/19 11:00	ABL	Mt. Juliet, TN
Mercury by Method 7470A	WG1334621	1	08/26/19 12:45	08/26/19 21:35	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 11:58	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334779	1	08/26/19 09:28	08/26/19 15:05	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1338754	1	09/02/19 14:59	09/02/19 14:59	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1339598	1	09/04/19 15:22	09/04/19 15:22	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	08/30/19 22:27	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1336569	1	08/28/19 18:00	08/29/19 07:10	DMG	Mt. Juliet, TN

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/27/2019 16:10	<a href="#">WG1335502</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3750	J6	100	1	08/30/2019 17:09	<a href="#">WG1335361</a>

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	08/26/2019 12:47	<a href="#">WG1334786</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	8640		5000	1	08/26/2019 23:07	<a href="#">WG1334824</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	08/27/2019 10:55	<a href="#">WG1334619</a>
Mercury,Dissolved	ND		0.200	1	08/26/2019 21:31	<a href="#">WG1334621</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	7.25		2.00	1	08/26/2019 14:55	<a href="#">WG1334779</a>
Arsenic,Dissolved	7.62		2.00	1	08/27/2019 11:47	<a href="#">WG1334768</a>
Barium	20.7		5.00	1	08/26/2019 14:55	<a href="#">WG1334779</a>
Barium,Dissolved	21.4		5.00	1	08/27/2019 11:47	<a href="#">WG1334768</a>
Cadmium	ND		1.00	1	08/26/2019 14:55	<a href="#">WG1334779</a>
Cadmium,Dissolved	ND		1.00	1	08/27/2019 11:47	<a href="#">WG1334768</a>
Chromium	4.04		2.00	1	08/26/2019 14:55	<a href="#">WG1334779</a>
Chromium,Dissolved	3.77		2.00	1	08/27/2019 11:47	<a href="#">WG1334768</a>
Iron,Dissolved	ND		100	1	08/27/2019 11:47	<a href="#">WG1334768</a>
Lead	ND		2.00	1	08/26/2019 14:55	<a href="#">WG1334779</a>
Lead,Dissolved	ND		2.00	1	08/27/2019 11:47	<a href="#">WG1334768</a>
Manganese,Dissolved	ND		5.00	1	08/27/2019 11:47	<a href="#">WG1334768</a>
Selenium	ND		2.00	1	08/26/2019 14:55	<a href="#">WG1334779</a>
Selenium,Dissolved	ND	J4	2.00	1	08/27/2019 11:47	<a href="#">WG1334768</a>
Silver	ND		2.00	1	08/26/2019 14:55	<a href="#">WG1334779</a>
Silver,Dissolved	ND		2.00	1	08/27/2019 11:47	<a href="#">WG1334768</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/03/2019 13:37	<a href="#">WG1338950</a>
Ethane	ND		13.0	1	09/03/2019 13:37	<a href="#">WG1338950</a>
Ethene	ND		13.0	1	09/03/2019 13:37	<a href="#">WG1338950</a>



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	09/02/2019 13:57	WG1338754
Acrolein	ND		50.0	1	09/04/2019 14:00	WG1339598
Acrylonitrile	ND		10.0	1	09/02/2019 13:57	WG1338754
Benzene	ND		1.00	1	09/02/2019 13:57	WG1338754
Bromobenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
Bromodichloromethane	ND		1.00	1	09/02/2019 13:57	WG1338754
Bromoform	ND		1.00	1	09/02/2019 13:57	WG1338754
Bromomethane	ND		5.00	1	09/02/2019 13:57	WG1338754
n-Butylbenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
sec-Butylbenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
tert-Butylbenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
Carbon tetrachloride	ND		1.00	1	09/02/2019 13:57	WG1338754
Chlorobenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
Chlorodibromomethane	ND		1.00	1	09/02/2019 13:57	WG1338754
Chloroethane	ND		5.00	1	09/02/2019 13:57	WG1338754
Chloroform	ND		5.00	1	09/02/2019 13:57	WG1338754
Chloromethane	ND		2.50	1	09/02/2019 13:57	WG1338754
2-Chlorotoluene	ND		1.00	1	09/02/2019 13:57	WG1338754
4-Chlorotoluene	ND		1.00	1	09/02/2019 13:57	WG1338754
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2019 13:57	WG1338754
1,2-Dibromoethane	ND		1.00	1	09/02/2019 13:57	WG1338754
Dibromomethane	ND		1.00	1	09/02/2019 13:57	WG1338754
1,2-Dichlorobenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
1,3-Dichlorobenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
1,4-Dichlorobenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
Dichlorodifluoromethane	ND		5.00	1	09/02/2019 13:57	WG1338754
1,1-Dichloroethane	ND		1.00	1	09/02/2019 13:57	WG1338754
1,2-Dichloroethane	ND		1.00	1	09/02/2019 13:57	WG1338754
1,1-Dichloroethene	ND		1.00	1	09/02/2019 13:57	WG1338754
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2019 13:57	WG1338754
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2019 13:57	WG1338754
1,2-Dichloropropane	ND		1.00	1	09/02/2019 13:57	WG1338754
1,1-Dichloropropene	ND		1.00	1	09/02/2019 13:57	WG1338754
1,3-Dichloropropane	ND		1.00	1	09/02/2019 13:57	WG1338754
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2019 13:57	WG1338754
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2019 13:57	WG1338754
2,2-Dichloropropane	ND		1.00	1	09/02/2019 13:57	WG1338754
Di-isopropyl ether	ND		1.00	1	09/02/2019 13:57	WG1338754
Ethylbenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2019 13:57	WG1338754
Isopropylbenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
p-Isopropyltoluene	ND		1.00	1	09/02/2019 13:57	WG1338754
2-Butanone (MEK)	ND		10.0	1	09/02/2019 13:57	WG1338754
Methylene Chloride	ND		5.00	1	09/02/2019 13:57	WG1338754
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2019 13:57	WG1338754
Methyl tert-butyl ether	ND		1.00	1	09/02/2019 13:57	WG1338754
Naphthalene	ND		5.00	1	09/02/2019 13:57	WG1338754
n-Propylbenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
Styrene	ND		1.00	1	09/02/2019 13:57	WG1338754
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2019 13:57	WG1338754
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2019 13:57	WG1338754
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2019 13:57	WG1338754
Tetrachloroethene	ND		1.00	1	09/02/2019 13:57	WG1338754
Toluene	ND		1.00	1	09/02/2019 13:57	WG1338754
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2019 13:57	WG1338754
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2019 13:57	WG1338754

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	
1,1,1-Trichloroethane	ND		1.00	1	09/02/2019 13:57	<a href="#">WG1338754</a>
1,1,2-Trichloroethane	ND		1.00	1	09/02/2019 13:57	<a href="#">WG1338754</a>
Trichloroethene	ND		1.00	1	09/02/2019 13:57	<a href="#">WG1338754</a>
Trichlorofluoromethane	ND		5.00	1	09/02/2019 13:57	<a href="#">WG1338754</a>
1,2,3-Trichloropropane	ND		2.50	1	09/02/2019 13:57	<a href="#">WG1338754</a>
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2019 13:57	<a href="#">WG1338754</a>
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2019 13:57	<a href="#">WG1338754</a>
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2019 13:57	<a href="#">WG1338754</a>
Vinyl chloride	ND		1.00	1	09/02/2019 13:57	<a href="#">WG1338754</a>
o-Xylene	ND		1.00	1	09/02/2019 13:57	<a href="#">WG1338754</a>
m&p-Xylene	ND		2.00	1	09/02/2019 13:57	<a href="#">WG1338754</a>
(S) Toluene-d8	101		80.0-120		09/02/2019 13:57	<a href="#">WG1338754</a>
(S) Toluene-d8	102		80.0-120		09/04/2019 14:00	<a href="#">WG1339598</a>
(S) 4-Bromofluorobenzene	97.3		77.0-126		09/02/2019 13:57	<a href="#">WG1338754</a>
(S) 4-Bromofluorobenzene	98.4		77.0-126		09/04/2019 14:00	<a href="#">WG1339598</a>
(S) 1,2-Dichloroethane-d4	96.5		70.0-130		09/02/2019 13:57	<a href="#">WG1338754</a>
(S) 1,2-Dichloroethane-d4	104		70.0-130		09/04/2019 14:00	<a href="#">WG1339598</a>

- 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	08/30/2019 21:26	<a href="#">WG1336422</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2019 21:26	<a href="#">WG1336422</a>
(S) o-Terphenyl	90.0		52.0-156		08/30/2019 21:26	<a href="#">WG1336422</a>

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	08/29/2019 06:00	<a href="#">WG1336569</a>
Acenaphthene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Acenaphthylene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Chrysene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Fluoranthene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Fluorene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Naphthalene	ND		0.250	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Phenanthrene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
Pyrene	ND		0.0500	1	08/29/2019 06:00	<a href="#">WG1336569</a>
1-Methylnaphthalene	ND		0.250	1	08/29/2019 06:00	<a href="#">WG1336569</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2019 06:00	<a href="#">WG1336569</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2019 06:00	<a href="#">WG1336569</a>
(S) Nitrobenzene-d5	126		31.0-160		08/29/2019 06:00	<a href="#">WG1336569</a>
(S) 2-Fluorobiphenyl	88.4		48.0-148		08/29/2019 06:00	<a href="#">WG1336569</a>
(S) p-Terphenyl-d14	104		37.0-146		08/29/2019 06:00	<a href="#">WG1336569</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/27/2019 16:13	<a href="#">WG1335502</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	15700		1000	10	08/30/2019 17:19	<a href="#">WG1335361</a>

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	08/26/2019 12:48	<a href="#">WG1334786</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	15200		5000	1	08/26/2019 12:59	<a href="#">WG1334826</a>

7 Gl

8 Al

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	08/27/2019 10:58	<a href="#">WG1334619</a>
Mercury,Dissolved	ND		0.200	1	08/26/2019 21:33	<a href="#">WG1334621</a>

9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.99		2.00	1	08/26/2019 14:59	<a href="#">WG1334779</a>
Arsenic,Dissolved	5.36		2.00	1	08/27/2019 11:51	<a href="#">WG1334768</a>
Barium	31.5		5.00	1	08/26/2019 14:59	<a href="#">WG1334779</a>
Barium,Dissolved	29.9		5.00	1	08/27/2019 11:51	<a href="#">WG1334768</a>
Cadmium	ND		1.00	1	08/26/2019 14:59	<a href="#">WG1334779</a>
Cadmium,Dissolved	ND		1.00	1	08/27/2019 11:51	<a href="#">WG1334768</a>
Chromium	4.27		2.00	1	08/26/2019 14:59	<a href="#">WG1334779</a>
Chromium,Dissolved	4.63		2.00	1	08/27/2019 11:51	<a href="#">WG1334768</a>
Iron,Dissolved	ND		100	1	08/27/2019 11:51	<a href="#">WG1334768</a>
Lead	ND		2.00	1	08/26/2019 14:59	<a href="#">WG1334779</a>
Lead,Dissolved	ND		2.00	1	08/27/2019 11:51	<a href="#">WG1334768</a>
Manganese,Dissolved	20.3		5.00	1	08/27/2019 11:51	<a href="#">WG1334768</a>
Selenium	ND		2.00	1	08/26/2019 14:59	<a href="#">WG1334779</a>
Selenium,Dissolved	ND	J4	2.00	1	08/27/2019 11:51	<a href="#">WG1334768</a>
Silver	ND		2.00	1	08/26/2019 14:59	<a href="#">WG1334779</a>
Silver,Dissolved	ND		2.00	1	08/27/2019 11:51	<a href="#">WG1334768</a>

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	09/03/2019 13:48	<a href="#">WG1339137</a>
(S) a, a, a-Trifluorotoluene(FID)	105		78.0-120		09/03/2019 13:48	<a href="#">WG1339137</a>



Collected date/time: 08/22/19 10:35

L1132612

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	09/03/2019 13:39	<a href="#">WG1338950</a>
Ethane	ND		13.0	1	09/03/2019 13:39	<a href="#">WG1338950</a>
Ethene	ND		13.0	1	09/03/2019 13:39	<a href="#">WG1338950</a>

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	09/02/2019 14:18	<a href="#">WG1338754</a>
Acrolein	ND		50.0	1	09/04/2019 14:41	<a href="#">WG1339598</a>
Acrylonitrile	ND		10.0	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Benzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Bromobenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Bromodichloromethane	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Bromoform	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Bromomethane	ND		5.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
n-Butylbenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
sec-Butylbenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
tert-Butylbenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Carbon tetrachloride	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Chlorobenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Chlorodibromomethane	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Chloroethane	ND		5.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Chloroform	ND		5.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Chloromethane	ND		2.50	1	09/02/2019 14:18	<a href="#">WG1338754</a>
2-Chlorotoluene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
4-Chlorotoluene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,2-Dibromoethane	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Dibromomethane	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,2-Dichlorobenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,3-Dichlorobenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,4-Dichlorobenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Dichlorodifluoromethane	ND		5.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,1-Dichloroethane	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,2-Dichloroethane	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,1-Dichloroethene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,2-Dichloropropane	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,1-Dichloropropene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
1,3-Dichloropropane	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
2,2-Dichloropropane	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Di-isopropyl ether	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Ethylbenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Isopropylbenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
p-Isopropyltoluene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
2-Butanone (MEK)	ND		10.0	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Methylene Chloride	ND		5.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Methyl tert-butyl ether	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Naphthalene	ND		5.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
n-Propylbenzene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>
Styrene	ND		1.00	1	09/02/2019 14:18	<a href="#">WG1338754</a>

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
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2019 14:18	WG1338754
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2019 14:18	WG1338754
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2019 14:18	WG1338754
Tetrachloroethene	ND		1.00	1	09/02/2019 14:18	WG1338754
Toluene	ND		1.00	1	09/02/2019 14:18	WG1338754
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2019 14:18	WG1338754
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2019 14:18	WG1338754
1,1,1-Trichloroethane	ND		1.00	1	09/02/2019 14:18	WG1338754
1,1,2-Trichloroethane	ND		1.00	1	09/02/2019 14:18	WG1338754
Trichloroethene	ND		1.00	1	09/02/2019 14:18	WG1338754
Trichlorofluoromethane	ND		5.00	1	09/02/2019 14:18	WG1338754
1,2,3-Trichloropropane	ND		2.50	1	09/02/2019 14:18	WG1338754
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2019 14:18	WG1338754
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2019 14:18	WG1338754
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2019 14:18	WG1338754
Vinyl chloride	ND		1.00	1	09/02/2019 14:18	WG1338754
o-Xylene	ND		1.00	1	09/02/2019 14:18	WG1338754
m&p-Xylene	ND		2.00	1	09/02/2019 14:18	WG1338754
(S) Toluene-d8	105		80.0-120		09/02/2019 14:18	WG1338754
(S) Toluene-d8	106		80.0-120		09/04/2019 14:41	WG1339598
(S) 4-Bromofluorobenzene	100		77.0-126		09/02/2019 14:18	WG1338754
(S) 4-Bromofluorobenzene	97.3		77.0-126		09/04/2019 14:41	WG1339598
(S) 1,2-Dichloroethane-d4	93.5		70.0-130		09/02/2019 14:18	WG1338754
(S) 1,2-Dichloroethane-d4	97.6		70.0-130		09/04/2019 14:41	WG1339598

- 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	09/01/2019 22:48	WG1336422
Residual Range Organics (RRO)	268		250	1	09/01/2019 22:48	WG1336422
(S) o-Terphenyl	94.0		52.0-156		09/01/2019 22:48	WG1336422

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	08/29/2019 06:23	WG1336569
Acenaphthene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Acenaphthylene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Benzo(a)anthracene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Benzo(a)pyrene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Chrysene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Fluoranthene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Fluorene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Naphthalene	ND		0.250	1	08/29/2019 06:23	WG1336569
Phenanthrene	ND		0.0500	1	08/29/2019 06:23	WG1336569
Pyrene	ND		0.0500	1	08/29/2019 06:23	WG1336569
1-Methylnaphthalene	ND		0.250	1	08/29/2019 06:23	WG1336569
2-Methylnaphthalene	ND		0.250	1	08/29/2019 06:23	WG1336569
2-Chloronaphthalene	ND		0.250	1	08/29/2019 06:23	WG1336569
(S) Nitrobenzene-d5	126		31.0-160		08/29/2019 06:23	WG1336569



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	87.4		48.0-148		08/29/2019 06:23	<a href="#">WG1336569</a>
(S) p-Terphenyl-d14	101		37.0-146		08/29/2019 06:23	<a href="#">WG1336569</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/27/2019 16:18	<a href="#">WG1335502</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1460		100	1	08/30/2019 17:21	<a href="#">WG1335361</a>

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	08/26/2019 12:48	<a href="#">WG1334786</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	6880		5000	1	08/26/2019 13:29	<a href="#">WG1334826</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/27/2019 11:55	<a href="#">WG1334768</a>
Lead	ND		2.00	1	08/26/2019 15:02	<a href="#">WG1334779</a>
Lead,Dissolved	ND		2.00	1	08/27/2019 11:55	<a href="#">WG1334768</a>
Manganese,Dissolved	12.9		5.00	1	08/27/2019 11:55	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	32.1		10.0	1	09/03/2019 13:52	<a href="#">WG1338950</a>
Ethane	ND		13.0	1	09/03/2019 13:52	<a href="#">WG1338950</a>
Ethene	ND		13.0	1	09/03/2019 13:52	<a href="#">WG1338950</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	08/31/2019 05:55	<a href="#">WG1338083</a>
Toluene	ND		1.00	1	08/31/2019 05:55	<a href="#">WG1338083</a>
Ethylbenzene	ND		1.00	1	08/31/2019 05:55	<a href="#">WG1338083</a>
o-Xylene	ND		1.00	1	08/31/2019 05:55	<a href="#">WG1338083</a>
m&p-Xylene	ND		2.00	1	08/31/2019 05:55	<a href="#">WG1338083</a>
(S) Toluene-d8	95.6		80.0-120		08/31/2019 05:55	<a href="#">WG1338083</a>
(S) 4-Bromofluorobenzene	94.7		77.0-126		08/31/2019 05:55	<a href="#">WG1338083</a>
(S) 1,2-Dichloroethane-d4	115		70.0-130		08/31/2019 05:55	<a href="#">WG1338083</a>

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	08/30/2019 22:07	<a href="#">WG1336422</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2019 22:07	<a href="#">WG1336422</a>
(S) o-Terphenyl	89.5		52.0-156		08/30/2019 22:07	<a href="#">WG1336422</a>



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	08/29/2019 06:47	<a href="#">WG1336569</a>
Acenaphthene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Acenaphthylene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Chrysene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Fluoranthene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Fluorene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Naphthalene	ND		0.250	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Phenanthrene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
Pyrene	ND		0.0500	1	08/29/2019 06:47	<a href="#">WG1336569</a>
1-Methylnaphthalene	ND		0.250	1	08/29/2019 06:47	<a href="#">WG1336569</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2019 06:47	<a href="#">WG1336569</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2019 06:47	<a href="#">WG1336569</a>
(S) Nitrobenzene-d5	130		31.0-160		08/29/2019 06:47	<a href="#">WG1336569</a>
(S) 2-Fluorobiphenyl	85.3		48.0-148		08/29/2019 06:47	<a href="#">WG1336569</a>
(S) p-Terphenyl-d14	103		37.0-146		08/29/2019 06:47	<a href="#">WG1336569</a>

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	09/02/2019 14:38	WG1338754
Acrolein	ND		50.0	1	09/04/2019 15:01	WG1339598
Acrylonitrile	ND		10.0	1	09/02/2019 14:38	WG1338754
Benzene	ND		1.00	1	09/02/2019 14:38	WG1338754
Bromobenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
Bromodichloromethane	ND		1.00	1	09/02/2019 14:38	WG1338754
Bromoform	ND		1.00	1	09/02/2019 14:38	WG1338754
Bromomethane	ND		5.00	1	09/02/2019 14:38	WG1338754
n-Butylbenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
sec-Butylbenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
tert-Butylbenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
Carbon tetrachloride	ND		1.00	1	09/02/2019 14:38	WG1338754
Chlorobenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
Chlorodibromomethane	ND		1.00	1	09/02/2019 14:38	WG1338754
Chloroethane	ND		5.00	1	09/02/2019 14:38	WG1338754
Chloroform	ND		5.00	1	09/02/2019 14:38	WG1338754
Chloromethane	ND		2.50	1	09/02/2019 14:38	WG1338754
2-Chlorotoluene	ND		1.00	1	09/02/2019 14:38	WG1338754
4-Chlorotoluene	ND		1.00	1	09/02/2019 14:38	WG1338754
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2019 14:38	WG1338754
1,2-Dibromoethane	ND		1.00	1	09/02/2019 14:38	WG1338754
Dibromomethane	ND		1.00	1	09/02/2019 14:38	WG1338754
1,2-Dichlorobenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
1,3-Dichlorobenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
1,4-Dichlorobenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
Dichlorodifluoromethane	ND		5.00	1	09/02/2019 14:38	WG1338754
1,1-Dichloroethane	ND		1.00	1	09/02/2019 14:38	WG1338754
1,2-Dichloroethane	ND		1.00	1	09/02/2019 14:38	WG1338754
1,1-Dichloroethene	ND		1.00	1	09/02/2019 14:38	WG1338754
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2019 14:38	WG1338754
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2019 14:38	WG1338754
1,2-Dichloropropane	ND		1.00	1	09/02/2019 14:38	WG1338754
1,1-Dichloropropene	ND		1.00	1	09/02/2019 14:38	WG1338754
1,3-Dichloropropane	ND		1.00	1	09/02/2019 14:38	WG1338754
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2019 14:38	WG1338754
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2019 14:38	WG1338754
2,2-Dichloropropane	ND		1.00	1	09/02/2019 14:38	WG1338754
Di-isopropyl ether	ND		1.00	1	09/02/2019 14:38	WG1338754
Ethylbenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2019 14:38	WG1338754
Isopropylbenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
p-Isopropyltoluene	ND		1.00	1	09/02/2019 14:38	WG1338754
2-Butanone (MEK)	ND		10.0	1	09/02/2019 14:38	WG1338754
Methylene Chloride	ND		5.00	1	09/02/2019 14:38	WG1338754
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2019 14:38	WG1338754
Methyl tert-butyl ether	ND		1.00	1	09/02/2019 14:38	WG1338754
Naphthalene	ND		5.00	1	09/02/2019 14:38	WG1338754
n-Propylbenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
Styrene	ND		1.00	1	09/02/2019 14:38	WG1338754
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2019 14:38	WG1338754
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2019 14:38	WG1338754
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2019 14:38	WG1338754
Tetrachloroethene	ND		1.00	1	09/02/2019 14:38	WG1338754
Toluene	ND		1.00	1	09/02/2019 14:38	WG1338754
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2019 14:38	WG1338754
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2019 14:38	WG1338754

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	09/02/2019 14:38	<a href="#">WG1338754</a>
1,1,2-Trichloroethane	ND		1.00	1	09/02/2019 14:38	<a href="#">WG1338754</a>
Trichloroethene	ND		1.00	1	09/02/2019 14:38	<a href="#">WG1338754</a>
Trichlorofluoromethane	ND		5.00	1	09/02/2019 14:38	<a href="#">WG1338754</a>
1,2,3-Trichloropropane	ND		2.50	1	09/02/2019 14:38	<a href="#">WG1338754</a>
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2019 14:38	<a href="#">WG1338754</a>
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2019 14:38	<a href="#">WG1338754</a>
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2019 14:38	<a href="#">WG1338754</a>
Vinyl chloride	ND		1.00	1	09/02/2019 14:38	<a href="#">WG1338754</a>
o-Xylene	ND		1.00	1	09/02/2019 14:38	<a href="#">WG1338754</a>
m&p-Xylene	ND		2.00	1	09/02/2019 14:38	<a href="#">WG1338754</a>
(S) Toluene-d8	99.2		80.0-120		09/02/2019 14:38	<a href="#">WG1338754</a>
(S) Toluene-d8	103		80.0-120		09/04/2019 15:01	<a href="#">WG1339598</a>
(S) 4-Bromofluorobenzene	101		77.0-126		09/02/2019 14:38	<a href="#">WG1338754</a>
(S) 4-Bromofluorobenzene	101		77.0-126		09/04/2019 15:01	<a href="#">WG1339598</a>
(S) 1,2-Dichloroethane-d4	95.0		70.0-130		09/02/2019 14:38	<a href="#">WG1338754</a>
(S) 1,2-Dichloroethane-d4	102		70.0-130		09/04/2019 15:01	<a href="#">WG1339598</a>

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	08/27/2019 11:00	<a href="#">WG1334619</a>
Mercury,Dissolved	ND		0.200	1	08/26/2019 21:35	<a href="#">WG1334621</a>

1 Cp

2 Tc

3 Ss

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	7.19		2.00	1	08/26/2019 15:05	<a href="#">WG1334779</a>
Arsenic,Dissolved	7.10		2.00	1	08/27/2019 11:58	<a href="#">WG1334768</a>
Barium	20.9		5.00	1	08/26/2019 15:05	<a href="#">WG1334779</a>
Barium,Dissolved	21.5		5.00	1	08/27/2019 11:58	<a href="#">WG1334768</a>
Cadmium	ND		1.00	1	08/26/2019 15:05	<a href="#">WG1334779</a>
Cadmium,Dissolved	ND		1.00	1	08/27/2019 11:58	<a href="#">WG1334768</a>
Chromium	4.28		2.00	1	08/26/2019 15:05	<a href="#">WG1334779</a>
Chromium,Dissolved	3.81		2.00	1	08/27/2019 11:58	<a href="#">WG1334768</a>
Lead	ND		2.00	1	08/26/2019 15:05	<a href="#">WG1334779</a>
Lead,Dissolved	ND		2.00	1	08/27/2019 11:58	<a href="#">WG1334768</a>
Selenium	ND		2.00	1	08/26/2019 15:05	<a href="#">WG1334779</a>
Selenium,Dissolved	ND	<u>J4</u>	2.00	1	08/27/2019 11:58	<a href="#">WG1334768</a>
Silver	ND		2.00	1	08/26/2019 15:05	<a href="#">WG1334779</a>
Silver,Dissolved	ND		2.00	1	08/27/2019 11:58	<a href="#">WG1334768</a>

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	09/02/2019 14:59	<a href="#">WG1338754</a>
Acrolein	ND		50.0	1	09/04/2019 15:22	<a href="#">WG1339598</a>
Acrylonitrile	ND		10.0	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Benzene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Bromobenzene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Bromodichloromethane	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Bromoform	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Bromomethane	ND		5.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
n-Butylbenzene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
sec-Butylbenzene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
tert-Butylbenzene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Carbon tetrachloride	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Chlorobenzene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Chlorodibromomethane	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Chloroethane	ND		5.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Chloroform	ND		5.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Chloromethane	ND		2.50	1	09/02/2019 14:59	<a href="#">WG1338754</a>
2-Chlorotoluene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
4-Chlorotoluene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
1,2-Dibromoethane	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Dibromomethane	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
1,2-Dichlorobenzene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
1,3-Dichlorobenzene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
1,4-Dichlorobenzene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
Dichlorodifluoromethane	ND		5.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
1,1-Dichloroethane	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
1,2-Dichloroethane	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
1,1-Dichloroethene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
cis-1,2-Dichloroethene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>
trans-1,2-Dichloroethene	ND		1.00	1	09/02/2019 14:59	<a href="#">WG1338754</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dichloropropane	ND		1.00	1	09/02/2019 14:59	WG1338754
1,1-Dichloropropene	ND		1.00	1	09/02/2019 14:59	WG1338754
1,3-Dichloropropane	ND		1.00	1	09/02/2019 14:59	WG1338754
cis-1,3-Dichloropropene	ND		1.00	1	09/02/2019 14:59	WG1338754
trans-1,3-Dichloropropene	ND		1.00	1	09/02/2019 14:59	WG1338754
2,2-Dichloropropane	ND		1.00	1	09/02/2019 14:59	WG1338754
Di-isopropyl ether	ND		1.00	1	09/02/2019 14:59	WG1338754
Ethylbenzene	ND		1.00	1	09/02/2019 14:59	WG1338754
Hexachloro-1,3-butadiene	ND		1.00	1	09/02/2019 14:59	WG1338754
Isopropylbenzene	ND		1.00	1	09/02/2019 14:59	WG1338754
p-Isopropyltoluene	ND		1.00	1	09/02/2019 14:59	WG1338754
2-Butanone (MEK)	ND		10.0	1	09/02/2019 14:59	WG1338754
Methylene Chloride	ND		5.00	1	09/02/2019 14:59	WG1338754
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/02/2019 14:59	WG1338754
Methyl tert-butyl ether	ND		1.00	1	09/02/2019 14:59	WG1338754
Naphthalene	ND		5.00	1	09/02/2019 14:59	WG1338754
n-Propylbenzene	ND		1.00	1	09/02/2019 14:59	WG1338754
Styrene	ND		1.00	1	09/02/2019 14:59	WG1338754
1,1,1,2-Tetrachloroethane	ND		1.00	1	09/02/2019 14:59	WG1338754
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/02/2019 14:59	WG1338754
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/02/2019 14:59	WG1338754
Tetrachloroethene	ND		1.00	1	09/02/2019 14:59	WG1338754
Toluene	ND		1.00	1	09/02/2019 14:59	WG1338754
1,2,3-Trichlorobenzene	ND		1.00	1	09/02/2019 14:59	WG1338754
1,2,4-Trichlorobenzene	ND		1.00	1	09/02/2019 14:59	WG1338754
1,1,1-Trichloroethane	ND		1.00	1	09/02/2019 14:59	WG1338754
1,1,2-Trichloroethane	ND		1.00	1	09/02/2019 14:59	WG1338754
Trichloroethene	ND		1.00	1	09/02/2019 14:59	WG1338754
Trichlorofluoromethane	ND		5.00	1	09/02/2019 14:59	WG1338754
1,2,3-Trichloropropane	ND		2.50	1	09/02/2019 14:59	WG1338754
1,2,4-Trimethylbenzene	ND		1.00	1	09/02/2019 14:59	WG1338754
1,2,3-Trimethylbenzene	ND		1.00	1	09/02/2019 14:59	WG1338754
1,3,5-Trimethylbenzene	ND		1.00	1	09/02/2019 14:59	WG1338754
Vinyl chloride	ND		1.00	1	09/02/2019 14:59	WG1338754
o-Xylene	ND		1.00	1	09/02/2019 14:59	WG1338754
m&p-Xylene	ND		2.00	1	09/02/2019 14:59	WG1338754
(S) Toluene-d8	97.2		80.0-120		09/02/2019 14:59	WG1338754
(S) Toluene-d8	102		80.0-120		09/04/2019 15:22	WG1339598
(S) 4-Bromofluorobenzene	100		77.0-126		09/02/2019 14:59	WG1338754
(S) 4-Bromofluorobenzene	98.8		77.0-126		09/04/2019 15:22	WG1339598
(S) 1,2-Dichloroethane-d4	95.0		70.0-130		09/02/2019 14:59	WG1338754
(S) 1,2-Dichloroethane-d4	103		70.0-130		09/04/2019 15:22	WG1339598

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	08/30/2019 22:27	WG1336422
Residual Range Organics (RRO)	ND		250	1	08/30/2019 22:27	WG1336422
(S) o-Terphenyl	94.0		52.0-156		08/30/2019 22:27	WG1336422





Collected date/time: 08/22/19 13:40

L1132612

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	08/29/2019 07:10	<a href="#">WG1336569</a>
Acenaphthene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Acenaphthylene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Chrysene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Fluoranthene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Fluorene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Naphthalene	ND		0.250	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Phenanthrene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
Pyrene	ND		0.0500	1	08/29/2019 07:10	<a href="#">WG1336569</a>
1-Methylnaphthalene	ND		0.250	1	08/29/2019 07:10	<a href="#">WG1336569</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2019 07:10	<a href="#">WG1336569</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2019 07:10	<a href="#">WG1336569</a>
(S) Nitrobenzene-d5	119		31.0-160		08/29/2019 07:10	<a href="#">WG1336569</a>
(S) 2-Fluorobiphenyl	82.6		48.0-148		08/29/2019 07:10	<a href="#">WG1336569</a>
(S) p-Terphenyl-d14	105		37.0-146		08/29/2019 07:10	<a href="#">WG1336569</a>

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



Method Blank (MB)

(MB) R3444770-1 08/27/19 16:04

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

L1132612-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132612-01 08/27/19 16:10 • (DUP) R3444770-3 08/27/19 16:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1133018-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1133018-02 08/27/19 16:39 • (DUP) R3444770-6 08/27/19 16:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3444770-2 08/27/19 16:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	6850	91.3	90.0-110	

L1132612-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132612-02 08/27/19 16:13 • (MS) R3444770-4 08/27/19 16:15 • (MSD) R3444770-5 08/27/19 16:17

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	4650	4630	93.0	92.5	1	90.0-110			0.539	10

L1133018-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1133018-03 08/27/19 16:47 • (MS) R3444770-7 08/27/19 16:48

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4620	92.5	1	90.0-110	



Method Blank (MB)

(MB) R3446152-1 08/30/19 16:58

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

L1132487-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132487-01 08/30/19 17:06 • (DUP) R3446152-3 08/30/19 17:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	123	0.000	1	32.1	P1	20

L1133830-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1133830-03 08/30/19 17:43 • (DUP) R3446152-6 08/30/19 17:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	141	157	1	10.7		20

Laboratory Control Sample (LCS)

(LCS) R3446152-2 08/30/19 16:59

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	3790	94.8	90.0-110	

L1132612-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132612-01 08/30/19 17:09 • (MS) R3446152-4 08/30/19 17:10 • (MSD) R3446152-5 08/30/19 17:12

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	3750	5780	5980	81.2	89.2	1	90.0-110	E J6	E J6	3.42	20

L1133830-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1133830-04 08/30/19 17:46 • (MS) R3446152-7 08/30/19 17:48

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	142	2690	102	1	90.0-110	



Method Blank (MB)

(MB) R3444205-1 08/26/19 12:40

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

L1132532-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1132532-06 08/26/19 12:46 • (DUP) R3444205-5 08/26/19 12:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

L1131889-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131889-01 08/26/19 12:54 • (DUP) R3444205-6 08/26/19 12:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3444205-2 08/26/19 12:41

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	499	99.8	85.0-115	

L1132015-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132015-06 08/26/19 12:42 • (MS) R3444205-3 08/26/19 12:43 • (MSD) R3444205-4 08/26/19 12:43

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	U	994	969	99.4	96.9	1	80.0-120			2.55	20



Method Blank (MB)

(MB) R3444477-1 08/26/19 14:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1132563-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1132563-07 08/26/19 16:09 • (DUP) R3444477-3 08/26/19 16:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	86800	86700	1	0.133		15

L1132586-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132586-01 08/26/19 19:31 • (DUP) R3444477-4 08/26/19 19:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	60600	60400	1	0.232		15

Laboratory Control Sample (LCS)

(LCS) R3444477-2 08/26/19 15:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	39700	99.2	80.0-120	

L1132586-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132586-01 08/26/19 19:31 • (MS) R3444477-5 08/26/19 20:00 • (MSD) R3444477-6 08/26/19 20:14

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	60600	99100	98900	77.0	76.7	1	80.0-120	J6	J6	0.128	15

L1132586-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132586-06 08/26/19 21:41 • (MS) R3444477-7 08/26/19 21:55 • (MSD) R3444477-8 08/26/19 22:10

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	8790	51600	51800	85.6	86.1	1	80.0-120			0.464	15



Method Blank (MB)

(MB) R3444439-1 08/26/19 12:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1132612-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1132612-02 08/26/19 12:59 • (DUP) R3444439-3 08/26/19 13:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	15200	15100	1	0.508		15

L1132615-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1132615-08 08/26/19 16:13 • (DUP) R3444439-5 08/26/19 16:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	5190	5200	1	0.166		15

Laboratory Control Sample (LCS)

(LCS) R3444439-2 08/26/19 12:25

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	40200	101	80.0-120	

L1132612-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1132612-03 08/26/19 13:29 • (MS) R3444439-4 08/26/19 13:43

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	6880	55900	98.0	1	80.0-120	

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/26/19 19:12 • (MS) R3444439-6 08/26/19 19:27 • (MSD) R3444439-7 08/26/19 19:41

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	77300	123000	123000	91.0	91.3	1	80.0-120	E	E	0.114	15



Method Blank (MB)

(MB) R3444531-1 08/27/19 10:08

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) R3444531-2 08/27/19 10:10 • (LCSD) R3444531-3 08/27/19 10:13

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	2.85	2.82	95.1	94.0	80.0-120			1.21	20

7 Gl

8 Al

L1132410-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132410-01 08/27/19 10:16 • (MS) R3444531-4 08/27/19 10:18 • (MSD) R3444531-5 08/27/19 10:26

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 %
Mercury	3.00	ND	2.76	2.63	92.1	87.8	1	75.0-125			4.75	20

9 Sc



Method Blank (MB)

(MB) R3444399-1 08/26/19 20:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.0490	0.200

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3444399-2 08/26/19 20:45 • (LCSD) R3444399-3 08/26/19 20:47

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	3.15	3.10	105	103	80.0-120			1.60	20

<sup>7</sup> Gl

<sup>8</sup> Al

L1132725-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132725-02 08/26/19 20:49 • (MS) R3444399-4 08/26/19 20:51 • (MSD) R3444399-5 08/26/19 21:00

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	U	3.23	3.19	108	106	1	75.0-125			1.25	20

<sup>9</sup> Sc





Method Blank (MB)

(MB) R3444512-1 08/27/19 10:48

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
Iron,Dissolved	U		15.0	100
Lead,Dissolved	U		0.240	2.00
Manganese,Dissolved	U		0.250	5.00
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3444512-2 08/27/19 10:52 • (LCSD) R3444512-3 08/27/19 10:56

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	52.0	51.5	104	103	80.0-120			0.827	20
Barium,Dissolved	50.0	48.4	50.8	96.9	102	80.0-120			4.80	20
Cadmium,Dissolved	50.0	49.8	54.3	99.7	109	80.0-120			8.48	20
Chromium,Dissolved	50.0	54.3	53.2	109	106	80.0-120			2.18	20
Iron,Dissolved	5000	5330	5290	107	106	80.0-120			0.820	20
Lead,Dissolved	50.0	49.2	50.9	98.3	102	80.0-120			3.49	20
Manganese,Dissolved	50.0	52.6	52.2	105	104	80.0-120			0.739	20
Selenium,Dissolved	50.0	62.9	60.2	126	120	80.0-120	J4		4.31	20
Silver,Dissolved	50.0	53.0	55.4	106	111	80.0-120			4.42	20

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 10:59 • (MS) R3444512-5 08/27/19 11:07 • (MSD) R3444512-6 08/27/19 11:10

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	4.68	55.0	55.0	101	101	1	75.0-125			0.0467	20
Barium,Dissolved	50.0	25.1	76.2	75.7	102	101	1	75.0-125			0.639	20
Cadmium,Dissolved	50.0	ND	53.9	52.3	108	105	1	75.0-125			2.89	20
Chromium,Dissolved	50.0	ND	52.7	52.7	102	102	1	75.0-125			0.0172	20
Iron,Dissolved	5000	ND	5060	5090	101	102	1	75.0-125			0.685	20
Lead,Dissolved	50.0	ND	49.9	49.0	99.7	98.0	1	75.0-125			1.77	20
Manganese,Dissolved	50.0	5.23	54.9	54.3	99.4	98.2	1	75.0-125			1.12	20
Selenium,Dissolved	50.0	ND	67.4	63.7	133	125	1	75.0-125	J5		5.65	20
Silver,Dissolved	50.0	ND	53.6	54.7	107	109	1	75.0-125			1.98	20



Method Blank (MB)

(MB) R3444324-1 08/26/19 14:02

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3444324-2 08/26/19 14:05 • (LCSD) R3444324-3 08/26/19 14:09

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	%	%	%			%	%
Arsenic	50.0	49.7	49.0	99.3	98.0	80.0-120			1.33	20
Barium	50.0	47.7	47.8	95.4	95.6	80.0-120			0.203	20
Cadmium	50.0	51.7	51.0	103	102	80.0-120			1.38	20
Chromium	50.0	51.0	50.3	102	101	80.0-120			1.44	20
Lead	50.0	51.4	49.5	103	98.9	80.0-120			3.92	20
Selenium	50.0	55.7	55.6	111	111	80.0-120			0.176	20
Silver	50.0	50.7	50.6	101	101	80.0-120			0.167	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1132552-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132552-01 08/26/19 14:12 • (MS) R3444324-5 08/26/19 14:19 • (MSD) R3444324-6 08/26/19 14:22

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	1.08	49.6	49.9	97.0	97.6	1	75.0-125			0.555	20
Barium	50.0	1.35	51.2	51.2	99.7	99.6	1	75.0-125			0.0863	20
Cadmium	50.0	0.235	52.3	51.6	104	103	1	75.0-125			1.41	20
Chromium	50.0	2.03	49.5	49.7	94.9	95.3	1	75.0-125			0.425	20
Lead	50.0	1.17	49.5	50.6	96.6	98.8	1	75.0-125			2.24	20
Selenium	50.0	0.664	56.3	54.7	111	108	1	75.0-125			3.01	20
Silver	50.0	U	49.6	50.6	99.2	101	1	75.0-125			1.98	20



Method Blank (MB)

(MB) R3446824-2 09/03/19 12:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	39.1	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	105			78.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3446824-1 09/03/19 12:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	6150	112	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			107	78.0-120	



Method Blank (MB)

(MB) R3446799-1 09/03/19 12:13

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

L1132516-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132516-01 09/03/19 12:48 • (DUP) R3446799-2 09/03/19 14:22

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

L1134643-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1134643-01 09/03/19 15:08 • (DUP) R3446799-3 09/03/19 15:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	59.6	55.7	1	6.76		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3446799-4 09/03/19 15:16 • (LCSD) R3446799-5 09/03/19 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	%	%	%			%	%
Methane	67.8	73.7	65.8	109	97.1	85.0-115			11.2	20
Ethane	129	123	113	95.5	87.3	85.0-115			8.96	20
Ethene	127	121	111	95.7	87.4	85.0-115			9.04	20



Method Blank (MB)

(MB) R3446390-3 08/30/19 21:47

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	96.3			80.0-120
(S) 4-Bromofluorobenzene	96.7			77.0-126
(S) 1,2-Dichloroethane-d4	112			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3446390-1 08/30/19 20:38 • (LCSD) R3446390-2 08/30/19 21:01

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	%	%	%			%	%
Benzene	25.0	22.8	23.6	91.1	94.6	70.0-123			3.72	20
Ethylbenzene	25.0	26.1	26.7	104	107	79.0-123			2.30	20
o-Xylene	25.0	26.2	27.2	105	109	80.0-122			3.65	20
m&p-Xylenes	50.0	51.6	54.3	103	109	80.0-122			4.98	20
Toluene	25.0	22.8	23.9	91.3	95.5	79.0-120			4.50	20
(S) Toluene-d8				95.3	97.6	80.0-120				
(S) 4-Bromofluorobenzene				99.5	101	77.0-126				
(S) 1,2-Dichloroethane-d4				117	118	70.0-130				



Method Blank (MB)

(MB) R3446687-2 09/02/19 10:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	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
Isopropylbenzene	U		0.326	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3446687-2 09/02/19 10:25

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	0.462	J	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) 4-Bromofluorobenzene	99.4			77.0-126
(S) 1,2-Dichloroethane-d4	99.7			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3446687-1 09/02/19 09:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Acetone	125	121	97.1	19.0-160	
Acrylonitrile	125	104	83.6	55.0-149	
Benzene	25.0	21.2	84.7	70.0-123	
Bromobenzene	25.0	21.8	87.4	73.0-121	



Laboratory Control Sample (LCS)

(LCS) R3446687-1 09/02/19 09:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromodichloromethane	25.0	22.6	90.3	75.0-120	
Bromoform	25.0	24.1	96.2	68.0-132	
Bromomethane	25.0	20.9	83.6	10.0-160	
n-Butylbenzene	25.0	22.9	91.7	73.0-125	
sec-Butylbenzene	25.0	22.7	90.9	75.0-125	
tert-Butylbenzene	25.0	22.1	88.4	76.0-124	
Carbon tetrachloride	25.0	20.7	82.9	68.0-126	
Chlorobenzene	25.0	22.5	90.0	80.0-121	
Chlorodibromomethane	25.0	23.1	92.5	77.0-125	
Chloroethane	25.0	22.5	90.1	47.0-150	
Chloroform	25.0	21.7	86.7	73.0-120	
Chloromethane	25.0	21.4	85.6	41.0-142	
2-Chlorotoluene	25.0	24.2	96.6	76.0-123	
4-Chlorotoluene	25.0	22.0	88.1	75.0-122	
1,2-Dibromo-3-Chloropropane	25.0	23.6	94.5	58.0-134	
1,2-Dibromoethane	25.0	21.2	84.8	80.0-122	
Dibromomethane	25.0	21.9	87.6	80.0-120	
1,2-Dichlorobenzene	25.0	22.7	90.6	79.0-121	
1,3-Dichlorobenzene	25.0	20.8	83.3	79.0-120	
1,4-Dichlorobenzene	25.0	23.7	94.7	79.0-120	
Dichlorodifluoromethane	25.0	24.2	96.6	51.0-149	
1,1-Dichloroethane	25.0	21.4	85.8	70.0-126	
1,2-Dichloroethane	25.0	21.3	85.1	70.0-128	
1,1-Dichloroethene	25.0	22.0	88.0	71.0-124	
cis-1,2-Dichloroethene	25.0	21.6	86.3	73.0-120	
trans-1,2-Dichloroethene	25.0	22.0	88.2	73.0-120	
1,2-Dichloropropane	25.0	21.5	86.1	77.0-125	
1,1-Dichloropropene	25.0	22.5	90.1	74.0-126	
1,3-Dichloropropane	25.0	22.2	88.8	80.0-120	
cis-1,3-Dichloropropene	25.0	21.6	86.3	80.0-123	
trans-1,3-Dichloropropene	25.0	21.3	85.3	78.0-124	
2,2-Dichloropropane	25.0	21.7	86.9	58.0-130	
Di-isopropyl ether	25.0	21.1	84.4	58.0-138	
Ethylbenzene	25.0	23.4	93.5	79.0-123	
Hexachloro-1,3-butadiene	25.0	21.7	86.8	54.0-138	
Isopropylbenzene	25.0	24.1	96.5	76.0-127	
p-Isopropyltoluene	25.0	24.5	98.0	76.0-125	
2-Butanone (MEK)	125	104	83.5	44.0-160	
Methylene Chloride	25.0	21.7	86.8	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	107	85.8	68.0-142	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Laboratory Control Sample (LCS)

(LCS) R3446687-1 09/02/19 09:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methyl tert-butyl ether	25.0	20.4	81.5	68.0-125	
Naphthalene	25.0	22.8	91.3	54.0-135	
n-Propylbenzene	25.0	22.6	90.5	77.0-124	
Styrene	25.0	22.7	90.9	73.0-130	
1,1,1,2-Tetrachloroethane	25.0	23.1	92.4	75.0-125	
1,1,2,2-Tetrachloroethane	25.0	23.5	94.1	65.0-130	
Tetrachloroethene	25.0	23.7	95.0	72.0-132	
Toluene	25.0	22.2	88.9	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	21.9	87.6	69.0-132	
1,2,3-Trichlorobenzene	25.0	23.3	93.3	50.0-138	
1,2,4-Trichlorobenzene	25.0	23.0	92.0	57.0-137	
1,1,1-Trichloroethane	25.0	22.3	89.1	73.0-124	
1,1,2-Trichloroethane	25.0	22.8	91.3	80.0-120	
Trichloroethene	25.0	21.5	86.1	78.0-124	
Trichlorofluoromethane	25.0	23.0	91.9	59.0-147	
1,2,3-Trichloropropane	25.0	21.5	86.0	73.0-130	
1,2,3-Trimethylbenzene	25.0	24.3	97.1	77.0-120	
1,2,4-Trimethylbenzene	25.0	23.5	94.1	76.0-121	
1,3,5-Trimethylbenzene	25.0	26.1	104	76.0-122	
Vinyl chloride	25.0	21.9	87.8	67.0-131	
o-Xylene	25.0	22.5	89.8	80.0-122	
m&p-Xylenes	50.0	44.2	88.5	80.0-122	
(S) Toluene-d8			101	80.0-120	
(S) 4-Bromofluorobenzene			87.7	77.0-126	
(S) 1,2-Dichloroethane-d4			101	70.0-130	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3447237-3 09/04/19 12:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acrolein	U		8.87	50.0
(S) Toluene-d8	103			80.0-120
(S) 4-Bromofluorobenzene	100			77.0-126
(S) 1,2-Dichloroethane-d4	102			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3447237-1 09/04/19 11:02

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Acrolein	125	148	119	10.0-160	
(S) Toluene-d8			102	80.0-120	
(S) 4-Bromofluorobenzene			101	77.0-126	
(S) 1,2-Dichloroethane-d4			109	70.0-130	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3446144-1 08/30/19 10:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
<i>(S) o-Terphenyl</i>	97.5			52.0-156

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

(LCS) R3446144-2 08/30/19 11:10 • (LCSD) R3446144-3 08/30/19 11:30

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)	1500	1670	1680	111	112	50.0-150			0.597	20
<i>(S) o-Terphenyl</i>				99.5	99.0	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) R3445584-2 08/29/19 04:05

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	0.00316	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	0.0101	J	0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	114			31.0-160
(S) 2-Fluorobiphenyl	80.0			48.0-148
(S) p-Terphenyl-d14	103			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)

(LCS) R3445584-1 08/29/19 03:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Anthracene	2.00	1.71	85.5	67.0-150	
Acenaphthene	2.00	1.77	88.5	65.0-138	
Acenaphthylene	2.00	1.79	89.5	66.0-140	
Benzo(a)anthracene	2.00	1.75	87.5	61.0-140	
Benzo(a)pyrene	2.00	1.66	83.0	60.0-143	
Benzo(b)fluoranthene	2.00	1.78	89.0	58.0-141	
Benzo(g,h,i)perylene	2.00	1.85	92.5	52.0-153	
Benzo(k)fluoranthene	2.00	1.60	80.0	58.0-148	
Chrysene	2.00	1.68	84.0	64.0-144	
Dibenz(a,h)anthracene	2.00	1.79	89.5	52.0-155	
Fluoranthene	2.00	1.67	83.5	69.0-153	



Laboratory Control Sample (LCS)

(LCS) R3445584-1 08/29/19 03:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	2.00	1.68	84.0	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.95	97.5	54.0-153	
Naphthalene	2.00	1.47	73.5	61.0-137	
Phenanthrene	2.00	1.82	91.0	62.0-137	
Pyrene	2.00	1.70	85.0	60.0-142	
1-Methylnaphthalene	2.00	1.58	79.0	66.0-142	
2-Methylnaphthalene	2.00	1.48	74.0	62.0-136	
2-Chloronaphthalene	2.00	1.67	83.5	64.0-140	
(S) Nitrobenzene-d5			118	31.0-160	
(S) 2-Fluorobiphenyl			73.0	48.0-148	
(S) p-Terphenyl-d14			100	37.0-146	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/29/19 11:46 • (MS) R3445584-3 08/29/19 12:09 • (MSD) R3445584-4 08/29/19 12:31

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	1.90	ND	1.55	1.63	81.6	85.8	1	56.0-156			5.03	20
Acenaphthene	1.90	ND	1.71	1.78	90.0	93.7	1	44.0-153			4.01	20
Acenaphthylene	1.90	ND	1.77	1.83	93.2	96.3	1	53.0-150			3.33	20
Benzo(a)anthracene	1.90	ND	1.64	1.67	86.3	87.9	1	47.0-151			1.81	20
Benzo(a)pyrene	1.90	ND	1.48	1.59	77.9	83.7	1	45.0-146			7.17	20
Benzo(b)fluoranthene	1.90	ND	1.55	1.53	81.4	80.4	1	43.0-142			1.30	20
Benzo(g,h,i)perylene	1.90	ND	1.70	1.61	89.5	84.7	1	40.0-147			5.44	20
Benzo(k)fluoranthene	1.90	ND	1.48	1.56	77.9	82.1	1	43.0-148			5.26	21
Chrysene	1.90	ND	1.56	1.63	82.1	85.8	1	50.0-148			4.39	20
Dibenz(a,h)anthracene	1.90	ND	1.63	1.54	85.8	81.1	1	37.0-151			5.68	20
Fluoranthene	1.90	ND	1.59	1.63	83.7	85.8	1	56.0-157			2.48	20
Fluorene	1.90	ND	1.57	1.61	82.6	84.7	1	48.0-148			2.52	20
Indeno(1,2,3-cd)pyrene	1.90	ND	1.70	1.70	89.5	89.5	1	41.0-148			0.000	20
Naphthalene	1.90	ND	1.48	1.49	76.8	77.3	1	10.0-160			0.673	20
Phenanthrene	1.90	ND	1.73	1.74	91.1	91.6	1	47.0-147			0.576	20
Pyrene	1.90	ND	1.66	1.65	87.4	86.8	1	51.0-148			0.604	20
1-Methylnaphthalene	1.90	ND	1.52	1.57	80.0	82.6	1	21.0-160			3.24	20
2-Methylnaphthalene	1.90	ND	1.45	1.51	76.3	79.5	1	31.0-160			4.05	20
2-Chloronaphthalene	1.90	ND	1.76	1.74	92.6	91.6	1	52.0-148			1.14	20
(S) Nitrobenzene-d5					129	127		31.0-160				
(S) 2-Fluorobiphenyl					83.7	88.4		48.0-148				
(S) p-Terphenyl-d14					97.9	101		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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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).
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.
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.



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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

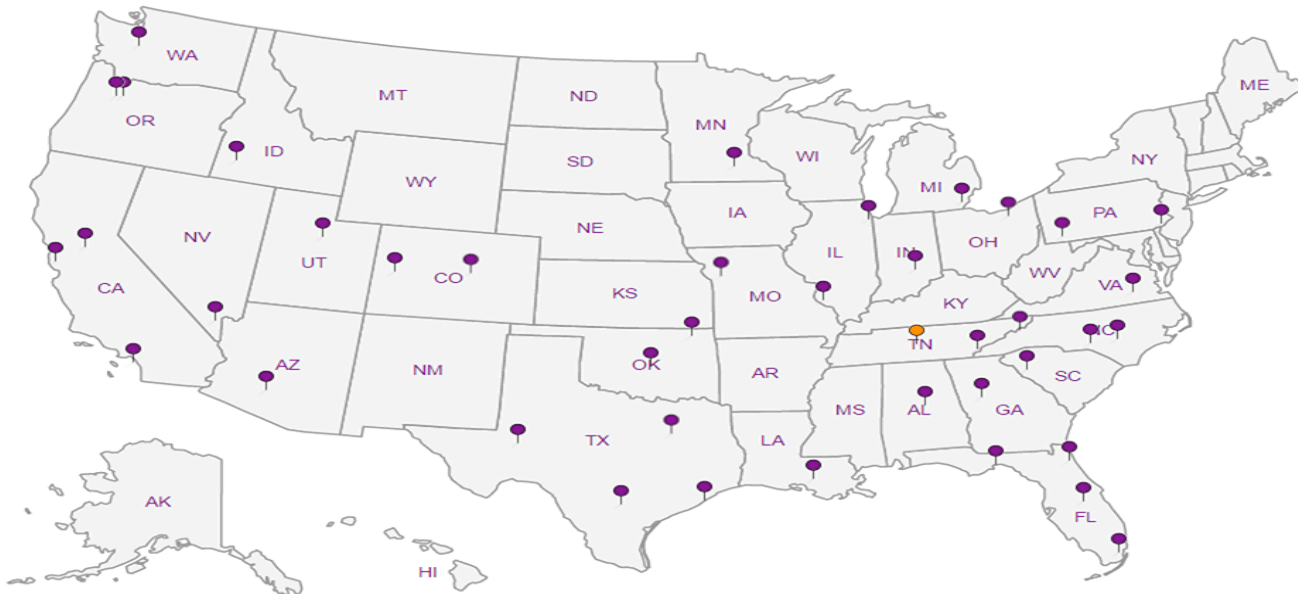
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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



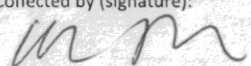
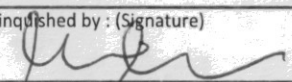
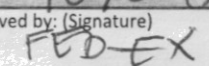
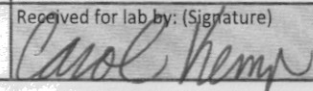
7 Gl

8 Al

9 Sc



2

<b>Kennedy/Jenks Con-BNSF Region 1</b> 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001				Billing Information: <b>Accounts Payable</b> 32001 32nd Avenue South, Ste 100 Federal Way, WA 98001				Analysis / Container / Preservative Pres Chk <u>CL</u> <u>CL</u> <u>CL</u>										Chain of Custody Page <u>1</u> of <u>2</u>					
				Report to: <b>Katie Teague</b>				Email To: <a href="mailto:KatieTeague@kennedyjenks.com">KatieTeague@kennedyjenks.com</a> ; <a href="mailto:RyanHultgren@kennedyjenks.com">RyanHultgren@kennedyjenks.com</a> ; <small>State/Country/Client/Institution/Website/Contract</small>				 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 										L# <u>1132612</u> <b>G195</b>	
Project Description: <b>BNSF - Wishram Railyard, WA</b>				City/State Collected: <u>Wishram, WA</u>				Diss M6020RCRA8 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										Acctnum: <b>BNSF1KEN</b> Template: <b>T149555</b> Prelogin: <b>P723325</b> TSR: <b>134 - Mark W. Beasley</b> PB: <u>8-7-19</u>					
Phone: <b>253-835-6400</b> Fax:		Client Project # <b>1996120*00</b>		Lab Project # <b>BNSF1KEN-WISHRAM</b>														Shipped Via: <b>FedEX Ground</b>					
Collected by (print): <u>K. Teague</u>		Site/Facility ID #		P.O. #														Remarks Sample # (lab only)					
Collected by (signature): 		<b>Rush?</b> (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					
Immediately Packed on Ice N <u>  </u> Y <u>X</u>																		No. of Cntrs					
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time																		
WMW-28-20190822	Grab	GW	—	8/22/19	1335	15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	See pg 2	-01	
WMW-32-20190822	↓	GW	↓	↓	1035	17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	↓	02	
WMW-19-20190822	↓	GW	↓	↓	1215	15		X	X	X	X	X	X	X	X	X	X	X	X	X	↓	03	
TB-06-20190823	—	GW	—	8/23/19	—	1															↓	04	
DVP-02-20190822	Grab	GW	—	8/22/19	1340	9	X				X		X								↓	05	
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		GW																					
		GW																					
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Remarks: <b>RAD SCREEN: &lt;0.5 mR/hr</b> Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier										Tracking # <u>1070 0201 3011</u> pH _____ Temp _____ Flow _____ Other _____										<b>Sample Receipt Checklist</b> COC Seal Present/Intact: <input 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: <u>8/23/19</u>		Time: <u>11:00</u>		Received by: (Signature) 				Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No HCl / MeOH TBR				Temp: <u>ASPC</u> Bottles Received: <u>56</u> <u>0.21, 1203</u>		If preservation required by Login: Date/Time							
Relinquished by: (Signature)		Date:		Time:		Received for lab by: (Signature) 				Date: <u>8/24/19</u> Time: <u>8:45</u>				Hold:		Condition: NCF / <u>OK</u>							



# 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:  
**Katie Teague**

Email To: [KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com);  
[RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com);

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

City/State  
Collected: **Wishram, WA**

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

Client Project #  
**1996120\*00**

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

No.  
of  
Cntrs

Total As 6020 250mlHDPE-HNO3  
Total M6020RCRA8 250mlHDPE-HNO3  
Total Pb 6020 250mlHDPE-HNO3  
V8260BTEXC 40mlAmb-HCl  
V8260C 40mlAmb-HCl  
Dissolved Pb 6020

L# **1132612**

Table #

Acctnum: **BNSF1KEN**

Template: **T149555**

Prelogin: **P723325**

TSR: **134 - Mark W. Beasley**

PB: **8-7-196m**

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl	Dissolved Pb 6020	Remarks	Sample # (lab only)
WMW-28-20190822	Grab	GW	—	8/22/19	1335	15	X			X				-01
WMW-32-20190822	↓	GW	↓		1035	17	X			X				02
WMW-19-20190822	↓	GW	↓		1215	15		X	X			X		03
TB-06-20190823	—	GW	↓	8/23/19	—	1				X				04
DUP-02-20190822	Grab	GW	—	8/22/19	1340	9	X			X				05
		GW												
		GW												
		GW												
		GW												
		GW												

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

### Remarks:

RAD SCREEN: <0.5 mR/hr  
pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **1070 0701 3011**

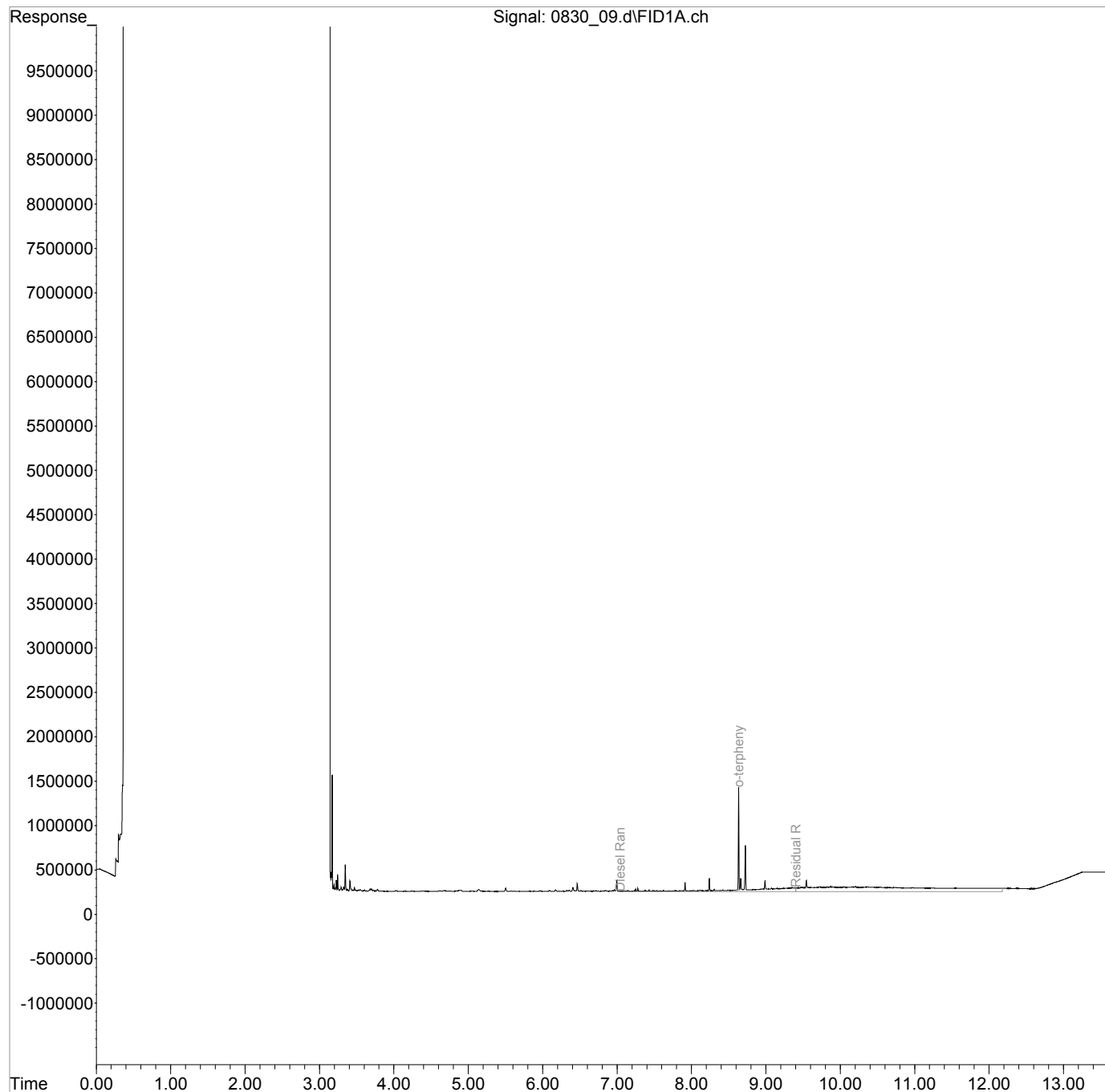
Sample Receipt Checklist	
COC Seal Present/Intact:	<input checked="" type="checkbox"/> NP Y <input type="checkbox"/> N
COC Signed/Accurate:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Correct 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) <i>[Signature]</i>	Date: <b>8/23/19</b>	Time: <b>11:00</b>	Received by: (Signature) <b>FED-EX</b>	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: <b>16°C</b> Bottles Received:	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <b>8/21/19</b> Time: <b>2:45</b>	Hold: Condition: <b>NCF / 08</b>

Data Path : C:\msdchem\1\data\083019\  
Data File : 0830\_09.d  
Signal(s) : FID1A.ch  
Acq On : 30 Aug 2019 9:26 pm  
Operator : 773  
Sample : L1132612-01 1x WG1336422  
Misc : M.I.s on ranges are corrections  
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 31 16:16:57 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

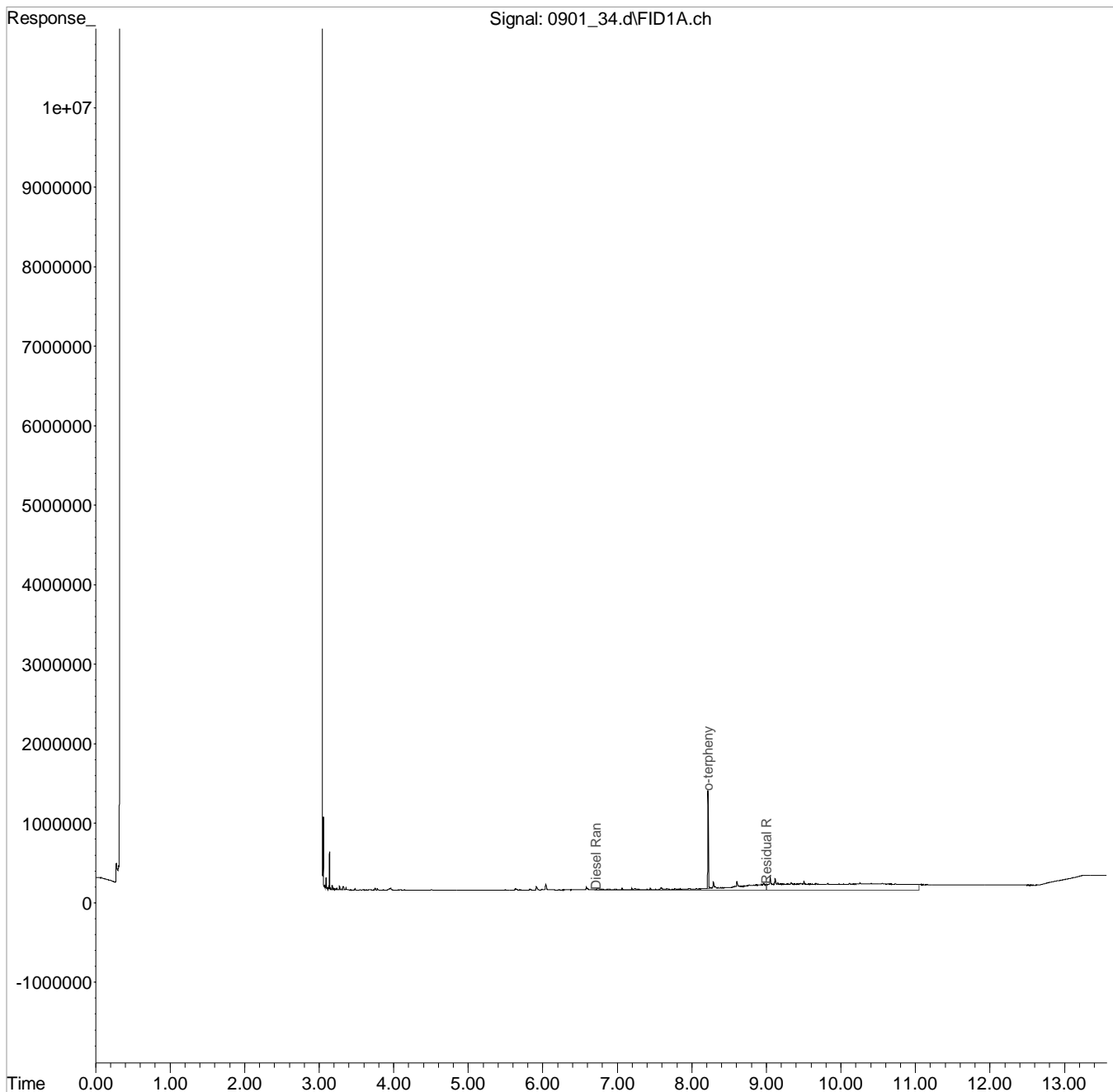
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\090119\  
 Data File : 0901 34.d  
 Signal(s) : FID1A.ch  
 Acq On : 1 Sep 2019 10:48 pm  
 Operator : 843  
 Sample : L1132612-02 1x WG1336422  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 34 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: Sep 02 10:09:01 2019  
 Quant Method : C:\msdchem\1\methods\DM21H30S.M  
 Quant Title : DROLVI  
 QLast Update : Fri Aug 30 15:46:39 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

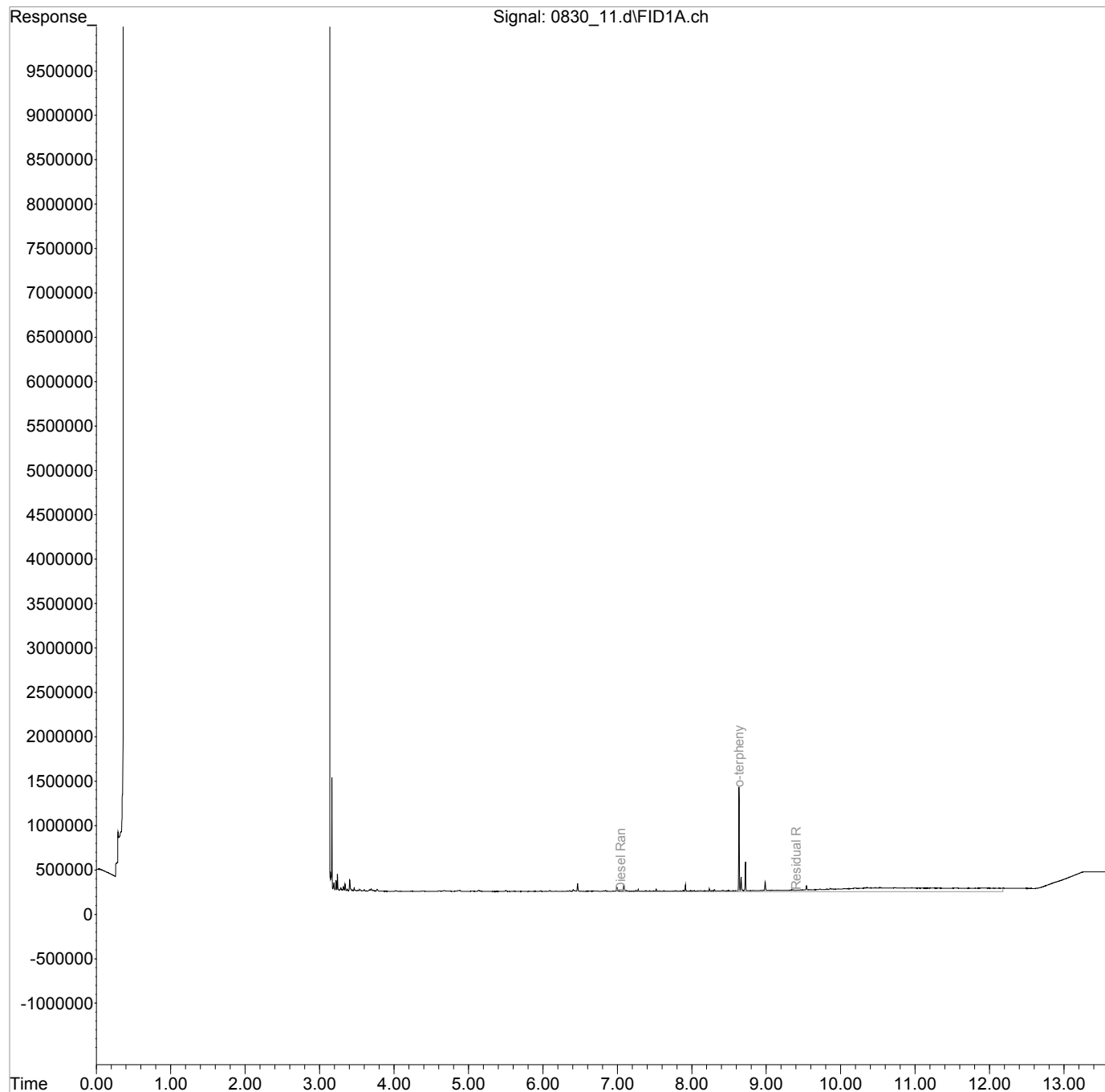
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\083019\  
Data File : 0830\_11.d  
Signal(s) : FID1A.ch  
Acq On : 30 Aug 2019 10:07 pm  
Operator : 773  
Sample : L1132612-03 1x WG1336422  
Misc : M.I.s on ranges are corrections  
ALS Vial : 8 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 31 16:17:46 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

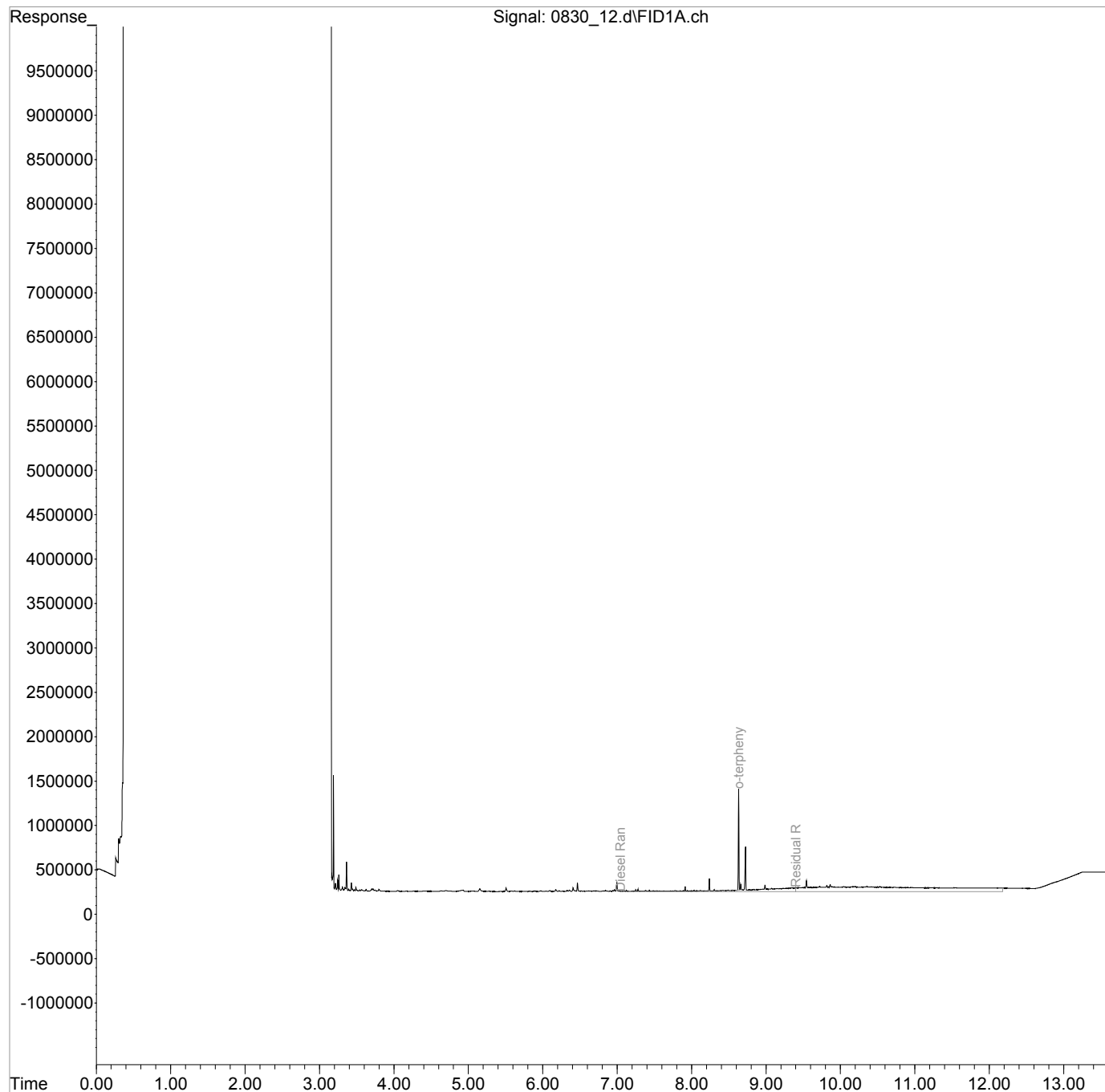
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\083019\  
Data File : 0830\_12.d  
Signal(s) : FID1A.ch  
Acq On : 30 Aug 2019 10:27 pm  
Operator : 773  
Sample : L1132612-05 1x WG1336422  
Misc : M.I.s on ranges are corrections  
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 31 16:18:08 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :



## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1132628  
Samples Received: 08/24/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

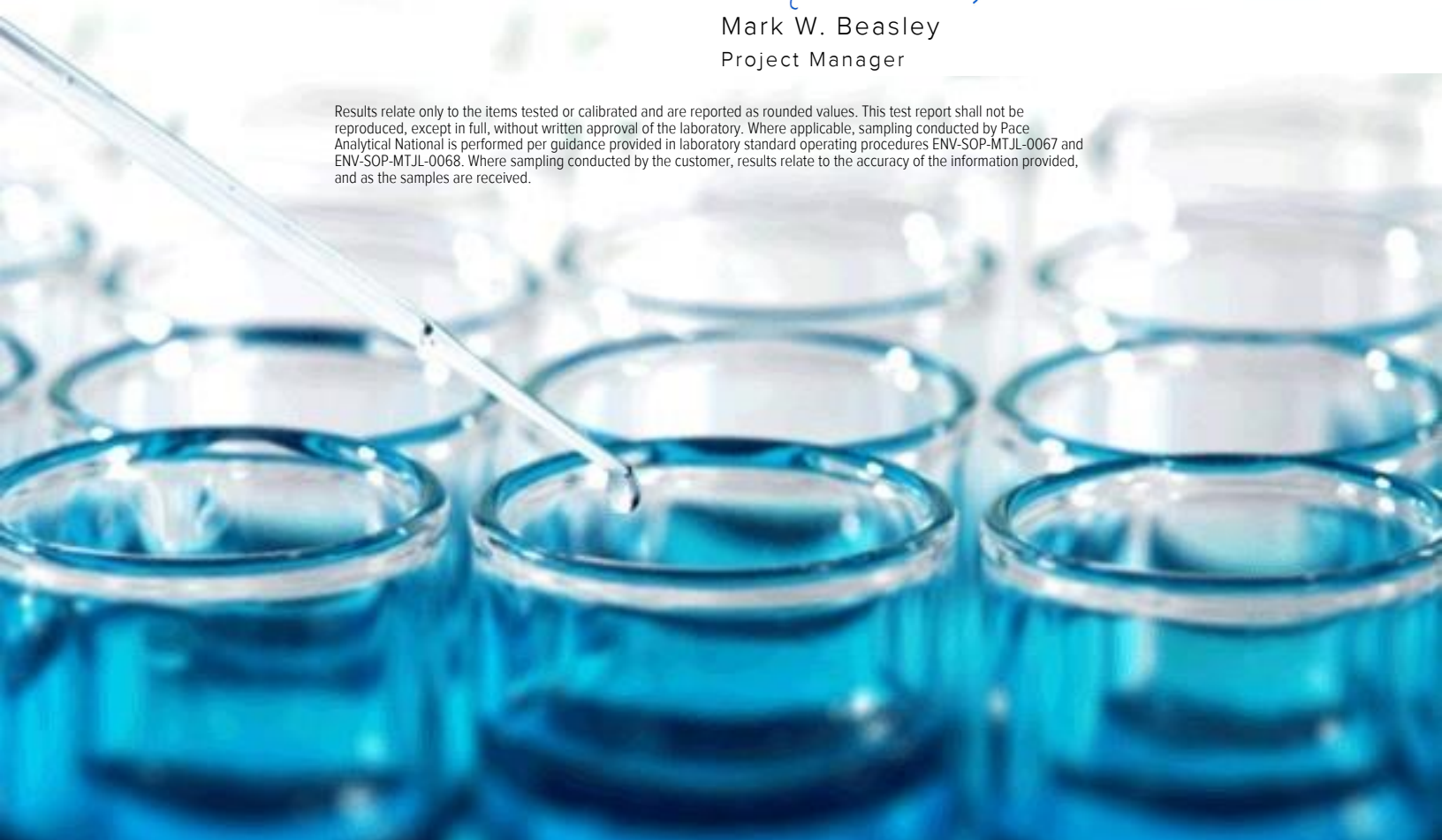
Report To: Katie Teague  
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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# SAMPLE SUMMARY

## RMD-1-20190822 L1132628-01 GW

Collected by: G. Gonzalez  
 Collected date/time: 08/22/19 11:48  
 Received date/time: 08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335502	1	08/27/19 16:25	08/27/19 16:25	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335361	1	08/30/19 17:22	08/30/19 17:22	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334788	1	08/26/19 18:06	08/26/19 18:06	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 16:57	08/26/19 16:57	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 12:02	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1339513	1	09/04/19 13:19	09/04/19 13:19	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1340051	10	09/04/19 17:32	09/04/19 17:32	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	09/01/19 23:11	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335621	1	08/27/19 16:44	08/30/19 02:26	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1336569	1	08/28/19 18:00	08/29/19 11:00	DMG	Mt. Juliet, TN

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

7  
Gl

8  
Al

9  
Sc

## WMW-14-20190822 L1132628-02 GW

Collected by: G. Gonzalez  
 Collected date/time: 08/22/19 13:45  
 Received date/time: 08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335502	1	08/27/19 16:26	08/27/19 16:26	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335361	1	08/30/19 17:24	08/30/19 17:24	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334788	1	08/26/19 18:06	08/26/19 18:06	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 17:12	08/26/19 17:12	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 12:06	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1339513	1	09/04/19 13:22	09/04/19 13:22	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	09/01/19 23:34	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335621	1	08/27/19 16:44	08/30/19 02:47	SHG	Mt. Juliet, TN

## WMW-15-20190822 L1132628-03 GW

Collected by: G. Gonzalez  
 Collected date/time: 08/22/19 12:38  
 Received date/time: 08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335502	1	08/27/19 16:28	08/27/19 16:28	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335361	1	08/30/19 17:25	08/30/19 17:25	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334788	1	08/26/19 18:06	08/26/19 18:06	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 17:27	08/26/19 17:27	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 12:09	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1339513	1	09/04/19 13:24	09/04/19 13:24	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	09/01/19 23:57	JN	Mt. Juliet, TN

## RMD-5-20190822 L1132628-04 GW

Collected by: G. Gonzalez  
 Collected date/time: 08/22/19 12:53  
 Received date/time: 08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335504	1	08/29/19 11:15	08/29/19 11:15	JER	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335361	1	08/30/19 17:27	08/30/19 17:27	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334788	1	08/26/19 18:07	08/26/19 18:07	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 17:42	08/26/19 17:42	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 12:25	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334779	1	08/26/19 09:28	08/26/19 15:09	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1339513	1	09/04/19 13:27	09/04/19 13:27	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1338375	1	08/31/19 17:52	08/31/19 17:52	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	09/02/19 00:19	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335621	1	08/27/19 16:44	08/30/19 03:07	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1336569	1	08/28/19 18:00	08/29/19 11:23	DMG	Mt. Juliet, TN



# SAMPLE SUMMARY



## TB-07-20190823 L1132628-05 GW

Collected by: G. Gonzalez  
 Collected date/time: 08/23/19 00:00  
 Received date/time: 08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1338375	1	08/31/19 18:11	08/31/19 18:11	JAH	Mt. Juliet, TN

1 Cp

2 Tc

## WMW-10-20190822 L1132628-06 GW

Collected by: G. Gonzalez  
 Collected date/time: 08/22/19 08:35  
 Received date/time: 08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335504	1	08/29/19 11:17	08/29/19 11:17	JER	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335361	5	08/30/19 17:28	08/30/19 17:28	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334788	1	08/26/19 18:07	08/26/19 18:07	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 18:27	08/26/19 18:27	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 12:29	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1339513	1	09/04/19 13:32	09/04/19 13:32	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	09/02/19 00:42	JN	Mt. Juliet, TN

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## WMW-11-20190822 L1132628-07 GW

Collected by: G. Gonzalez  
 Collected date/time: 08/22/19 07:45  
 Received date/time: 08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335504	1	08/29/19 11:18	08/29/19 11:18	JER	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335361	1	08/30/19 17:30	08/30/19 17:30	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334788	1	08/26/19 18:08	08/26/19 18:08	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 18:42	08/26/19 18:42	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 12:32	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1339513	1	09/04/19 13:34	09/04/19 13:34	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	09/02/19 01:05	JN	Mt. Juliet, TN

8 Al

9 Sc

## WMW-12-20190822 L1132628-08 GW

Collected by: G. Gonzalez  
 Collected date/time: 08/21/19 14:10  
 Received date/time: 08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335504	1	08/29/19 11:20	08/29/19 11:20	JER	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1335361	20	08/30/19 17:31	08/30/19 17:31	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334788	1	08/26/19 18:08	08/26/19 18:08	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 18:57	08/26/19 18:57	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 12:36	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1338951	1	09/04/19 09:36	09/04/19 09:36	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1335612	1	08/27/19 16:37	08/30/19 15:42	FM	Mt. Juliet, TN



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

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



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	316		100	1	08/27/2019 16:25	<a href="#">WG1335502</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/30/2019 17:22	<a href="#">WG1335361</a>

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	08/26/2019 18:06	<a href="#">WG1334788</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	08/26/2019 16:57	<a href="#">WG1334826</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	5700		100	1	08/27/2019 12:02	<a href="#">WG1334768</a>
Manganese,Dissolved	2360		5.00	1	08/27/2019 12:02	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	7620		100	10	09/04/2019 17:32	<a href="#">WG1340051</a>
Ethane	ND		13.0	1	09/04/2019 13:19	<a href="#">WG1339513</a>
Ethene	ND		13.0	1	09/04/2019 13:19	<a href="#">WG1339513</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5210		200	1	09/01/2019 23:11	<a href="#">WG1336422</a>
Residual Range Organics (RRO)	2100		250	1	09/01/2019 23:11	<a href="#">WG1336422</a>
(S) o-Terphenyl	109		52.0-156		09/01/2019 23:11	<a href="#">WG1336422</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	321		200	1	08/30/2019 02:26	<a href="#">WG1335621</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2019 02:26	<a href="#">WG1335621</a>
(S) o-Terphenyl	66.8		52.0-156		08/30/2019 02:26	<a href="#">WG1335621</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Acenaphthene	0.601		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Acenaphthylene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Chrysene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Fluoranthene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Fluorene	0.774		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Naphthalene	0.520		0.250	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Phenanthrene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
Pyrene	ND		0.0500	1	08/29/2019 11:00	<a href="#">WG1336569</a>
1-Methylnaphthalene	7.66		0.250	1	08/29/2019 11:00	<a href="#">WG1336569</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2019 11:00	<a href="#">WG1336569</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2019 11:00	<a href="#">WG1336569</a>
(S) Nitrobenzene-d5	128		31.0-160		08/29/2019 11:00	<a href="#">WG1336569</a>
(S) 2-Fluorobiphenyl	92.1		48.0-148		08/29/2019 11:00	<a href="#">WG1336569</a>
(S) p-Terphenyl-d14	106		37.0-146		08/29/2019 11:00	<a href="#">WG1336569</a>

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	08/27/2019 16:26	<a href="#">WG1335502</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1010		100	1	08/30/2019 17:24	<a href="#">WG1335361</a>

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	08/26/2019 18:06	<a href="#">WG1334788</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	9190		5000	1	08/26/2019 17:12	<a href="#">WG1334826</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/27/2019 12:06	<a href="#">WG1334768</a>
Manganese,Dissolved	ND		5.00	1	08/27/2019 12:06	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/04/2019 13:22	<a href="#">WG1339513</a>
Ethane	ND		13.0	1	09/04/2019 13:22	<a href="#">WG1339513</a>
Ethene	ND		13.0	1	09/04/2019 13:22	<a href="#">WG1339513</a>

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	09/01/2019 23:34	<a href="#">WG1336422</a>
Residual Range Organics (RRO)	ND		250	1	09/01/2019 23:34	<a href="#">WG1336422</a>
(S) o-Terphenyl	86.5		52.0-156		09/01/2019 23:34	<a href="#">WG1336422</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/30/2019 02:47	<a href="#">WG1335621</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2019 02:47	<a href="#">WG1335621</a>
(S) o-Terphenyl	65.3		52.0-156		08/30/2019 02:47	<a href="#">WG1335621</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	159		100	1	08/27/2019 16:28	<a href="#">WG1335502</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/30/2019 17:25	<a href="#">WG1335361</a>

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	08/26/2019 18:06	<a href="#">WG1334788</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	11500		5000	1	08/26/2019 17:27	<a href="#">WG1334826</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	473		100	1	08/27/2019 12:09	<a href="#">WG1334768</a>
Manganese,Dissolved	814		5.00	1	08/27/2019 12:09	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	447		10.0	1	09/04/2019 13:24	<a href="#">WG1339513</a>
Ethane	ND		13.0	1	09/04/2019 13:24	<a href="#">WG1339513</a>
Ethene	ND		13.0	1	09/04/2019 13:24	<a href="#">WG1339513</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4940		200	1	09/01/2019 23:57	<a href="#">WG1336422</a>
Residual Range Organics (RRO)	4130		250	1	09/01/2019 23:57	<a href="#">WG1336422</a>
(S) o-Terphenyl	117		52.0-156		09/01/2019 23:57	<a href="#">WG1336422</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/29/2019 11:15	<a href="#">WG1335504</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1760		100	1	08/30/2019 17:27	<a href="#">WG1335361</a>

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	08/26/2019 18:07	<a href="#">WG1334788</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	41200		5000	1	08/26/2019 17:42	<a href="#">WG1334826</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/27/2019 12:25	<a href="#">WG1334768</a>
Lead	ND		2.00	1	08/26/2019 15:09	<a href="#">WG1334779</a>
Lead,Dissolved	ND		2.00	1	08/27/2019 12:25	<a href="#">WG1334768</a>
Manganese,Dissolved	443		5.00	1	08/27/2019 12:25	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/04/2019 13:27	<a href="#">WG1339513</a>
Ethane	ND		13.0	1	09/04/2019 13:27	<a href="#">WG1339513</a>
Ethene	ND		13.0	1	09/04/2019 13:27	<a href="#">WG1339513</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	08/31/2019 17:52	<a href="#">WG1338375</a>
Toluene	ND		1.00	1	08/31/2019 17:52	<a href="#">WG1338375</a>
Ethylbenzene	ND		1.00	1	08/31/2019 17:52	<a href="#">WG1338375</a>
o-Xylene	ND		1.00	1	08/31/2019 17:52	<a href="#">WG1338375</a>
m&p-Xylene	ND		2.00	1	08/31/2019 17:52	<a href="#">WG1338375</a>
(S) Toluene-d8	99.6		80.0-120		08/31/2019 17:52	<a href="#">WG1338375</a>
(S) 4-Bromofluorobenzene	100		77.0-126		08/31/2019 17:52	<a href="#">WG1338375</a>
(S) 1,2-Dichloroethane-d4	104		70.0-130		08/31/2019 17:52	<a href="#">WG1338375</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1000		200	1	09/02/2019 00:19	<a href="#">WG1336422</a>
Residual Range Organics (RRO)	734		250	1	09/02/2019 00:19	<a href="#">WG1336422</a>
(S) o-Terphenyl	105		52.0-156		09/02/2019 00:19	<a href="#">WG1336422</a>



Collected date/time: 08/22/19 12:53

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Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/30/2019 03:07	<a href="#">WG1335621</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2019 03:07	<a href="#">WG1335621</a>
<i>(S) o-Terphenyl</i>	64.2		52.0-156		08/30/2019 03:07	<a href="#">WG1335621</a>

1 Cp

2 Tc

3 Ss

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Acenaphthene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Acenaphthylene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Chrysene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Fluoranthene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Fluorene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Naphthalene	ND		0.250	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Phenanthrene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
Pyrene	ND		0.0500	1	08/29/2019 11:23	<a href="#">WG1336569</a>
1-Methylnaphthalene	ND		0.250	1	08/29/2019 11:23	<a href="#">WG1336569</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2019 11:23	<a href="#">WG1336569</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2019 11:23	<a href="#">WG1336569</a>
<i>(S) Nitrobenzene-d5</i>	129		31.0-160		08/29/2019 11:23	<a href="#">WG1336569</a>
<i>(S) 2-Fluorobiphenyl</i>	88.4		48.0-148		08/29/2019 11:23	<a href="#">WG1336569</a>
<i>(S) p-Terphenyl-d14</i>	111		37.0-146		08/29/2019 11:23	<a href="#">WG1336569</a>

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	08/31/2019 18:11	<a href="#">WG1338375</a>
Toluene	ND		1.00	1	08/31/2019 18:11	<a href="#">WG1338375</a>
Ethylbenzene	ND		1.00	1	08/31/2019 18:11	<a href="#">WG1338375</a>
o-Xylene	ND		1.00	1	08/31/2019 18:11	<a href="#">WG1338375</a>
m&p-Xylene	ND		2.00	1	08/31/2019 18:11	<a href="#">WG1338375</a>
(S) Toluene-d8	101		80.0-120		08/31/2019 18:11	<a href="#">WG1338375</a>
(S) 4-Bromofluorobenzene	101		77.0-126		08/31/2019 18:11	<a href="#">WG1338375</a>
(S) 1,2-Dichloroethane-d4	107		70.0-130		08/31/2019 18:11	<a href="#">WG1338375</a>

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	08/29/2019 11:17	<a href="#">WG1335504</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	9230		500	5	08/30/2019 17:28	<a href="#">WG1335361</a>

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	08/26/2019 18:07	<a href="#">WG1334788</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	63700		5000	1	08/26/2019 18:27	<a href="#">WG1334826</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/27/2019 12:29	<a href="#">WG1334768</a>
Manganese,Dissolved	ND		5.00	1	08/27/2019 12:29	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/04/2019 13:32	<a href="#">WG1339513</a>
Ethane	ND		13.0	1	09/04/2019 13:32	<a href="#">WG1339513</a>
Ethene	ND		13.0	1	09/04/2019 13:32	<a href="#">WG1339513</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	472		200	1	09/02/2019 00:42	<a href="#">WG1336422</a>
Residual Range Organics (RRO)	1120		250	1	09/02/2019 00:42	<a href="#">WG1336422</a>
(S) o-Terphenyl	94.5		52.0-156		09/02/2019 00:42	<a href="#">WG1336422</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	305		100	1	08/29/2019 11:18	<a href="#">WG1335504</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	08/30/2019 17:30	<a href="#">WG1335361</a>

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	08/26/2019 18:08	<a href="#">WG1334788</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	24800		5000	1	08/26/2019 18:42	<a href="#">WG1334826</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	839		100	1	08/27/2019 12:32	<a href="#">WG1334768</a>
Manganese,Dissolved	1680		5.00	1	08/27/2019 12:32	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	702		10.0	1	09/04/2019 13:34	<a href="#">WG1339513</a>
Ethane	ND		13.0	1	09/04/2019 13:34	<a href="#">WG1339513</a>
Ethene	ND		13.0	1	09/04/2019 13:34	<a href="#">WG1339513</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4820		200	1	09/02/2019 01:05	<a href="#">WG1336422</a>
Residual Range Organics (RRO)	4790		250	1	09/02/2019 01:05	<a href="#">WG1336422</a>
(S) o-Terphenyl	104		52.0-156		09/02/2019 01:05	<a href="#">WG1336422</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/29/2019 11:20	<a href="#">WG1335504</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	32400		2000	20	08/30/2019 17:31	<a href="#">WG1335361</a>

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	08/26/2019 18:08	<a href="#">WG1334788</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	37100		5000	1	08/26/2019 18:57	<a href="#">WG1334826</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/27/2019 12:36	<a href="#">WG1334768</a>
Manganese,Dissolved	ND		5.00	1	08/27/2019 12:36	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/04/2019 09:36	<a href="#">WG1338951</a>
Ethane	ND		13.0	1	09/04/2019 09:36	<a href="#">WG1338951</a>
Ethene	ND		13.0	1	09/04/2019 09:36	<a href="#">WG1338951</a>

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	08/30/2019 15:42	<a href="#">WG1335612</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2019 15:42	<a href="#">WG1335612</a>
(S) o-Terphenyl	82.5		52.0-156		08/30/2019 15:42	<a href="#">WG1335612</a>



Method Blank (MB)

(MB) R3444770-1 08/27/19 16:04

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1132612-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132612-01 08/27/19 16:10 • (DUP) R3444770-3 08/27/19 16:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1133018-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1133018-02 08/27/19 16:39 • (DUP) R3444770-6 08/27/19 16:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3444770-2 08/27/19 16:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	6850	91.3	90.0-110	

L1132612-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132612-02 08/27/19 16:13 • (MS) R3444770-4 08/27/19 16:15 • (MSD) R3444770-5 08/27/19 16:17

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	4650	4630	93.0	92.5	1	90.0-110			0.539	10

L1133018-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1133018-03 08/27/19 16:47 • (MS) R3444770-7 08/27/19 16:48

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4620	92.5	1	90.0-110	



Method Blank (MB)

(MB) R3445749-1 08/29/19 10:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1132012-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132012-01 08/29/19 10:58 • (DUP) R3445749-3 08/29/19 10:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1132794-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1132794-02 08/29/19 11:28 • (DUP) R3445749-7 08/29/19 11:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	67.0	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3445749-2 08/29/19 10:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	7090	94.5	90.0-110	

L1132016-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132016-01 08/29/19 11:01 • (MS) R3445749-4 08/29/19 11:02 • (MSD) R3445749-5 08/29/19 11:04

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	1580	6570	6620	99.8	101	1	90.0-110			0.773	10

L1132636-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1132636-02 08/29/19 11:23 • (MS) R3445749-6 08/29/19 11:25

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4890	97.7	1	90.0-110	



Method Blank (MB)

(MB) R3446152-1 08/30/19 16:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1132487-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132487-01 08/30/19 17:06 • (DUP) R3446152-3 08/30/19 17:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	123	0.000	1	32.1	P1	20

L1133830-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1133830-03 08/30/19 17:43 • (DUP) R3446152-6 08/30/19 17:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	141	157	1	10.7		20

Laboratory Control Sample (LCS)

(LCS) R3446152-2 08/30/19 16:59

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	3790	94.8	90.0-110	

L1132612-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132612-01 08/30/19 17:09 • (MS) R3446152-4 08/30/19 17:10 • (MSD) R3446152-5 08/30/19 17:12

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	3750	5780	5980	81.2	89.2	1	90.0-110	E J6	E J6	3.42	20

L1133830-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1133830-04 08/30/19 17:46 • (MS) R3446152-7 08/30/19 17:48

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	142	2690	102	1	90.0-110	



Method Blank (MB)

(MB) R3444364-1 08/26/19 18:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1132628-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132628-01 08/26/19 18:06 • (DUP) R3444364-3 08/26/19 18:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3444364-2 08/26/19 18:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	472	94.4	85.0-115	

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/26/19 18:08 • (MS) R3444364-4 08/26/19 18:08 • (MSD) R3444364-5 08/26/19 18:09

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	878	887	87.8	88.7	1	80.0-120			1.02	20





Method Blank (MB)

(MB) R3444439-1 08/26/19 12:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1132612-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1132612-02 08/26/19 12:59 • (DUP) R3444439-3 08/26/19 13:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	15200	15100	1	0.508		15

L1132615-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1132615-08 08/26/19 16:13 • (DUP) R3444439-5 08/26/19 16:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	5190	5200	1	0.166		15

Laboratory Control Sample (LCS)

(LCS) R3444439-2 08/26/19 12:25

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	40200	101	80.0-120	

L1132612-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1132612-03 08/26/19 13:29 • (MS) R3444439-4 08/26/19 13:43

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	6880	55900	98.0	1	80.0-120	

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/26/19 19:12 • (MS) R3444439-6 08/26/19 19:27 • (MSD) R3444439-7 08/26/19 19:41

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	77300	123000	123000	91.0	91.3	1	80.0-120	E	E	0.114	15



Method Blank (MB)

(MB) R3444512-1 08/27/19 10:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron,Dissolved	U		15.0	100
Lead,Dissolved	U		0.240	2.00
Manganese,Dissolved	U		0.250	5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3444512-2 08/27/19 10:52 • (LCSD) R3444512-3 08/27/19 10:56

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron,Dissolved	5000	5330	5290	107	106	80.0-120			0.820	20
Lead,Dissolved	50.0	49.2	50.9	98.3	102	80.0-120			3.49	20
Manganese,Dissolved	50.0	52.6	52.2	105	104	80.0-120			0.739	20

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 10:59 • (MS) R3444512-5 08/27/19 11:07 • (MSD) R3444512-6 08/27/19 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
Iron,Dissolved	5000	ND	5060	5090	101	102	1	75.0-125			0.685	20
Lead,Dissolved	50.0	ND	49.9	49.0	99.7	98.0	1	75.0-125			1.77	20
Manganese,Dissolved	50.0	5.23	54.9	54.3	99.4	98.2	1	75.0-125			1.12	20



Method Blank (MB)

(MB) R3444324-1 08/26/19 14:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead	U		0.240	2.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

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

(LCS) R3444324-2 08/26/19 14:05 • (LCSD) R3444324-3 08/26/19 14:09

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 %
Lead	50.0	51.4	49.5	103	98.9	80.0-120			3.92	20

L1132552-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132552-01 08/26/19 14:12 • (MS) R3444324-5 08/26/19 14:19 • (MSD) R3444324-6 08/26/19 14:22

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 %
Lead	50.0	1.17	49.5	50.6	96.6	98.8	1	75.0-125			2.24	20

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3447093-1 09/04/19 08:40

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

L1132538-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132538-01 09/04/19 09:26 • (DUP) R3447093-2 09/04/19 10:35

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

L1135000-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1135000-10 09/04/19 11:31 • (DUP) R3447093-3 09/04/19 11:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	399	403	1	1.11		20
Ethane	U	0.000	1	0.000		20
Ethene	112	114	1	1.16		20

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

(LCS) R3447093-4 09/04/19 11:47 • (LCSD) R3447093-5 09/04/19 12:08

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	67.2	68.8	99.2	102	85.0-115			2.35	20
Ethane	129	116	115	90.1	88.8	85.0-115			1.42	20
Ethene	127	133	114	105	89.5	85.0-115			15.5	20



Method Blank (MB)

(MB) R3447190-1 09/04/19 13:17

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

L1132628-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1132628-07 09/04/19 13:34 • (DUP) R3447190-2 09/04/19 13:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	702	710	1	1.19		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1133680-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1133680-01 09/04/19 14:37 • (DUP) R3447190-3 09/04/19 14:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	2650	2670	1	0.942		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3447190-6 09/04/19 15:00 • (LCSD) R3447190-7 09/04/19 15:04

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	%	%	%			%	%
Methane	67.8	75.3	72.1	111	106	85.0-115			4.44	20
Ethane	129	118	115	91.4	89.4	85.0-115			2.18	20
Ethene	127	118	115	92.6	90.2	85.0-115			2.66	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 09/04/19 13:37 • (MS) R3447190-4 09/04/19 14:50 • (MSD) R3447190-5 09/04/19 14:55

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	75.3	75.4	111	111	1	85.0-115			0.154	20
Ethane	129	ND	123	127	95.4	98.3	1	85.0-115			3.02	20
Ethene	127	ND	121	125	95.2	98.6	1	85.0-115			3.45	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3447279-1 09/04/19 17:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Methane	U		2.91	10.0

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

(LCS) R3447279-2 09/04/19 18:10 • (LCSD) R3447279-3 09/04/19 18:14

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 %
Methane	67.8	71.6	71.4	106	105	85.0-115			0.206	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3446501-3 08/31/19 15:53

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	101			80.0-120
(S) 4-Bromofluorobenzene	103			77.0-126
(S) 1,2-Dichloroethane-d4	106			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3446501-1 08/31/19 14:28 • (LCSD) R3446501-2 08/31/19 14:47

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	%	%	%			%	%
Benzene	25.0	25.4	24.8	102	99.2	70.0-123			2.31	20
Ethylbenzene	25.0	24.1	24.1	96.6	96.3	79.0-123			0.308	20
Toluene	25.0	24.1	23.3	96.3	93.0	79.0-120			3.43	20
o-Xylene	25.0	24.1	24.3	96.6	97.2	80.0-122			0.585	20
m&p-Xylenes	50.0	48.3	48.6	96.7	97.2	80.0-122			0.472	20
(S) Toluene-d8				99.3	99.7	80.0-120				
(S) 4-Bromofluorobenzene				97.2	101	77.0-126				
(S) 1,2-Dichloroethane-d4				114	118	70.0-130				

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3445707-1 08/29/19 15:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
<i>(S) o-Terphenyl</i>	76.0			52.0-156

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

(LCS) R3445707-2 08/29/19 16:15 • (LCSD) R3445707-3 08/29/19 18:17

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)	1500	1350	1430	90.0	95.3	50.0-150			5.76	20
<i>(S) o-Terphenyl</i>				82.5	87.0	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) R3446144-1 08/30/19 10:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
<i>(S) o-Terphenyl</i>	97.5			52.0-156

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

(LCS) R3446144-2 08/30/19 11:10 • (LCSD) R3446144-3 08/30/19 11:30

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)	1500	1670	1680	111	112	50.0-150			0.597	20
<i>(S) o-Terphenyl</i>				99.5	99.0	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) R3446143-1 08/29/19 16:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	68.0			52.0-156

Laboratory Control Sample (LCS)

(LCS) R3446143-2 08/29/19 16:44

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Diesel Range Organics (DRO)	1500	1170	78.0	50.0-150	
(S) o-Terphenyl			74.0	52.0-156	

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/30/19 01:26 • (MS) R3446143-3 08/30/19 01:46 • (MSD) R3446143-4 08/30/19 02:06

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Diesel Range Organics (DRO)	1500	ND	1290	1220	86.0	81.3	1	50.0-150			5.58	20
(S) o-Terphenyl					77.0	71.5		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) R3445584-2 08/29/19 04:05

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	0.00316	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	0.0101	J	0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	114			31.0-160
(S) 2-Fluorobiphenyl	80.0			48.0-148
(S) p-Terphenyl-d14	103			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)

(LCS) R3445584-1 08/29/19 03:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Anthracene	2.00	1.71	85.5	67.0-150	
Acenaphthene	2.00	1.77	88.5	65.0-138	
Acenaphthylene	2.00	1.79	89.5	66.0-140	
Benzo(a)anthracene	2.00	1.75	87.5	61.0-140	
Benzo(a)pyrene	2.00	1.66	83.0	60.0-143	
Benzo(b)fluoranthene	2.00	1.78	89.0	58.0-141	
Benzo(g,h,i)perylene	2.00	1.85	92.5	52.0-153	
Benzo(k)fluoranthene	2.00	1.60	80.0	58.0-148	
Chrysene	2.00	1.68	84.0	64.0-144	
Dibenz(a,h)anthracene	2.00	1.79	89.5	52.0-155	
Fluoranthene	2.00	1.67	83.5	69.0-153	



Laboratory Control Sample (LCS)

(LCS) R3445584-1 08/29/19 03:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	2.00	1.68	84.0	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.95	97.5	54.0-153	
Naphthalene	2.00	1.47	73.5	61.0-137	
Phenanthrene	2.00	1.82	91.0	62.0-137	
Pyrene	2.00	1.70	85.0	60.0-142	
1-Methylnaphthalene	2.00	1.58	79.0	66.0-142	
2-Methylnaphthalene	2.00	1.48	74.0	62.0-136	
2-Chloronaphthalene	2.00	1.67	83.5	64.0-140	
(S) Nitrobenzene-d5			118	31.0-160	
(S) 2-Fluorobiphenyl			73.0	48.0-148	
(S) p-Terphenyl-d14			100	37.0-146	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/29/19 11:46 • (MS) R3445584-3 08/29/19 12:09 • (MSD) R3445584-4 08/29/19 12:31

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	1.90	ND	1.55	1.63	81.6	85.8	1	56.0-156			5.03	20
Acenaphthene	1.90	ND	1.71	1.78	90.0	93.7	1	44.0-153			4.01	20
Acenaphthylene	1.90	ND	1.77	1.83	93.2	96.3	1	53.0-150			3.33	20
Benzo(a)anthracene	1.90	ND	1.64	1.67	86.3	87.9	1	47.0-151			1.81	20
Benzo(a)pyrene	1.90	ND	1.48	1.59	77.9	83.7	1	45.0-146			7.17	20
Benzo(b)fluoranthene	1.90	ND	1.55	1.53	81.4	80.4	1	43.0-142			1.30	20
Benzo(g,h,i)perylene	1.90	ND	1.70	1.61	89.5	84.7	1	40.0-147			5.44	20
Benzo(k)fluoranthene	1.90	ND	1.48	1.56	77.9	82.1	1	43.0-148			5.26	21
Chrysene	1.90	ND	1.56	1.63	82.1	85.8	1	50.0-148			4.39	20
Dibenz(a,h)anthracene	1.90	ND	1.63	1.54	85.8	81.1	1	37.0-151			5.68	20
Fluoranthene	1.90	ND	1.59	1.63	83.7	85.8	1	56.0-157			2.48	20
Fluorene	1.90	ND	1.57	1.61	82.6	84.7	1	48.0-148			2.52	20
Indeno(1,2,3-cd)pyrene	1.90	ND	1.70	1.70	89.5	89.5	1	41.0-148			0.000	20
Naphthalene	1.90	ND	1.48	1.49	76.8	77.3	1	10.0-160			0.673	20
Phenanthrene	1.90	ND	1.73	1.74	91.1	91.6	1	47.0-147			0.576	20
Pyrene	1.90	ND	1.66	1.65	87.4	86.8	1	51.0-148			0.604	20
1-Methylnaphthalene	1.90	ND	1.52	1.57	80.0	82.6	1	21.0-160			3.24	20
2-Methylnaphthalene	1.90	ND	1.45	1.51	76.3	79.5	1	31.0-160			4.05	20
2-Chloronaphthalene	1.90	ND	1.76	1.74	92.6	91.6	1	52.0-148			1.14	20
(S) Nitrobenzene-d5					129	127		31.0-160				
(S) 2-Fluorobiphenyl					83.7	88.4		48.0-148				
(S) p-Terphenyl-d14					97.9	101		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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### 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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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
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.
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



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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

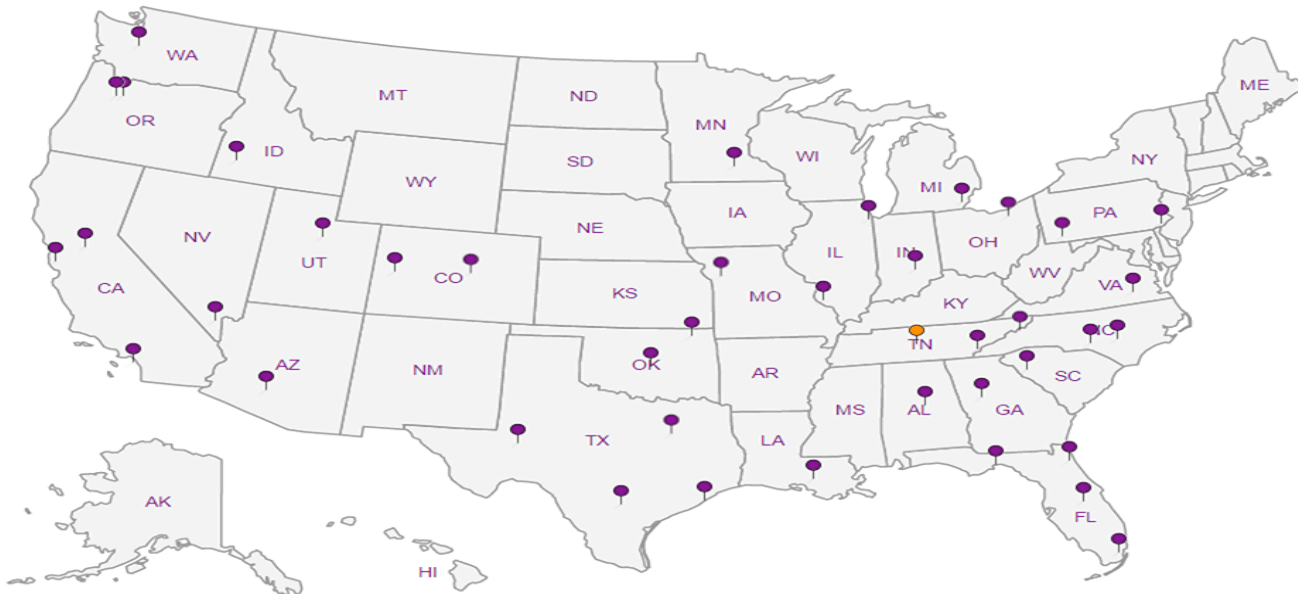
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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 1 of 2



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



Report to:  
Katie Teague

Email To: KatieTeague@kennedyjenks.com;  
RyanHultgren@kennedyjenks.com;

Project  
Description: BNSF - Wishram Railyard, WA

Phone: 253-835-6400  
Fax:

Collected by (print):  
A. Gonzalez

Collected by (signature):  
*[Signature]*

Immediately Packed on Ice N    Y X

Client Project #  
1996120\*00

Site/Facility ID #

Rush? (Lab MUST Be Notified)  
 Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

City/State  
Collected: Wishram, WA

Lab Project #  
BNSF1KEN-WISHRAM

P.O. #

Quote #

Date Results Needed

No. of  
Cntrs

Diss M6020RCRA8 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
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L# 1132628  
**G197**

Acctnum: BNSF1KEN  
Template: T149555  
Prelogin: P723325  
TSR: 134 - Mark W. Beasley  
PB: 8-7-196m  
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss M6020RCRA8 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	Remarks	Sample # (lab only)
RMD-1-20190822	Grab	GW	—	8/22/19	1148	12	X	X	X	X	X	X	X	X	X	X		-01
WMW-14-20190822	↓	GW	↓		1345	10	X	X	X	X	X	X	X	X	X	X		02
WMW-15-20190822	↓	GW	↓		1238	8	X	X	X	X	X	X	X	X	X	X		03
RMD-5-20190822	↓	GW	↓		1453	17	X	X	X	X	X	X	X	X	X	X	see pg 2	04
TB-07-20190823	—	GW	—	8/23/19	—	1												05
		GW																
		GW																
		GW																
		GW																

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

RAD SCREEN: <0.5 mR/hr

Samples returned via:  
 UPS  FedEx  Courier

Tracking # 1070 020 3022

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 checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Preservation Correct/Checked:	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N

Relinquished by: (Signature) *[Signature]* Date: 8/23/19 Time: 11:00

Received by: (Signature) FED-EX

Trip Blank Received: Yes/No  
 Yes  No  
HCl/MeOH TBR

Relinquished by: (Signature) Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature) Temp: AS 23°C Bottles Received: 47

Received for lab by: (Signature) Date: 8/24/19 Time: 8:45

If preservation required by Login: Date/Time

Relinquished by: (Signature) Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by: (Signature) *[Signature]*

Hold: \_\_\_\_\_ Condition: NCF 10K



# 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

Email To: KatieTeague@kennedyjenks.com;  
RyanHultgren@kennedyjenks.com;

Analysis / Container / Preservative

**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



Report to:  
**Katie Teague**

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

Phone: **253-835-6400**

Fax:

Collected by (print): **St. Gonzalez**

Collected by (signature): 

Immediately Packed on Ice N  Y

City/State Collected: **Wishram, WA**

Lab Project # **BNSF1KEN-WISHRAM**

P.O. #

Quote #

Client Project # **1996120\*00**

Site/Facility ID #

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	No. of Cntrs	Total As 6020 250mlHDPE-HNO3	Total M6020RCRA8 250mlHDPE-HNO3	Total Pb 6020 250mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	V8260C 40mlAmb-HCl	Remarks	Sample # (lab only)
KMD-5-20190822	Grab	GW	---	8/22/19	1453	17			X	X			04
TB-07-20190823	---	---	---	8/23/19	---	1			X				05

Dissolved Pb 6020

L# **1132628**

Table #

Acctnum: **BNSF1KEN**

Template: **T149555**

Prelogin: **P723325**

TSR: **134 - Mark W. Beasley**

PB: **8-7-19**

Shipped Via: **FedEX Ground**

- \* Matrix:
- SS - Soil AIR - Air F - Filter
- GW - Groundwater B - Bioassay
- WW - WasteWater
- DW - Drinking Water
- OT - Other

Remarks:

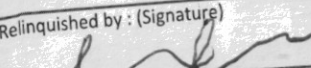
RAD SCREEN: <0.5 mR/hr

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **1070 0201 3022**

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: **8/23/19** Time: **11:00**

Received by: (Signature) **FED-EX**

Trip Blank Received:  Yes  No  
HCL / MeOH  
TBR

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp: **21.2** °C Bottles Received: **47**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature) **Carol Henry**

Date: **8/24/19** 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

Email To: KatieTeague@kennedyjenks.com;  
RyanHultgren@kennedyjenks.com;

Report to:  
Katie Teague

Project Description: BNSF - Wishram Railyard, WA

Phone: 253-835-6400  
Fax:

Client Project #  
1996120\*00

City/State Collected: Wishram, WA

Lab Project #  
BNSF1KEN-WISHRAM

P.O. #

Quote #

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


Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
WMW-10-20190822	Grab	GW	—	8/22/19	0835	8
WMW-11-20190822	↓	GW	↓	8/21/19	0745	8
WMW-12-20190821	↓	GW	↓	8/21/19	1410	8
		GW	↓	8/23/19	KT	
		GW				
		GW				
		GW				
		GW				
		GW				
		GW				

Analysis / Container / Preservative	Pres Chk
Diss M6020RCRA8 250mlHDPE-HNO3	CC
Dissolved Fe, Mn 250mlHDPE-HNO3	CC
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 1 of 1



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



L# 1132628  
G196

Acctnum: BNSF1KEN  
Template: T149555  
Prelogin: P723325  
TSR: 134 - Mark W. Beasley  
PB: 8-7-196m  
Shipped Via: FedEX Ground

Remarks	Sample # (lab only)
	06
	07
	08

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: Don't log trip blank

PH \_\_\_\_\_ Temp \_\_\_\_\_  
RAD SCREEN: <0.5 mR/hr  
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

Samples returned via:  UPS  FedEx  Courier

Tracking # 1070 0201 2997

Received by: (Signature) *FED-EX*

Trip Blank Received:  Yes  No  
HCl / MeOH TBR

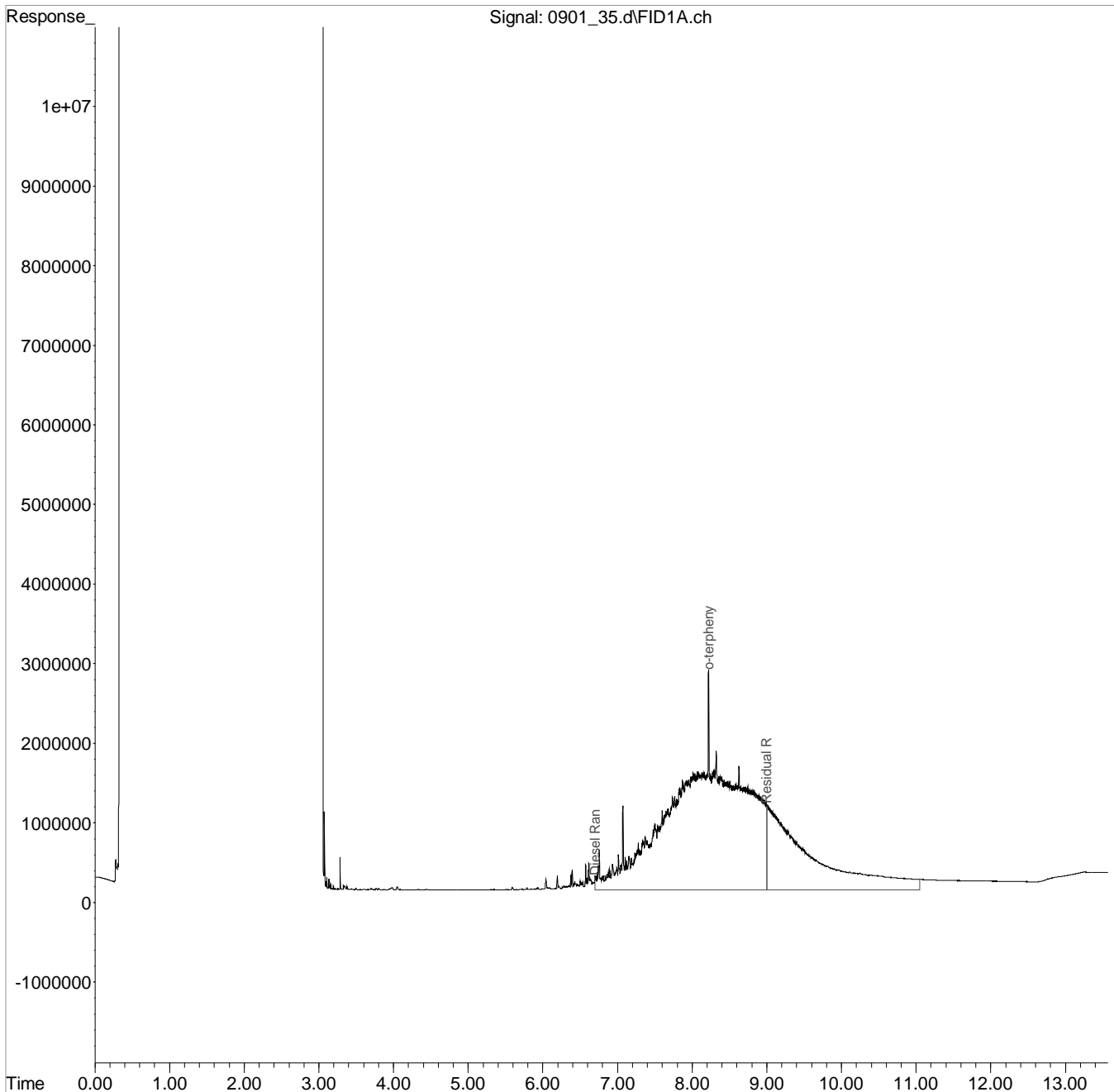
Relinquished by: (Signature) <i>[Signature]</i>	Date: 8/23/19	Time: 11:00	Received by: (Signature) <i>[Signature]</i>	Temp: 45°C	Bottles Received: 24	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 8/24/19	Time: 8:45	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Carol Kemp</i>	Date: 8/24/19	Time: 8:45	

Condition: NCF / OK

Data Path : C:\msdchem\1\data\090119\  
 Data File : 0901 35.d  
 Signal(s) : FID1A.ch  
 Acq On : 1 Sep 2019 11:11 pm  
 Operator : 843  
 Sample : L1132628-01 1x WG1336422  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 35 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: Sep 02 12:01:58 2019  
 Quant Method : C:\msdchem\1\methods\DM21H30S.M  
 Quant Title : DROLVI  
 QLast Update : Fri Aug 30 15:46:39 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

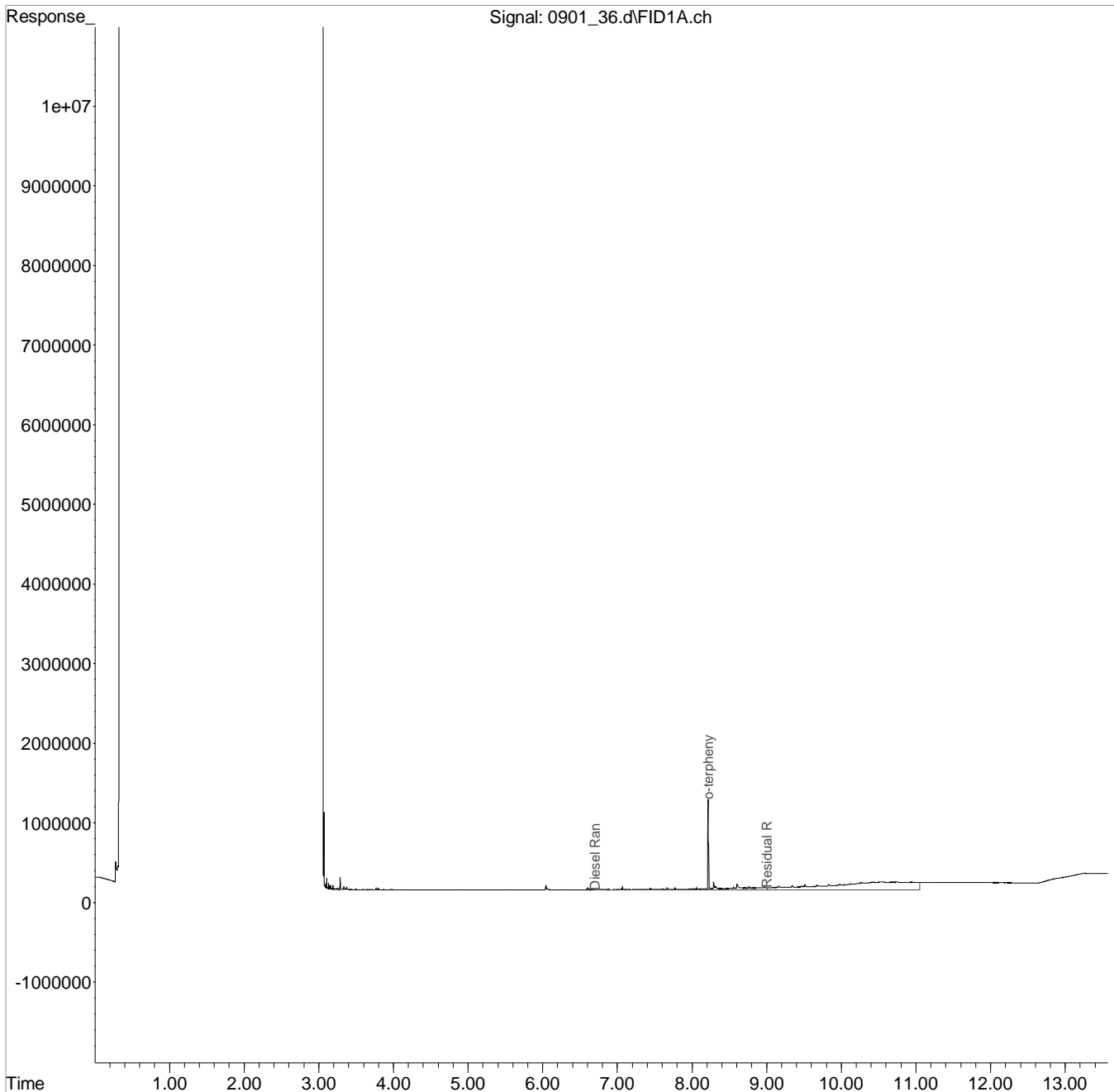
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\090119\  
 Data File : 0901\_36.d  
 Signal(s) : FID1A.ch  
 Acq On : 1 Sep 2019 11:34 pm  
 Operator : 843  
 Sample : L1132628-02 1x WG1336422  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 36 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: Sep 02 12:02:16 2019  
 Quant Method : C:\msdchem\1\methods\DM21H30S.M  
 Quant Title : DROLVI  
 QLast Update : Fri Aug 30 15:46:39 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

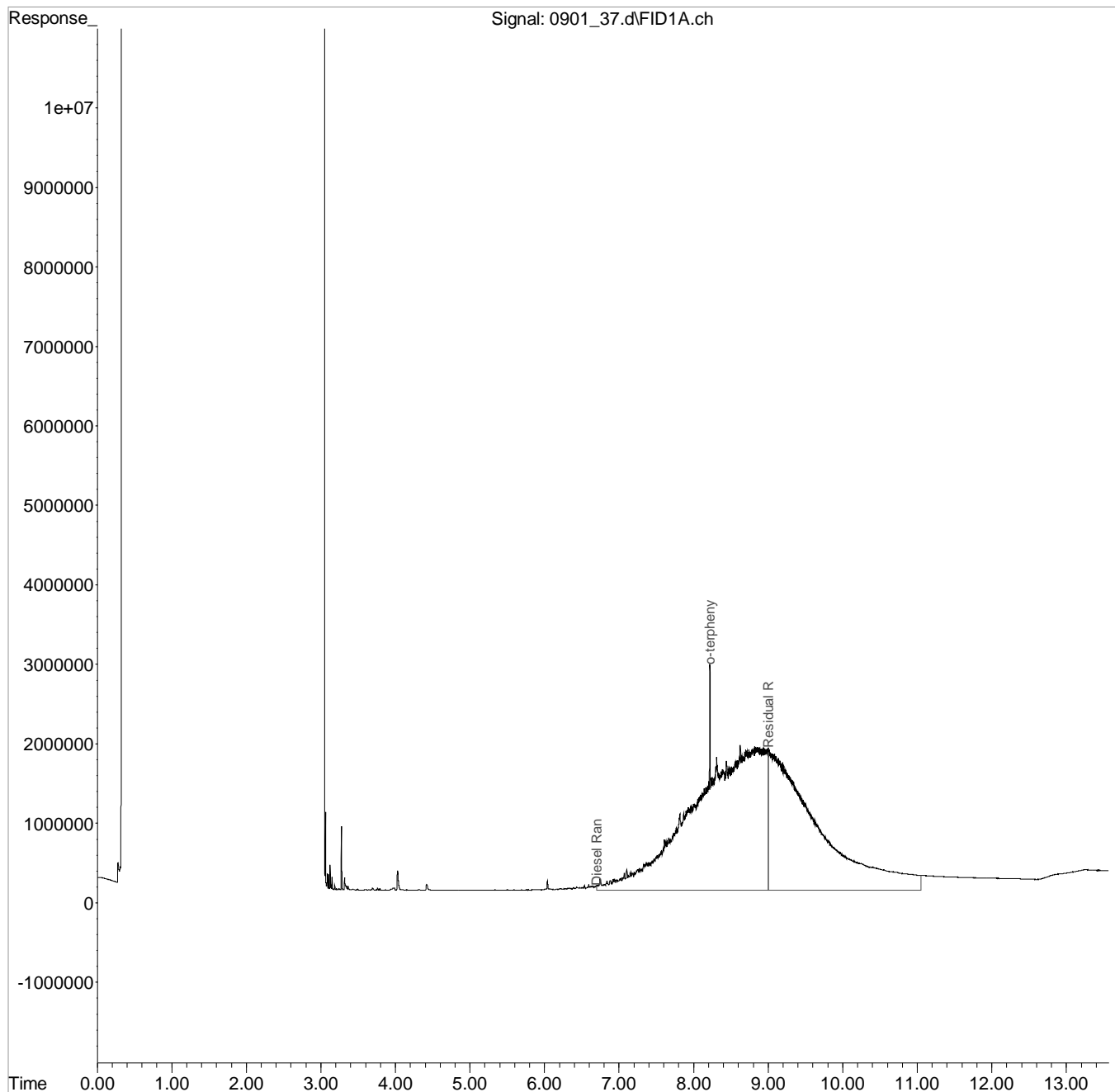
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\090119\  
Data File : 0901\_37.d  
Signal(s) : FID1A.ch  
Acq On : 1 Sep 2019 11:57 pm  
Operator : 843  
Sample : L1132628-03 1x WG1336422  
Misc : M.I.s on ranges are corrections  
ALS Vial : 37 Sample Multiplier: 1  
InstName : SVGC21

Integration File: events.e  
Quant Time: Sep 02 12:03:06 2019  
Quant Method : C:\msdchem\1\methods\DM21H30S.M  
Quant Title : DROLVI  
QLast Update : Fri Aug 30 15:46:39 2019  
Response via : Initial Calibration  
Integrator: ChemStation

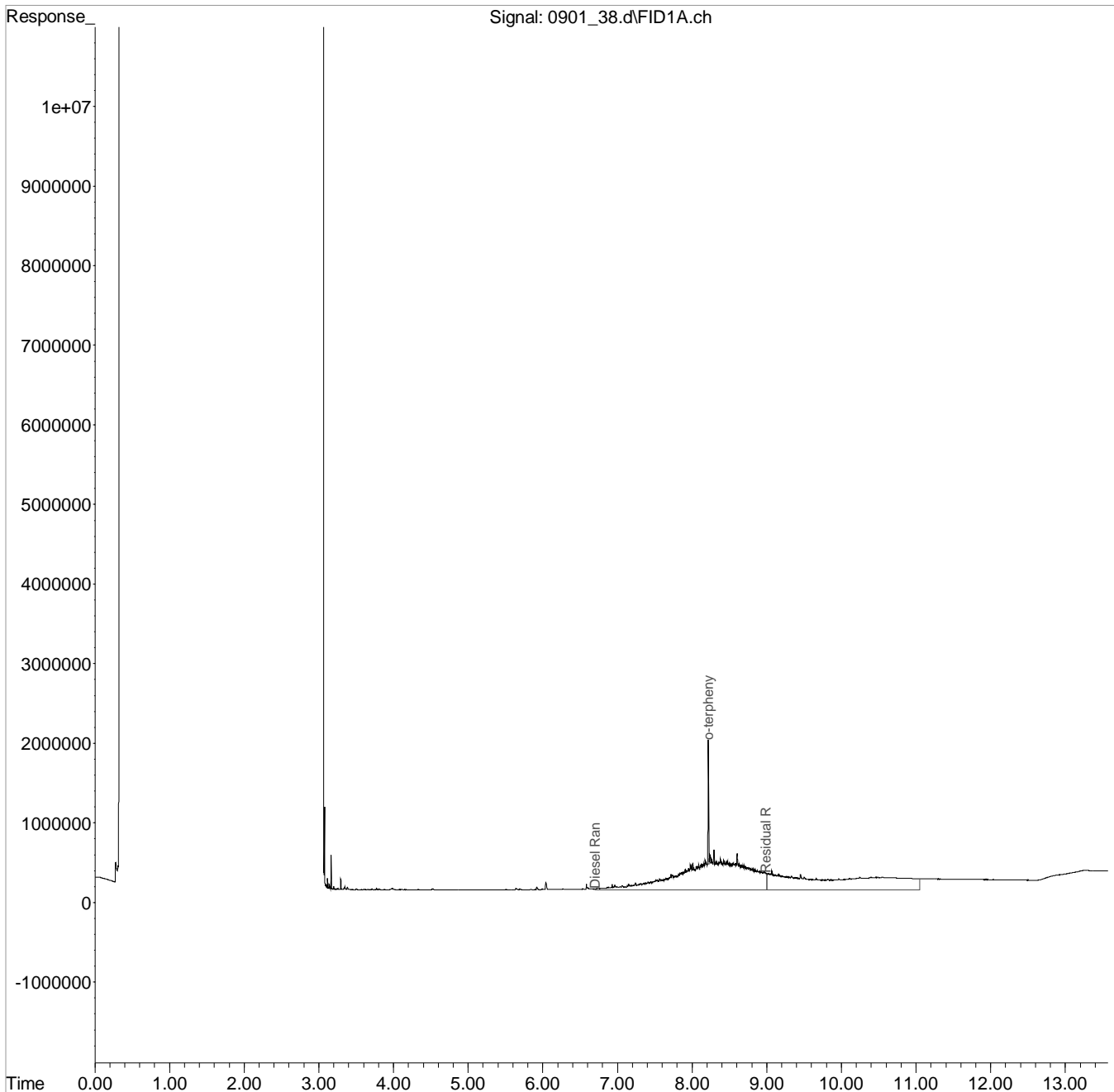
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\090119\  
 Data File : 0901 38.d  
 Signal(s) : FID1A.ch  
 Acq On : 2 Sep 2019 12:19 am  
 Operator : 843  
 Sample : L1132628-04 1x WG1336422  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 38 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: Sep 02 12:03:42 2019  
 Quant Method : C:\msdchem\1\methods\DM21H30S.M  
 Quant Title : DROLVI  
 QLast Update : Fri Aug 30 15:46:39 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

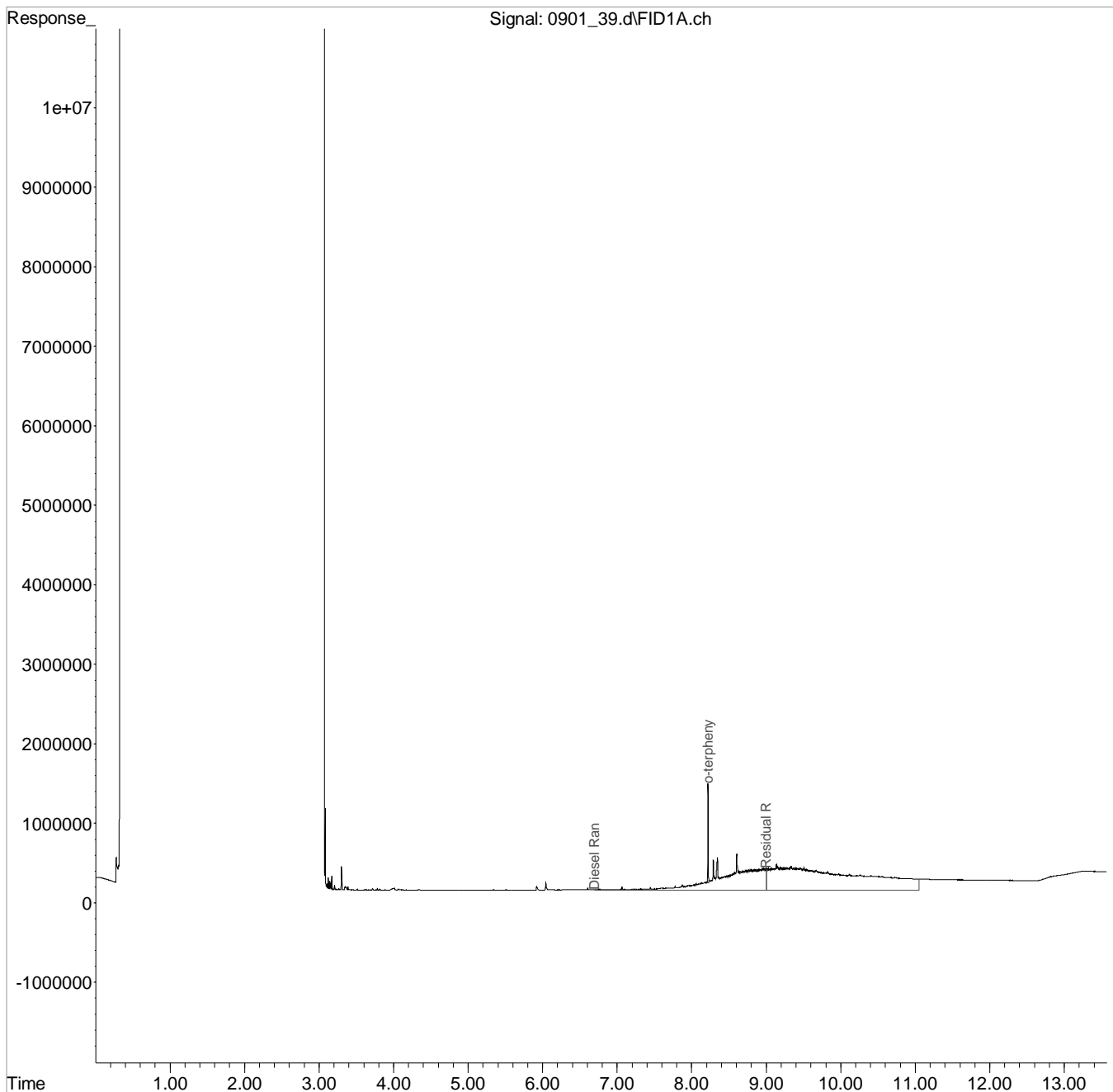
Volume Inj. :  
 Signal Phase :  
 Signal Info :



Data Path : C:\msdchem\1\data\090119\  
Data File : 0901 39.d  
Signal(s) : FID1A.ch  
Acq On : 2 Sep 2019 12:42 am  
Operator : 843  
Sample : L1132628-06 1x WG1336422  
Misc : M.I.s on ranges are corrections  
ALS Vial : 39 Sample Multiplier: 1  
InstName : SVGC21

Integration File: events.e  
Quant Time: Sep 02 12:04:24 2019  
Quant Method : C:\msdchem\1\methods\DM21H30S.M  
Quant Title : DROLVI  
QLast Update : Fri Aug 30 15:46:39 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

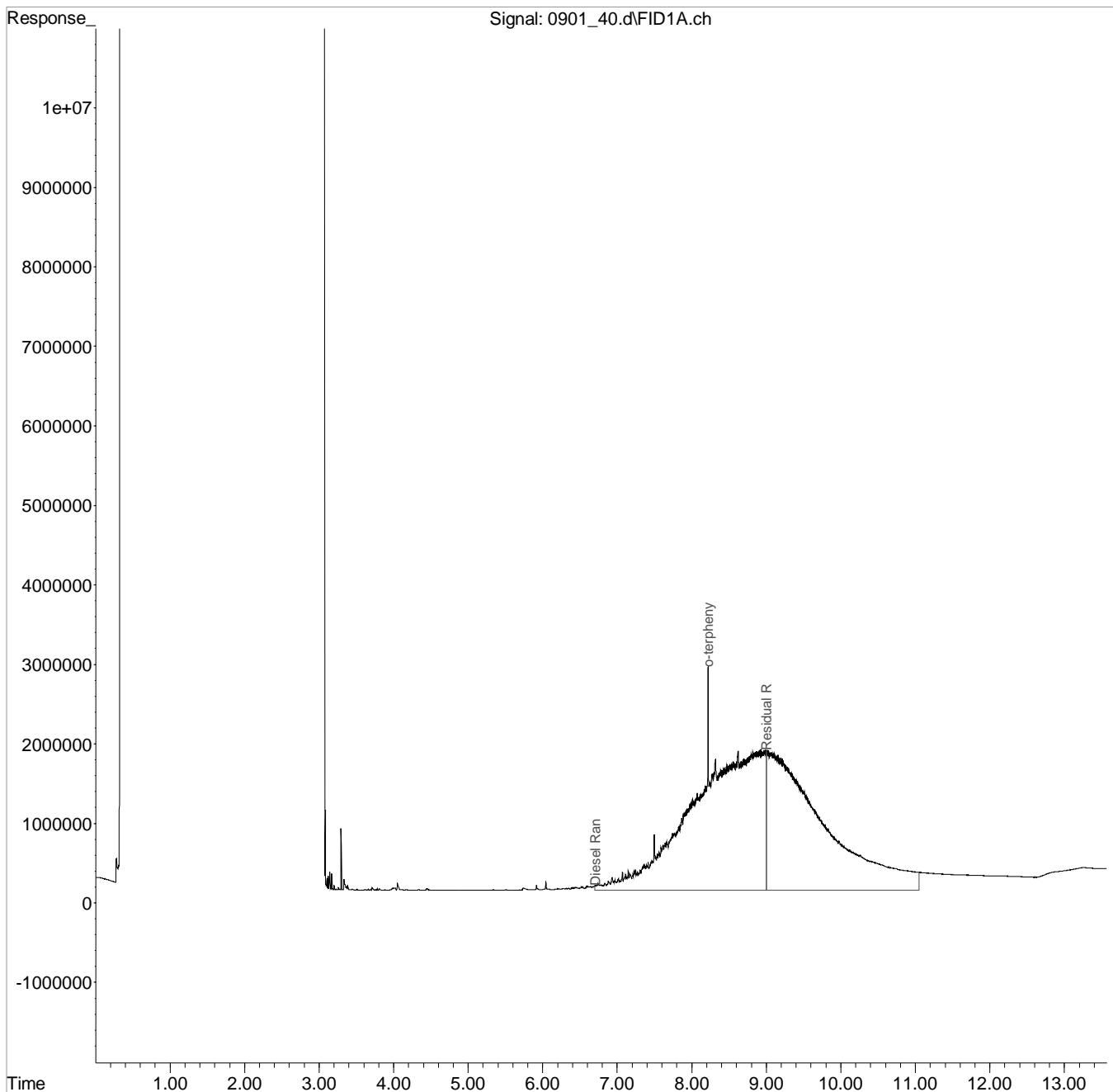




Data Path : C:\msdchem\1\data\090119\  
 Data File : 0901\_40.d  
 Signal(s) : FID1A.ch  
 Acq On : 2 Sep 2019 1:05 am  
 Operator : 843  
 Sample : L1132628-07 1x WG1336422  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 40 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: Sep 02 12:05:01 2019  
 Quant Method : C:\msdchem\1\methods\DM21H30S.M  
 Quant Title : DROLVI  
 QLast Update : Fri Aug 30 15:46:39 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :

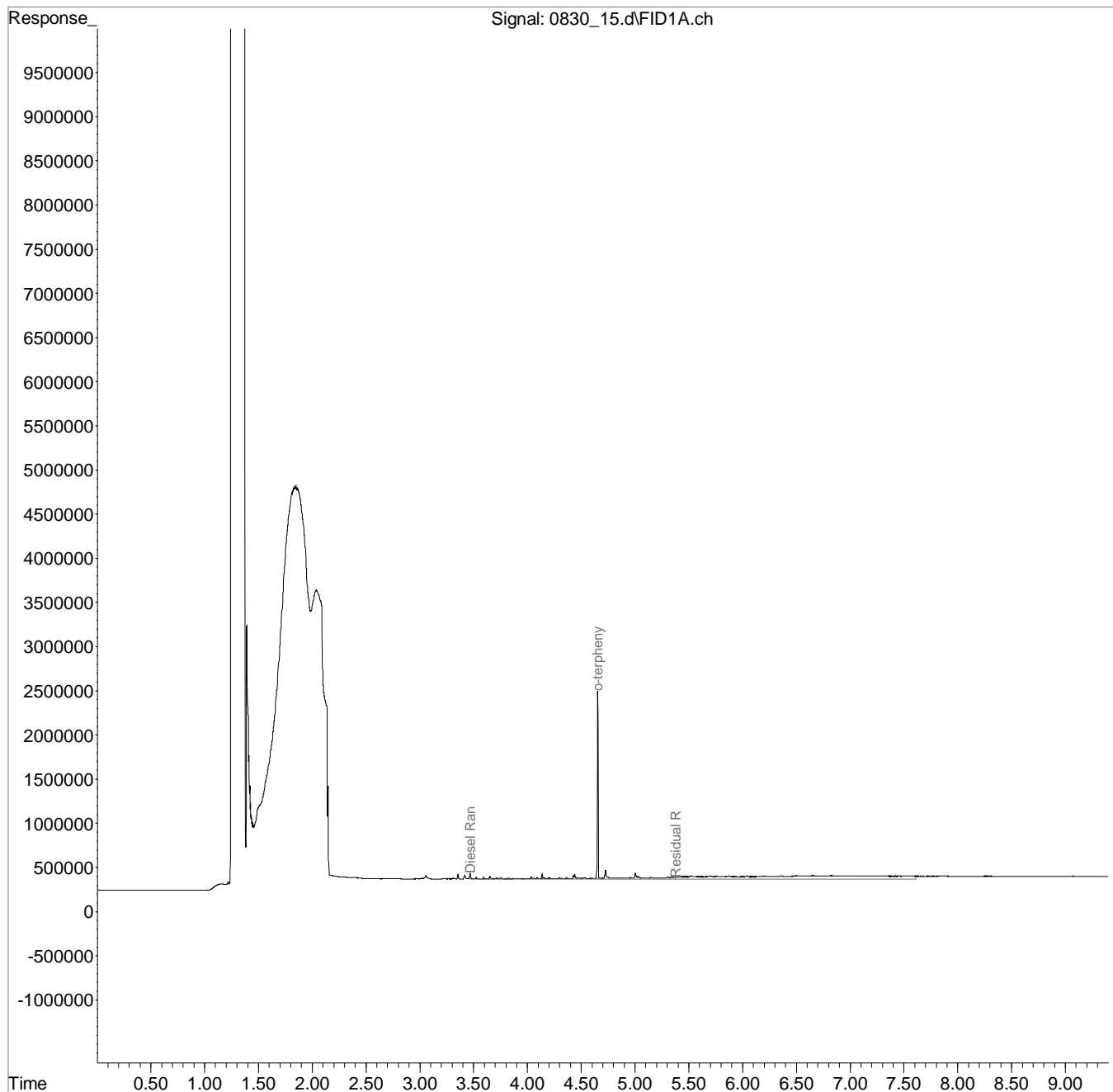




Data Path : C:\msdchem\1\data\083019\  
Data File : 0830 15.d  
Signal(s) : FID1A.ch  
Acq On : 30 Aug 2019 3:42 pm  
Operator : 773  
Sample : L1132628-08 1x WG1335612  
Misc : M.I.s on ranges are corrections  
ALS Vial : 13 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: Aug 30 16:11:42 2019  
Quant Method : C:\msdchem\1\methods\DM31H28AS.M  
Quant Title :  
QLast Update : Thu Aug 29 10:36:06 2019  
Response via : Initial Calibration  
Integrator: ChemStation

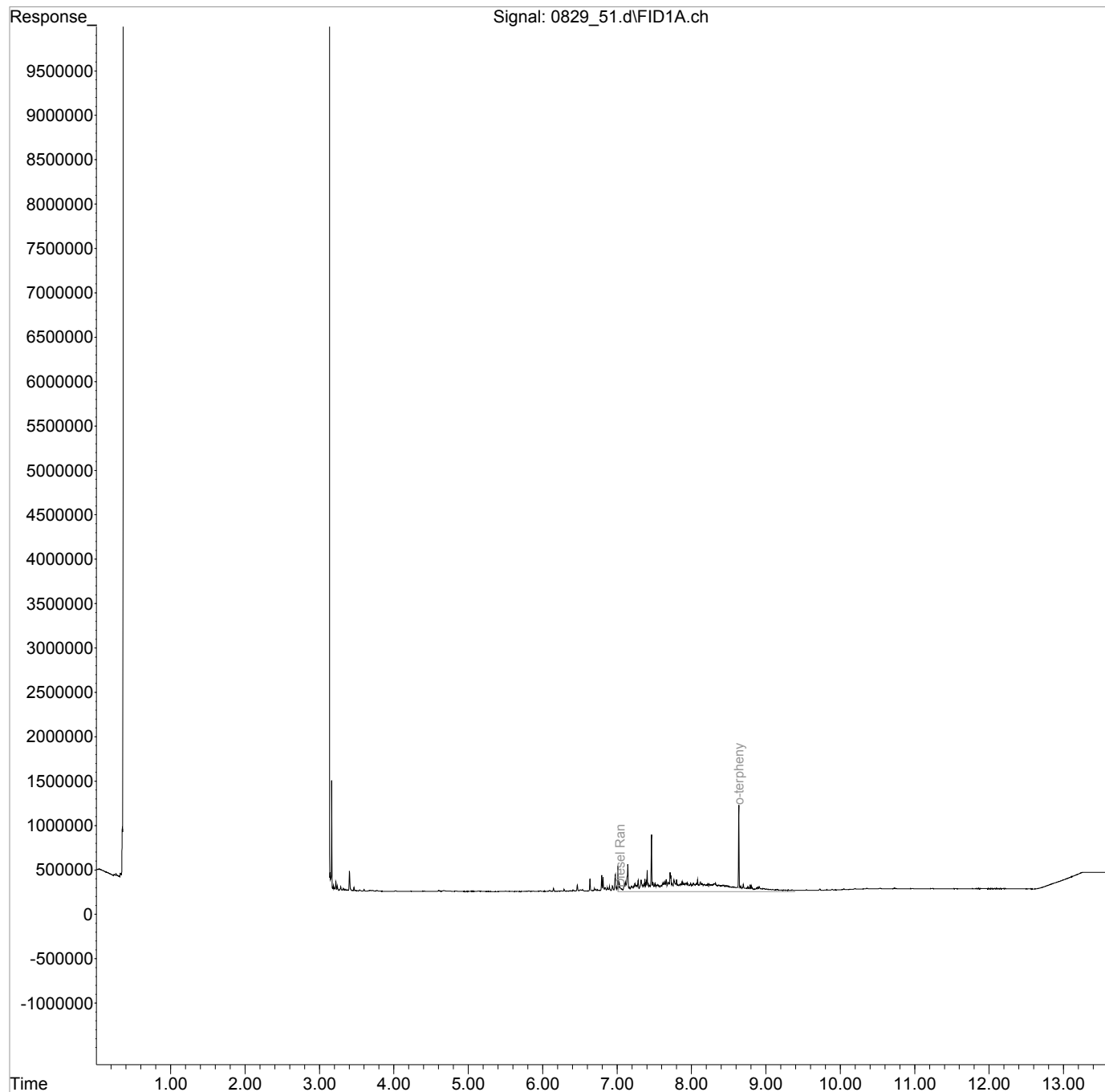
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082919\  
Data File : 0829\_51.d  
Signal(s) : FID1A.ch  
Acq On : 30 Aug 2019 2:26 am  
Operator : 843  
Sample : L1132628-01 1x WG1335621  
Misc : M.I.s on ranges are corrections  
ALS Vial : 30 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 30 15:15:41 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

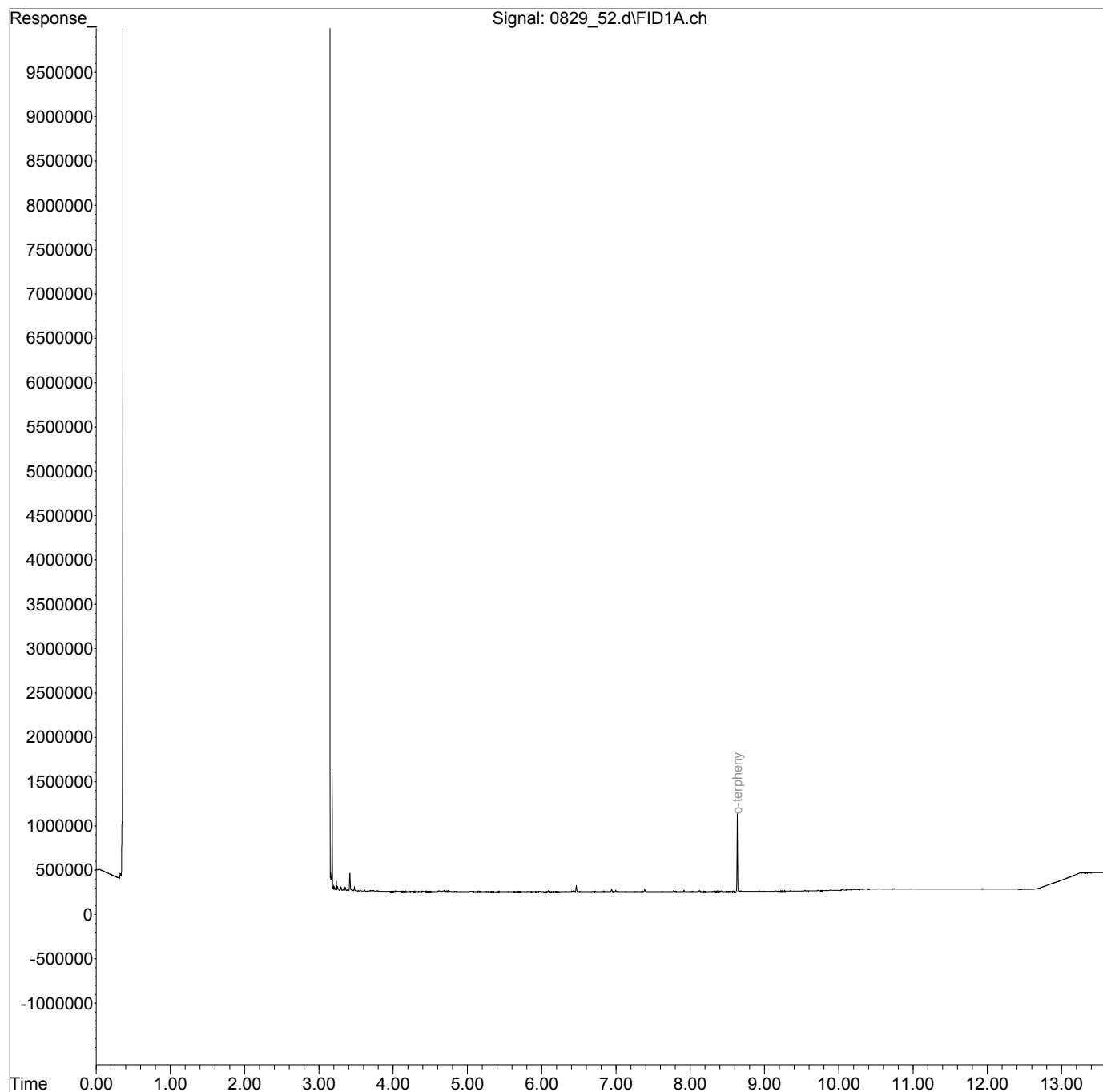
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082919\  
Data File : 0829\_52.d  
Signal(s) : FID1A.ch  
Acq On : 30 Aug 2019 2:47 am  
Operator : 843  
Sample : L1132628-02 1x WG1335621  
Misc : M.I.s on ranges are corrections  
ALS Vial : 31 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 30 15:15:53 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

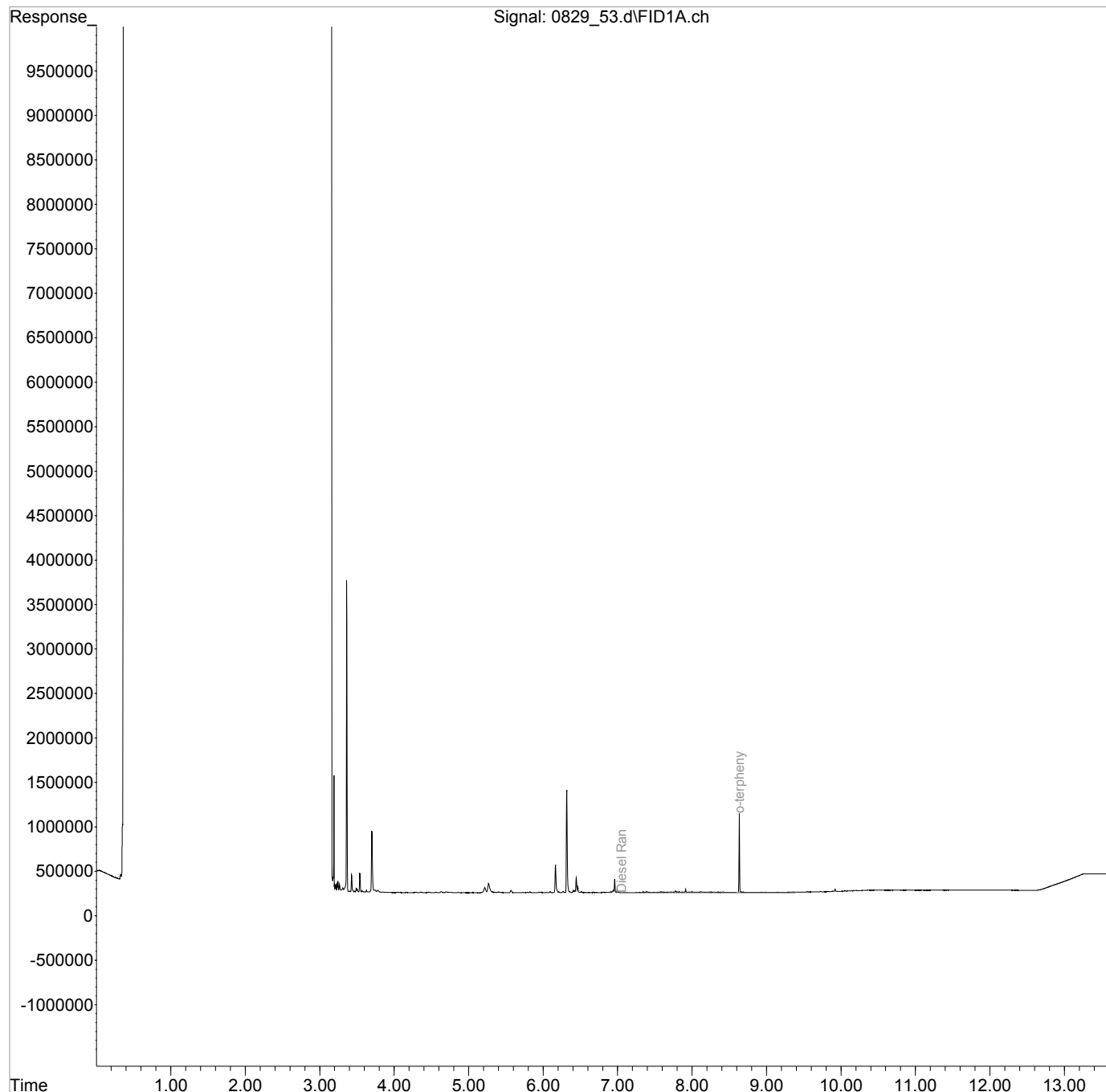
Volume Inj. :  
Signal Phase :  
Signal Info :

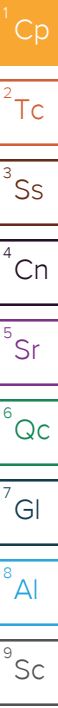


Data Path : C:\msdchem\1\data\082919\  
Data File : 0829\_53.d  
Signal(s) : FID1A.ch  
Acq On : 30 Aug 2019 3:07 am  
Operator : 843  
Sample : L1132628-04 1x WG1335621  
Misc : M.I.s on ranges are corrections  
ALS Vial : 32 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 30 15:16:17 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :





## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1132636  
Samples Received: 08/24/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

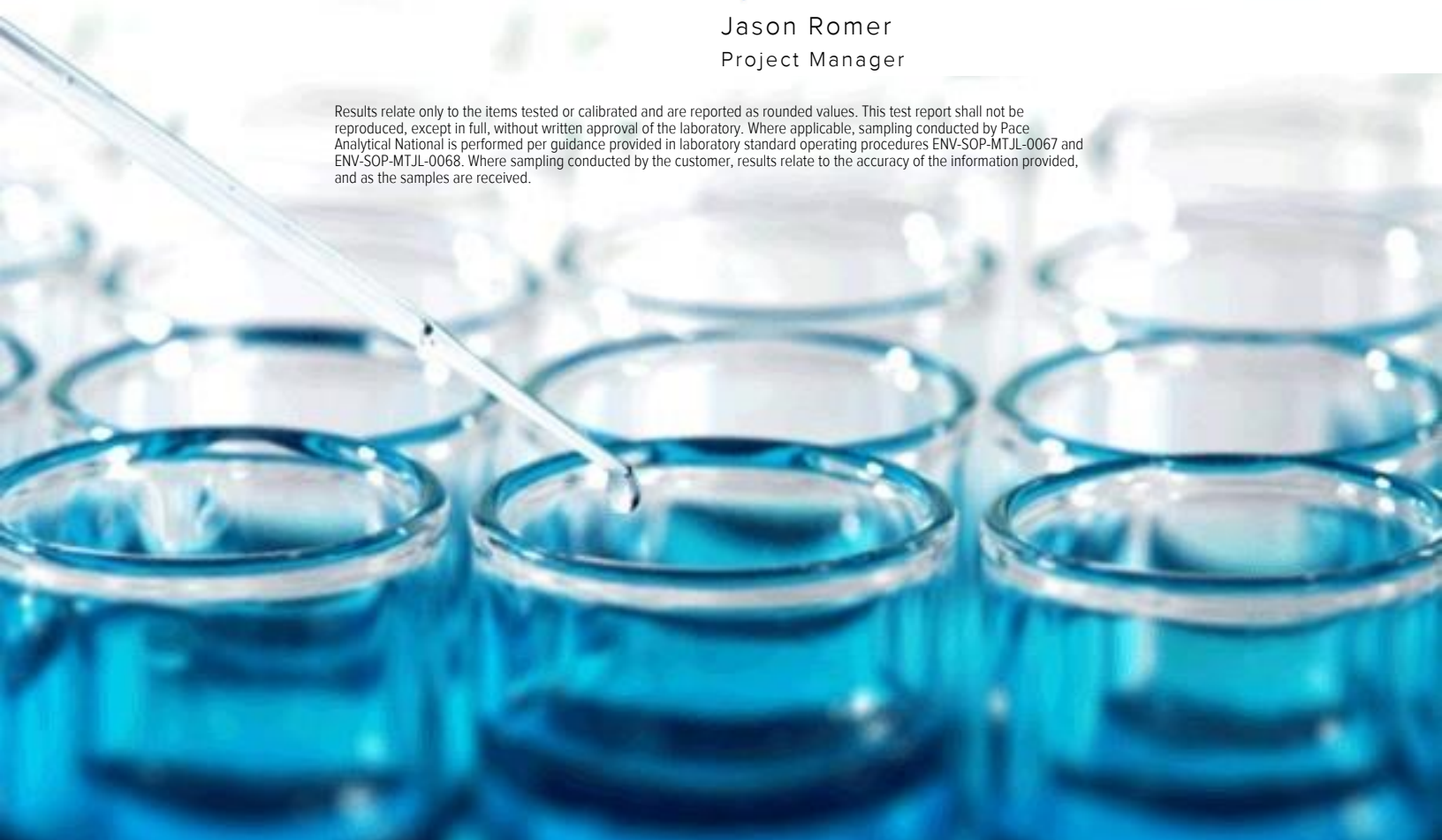
Report To: Katie Teague  
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

Entire Report Reviewed By:



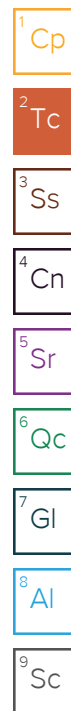
Jason Romer  
Project Manager

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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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# SAMPLE SUMMARY



## RMD-4-20190822 L1132636-01 GW

Collected by: G. Gonzalez  
 Collected date/time: 08/22/19 08:15  
 Received date/time: 08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1337377	1	08/30/19 12:27	08/30/19 12:27	JER	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1337432	5	09/03/19 14:09	09/03/19 14:09	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334788	1	08/26/19 18:08	08/26/19 18:08	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 19:12	08/26/19 19:12	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 12:40	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1339513	1	09/04/19 13:37	09/04/19 13:37	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1338384	1	08/29/19 14:41	09/01/19 05:18	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335621	1	08/27/19 16:44	08/30/19 01:26	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1336569	1	08/28/19 18:00	08/29/19 11:46	DMG	Mt. Juliet, TN

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

## WMW-18-20190822 L1132636-02 GW

Collected by: G. Gonzalez  
 Collected date/time: 08/22/19 10:15  
 Received date/time: 08/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1335504	1	08/29/19 11:23	08/29/19 11:23	JER	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1337432	1	09/03/19 14:20	09/03/19 14:20	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1334788	1	08/26/19 18:09	08/26/19 18:09	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1334826	1	08/26/19 19:56	08/26/19 19:56	LDC	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334768	1	08/26/19 10:55	08/27/19 12:44	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1334779	1	08/26/19 09:28	08/26/19 15:12	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1339513	1	09/04/19 13:39	09/04/19 13:39	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1336422	1	08/28/19 16:13	09/02/19 02:02	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1335621	1	08/27/19 16:44	08/30/19 03:27	SHG	Mt. Juliet, TN



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.

Jason Romer  
Project Manager

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





## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	08/30/2019 12:27	<a href="#">WG1337377</a>

1 Cp

2 Tc

## Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5210		500	5	09/03/2019 14:09	<a href="#">WG1337432</a>

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	08/26/2019 18:08	<a href="#">WG1334788</a>

5 Sr

6 Qc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	77300		5000	1	08/26/2019 19:12	<a href="#">WG1334826</a>

7 Gl

8 Al

## Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	08/27/2019 12:40	<a href="#">WG1334768</a>
Manganese,Dissolved	23.9		5.00	1	08/27/2019 12:40	<a href="#">WG1334768</a>

9 Sc

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/04/2019 13:37	<a href="#">WG1339513</a>
Ethane	ND		13.0	1	09/04/2019 13:37	<a href="#">WG1339513</a>
Ethene	ND		13.0	1	09/04/2019 13:37	<a href="#">WG1339513</a>

## 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	09/01/2019 05:18	<a href="#">WG1338384</a>
Residual Range Organics (RRO)	ND		250	1	09/01/2019 05:18	<a href="#">WG1338384</a>
(S) o-Terphenyl	78.9		52.0-156		09/01/2019 05:18	<a href="#">WG1338384</a>

## Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/30/2019 01:26	<a href="#">WG1335621</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2019 01:26	<a href="#">WG1335621</a>
(S) o-Terphenyl	65.8		52.0-156		08/30/2019 01:26	<a href="#">WG1335621</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Acenaphthene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Acenaphthylene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Benzo(a)anthracene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Benzo(a)pyrene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Benzo(g,h,i)perylene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Benzo(k)fluoranthene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Chrysene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Dibenz(a,h)anthracene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Fluoranthene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Fluorene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Naphthalene	ND		0.250	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Phenanthrene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
Pyrene	ND		0.0500	1	08/29/2019 11:46	<a href="#">WG1336569</a>
1-Methylnaphthalene	ND		0.250	1	08/29/2019 11:46	<a href="#">WG1336569</a>
2-Methylnaphthalene	ND		0.250	1	08/29/2019 11:46	<a href="#">WG1336569</a>
2-Chloronaphthalene	ND		0.250	1	08/29/2019 11:46	<a href="#">WG1336569</a>
(S) Nitrobenzene-d5	125		31.0-160		08/29/2019 11:46	<a href="#">WG1336569</a>
(S) 2-Fluorobiphenyl	88.9		48.0-148		08/29/2019 11:46	<a href="#">WG1336569</a>
(S) p-Terphenyl-d14	103		37.0-146		08/29/2019 11:46	<a href="#">WG1336569</a>

- 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	08/29/2019 11:23	<a href="#">WG1335504</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1610		100	1	09/03/2019 14:20	<a href="#">WG1337432</a>

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	08/26/2019 18:09	<a href="#">WG1334788</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	21900		5000	1	08/26/2019 19:56	<a href="#">WG1334826</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	7.98		2.00	1	08/26/2019 15:12	<a href="#">WG1334779</a>
Arsenic,Dissolved	8.83		2.00	1	08/27/2019 12:44	<a href="#">WG1334768</a>
Iron,Dissolved	ND		100	1	08/27/2019 12:44	<a href="#">WG1334768</a>
Manganese,Dissolved	ND		5.00	1	08/27/2019 12:44	<a href="#">WG1334768</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/04/2019 13:39	<a href="#">WG1339513</a>
Ethane	ND		13.0	1	09/04/2019 13:39	<a href="#">WG1339513</a>
Ethene	ND		13.0	1	09/04/2019 13:39	<a href="#">WG1339513</a>

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	09/02/2019 02:02	<a href="#">WG1336422</a>
Residual Range Organics (RRO)	294		250	1	09/02/2019 02:02	<a href="#">WG1336422</a>
(S) o-Terphenyl	86.5		52.0-156		09/02/2019 02:02	<a href="#">WG1336422</a>

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		200	1	08/30/2019 03:27	<a href="#">WG1335621</a>
Residual Range Organics (RRO)	ND		250	1	08/30/2019 03:27	<a href="#">WG1335621</a>
(S) o-Terphenyl	68.9		52.0-156		08/30/2019 03:27	<a href="#">WG1335621</a>



Method Blank (MB)

(MB) R3445749-1 08/29/19 10:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1132012-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132012-01 08/29/19 10:58 • (DUP) R3445749-3 08/29/19 10:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1132794-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1132794-02 08/29/19 11:28 • (DUP) R3445749-7 08/29/19 11:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	67.0	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3445749-2 08/29/19 10:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	7090	94.5	90.0-110	

L1132016-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132016-01 08/29/19 11:01 • (MS) R3445749-4 08/29/19 11:02 • (MSD) R3445749-5 08/29/19 11:04

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	1580	6570	6620	99.8	101	1	90.0-110			0.773	10

L1132636-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1132636-02 08/29/19 11:23 • (MS) R3445749-6 08/29/19 11:25

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4890	97.7	1	90.0-110	



Method Blank (MB)

(MB) R3446147-1 08/30/19 12:19

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1133546-27 Original Sample (OS) • Duplicate (DUP)

(OS) L1133546-27 08/30/19 12:32 • (DUP) R3446147-5 08/30/19 12:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	16000	16000	5	0.194		10

L1133929-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1133929-01 08/30/19 12:49 • (DUP) R3446147-6 08/30/19 12:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	191	197	1	3.09		10

Laboratory Control Sample (LCS)

(LCS) R3446147-2 08/30/19 12:21

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	7230	96.4	90.0-110	

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/30/19 12:27 • (MS) R3446147-3 08/30/19 12:29 • (MSD) R3446147-4 08/30/19 12:30

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	4860	4960	97.1	99.1	1	90.0-110			2.06	10

L1134221-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1134221-01 08/30/19 12:52 • (MS) R3446147-7 08/30/19 12:54

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	5040	101	1	90.0-110	



Method Blank (MB)

(MB) R3446744-1 09/03/19 14:00

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

L1131894-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131894-01 09/03/19 14:03 • (DUP) R3446744-3 09/03/19 14:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	U	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3446744-2 09/03/19 14:02

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	4200	105	90.0-110	

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 09/03/19 14:09 • (MS) R3446744-4 09/03/19 14:11 • (MSD) R3446744-5 09/03/19 14:12

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	5210	18000	17400	102	97.2	5	90.0-110			3.41	20



Method Blank (MB)

(MB) R3444364-1 08/26/19 18:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1132628-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1132628-01 08/26/19 18:06 • (DUP) R3444364-3 08/26/19 18:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3444364-2 08/26/19 18:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	472	94.4	85.0-115	

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/26/19 18:08 • (MS) R3444364-4 08/26/19 18:08 • (MSD) R3444364-5 08/26/19 18:09

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	878	887	87.8	88.7	1	80.0-120			1.02	20



Method Blank (MB)

(MB) R3444439-1 08/26/19 12:11

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

L1132612-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1132612-02 08/26/19 12:59 • (DUP) R3444439-3 08/26/19 13:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	15200	15100	1	0.508		15

L1132615-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1132615-08 08/26/19 16:13 • (DUP) R3444439-5 08/26/19 16:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	5190	5200	1	0.166		15

Laboratory Control Sample (LCS)

(LCS) R3444439-2 08/26/19 12:25

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	40200	101	80.0-120	

L1132612-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1132612-03 08/26/19 13:29 • (MS) R3444439-4 08/26/19 13:43

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	6880	55900	98.0	1	80.0-120	

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/26/19 19:12 • (MS) R3444439-6 08/26/19 19:27 • (MSD) R3444439-7 08/26/19 19:41

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	77300	123000	123000	91.0	91.3	1	80.0-120	E	E	0.114	15





Method Blank (MB)

(MB) R3444512-1 08/27/19 10:48

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
Manganese,Dissolved	U		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) R3444512-2 08/27/19 10:52 • (LCSD) R3444512-3 08/27/19 10:56

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	%	%	%			%	%
Arsenic,Dissolved	50.0	52.0	51.5	104	103	80.0-120			0.827	20
Iron,Dissolved	5000	5330	5290	107	106	80.0-120			0.820	20
Manganese,Dissolved	50.0	52.6	52.2	105	104	80.0-120			0.739	20

L1131721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1131721-03 08/27/19 10:59 • (MS) R3444512-5 08/27/19 11:07 • (MSD) R3444512-6 08/27/19 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
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Arsenic,Dissolved	50.0	4.68	55.0	55.0	101	101	1	75.0-125			0.0467	20
Iron,Dissolved	5000	ND	5060	5090	101	102	1	75.0-125			0.685	20
Manganese,Dissolved	50.0	5.23	54.9	54.3	99.4	98.2	1	75.0-125			1.12	20



Method Blank (MB)

(MB) R3444324-1 08/26/19 14:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		0.250	2.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

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

(LCS) R3444324-2 08/26/19 14:05 • (LCSD) R3444324-3 08/26/19 14:09

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	49.7	49.0	99.3	98.0	80.0-120			1.33	20

L1132552-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132552-01 08/26/19 14:12 • (MS) R3444324-5 08/26/19 14:19 • (MSD) R3444324-6 08/26/19 14:22

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	1.08	49.6	49.9	97.0	97.6	1	75.0-125			0.555	20

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3447190-1 09/04/19 13:17

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

L1132628-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1132628-07 09/04/19 13:34 • (DUP) R3447190-2 09/04/19 13:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	702	710	1	1.19		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1133680-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1133680-01 09/04/19 14:37 • (DUP) R3447190-3 09/04/19 14:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	2650	2670	1	0.942		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3447190-6 09/04/19 15:00 • (LCSD) R3447190-7 09/04/19 15:04

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	%	%	%			%	%
Methane	67.8	75.3	72.1	111	106	85.0-115			4.44	20
Ethane	129	118	115	91.4	89.4	85.0-115			2.18	20
Ethene	127	118	115	92.6	90.2	85.0-115			2.66	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 09/04/19 13:37 • (MS) R3447190-4 09/04/19 14:50 • (MSD) R3447190-5 09/04/19 14:55

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	75.3	75.4	111	111	1	85.0-115			0.154	20
Ethane	129	ND	123	127	95.4	98.3	1	85.0-115			3.02	20
Ethene	127	ND	121	125	95.2	98.6	1	85.0-115			3.45	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3446144-1 08/30/19 10:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
<i>(S) o-Terphenyl</i>	97.5			52.0-156

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

(LCS) R3446144-2 08/30/19 11:10 • (LCSD) R3446144-3 08/30/19 11:30

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)	1500	1670	1680	111	112	50.0-150			0.597	20
<i>(S) o-Terphenyl</i>				99.5	99.0	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) R3446377-1 09/01/19 04:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
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) R3446377-2 09/01/19 04:44 • (LCSD) R3446377-3 09/01/19 05:01

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Diesel Range Organics (DRO)	1500	1320	1350	88.0	90.0	50.0-150			2.25	20
(S) o-Terphenyl				85.5	87.0	52.0-156				

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 09/01/19 05:18 • (MS) R3446377-4 09/01/19 05:35 • (MSD) R3446377-5 09/01/19 05:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Diesel Range Organics (DRO)	1430	ND	1330	1360	93.0	95.1	1	50.0-150			2.23	20
(S) o-Terphenyl					83.2	84.2		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) R3446143-1 08/29/19 16:23

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>	68.0			52.0-156

Laboratory Control Sample (LCS)

(LCS) R3446143-2 08/29/19 16:44

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Diesel Range Organics (DRO)	1500	1170	78.0	50.0-150	
<i>(S) o-Terphenyl</i>			74.0	52.0-156	

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/30/19 01:26 • (MS) R3446143-3 08/30/19 01:46 • (MSD) R3446143-4 08/30/19 02:06

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)	1500	ND	1290	1220	86.0	81.3	1	50.0-150			5.58	20
<i>(S) o-Terphenyl</i>					77.0	71.5		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) R3445584-2 08/29/19 04:05

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	0.00316	↓	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	0.0101	↓	0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	114			31.0-160
(S) 2-Fluorobiphenyl	80.0			48.0-148
(S) p-Terphenyl-d14	103			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3445584-1 08/29/19 03:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	2.00	1.71	85.5	67.0-150	
Acenaphthene	2.00	1.77	88.5	65.0-138	
Acenaphthylene	2.00	1.79	89.5	66.0-140	
Benzo(a)anthracene	2.00	1.75	87.5	61.0-140	
Benzo(a)pyrene	2.00	1.66	83.0	60.0-143	
Benzo(b)fluoranthene	2.00	1.78	89.0	58.0-141	
Benzo(g,h,i)perylene	2.00	1.85	92.5	52.0-153	
Benzo(k)fluoranthene	2.00	1.60	80.0	58.0-148	
Chrysene	2.00	1.68	84.0	64.0-144	
Dibenz(a,h)anthracene	2.00	1.79	89.5	52.0-155	
Fluoranthene	2.00	1.67	83.5	69.0-153	





Laboratory Control Sample (LCS)

(LCS) R3445584-1 08/29/19 03:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	2.00	1.68	84.0	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.95	97.5	54.0-153	
Naphthalene	2.00	1.47	73.5	61.0-137	
Phenanthrene	2.00	1.82	91.0	62.0-137	
Pyrene	2.00	1.70	85.0	60.0-142	
1-Methylnaphthalene	2.00	1.58	79.0	66.0-142	
2-Methylnaphthalene	2.00	1.48	74.0	62.0-136	
2-Chloronaphthalene	2.00	1.67	83.5	64.0-140	
(S) Nitrobenzene-d5			118	31.0-160	
(S) 2-Fluorobiphenyl			73.0	48.0-148	
(S) p-Terphenyl-d14			100	37.0-146	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1132636-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132636-01 08/29/19 11:46 • (MS) R3445584-3 08/29/19 12:09 • (MSD) R3445584-4 08/29/19 12:31

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	1.90	ND	1.55	1.63	81.6	85.8	1	56.0-156			5.03	20
Acenaphthene	1.90	ND	1.71	1.78	90.0	93.7	1	44.0-153			4.01	20
Acenaphthylene	1.90	ND	1.77	1.83	93.2	96.3	1	53.0-150			3.33	20
Benzo(a)anthracene	1.90	ND	1.64	1.67	86.3	87.9	1	47.0-151			1.81	20
Benzo(a)pyrene	1.90	ND	1.48	1.59	77.9	83.7	1	45.0-146			7.17	20
Benzo(b)fluoranthene	1.90	ND	1.55	1.53	81.4	80.4	1	43.0-142			1.30	20
Benzo(g,h,i)perylene	1.90	ND	1.70	1.61	89.5	84.7	1	40.0-147			5.44	20
Benzo(k)fluoranthene	1.90	ND	1.48	1.56	77.9	82.1	1	43.0-148			5.26	21
Chrysene	1.90	ND	1.56	1.63	82.1	85.8	1	50.0-148			4.39	20
Dibenz(a,h)anthracene	1.90	ND	1.63	1.54	85.8	81.1	1	37.0-151			5.68	20
Fluoranthene	1.90	ND	1.59	1.63	83.7	85.8	1	56.0-157			2.48	20
Fluorene	1.90	ND	1.57	1.61	82.6	84.7	1	48.0-148			2.52	20
Indeno(1,2,3-cd)pyrene	1.90	ND	1.70	1.70	89.5	89.5	1	41.0-148			0.000	20
Naphthalene	1.90	ND	1.48	1.49	76.8	77.3	1	10.0-160			0.673	20
Phenanthrene	1.90	ND	1.73	1.74	91.1	91.6	1	47.0-147			0.576	20
Pyrene	1.90	ND	1.66	1.65	87.4	86.8	1	51.0-148			0.604	20
1-Methylnaphthalene	1.90	ND	1.52	1.57	80.0	82.6	1	21.0-160			3.24	20
2-Methylnaphthalene	1.90	ND	1.45	1.51	76.3	79.5	1	31.0-160			4.05	20
2-Chloronaphthalene	1.90	ND	1.76	1.74	92.6	91.6	1	52.0-148			1.14	20
(S) Nitrobenzene-d5					129	127		31.0-160				
(S) 2-Fluorobiphenyl					83.7	88.4		48.0-148				
(S) p-Terphenyl-d14					97.9	101		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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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).
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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

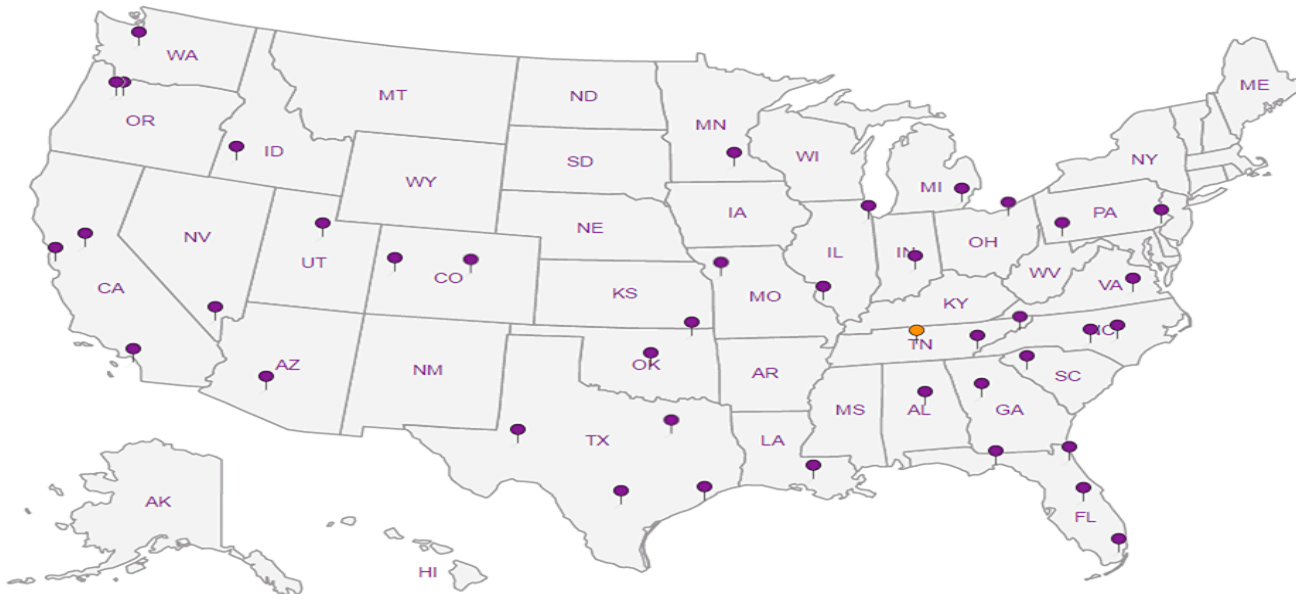
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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

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

Email To: KatieTeague@kennedyjenks.com;  
RyanHultgren@kennedyjenks.com;

Report to:  
Katie Teague

Project Description: BNSF - Wishram Railyard, WA

Phone: 253-835-6400  
Fax:

Client Project #  
1996120\*00

City/State Collected: Wishram, WA

Lab Project #  
BNSF1KEN-WISHRAM

Site/Facility ID #

P.O. #

Collected by (print):  
G. Gonzalez

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

Collected by (signature):  
*[Signature]*

Immediately Packed on Ice N    Y X

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

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# 1132636  
Tab C249  
Acctnum: BNSF1KEN  
Template: T149555  
Prelogin: P723325  
TSR: 134 - Mark W. Beasley  
PB: 8-7-196m  
Shipped Via: FedEx Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss M6020RCRAB 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	Remarks	Sample # (lab only)
RMD-4-20190822	Grab	GW	—	8/22/19	0815	12		X	X	X	X		X	X	X	X	MS/MSD	-01
WMW-18-20190822	↓	GW	↓	8/22/19	1015	12		X	X	X	X			X	X	X		02

- \* Matrix: SS - Soil AIR - Air F - Filter
- GW - Groundwater B - Bioassay
- WW - WasteWater
- DW - Drinking Water
- OT - Other

Remarks: Don't log trip blank

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

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

Relinquished by: (Signature) <i>[Signature]</i>	Date: 8/23/19	Time: 11:00	Received by: (Signature) FEDEX	Trip Blank Received: <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No	HCL / MeOH TBR	RAD SCREEN: <0.5 mR/hr
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C 71.1 = 82	Bottles Received: 48	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 8/24	Time: 0845	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

Email To: [KatieTeague@kennedyjenks.com](mailto:KatieTeague@kennedyjenks.com);  
[RyanHultgren@kennedyjenks.com](mailto:RyanHultgren@kennedyjenks.com);

Report to:  
**Katie Teague**

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

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

Client Project #  
**1996120\*00**

City/State  
Collected: **Wishram, WA**

Lab Project #  
**BNSF1KEN-WISHRAM**

P.O. #

Collected by (print):  
**G. Gonzalez**

Site/Facility ID #

Quote #

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

No. of  
Cntrs

Immediately  
Packed on Ice N  Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative	Chain of Custody
WMW-18-20190822	Grab	GW	-	8/22/19	1015	12	Total As 6020 250mlHDPE-HNO3 Total M6020RCRA8 250mlHDPE-HNO3 Total Pb 6020 250mlHDPE-HNO3 V8260BTEXC 40mlAmb-HCl V8260C 40mlAmb-HCl Dissolved As 6020	
		GW						
		GW						
		GW						
		GW						
		GW						
		GW						
		GW						
		GW						
		GW						

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



L# **1132636**

Table #

Acctnum: **BNSF1KEN**

Template: **T149555**

Prelogin: **P723325**

TSR: **134 - Mark W. Beasley**

PB: **8-7-196m**

Shipped Via: **FedEX Ground**

- \* Matrix:
- SS - Soil AIR - Air F - Filter
- GW - Groundwater B - Bioassay
- WW - WasteWater
- DW - Drinking Water
- OT - Other

Remarks:  
**Don't log trip blank**

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 Headpace:  Y  N

Preservation Correct/Checked:  Y  N

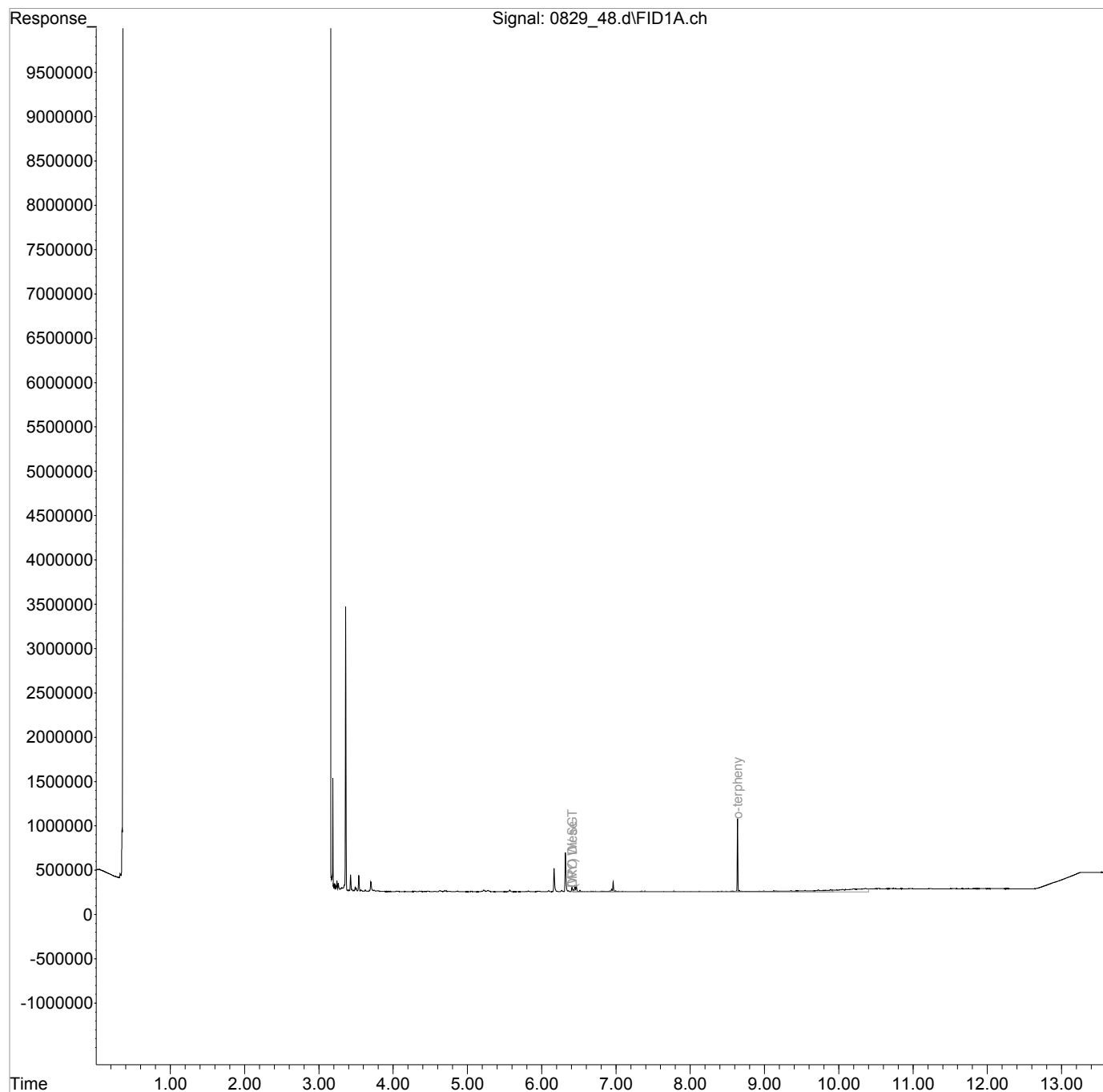
**RAD SCREEN: <0.5 mR/hr**

Relinquished by: (Signature) <i>[Signature]</i>	Date: <b>8/23/19</b>	Time: <b>1100</b>	Received by: (Signature) <b>FED-EX</b>	Trip Blank Received: Yes / No HCL / MeOH TBR	Bottles Received:	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <b>7.1: 8.5</b>		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <b>8/4/5</b>	Time: <b>0845</b>	Hold: Condition: <b>NCF / OK</b>

Data Path : C:\msdchem\1\data\082919\  
Data File : 0829\_48.d  
Signal(s) : FID1A.ch  
Acq On : 30 Aug 2019 1:26 am  
Operator : 843  
Sample : L1132636-01 1x WG1335621  
Misc : M.I.s on ranges are corrections  
ALS Vial : 27 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 30 15:12:16 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

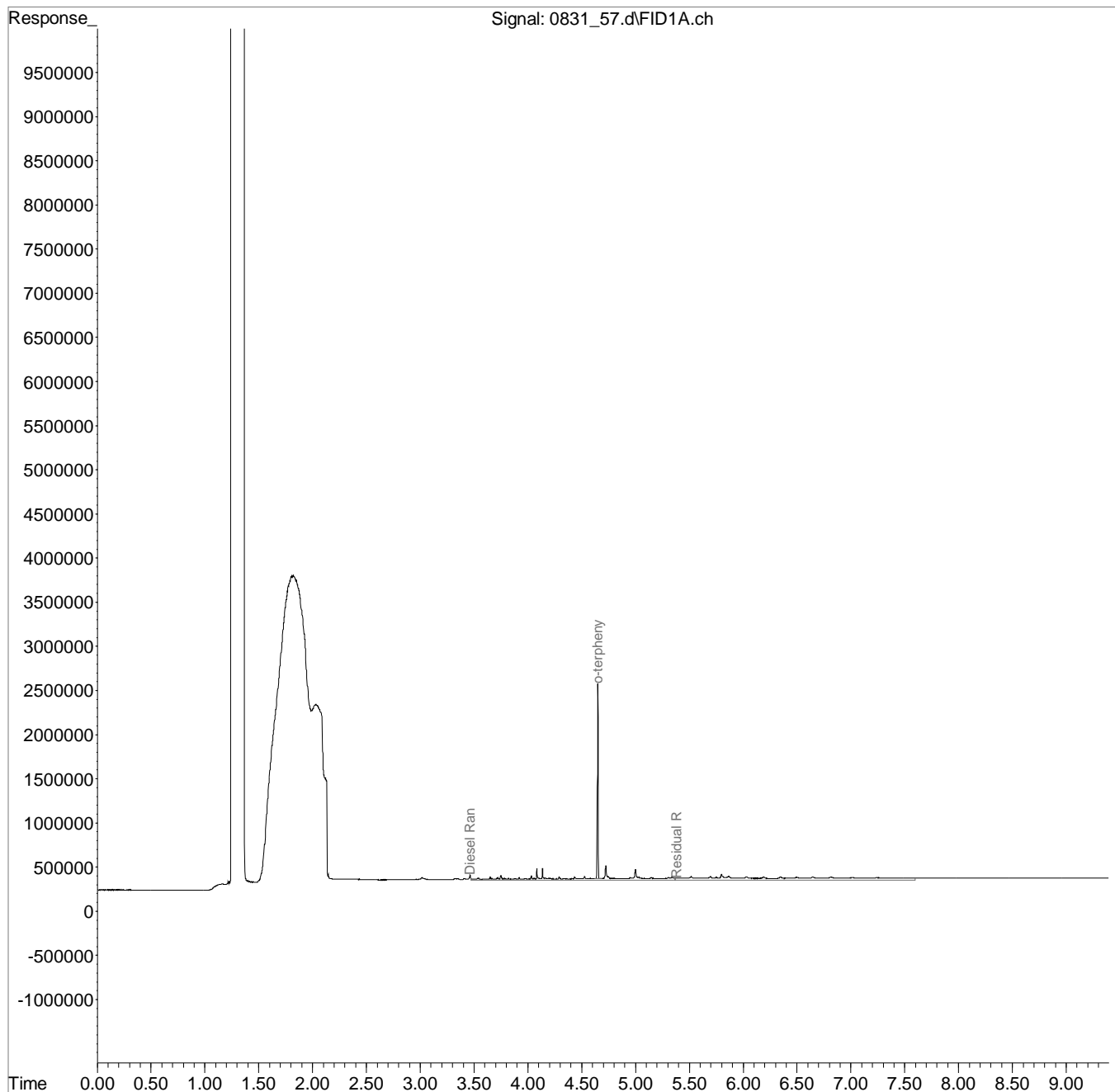
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\083119\  
Data File : 0831\_57.d  
Signal(s) : FID1A.ch  
Acq On : 1 Sep 2019 5:18 am  
Operator : 773  
Sample : L1132636-01 1x WG1338384  
Misc : M.I.s on ranges are corrections  
ALS Vial : 34 Sample Multiplier: 1  
InstName : SVGC31

Integration File: events.e  
Quant Time: Sep 01 14:10:11 2019  
Quant Method : C:\msdchem\1\methods\DM31H28AS.M  
Quant Title :  
QLast Update : Thu Aug 29 10:36:06 2019  
Response via : Initial Calibration  
Integrator: ChemStation

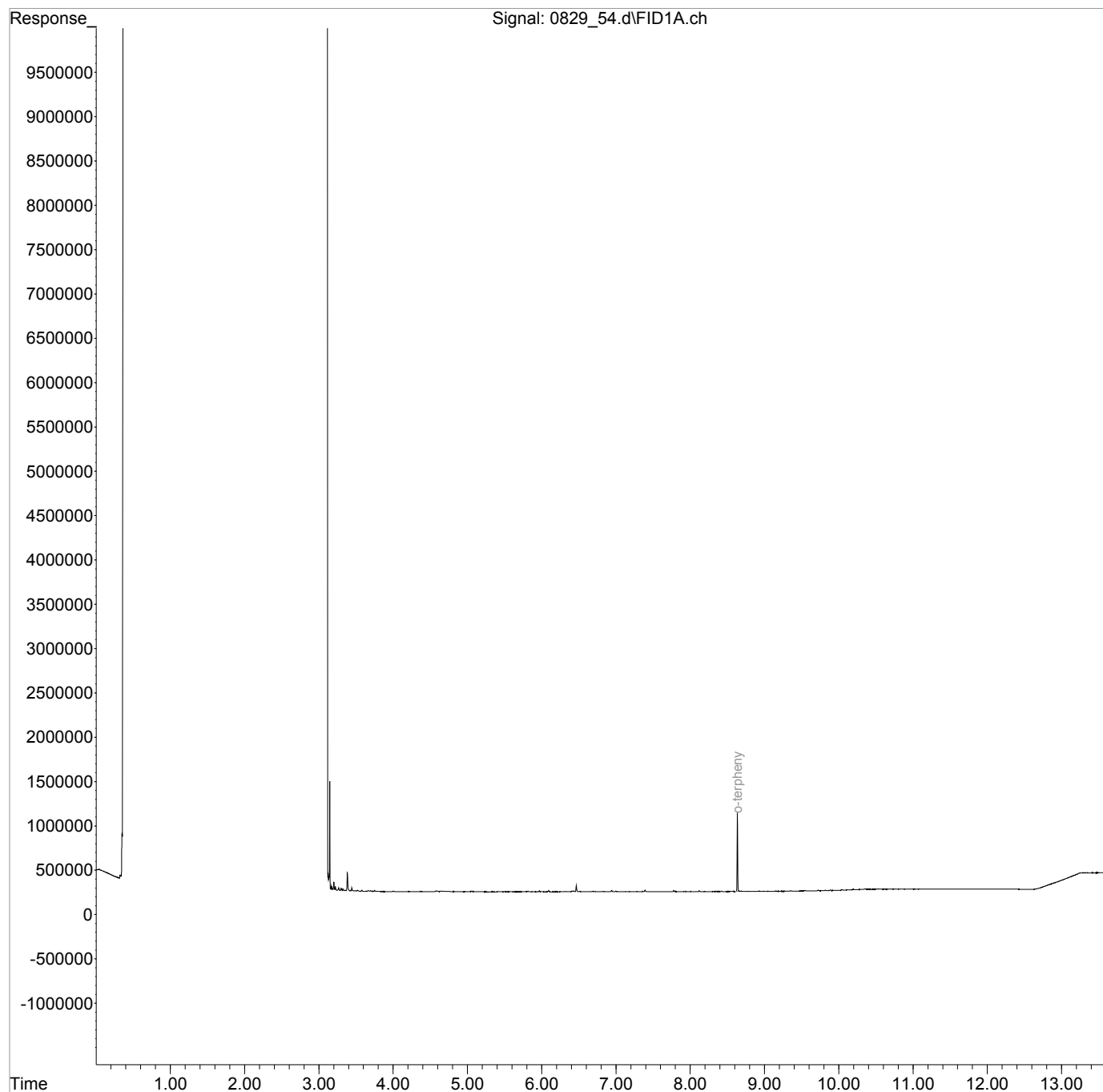
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\082919\  
Data File : 0829\_54.d  
Signal(s) : FID1A.ch  
Acq On : 30 Aug 2019 3:27 am  
Operator : 843  
Sample : L1132636-02 1x WG1335621  
Misc : M.I.s on ranges are corrections  
ALS Vial : 33 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Aug 30 15:16:40 2019  
Quant Method : C:\msdchem\1\methods\DM34H23AS.M  
Quant Title :  
QLast Update : Sat Aug 24 15:55:03 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

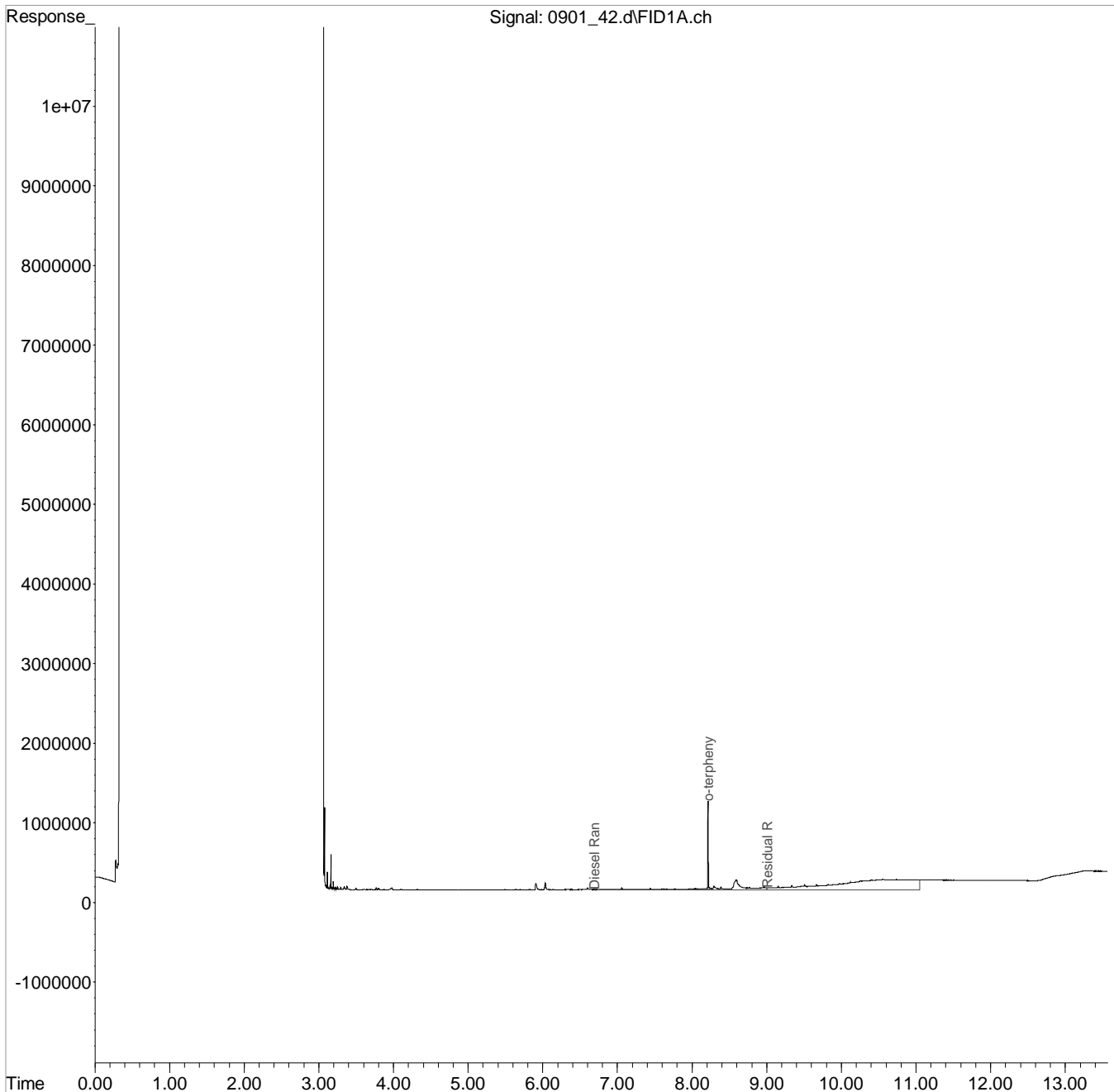




Data Path : C:\msdchem\1\data\090119\  
 Data File : 0901 42.d  
 Signal(s) : FID1A.ch  
 Acq On : 2 Sep 2019 2:02 am  
 Operator : 843  
 Sample : L1132636-02 1x WG1336422  
 Misc : M.I.s on ranges are corrections  
 ALS Vial : 42 Sample Multiplier: 1  
 InstName : SVGC21

Integration File: events.e  
 Quant Time: Sep 02 12:05:37 2019  
 Quant Method : C:\msdchem\1\methods\DM21H30S.M  
 Quant Title : DROLVI  
 QLast Update : Fri Aug 30 15:46:39 2019  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. :  
 Signal Phase :  
 Signal Info :



---

Groundwater Analytical Reports  
12 to 14 November 2019

## Kennedy/Jenks Con-BNSF Region 1

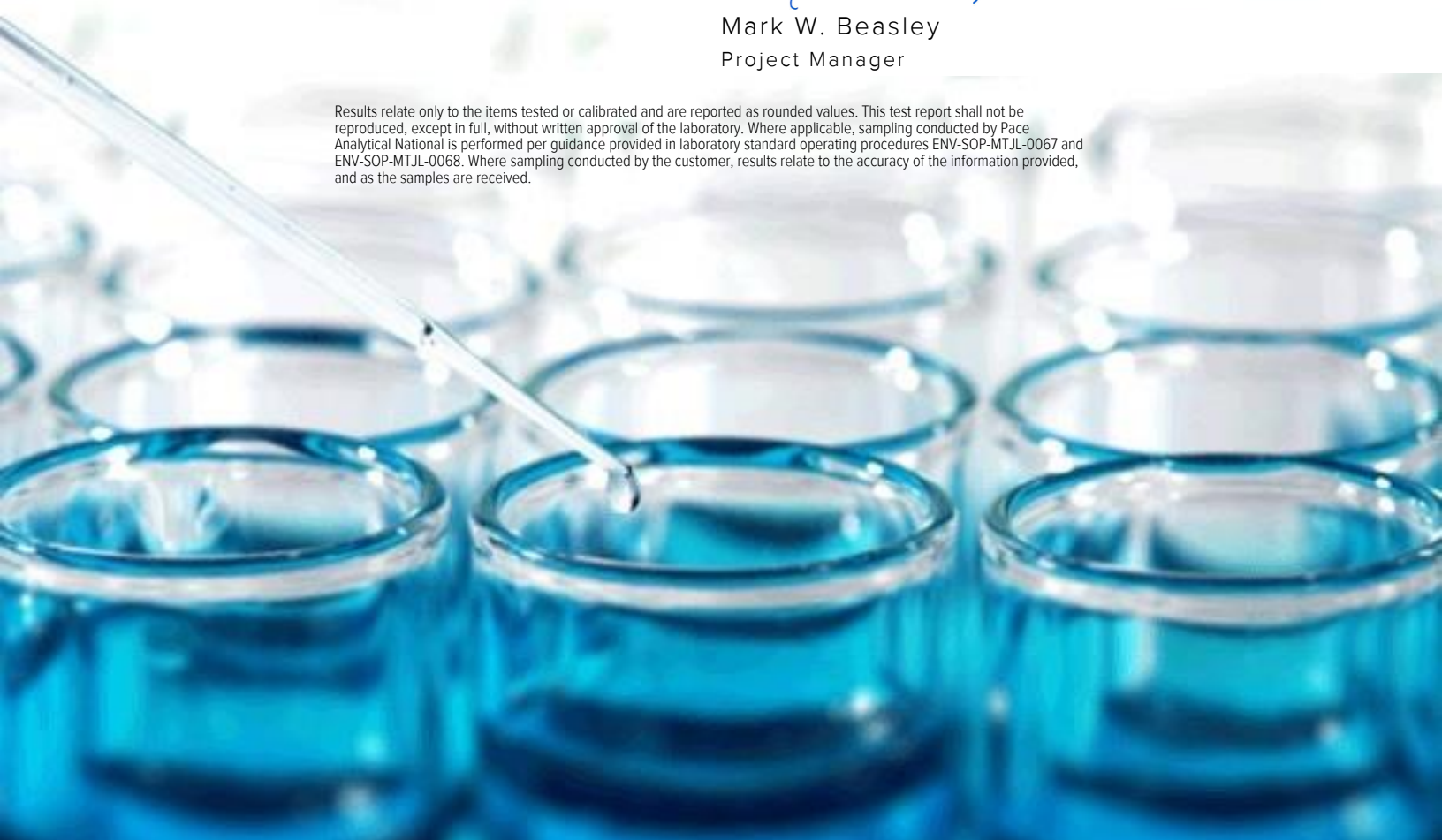
Sample Delivery Group: L1161399  
Samples Received: 11/15/2019  
Project Number: 1996120\*00  
Description: BNSF - Wishram Railyard, WA

Report To: Katie Haskins  
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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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<b>Tc: Table of Contents</b>	<b>2</b>	<b>1</b> Cp
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<b>Cn: Case Narrative</b>	<b>10</b>	<b>3</b> Ss
<b>Sr: Sample Results</b>	<b>11</b>	<b>4</b> Cn
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WMW-24-20191112 L1161399-02	12	<b>6</b> Qc
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# SAMPLE SUMMARY



## WMW-23-20191113 L1161399-01 GW

Collected by: K. Haskins  
 Collected date/time: 11/13/19 08:15  
 Received date/time: 11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:02	11/25/19 17:02	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	5	11/24/19 20:19	11/24/19 20:19	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383359	1	11/19/19 17:15	11/19/19 17:15	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1384929	1	11/23/19 10:13	11/23/19 10:13	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 18:19	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:21	11/21/19 14:21	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385091	1	11/22/19 06:24	11/22/19 06:24	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 15:53	JN	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

## WMW-24-20191112 L1161399-02 GW

Collected by: K. Haskins  
 Collected date/time: 11/12/19 16:35  
 Received date/time: 11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:05	11/25/19 17:05	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	2	11/24/19 20:22	11/24/19 20:22	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1382380	1	11/18/19 14:36	11/18/19 14:36	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1384929	1	11/23/19 10:28	11/23/19 10:28	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 19:15	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384369	1	11/21/19 09:14	11/21/19 09:14	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 13:53	11/23/19 13:53	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382350	1	11/17/19 19:38	11/18/19 12:01	JN	Mt. Juliet, TN

6  
Qc

7  
Gl

8  
Al

9  
Sc

## DUP-01-20191112 L1161399-03 GW

Collected by: K. Haskins  
 Collected date/time: 11/12/19 16:40  
 Received date/time: 11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:07	11/25/19 17:07	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:23	11/24/19 20:23	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1382380	1	11/18/19 14:36	11/18/19 14:36	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1384929	1	11/23/19 10:43	11/23/19 10:43	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 19:18	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384369	1	11/21/19 09:17	11/21/19 09:17	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 14:12	11/23/19 14:12	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382350	1	11/17/19 19:38	11/18/19 12:23	JN	Mt. Juliet, TN

## WMW-26-20191113 L1161399-04 GW

Collected by: K. Haskins  
 Collected date/time: 11/13/19 07:25  
 Received date/time: 11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:08	11/25/19 17:08	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:25	11/24/19 20:25	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1382380	1	11/18/19 14:36	11/18/19 14:36	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1384929	1	11/23/19 10:58	11/23/19 10:58	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 19:22	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:23	11/21/19 14:23	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 14:32	11/23/19 14:32	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 16:14	JN	Mt. Juliet, TN

# SAMPLE SUMMARY



## WMW-27-20191113 L1161399-05 GW

Collected by: K. Haskins  
 Collected date/time: 11/13/19 09:35  
 Received date/time: 11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:10	11/25/19 17:10	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:26	11/24/19 20:26	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1382380	1	11/18/19 14:37	11/18/19 14:37	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1384929	1	11/23/19 12:00	11/23/19 12:00	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 18:33	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:25	11/21/19 14:25	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1386388	1	11/25/19 16:58	11/25/19 16:58	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1386978	1	11/26/19 03:17	11/26/19 03:17	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 16:36	JN	Mt. Juliet, TN

1  
Cp

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Tc

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Ss

4  
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

## WMW-28-20191113 L1161399-06 GW

Collected by: K. Haskins  
 Collected date/time: 11/12/19 16:15  
 Received date/time: 11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:20	11/25/19 17:20	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:37	11/24/19 20:37	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1382380	1	11/18/19 14:38	11/18/19 14:38	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1384929	1	11/23/19 13:29	11/23/19 13:29	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 19:40	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384369	1	11/21/19 09:19	11/21/19 09:19	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 15:11	11/23/19 15:11	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382350	1	11/17/19 19:38	11/18/19 12:44	JN	Mt. Juliet, TN

## WMW-29-20191113 L1161399-07 GW

Collected by: K. Haskins  
 Collected date/time: 11/13/19 08:10  
 Received date/time: 11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:21	11/25/19 17:21	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:38	11/24/19 20:38	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1382380	1	11/18/19 14:38	11/18/19 14:38	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1384929	1	11/23/19 13:44	11/23/19 13:44	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 19:43	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:27	11/21/19 14:27	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 15:30	11/23/19 15:30	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 17:54	JN	Mt. Juliet, TN

## WMW-30-20191113 L1161399-08 GW

Collected by: K. Haskins  
 Collected date/time: 11/13/19 10:50  
 Received date/time: 11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:23	11/25/19 17:23	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:40	11/24/19 20:40	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383359	1	11/19/19 17:16	11/19/19 17:16	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1384929	1	11/23/19 13:59	11/23/19 13:59	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 19:47	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381632	1	11/20/19 14:11	11/20/19 17:53	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:30	11/21/19 14:30	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 15:50	11/23/19 15:50	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 18:15	JN	Mt. Juliet, TN

# SAMPLE SUMMARY



## WMW-31-20191113 L1161399-09 GW

Collected by  
K. Haskins  
Collected date/time  
11/13/19 14:15  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:24	11/25/19 17:24	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	2	11/24/19 20:41	11/24/19 20:41	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383359	1	11/19/19 17:16	11/19/19 17:16	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1384929	1	11/23/19 14:14	11/23/19 14:14	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 19:50	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:32	11/21/19 14:32	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 16:09	11/23/19 16:09	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 18:47	JN	Mt. Juliet, TN

1  
Cp

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Tc

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Ss

4  
Cn

5  
Sr

## WMW-32-20191113 L1161399-10 GW

Collected by  
K. Haskins  
Collected date/time  
11/13/19 13:15  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:26	11/25/19 17:26	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	10	11/24/19 20:43	11/24/19 20:43	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383359	1	11/19/19 17:16	11/19/19 17:16	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1384929	1	11/23/19 14:29	11/23/19 14:29	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 19:53	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:34	11/21/19 14:34	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 16:29	11/23/19 16:29	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 19:12	JN	Mt. Juliet, TN

6  
Qc

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Gl

8  
Al

9  
Sc

## WMW-14-20191114 L1161399-11 GW

Collected by  
K. Haskins  
Collected date/time  
11/14/19 07:30  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:28	11/25/19 17:28	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:44	11/24/19 20:44	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383462	1	11/21/19 12:40	11/21/19 12:40	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1385833	1	11/23/19 13:27	11/23/19 13:27	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 19:57	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384883	1	11/22/19 07:54	11/22/19 07:54	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1383281	1	11/19/19 17:17	11/20/19 13:46	SHG	Mt. Juliet, TN

## WMW-15-20191114 L1161399-12 GW

Collected by  
K. Haskins  
Collected date/time  
11/14/19 07:55  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:29	11/25/19 17:29	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:46	11/24/19 20:46	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383462	1	11/21/19 12:40	11/21/19 12:40	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1385833	1	11/23/19 14:30	11/23/19 14:30	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 20:00	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384883	1	11/22/19 07:58	11/22/19 07:58	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1383281	1	11/19/19 17:17	11/20/19 14:07	SHG	Mt. Juliet, TN



# SAMPLE SUMMARY

## WMW-16-20191113 L1161399-13 GW

Collected by  
K. Haskins  
Collected date/time  
11/13/19 14:45  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:31	11/25/19 17:31	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:47	11/24/19 20:47	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383359	1	11/19/19 17:17	11/19/19 17:17	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1385833	1	11/23/19 14:46	11/23/19 14:46	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 20:04	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1383395	1	11/20/19 01:47	11/20/19 01:47	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:42	11/21/19 14:42	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 19:42	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1382191	1	11/17/19 20:31	11/18/19 04:47	DMG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## WMW-17-20191114 L1161399-14 GW

Collected by  
K. Haskins  
Collected date/time  
11/14/19 09:05  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:32	11/25/19 17:32	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:49	11/24/19 20:49	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383462	1	11/21/19 12:41	11/21/19 12:41	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1385833	1	11/23/19 15:02	11/23/19 15:02	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381609	1	11/20/19 11:38	11/20/19 20:07	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381632	1	11/20/19 14:11	11/20/19 18:06	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1383395	1	11/20/19 02:11	11/20/19 02:11	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384883	1	11/22/19 08:04	11/22/19 08:04	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1383281	1	11/19/19 17:17	11/20/19 14:28	SHG	Mt. Juliet, TN

## DUP-02-20191114 L1161399-15 GW

Collected by  
K. Haskins  
Collected date/time  
11/14/19 09:10  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:34	11/25/19 17:34	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:50	11/24/19 20:50	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383462	1	11/21/19 12:41	11/21/19 12:41	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1385833	1	11/23/19 15:18	11/23/19 15:18	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381632	1	11/20/19 14:11	11/20/19 18:10	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1383657	1	11/20/19 10:26	11/20/19 13:30	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1383395	1	11/20/19 02:35	11/20/19 02:35	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384883	1	11/22/19 08:08	11/22/19 08:08	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1383281	1	11/19/19 17:17	11/20/19 14:49	SHG	Mt. Juliet, TN

## WMW-18-20191113 L1161399-16 GW

Collected by  
K. Haskins  
Collected date/time  
11/13/19 13:20  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:40	11/25/19 17:40	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:58	11/24/19 20:58	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383359	1	11/19/19 17:17	11/19/19 17:17	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1385833	1	11/23/19 16:05	11/23/19 16:05	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1381632	1	11/20/19 14:11	11/20/19 18:14	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1383657	1	11/20/19 10:26	11/20/19 13:34	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:46	11/21/19 14:46	DAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 12:15	JN	Mt. Juliet, TN

# SAMPLE SUMMARY



## WMW-19-20191113 L1161399-17 GW

Collected by  
K. Haskins  
Collected date/time  
11/13/19 15:15  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:42	11/25/19 17:42	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 20:59	11/24/19 20:59	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383359	1	11/19/19 17:17	11/19/19 17:17	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1385833	1	11/23/19 16:21	11/23/19 16:21	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1383657	1	11/20/19 10:26	11/20/19 13:37	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:49	11/21/19 14:49	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385340	1	11/22/19 14:33	11/22/19 14:33	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 12:37	JN	Mt. Juliet, TN

1  
Cp

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Tc

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Ss

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Cn

5  
Sr

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Qc

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Gl

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Al

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Sc

## WMW-20-20191113 L1161399-18 GW

Collected by  
K. Haskins  
Collected date/time  
11/13/19 12:00  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:43	11/25/19 17:43	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 21:01	11/24/19 21:01	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383359	1	11/19/19 17:18	11/19/19 17:18	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1385833	1	11/23/19 16:37	11/23/19 16:37	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1383657	1	11/20/19 10:26	11/20/19 13:41	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:51	11/21/19 14:51	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385340	1	11/22/19 14:53	11/22/19 14:53	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 12:58	JN	Mt. Juliet, TN

## WMW-21-20191113 L1161399-19 GW

Collected by  
K. Haskins  
Collected date/time  
11/13/19 10:30  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:45	11/25/19 17:45	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	1	11/24/19 21:02	11/24/19 21:02	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383359	1	11/19/19 17:18	11/19/19 17:18	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1385833	1	11/23/19 16:53	11/23/19 16:53	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1383657	1	11/20/19 10:26	11/20/19 13:44	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:53	11/21/19 14:53	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385340	1	11/22/19 15:14	11/22/19 15:14	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 13:20	JN	Mt. Juliet, TN

## WMW-22-20191113 L1161399-20 GW

Collected by  
K. Haskins  
Collected date/time  
11/13/19 09:15  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 350.1	WG1385627	1	11/25/19 17:48	11/25/19 17:48	MCG	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1385642	5	11/24/19 21:50	11/24/19 21:50	MCG	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1383359	1	11/19/19 17:19	11/19/19 17:19	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1385833	1	11/23/19 17:09	11/23/19 17:09	ST	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1383657	1	11/20/19 10:26	11/20/19 13:47	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1384371	1	11/21/19 14:55	11/21/19 14:55	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385340	1	11/22/19 15:34	11/22/19 15:34	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1382656	1	11/18/19 21:37	11/19/19 13:42	JN	Mt. Juliet, TN

# SAMPLE SUMMARY

TB-01-20191114 L1161399-21 GW

Collected by  
K. Haskins  
Collected date/time  
11/14/19 00:00  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 10:57	11/23/19 10:57	ACG	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

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Qc

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Gl

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Al

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Sc

TB-02-20191114 L1161399-22 GW

Collected by  
K. Haskins  
Collected date/time  
11/14/19 00:00  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 11:16	11/23/19 11:16	ACG	Mt. Juliet, TN

TB-03-20191114 L1161399-23 GW

Collected by  
K. Haskins  
Collected date/time  
11/14/19 00:00  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385890	1	11/23/19 11:36	11/23/19 11:36	ACG	Mt. Juliet, TN

TB-04-20191114 L1161399-24 GW

Collected by  
K. Haskins  
Collected date/time  
11/14/19 00:00  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1383395	1	11/20/19 02:59	11/20/19 02:59	BMB	Mt. Juliet, TN

TB-05-20191114 L1161399-25 GW

Collected by  
K. Haskins  
Collected date/time  
11/14/19 00:00  
Received date/time  
11/15/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1385340	1	11/22/19 15:55	11/22/19 15:55	ADM	Mt. Juliet, TN



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

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

### Report Revision History

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Version 1: 11/27/19 02:21 PM

### Project Narrative

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J0 qualifiers were assigned due to CCV failure



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:02	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	6280		500	5	11/24/2019 20:19	<a href="#">WG1385642</a>

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	11/19/2019 17:15	<a href="#">WG1383359</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	36000		5000	1	11/23/2019 10:13	<a href="#">WG1384929</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 18:19	<a href="#">WG1381609</a>
Manganese,Dissolved	202		5.00	1	11/20/2019 18:19	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 14:21	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:21	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:21	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/22/2019 06:24	<a href="#">WG1385091</a>
Toluene	ND		1.00	1	11/22/2019 06:24	<a href="#">WG1385091</a>
Ethylbenzene	ND		1.00	1	11/22/2019 06:24	<a href="#">WG1385091</a>
o-Xylene	ND		1.00	1	11/22/2019 06:24	<a href="#">WG1385091</a>
m&p-Xylene	ND		2.00	1	11/22/2019 06:24	<a href="#">WG1385091</a>
(S) Toluene-d8	89.9		80.0-120		11/22/2019 06:24	<a href="#">WG1385091</a>
(S) 4-Bromofluorobenzene	94.3		77.0-126		11/22/2019 06:24	<a href="#">WG1385091</a>
(S) 1,2-Dichloroethane-d4	117		70.0-130		11/22/2019 06:24	<a href="#">WG1385091</a>

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	11/19/2019 15:53	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	ND		250	1	11/19/2019 15:53	<a href="#">WG1382656</a>
(S) o-Terphenyl	89.5		52.0-156		11/19/2019 15:53	<a href="#">WG1382656</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:05	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5030		200	2	11/24/2019 20:22	<a href="#">WG1385642</a>

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	11/18/2019 14:36	<a href="#">WG1382380</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	30300		5000	1	11/23/2019 10:28	<a href="#">WG1384929</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 19:15	<a href="#">WG1381609</a>
Manganese,Dissolved	322		5.00	1	11/20/2019 19:15	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 09:14	<a href="#">WG1384369</a>
Ethane	ND		13.0	1	11/21/2019 09:14	<a href="#">WG1384369</a>
Ethene	ND		13.0	1	11/21/2019 09:14	<a href="#">WG1384369</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Bromomethane	ND	JO	5.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 13:53	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
4-Chlorotoluene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Dibromomethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,1-Dichloroethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,2-Dichloroethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,1-Dichloroethene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,2-Dichloropropane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,1-Dichloropropene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,3-Dichloropropane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
2,2-Dichloropropane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Di-isopropyl ether	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Ethylbenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Isopropylbenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
p-Isopropyltoluene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
2-Butanone (MEK)	ND		10.0	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Methylene Chloride	ND		5.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Naphthalene	ND		5.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
n-Propylbenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Styrene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Tetrachloroethene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Toluene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Trichloroethene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Trichlorofluoromethane	ND		5.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
Vinyl chloride	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
o-Xylene	ND		1.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
m&p-Xylene	ND		2.00	1	11/23/2019 13:53	<a href="#">WG1385890</a>
(S) Toluene-d8	89.2		80.0-120		11/23/2019 13:53	<a href="#">WG1385890</a>
(S) 4-Bromofluorobenzene	95.0		77.0-126		11/23/2019 13:53	<a href="#">WG1385890</a>
(S) 1,2-Dichloroethane-d4	90.1		70.0-130		11/23/2019 13:53	<a href="#">WG1385890</a>

- 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	11/18/2019 12:01	<a href="#">WG1382350</a>
Residual Range Organics (RRO)	497		250	1	11/18/2019 12:01	<a href="#">WG1382350</a>



Collected date/time: 11/12/19 16:35

L1161399

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	89.5		52.0-156		11/18/2019 12:01	<a href="#">WG1382350</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:07	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4860		100	1	11/24/2019 20:23	<a href="#">WG1385642</a>

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	11/18/2019 14:36	<a href="#">WG1382380</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	30300		5000	1	11/23/2019 10:43	<a href="#">WG1384929</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 19:18	<a href="#">WG1381609</a>
Manganese,Dissolved	320		5.00	1	11/20/2019 19:18	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 09:17	<a href="#">WG1384369</a>
Ethane	ND		13.0	1	11/21/2019 09:17	<a href="#">WG1384369</a>
Ethene	ND		13.0	1	11/21/2019 09:17	<a href="#">WG1384369</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Bromomethane	ND	JO	5.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 14:12	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
4-Chlorotoluene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Dibromomethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,1-Dichloroethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,2-Dichloroethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,1-Dichloroethene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,2-Dichloropropane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,1-Dichloropropene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,3-Dichloropropane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
2,2-Dichloropropane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Di-isopropyl ether	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Ethylbenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Isopropylbenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
p-Isopropyltoluene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
2-Butanone (MEK)	ND		10.0	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Methylene Chloride	ND		5.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Naphthalene	ND		5.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
n-Propylbenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Styrene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Tetrachloroethene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Toluene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Trichloroethene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Trichlorofluoromethane	ND		5.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
Vinyl chloride	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
o-Xylene	ND		1.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
m&p-Xylene	ND		2.00	1	11/23/2019 14:12	<a href="#">WG1385890</a>
(S) Toluene-d8	88.5		80.0-120		11/23/2019 14:12	<a href="#">WG1385890</a>
(S) 4-Bromofluorobenzene	94.9		77.0-126		11/23/2019 14:12	<a href="#">WG1385890</a>
(S) 1,2-Dichloroethane-d4	91.9		70.0-130		11/23/2019 14:12	<a href="#">WG1385890</a>

- 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	11/18/2019 12:23	<a href="#">WG1382350</a>
Residual Range Organics (RRO)	564		250	1	11/18/2019 12:23	<a href="#">WG1382350</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	88.0		52.0-156		11/18/2019 12:23	<a href="#">WG1382350</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:08	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	911		100	1	11/24/2019 20:25	<a href="#">WG1385642</a>

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	11/18/2019 14:36	<a href="#">WG1382380</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	23400		5000	1	11/23/2019 10:58	<a href="#">WG1384929</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 19:22	<a href="#">WG1381609</a>
Manganese,Dissolved	866		5.00	1	11/20/2019 19:22	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 14:23	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:23	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:23	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Bromomethane	ND	JO	5.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 14:32	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
4-Chlorotoluene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Dibromomethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,1-Dichloroethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,2-Dichloroethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,1-Dichloroethene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,2-Dichloropropane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,1-Dichloropropene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,3-Dichloropropane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
2,2-Dichloropropane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Di-isopropyl ether	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Ethylbenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Isopropylbenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
p-Isopropyltoluene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
2-Butanone (MEK)	ND		10.0	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Methylene Chloride	ND		5.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Naphthalene	ND		5.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
n-Propylbenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Styrene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Tetrachloroethene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Toluene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Trichloroethene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Trichlorofluoromethane	ND		5.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
Vinyl chloride	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
o-Xylene	ND		1.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
m&p-Xylene	ND		2.00	1	11/23/2019 14:32	<a href="#">WG1385890</a>
(S) Toluene-d8	91.7		80.0-120		11/23/2019 14:32	<a href="#">WG1385890</a>
(S) 4-Bromofluorobenzene	96.4		77.0-126		11/23/2019 14:32	<a href="#">WG1385890</a>
(S) 1,2-Dichloroethane-d4	92.1		70.0-130		11/23/2019 14:32	<a href="#">WG1385890</a>

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)	484		200	1	11/19/2019 16:14	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	743		250	1	11/19/2019 16:14	<a href="#">WG1382656</a>



Collected date/time: 11/13/19 07:25

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	105		52.0-156		11/19/2019 16:14	<a href="#">WG1382656</a>

- 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	11/25/2019 17:10	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2030		100	1	11/24/2019 20:26	<a href="#">WG1385642</a>

3 Ss

4 Cn

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND	J6	50.0	1	11/18/2019 14:37	<a href="#">WG1382380</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	7720		5000	1	11/23/2019 12:00	<a href="#">WG1384929</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 18:33	<a href="#">WG1381609</a>
Manganese,Dissolved	10.3	B	5.00	1	11/20/2019 18:33	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND	J5	10.0	1	11/21/2019 14:25	<a href="#">WG1384371</a>
Ethane	ND	J5	13.0	1	11/21/2019 14:25	<a href="#">WG1384371</a>
Ethene	ND	J5	13.0	1	11/21/2019 14:25	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Acrolein	ND		50.0	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Acrylonitrile	ND		10.0	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Benzene	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Bromobenzene	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Bromodichloromethane	ND	J5	1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Bromoform	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Bromomethane	ND		5.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
n-Butylbenzene	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
sec-Butylbenzene	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
tert-Butylbenzene	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Carbon tetrachloride	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Chlorobenzene	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Chlorodibromomethane	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Chloroethane	ND	J5	5.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Chloroform	ND		5.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
Chloromethane	ND	J5	2.50	1	11/25/2019 16:58	<a href="#">WG1386388</a>
2-Chlorotoluene	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
4-Chlorotoluene	ND		1.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/25/2019 16:58	<a href="#">WG1386388</a>



Collected date/time: 11/13/19 09:35

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	ND		1.00	1	11/25/2019 16:58	WG1386388
Dibromomethane	ND		1.00	1	11/25/2019 16:58	WG1386388
1,2-Dichlorobenzene	ND		1.00	1	11/25/2019 16:58	WG1386388
1,3-Dichlorobenzene	ND		1.00	1	11/25/2019 16:58	WG1386388
1,4-Dichlorobenzene	ND		1.00	1	11/25/2019 16:58	WG1386388
Dichlorodifluoromethane	ND	J5	5.00	1	11/25/2019 16:58	WG1386388
1,1-Dichloroethane	ND		1.00	1	11/25/2019 16:58	WG1386388
1,2-Dichloroethane	ND	J4	1.00	1	11/25/2019 16:58	WG1386388
1,1-Dichloroethene	ND		1.00	1	11/25/2019 16:58	WG1386388
cis-1,2-Dichloroethene	ND		1.00	1	11/25/2019 16:58	WG1386388
trans-1,2-Dichloroethene	ND		1.00	1	11/25/2019 16:58	WG1386388
1,2-Dichloropropane	ND		1.00	1	11/25/2019 16:58	WG1386388
1,1-Dichloropropene	ND		1.00	1	11/25/2019 16:58	WG1386388
1,3-Dichloropropane	ND		1.00	1	11/25/2019 16:58	WG1386388
cis-1,3-Dichloropropene	ND		1.00	1	11/25/2019 16:58	WG1386388
trans-1,3-Dichloropropene	ND		1.00	1	11/25/2019 16:58	WG1386388
2,2-Dichloropropane	ND	J5	1.00	1	11/25/2019 16:58	WG1386388
Di-isopropyl ether	ND		1.00	1	11/25/2019 16:58	WG1386388
Ethylbenzene	ND		1.00	1	11/25/2019 16:58	WG1386388
Hexachloro-1,3-butadiene	ND		1.00	1	11/25/2019 16:58	WG1386388
Isopropylbenzene	ND		1.00	1	11/25/2019 16:58	WG1386388
p-Isopropyltoluene	ND		1.00	1	11/25/2019 16:58	WG1386388
2-Butanone (MEK)	ND		10.0	1	11/25/2019 16:58	WG1386388
Methylene Chloride	ND		5.00	1	11/25/2019 16:58	WG1386388
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/25/2019 16:58	WG1386388
Methyl tert-butyl ether	ND		1.00	1	11/25/2019 16:58	WG1386388
Naphthalene	ND		5.00	1	11/25/2019 16:58	WG1386388
n-Propylbenzene	ND		1.00	1	11/25/2019 16:58	WG1386388
Styrene	ND		1.00	1	11/25/2019 16:58	WG1386388
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/25/2019 16:58	WG1386388
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/25/2019 16:58	WG1386388
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/25/2019 16:58	WG1386388
Tetrachloroethene	ND		1.00	1	11/25/2019 16:58	WG1386388
Toluene	ND		1.00	1	11/25/2019 16:58	WG1386388
1,2,3-Trichlorobenzene	ND	J4	1.00	1	11/26/2019 03:17	WG1386978
1,2,4-Trichlorobenzene	ND		1.00	1	11/25/2019 16:58	WG1386388
1,1,1-Trichloroethane	ND	J5	1.00	1	11/25/2019 16:58	WG1386388
1,1,2-Trichloroethane	ND		1.00	1	11/25/2019 16:58	WG1386388
Trichloroethene	ND	J5	1.00	1	11/25/2019 16:58	WG1386388
Trichlorofluoromethane	ND	J5	5.00	1	11/25/2019 16:58	WG1386388
1,2,3-Trichloropropane	ND		2.50	1	11/25/2019 16:58	WG1386388
1,2,4-Trimethylbenzene	ND		1.00	1	11/25/2019 16:58	WG1386388
1,2,3-Trimethylbenzene	ND		1.00	1	11/25/2019 16:58	WG1386388
1,3,5-Trimethylbenzene	ND		1.00	1	11/25/2019 16:58	WG1386388
Vinyl chloride	ND	J5	1.00	1	11/25/2019 16:58	WG1386388
o-Xylene	ND		1.00	1	11/25/2019 16:58	WG1386388
m&p-Xylene	ND		2.00	1	11/25/2019 16:58	WG1386388
(S) Toluene-d8	92.9		80.0-120		11/25/2019 16:58	WG1386388
(S) Toluene-d8	106		80.0-120		11/26/2019 03:17	WG1386978
(S) 4-Bromofluorobenzene	96.9		77.0-126		11/25/2019 16:58	WG1386388
(S) 4-Bromofluorobenzene	101		77.0-126		11/26/2019 03:17	WG1386978
(S) 1,2-Dichloroethane-d4	112		70.0-130		11/25/2019 16:58	WG1386388
(S) 1,2-Dichloroethane-d4	101		70.0-130		11/26/2019 03:17	WG1386978

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	11/19/2019 16:36	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	ND		250	1	11/19/2019 16:36	<a href="#">WG1382656</a>
<i>(S) o-Terphenyl</i>	90.5		52.0-156		11/19/2019 16:36	<a href="#">WG1382656</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:20	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2800		100	1	11/24/2019 20:37	<a href="#">WG1385642</a>

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	11/18/2019 14:38	<a href="#">WG1382380</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	6380		5000	1	11/23/2019 13:29	<a href="#">WG1384929</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 19:40	<a href="#">WG1381609</a>
Manganese,Dissolved	ND		5.00	1	11/20/2019 19:40	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 09:19	<a href="#">WG1384369</a>
Ethane	ND		13.0	1	11/21/2019 09:19	<a href="#">WG1384369</a>
Ethene	ND		13.0	1	11/21/2019 09:19	<a href="#">WG1384369</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Bromomethane	ND	JO	5.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 15:11	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
4-Chlorotoluene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Dibromomethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,1-Dichloroethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,2-Dichloroethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,1-Dichloroethene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,2-Dichloropropane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,1-Dichloropropene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,3-Dichloropropane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
2,2-Dichloropropane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Di-isopropyl ether	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Ethylbenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Isopropylbenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
p-Isopropyltoluene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
2-Butanone (MEK)	ND		10.0	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Methylene Chloride	ND		5.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Naphthalene	ND		5.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
n-Propylbenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Styrene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Tetrachloroethene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Toluene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Trichloroethene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Trichlorofluoromethane	ND		5.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
Vinyl chloride	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
o-Xylene	ND		1.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
m&p-Xylene	ND		2.00	1	11/23/2019 15:11	<a href="#">WG1385890</a>
(S) Toluene-d8	89.1		80.0-120		11/23/2019 15:11	<a href="#">WG1385890</a>
(S) 4-Bromofluorobenzene	94.4		77.0-126		11/23/2019 15:11	<a href="#">WG1385890</a>
(S) 1,2-Dichloroethane-d4	93.0		70.0-130		11/23/2019 15:11	<a href="#">WG1385890</a>

- 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	11/18/2019 12:44	<a href="#">WG1382350</a>
Residual Range Organics (RRO)	ND		250	1	11/18/2019 12:44	<a href="#">WG1382350</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	88.0		52.0-156		11/18/2019 12:44	<a href="#">WG1382350</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:21	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/24/2019 20:38	<a href="#">WG1385642</a>

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	11/18/2019 14:38	<a href="#">WG1382380</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	18500		5000	1	11/23/2019 13:44	<a href="#">WG1384929</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	265		100	1	11/20/2019 19:43	<a href="#">WG1381609</a>
Manganese,Dissolved	4580		5.00	1	11/20/2019 19:43	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 14:27	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:27	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:27	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Bromomethane	ND	JO	5.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 15:30	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
4-Chlorotoluene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Dibromomethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,1-Dichloroethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,2-Dichloroethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,1-Dichloroethene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,2-Dichloropropane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,1-Dichloropropene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,3-Dichloropropane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
2,2-Dichloropropane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Di-isopropyl ether	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Ethylbenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Isopropylbenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
p-Isopropyltoluene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
2-Butanone (MEK)	ND		10.0	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Methylene Chloride	ND		5.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Naphthalene	ND		5.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
n-Propylbenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Styrene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Tetrachloroethene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Toluene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Trichloroethene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Trichlorofluoromethane	ND		5.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
Vinyl chloride	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
o-Xylene	ND		1.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
m&p-Xylene	ND		2.00	1	11/23/2019 15:30	<a href="#">WG1385890</a>
(S) Toluene-d8	89.1		80.0-120		11/23/2019 15:30	<a href="#">WG1385890</a>
(S) 4-Bromofluorobenzene	95.0		77.0-126		11/23/2019 15:30	<a href="#">WG1385890</a>
(S) 1,2-Dichloroethane-d4	90.9		70.0-130		11/23/2019 15:30	<a href="#">WG1385890</a>

- 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)	3600		200	1	11/19/2019 17:54	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	2890		250	1	11/19/2019 17:54	<a href="#">WG1382656</a>



Collected date/time: 11/13/19 08:10

L1161399

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	119		52.0-156		11/19/2019 17:54	<a href="#">WG1382656</a>

- 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	11/25/2019 17:23	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1820		100	1	11/24/2019 20:40	<a href="#">WG1385642</a>

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	11/19/2019 17:16	<a href="#">WG1383359</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	28500		5000	1	11/23/2019 13:59	<a href="#">WG1384929</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Barium	35.7		5.00	1	11/20/2019 17:53	<a href="#">WG1381632</a>
Barium,Dissolved	33.0		5.00	1	11/20/2019 19:47	<a href="#">WG1381609</a>
Iron,Dissolved	ND		100	1	11/20/2019 19:47	<a href="#">WG1381609</a>
Manganese,Dissolved	177		5.00	1	11/20/2019 19:47	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 14:30	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:30	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:30	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Bromomethane	ND	JO	5.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 15:50	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 15:50	<a href="#">WG1385890</a>





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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
4-Chlorotoluene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 15:50	WG1385890
1,2-Dibromoethane	ND		1.00	1	11/23/2019 15:50	WG1385890
Dibromomethane	ND		1.00	1	11/23/2019 15:50	WG1385890
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 15:50	WG1385890
1,1-Dichloroethane	ND		1.00	1	11/23/2019 15:50	WG1385890
1,2-Dichloroethane	ND		1.00	1	11/23/2019 15:50	WG1385890
1,1-Dichloroethene	ND		1.00	1	11/23/2019 15:50	WG1385890
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 15:50	WG1385890
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,2-Dichloropropane	ND		1.00	1	11/23/2019 15:50	WG1385890
1,1-Dichloropropene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,3-Dichloropropane	ND		1.00	1	11/23/2019 15:50	WG1385890
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 15:50	WG1385890
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 15:50	WG1385890
2,2-Dichloropropane	ND		1.00	1	11/23/2019 15:50	WG1385890
Di-isopropyl ether	ND		1.00	1	11/23/2019 15:50	WG1385890
Ethylbenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 15:50	WG1385890
Isopropylbenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
p-Isopropyltoluene	ND		1.00	1	11/23/2019 15:50	WG1385890
2-Butanone (MEK)	ND		10.0	1	11/23/2019 15:50	WG1385890
Methylene Chloride	ND		5.00	1	11/23/2019 15:50	WG1385890
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 15:50	WG1385890
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 15:50	WG1385890
Naphthalene	ND		5.00	1	11/23/2019 15:50	WG1385890
n-Propylbenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
Styrene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 15:50	WG1385890
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 15:50	WG1385890
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 15:50	WG1385890
Tetrachloroethene	ND		1.00	1	11/23/2019 15:50	WG1385890
Toluene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 15:50	WG1385890
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 15:50	WG1385890
Trichloroethene	ND		1.00	1	11/23/2019 15:50	WG1385890
Trichlorofluoromethane	ND		5.00	1	11/23/2019 15:50	WG1385890
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 15:50	WG1385890
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 15:50	WG1385890
Vinyl chloride	ND		1.00	1	11/23/2019 15:50	WG1385890
o-Xylene	ND		1.00	1	11/23/2019 15:50	WG1385890
m&p-Xylene	ND		2.00	1	11/23/2019 15:50	WG1385890
(S) Toluene-d8	87.6		80.0-120		11/23/2019 15:50	WG1385890
(S) 4-Bromofluorobenzene	92.3		77.0-126		11/23/2019 15:50	WG1385890
(S) 1,2-Dichloroethane-d4	95.5		70.0-130		11/23/2019 15:50	WG1385890

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	11/19/2019 18:15	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	491		250	1	11/19/2019 18:15	<a href="#">WG1382656</a>
<i>(S) o-Terphenyl</i>	90.0		52.0-156		11/19/2019 18:15	<a href="#">WG1382656</a>

- 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	11/25/2019 17:24	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2210		200	2	11/24/2019 20:41	<a href="#">WG1385642</a>

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	11/19/2019 17:16	<a href="#">WG1383359</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	17100		5000	1	11/23/2019 14:14	<a href="#">WG1384929</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 19:50	<a href="#">WG1381609</a>
Manganese,Dissolved	196		5.00	1	11/20/2019 19:50	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 14:32	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:32	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:32	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Bromomethane	ND	JO	5.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 16:09	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
4-Chlorotoluene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Dibromomethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,1-Dichloroethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,2-Dichloroethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,1-Dichloroethene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,2-Dichloropropane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,1-Dichloropropene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,3-Dichloropropane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
2,2-Dichloropropane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Di-isopropyl ether	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Ethylbenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Isopropylbenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
p-Isopropyltoluene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
2-Butanone (MEK)	ND		10.0	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Methylene Chloride	ND		5.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Naphthalene	ND		5.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
n-Propylbenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Styrene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Tetrachloroethene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Toluene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Trichloroethene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Trichlorofluoromethane	ND		5.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
Vinyl chloride	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
o-Xylene	ND		1.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
m&p-Xylene	ND		2.00	1	11/23/2019 16:09	<a href="#">WG1385890</a>
(S) Toluene-d8	88.0		80.0-120		11/23/2019 16:09	<a href="#">WG1385890</a>
(S) 4-Bromofluorobenzene	93.1		77.0-126		11/23/2019 16:09	<a href="#">WG1385890</a>
(S) 1,2-Dichloroethane-d4	93.1		70.0-130		11/23/2019 16:09	<a href="#">WG1385890</a>

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	11/19/2019 18:47	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	ND		250	1	11/19/2019 18:47	<a href="#">WG1382656</a>



Collected date/time: 11/13/19 14:15

L1161399

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	80.0		52.0-156		11/19/2019 18:47	<a href="#">WG1382656</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:26	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	15600		1000	10	11/24/2019 20:43	<a href="#">WG1385642</a>

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	11/19/2019 17:16	<a href="#">WG1383359</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	17000		5000	1	11/23/2019 14:29	<a href="#">WG1384929</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 19:53	<a href="#">WG1381609</a>
Manganese,Dissolved	92.8		5.00	1	11/20/2019 19:53	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 14:34	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:34	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:34	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Bromomethane	ND	JO	5.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 16:29	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
4-Chlorotoluene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,2-Dibromoethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Dibromomethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,1-Dichloroethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,2-Dichloroethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,1-Dichloroethene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,2-Dichloropropane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,1-Dichloropropene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,3-Dichloropropane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
2,2-Dichloropropane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Di-isopropyl ether	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Ethylbenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Isopropylbenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
p-Isopropyltoluene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
2-Butanone (MEK)	ND		10.0	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Methylene Chloride	ND		5.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Naphthalene	ND		5.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
n-Propylbenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Styrene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Tetrachloroethene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Toluene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Trichloroethene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Trichlorofluoromethane	ND		5.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
Vinyl chloride	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
o-Xylene	ND		1.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
m&p-Xylene	ND		2.00	1	11/23/2019 16:29	<a href="#">WG1385890</a>
(S) Toluene-d8	90.3		80.0-120		11/23/2019 16:29	<a href="#">WG1385890</a>
(S) 4-Bromofluorobenzene	94.6		77.0-126		11/23/2019 16:29	<a href="#">WG1385890</a>
(S) 1,2-Dichloroethane-d4	92.7		70.0-130		11/23/2019 16:29	<a href="#">WG1385890</a>

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	11/19/2019 19:12	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	279		250	1	11/19/2019 19:12	<a href="#">WG1382656</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	83.7		52.0-156		11/19/2019 19:12	<a href="#">WG1382656</a>

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





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:28	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2990		100	1	11/24/2019 20:44	<a href="#">WG1385642</a>

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	11/21/2019 12:40	<a href="#">WG1383462</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	10400		5000	1	11/23/2019 13:27	<a href="#">WG1385833</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 19:57	<a href="#">WG1381609</a>
Manganese,Dissolved	ND		5.00	1	11/20/2019 19:57	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/22/2019 07:54	<a href="#">WG1384883</a>
Ethane	ND		13.0	1	11/22/2019 07:54	<a href="#">WG1384883</a>
Ethene	ND		13.0	1	11/22/2019 07:54	<a href="#">WG1384883</a>

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	11/20/2019 13:46	<a href="#">WG1383281</a>
Residual Range Organics (RRO)	ND		250	1	11/20/2019 13:46	<a href="#">WG1383281</a>
(S) o-Terphenyl	85.3		52.0-156		11/20/2019 13:46	<a href="#">WG1383281</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	206		100	1	11/25/2019 17:29	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/24/2019 20:46	<a href="#">WG1385642</a>

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	11/21/2019 12:40	<a href="#">WG1383462</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	10900		5000	1	11/23/2019 14:30	<a href="#">WG1385833</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	1960		100	1	11/20/2019 20:00	<a href="#">WG1381609</a>
Manganese,Dissolved	984		5.00	1	11/20/2019 20:00	<a href="#">WG1381609</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	351		10.0	1	11/22/2019 07:58	<a href="#">WG1384883</a>
Ethane	ND		13.0	1	11/22/2019 07:58	<a href="#">WG1384883</a>
Ethene	ND		13.0	1	11/22/2019 07:58	<a href="#">WG1384883</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5160		200	1	11/20/2019 14:07	<a href="#">WG1383281</a>
Residual Range Organics (RRO)	2980		250	1	11/20/2019 14:07	<a href="#">WG1383281</a>
(S) o-Terphenyl	109		52.0-156		11/20/2019 14:07	<a href="#">WG1383281</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	575		100	1	11/25/2019 17:31	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/24/2019 20:47	<a href="#">WG1385642</a>

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	11/19/2019 17:17	<a href="#">WG1383359</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	11/23/2019 14:46	<a href="#">WG1385833</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	4940		100	1	11/20/2019 20:04	<a href="#">WG1381609</a>
Manganese,Dissolved	1080		5.00	1	11/20/2019 20:04	<a href="#">WG1381609</a>

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	11/20/2019 01:47	<a href="#">WG1383395</a>
(S) a,a,a-Trifluorotoluene(FID)	105		78.0-120		11/20/2019 01:47	<a href="#">WG1383395</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	3500		10.0	1	11/21/2019 14:42	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:42	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:42	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	7430		200	1	11/19/2019 19:42	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	1830		250	1	11/19/2019 19:42	<a href="#">WG1382656</a>
(S) o-Terphenyl	143		52.0-156		11/19/2019 19:42	<a href="#">WG1382656</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Acenaphthene	0.166		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Acenaphthylene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Benzo(a)anthracene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Benzo(a)pyrene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Benzo(b)fluoranthene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Benzo(k)fluoranthene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Chrysene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Dibenz(a,h)anthracene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Fluoranthene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Fluorene	0.209		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Naphthalene	ND		0.250	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Phenanthrene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
Pyrene	ND		0.0500	1	11/18/2019 04:47	<a href="#">WG1382191</a>
1-Methylnaphthalene	0.298		0.250	1	11/18/2019 04:47	<a href="#">WG1382191</a>
2-Methylnaphthalene	ND		0.250	1	11/18/2019 04:47	<a href="#">WG1382191</a>
<i>(S)</i> Nitrobenzene-d5	128		31.0-160		11/18/2019 04:47	<a href="#">WG1382191</a>
<i>(S)</i> 2-Fluorobiphenyl	71.0		48.0-148		11/18/2019 04:47	<a href="#">WG1382191</a>
<i>(S)</i> p-Terphenyl-d14	93.5		37.0-146		11/18/2019 04:47	<a href="#">WG1382191</a>

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	368		100	1	11/25/2019 17:32	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/24/2019 20:49	<a href="#">WG1385642</a>

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	11/21/2019 12:41	<a href="#">WG1383462</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	11/23/2019 15:02	<a href="#">WG1385833</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	27.7		2.00	1	11/20/2019 18:06	<a href="#">WG1381632</a>
Arsenic,Dissolved	17.6		2.00	1	11/20/2019 20:07	<a href="#">WG1381609</a>
Iron,Dissolved	4690		100	1	11/20/2019 20:07	<a href="#">WG1381609</a>
Manganese,Dissolved	1820		5.00	1	11/20/2019 20:07	<a href="#">WG1381609</a>

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	11/20/2019 02:11	<a href="#">WG1383395</a>
(S) a,a,a-Trifluorotoluene(FID)	106		78.0-120		11/20/2019 02:11	<a href="#">WG1383395</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	1890		10.0	1	11/22/2019 08:04	<a href="#">WG1384883</a>
Ethane	ND		13.0	1	11/22/2019 08:04	<a href="#">WG1384883</a>
Ethene	ND		13.0	1	11/22/2019 08:04	<a href="#">WG1384883</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3680		200	1	11/20/2019 14:28	<a href="#">WG1383281</a>
Residual Range Organics (RRO)	1950		250	1	11/20/2019 14:28	<a href="#">WG1383281</a>
(S) o-Terphenyl	117		52.0-156		11/20/2019 14:28	<a href="#">WG1383281</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	360		100	1	11/25/2019 17:34	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	ND		100	1	11/24/2019 20:50	<a href="#">WG1385642</a>

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	11/21/2019 12:41	<a href="#">WG1383462</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	11/23/2019 15:18	<a href="#">WG1385833</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	25.5		2.00	1	11/20/2019 18:10	<a href="#">WG1381632</a>
Arsenic,Dissolved	18.2		2.00	1	11/20/2019 13:30	<a href="#">WG1383657</a>
Iron,Dissolved	4720		100	1	11/20/2019 13:30	<a href="#">WG1383657</a>
Manganese,Dissolved	1840		5.00	1	11/20/2019 13:30	<a href="#">WG1383657</a>

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	11/20/2019 02:35	<a href="#">WG1383395</a>
(S) a,a,a-Trifluorotoluene(FID)	106		78.0-120		11/20/2019 02:35	<a href="#">WG1383395</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	2130		10.0	1	11/22/2019 08:08	<a href="#">WG1384883</a>
Ethane	ND		13.0	1	11/22/2019 08:08	<a href="#">WG1384883</a>
Ethene	ND		13.0	1	11/22/2019 08:08	<a href="#">WG1384883</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3510		200	1	11/20/2019 14:49	<a href="#">WG1383281</a>
Residual Range Organics (RRO)	2010		250	1	11/20/2019 14:49	<a href="#">WG1383281</a>
(S) o-Terphenyl	102		52.0-156		11/20/2019 14:49	<a href="#">WG1383281</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	290		100	1	11/25/2019 17:40	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	322		100	1	11/24/2019 20:58	<a href="#">WG1385642</a>

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	11/19/2019 17:17	<a href="#">WG1383359</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	20200		5000	1	11/23/2019 16:05	<a href="#">WG1385833</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	16.0		2.00	1	11/20/2019 18:14	<a href="#">WG1381632</a>
Arsenic,Dissolved	15.3		2.00	1	11/20/2019 13:34	<a href="#">WG1383657</a>
Iron,Dissolved	ND		100	1	11/20/2019 13:34	<a href="#">WG1383657</a>
Manganese,Dissolved	281		5.00	1	11/20/2019 13:34	<a href="#">WG1383657</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	61.7		10.0	1	11/21/2019 14:46	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:46	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:46	<a href="#">WG1384371</a>

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	11/19/2019 12:15	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	ND		250	1	11/19/2019 12:15	<a href="#">WG1382656</a>
(S) o-Terphenyl	98.9		52.0-156		11/19/2019 12:15	<a href="#">WG1382656</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:42	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1160		100	1	11/24/2019 20:59	<a href="#">WG1385642</a>

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	11/19/2019 17:17	<a href="#">WG1383359</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	ND		5000	1	11/23/2019 16:21	<a href="#">WG1385833</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 13:37	<a href="#">WG1383657</a>
Manganese,Dissolved	27.9		5.00	1	11/20/2019 13:37	<a href="#">WG1383657</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 14:49	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:49	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:49	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/22/2019 14:33	<a href="#">WG1385340</a>
Toluene	ND		1.00	1	11/22/2019 14:33	<a href="#">WG1385340</a>
Ethylbenzene	ND		1.00	1	11/22/2019 14:33	<a href="#">WG1385340</a>
o-Xylene	ND		1.00	1	11/22/2019 14:33	<a href="#">WG1385340</a>
m&p-Xylene	ND		2.00	1	11/22/2019 14:33	<a href="#">WG1385340</a>
(S) Toluene-d8	91.3		80.0-120		11/22/2019 14:33	<a href="#">WG1385340</a>
(S) 4-Bromofluorobenzene	92.9		77.0-126		11/22/2019 14:33	<a href="#">WG1385340</a>
(S) 1,2-Dichloroethane-d4	106		70.0-130		11/22/2019 14:33	<a href="#">WG1385340</a>

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	11/19/2019 12:37	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	ND		250	1	11/19/2019 12:37	<a href="#">WG1382656</a>
(S) o-Terphenyl	94.7		52.0-156		11/19/2019 12:37	<a href="#">WG1382656</a>





Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:43	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	189		100	1	11/24/2019 21:01	<a href="#">WG1385642</a>

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	11/19/2019 17:18	<a href="#">WG1383359</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	17500		5000	1	11/23/2019 16:37	<a href="#">WG1385833</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	171		100	1	11/20/2019 13:41	<a href="#">WG1383657</a>
Manganese,Dissolved	967		5.00	1	11/20/2019 13:41	<a href="#">WG1383657</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	107		10.0	1	11/21/2019 14:51	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:51	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:51	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/22/2019 14:53	<a href="#">WG1385340</a>
Toluene	ND		1.00	1	11/22/2019 14:53	<a href="#">WG1385340</a>
Ethylbenzene	ND		1.00	1	11/22/2019 14:53	<a href="#">WG1385340</a>
o-Xylene	ND		1.00	1	11/22/2019 14:53	<a href="#">WG1385340</a>
m&p-Xylene	ND		2.00	1	11/22/2019 14:53	<a href="#">WG1385340</a>
(S) Toluene-d8	91.6		80.0-120		11/22/2019 14:53	<a href="#">WG1385340</a>
(S) 4-Bromofluorobenzene	96.2		77.0-126		11/22/2019 14:53	<a href="#">WG1385340</a>
(S) 1,2-Dichloroethane-d4	106		70.0-130		11/22/2019 14:53	<a href="#">WG1385340</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	235		200	1	11/19/2019 12:58	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	351		250	1	11/19/2019 12:58	<a href="#">WG1382656</a>
(S) o-Terphenyl	98.9		52.0-156		11/19/2019 12:58	<a href="#">WG1382656</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:45	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4870		100	1	11/24/2019 21:02	<a href="#">WG1385642</a>

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	11/19/2019 17:18	<a href="#">WG1383359</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	19900		5000	1	11/23/2019 16:53	<a href="#">WG1385833</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 13:44	<a href="#">WG1383657</a>
Manganese,Dissolved	ND		5.00	1	11/20/2019 13:44	<a href="#">WG1383657</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 14:53	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:53	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:53	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/22/2019 15:14	<a href="#">WG1385340</a>
Toluene	ND		1.00	1	11/22/2019 15:14	<a href="#">WG1385340</a>
Ethylbenzene	ND		1.00	1	11/22/2019 15:14	<a href="#">WG1385340</a>
o-Xylene	ND		1.00	1	11/22/2019 15:14	<a href="#">WG1385340</a>
m&p-Xylene	ND		2.00	1	11/22/2019 15:14	<a href="#">WG1385340</a>
(S) Toluene-d8	90.8		80.0-120		11/22/2019 15:14	<a href="#">WG1385340</a>
(S) 4-Bromofluorobenzene	95.1		77.0-126		11/22/2019 15:14	<a href="#">WG1385340</a>
(S) 1,2-Dichloroethane-d4	104		70.0-130		11/22/2019 15:14	<a href="#">WG1385340</a>

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	11/19/2019 13:20	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	ND		250	1	11/19/2019 13:20	<a href="#">WG1382656</a>
(S) o-Terphenyl	92.1		52.0-156		11/19/2019 13:20	<a href="#">WG1382656</a>



Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		100	1	11/25/2019 17:48	<a href="#">WG1385627</a>

1 Cp

2 Tc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	5310		500	5	11/24/2019 21:50	<a href="#">WG1385642</a>

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	11/19/2019 17:19	<a href="#">WG1383359</a>

5 Sr

6 Qc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfate	35000		5000	1	11/23/2019 17:09	<a href="#">WG1385833</a>

7 Gl

8 Al

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	ND		100	1	11/20/2019 13:47	<a href="#">WG1383657</a>
Manganese,Dissolved	ND		5.00	1	11/20/2019 13:47	<a href="#">WG1383657</a>

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	11/21/2019 14:55	<a href="#">WG1384371</a>
Ethane	ND		13.0	1	11/21/2019 14:55	<a href="#">WG1384371</a>
Ethene	ND		13.0	1	11/21/2019 14:55	<a href="#">WG1384371</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/22/2019 15:34	<a href="#">WG1385340</a>
Toluene	ND		1.00	1	11/22/2019 15:34	<a href="#">WG1385340</a>
Ethylbenzene	ND		1.00	1	11/22/2019 15:34	<a href="#">WG1385340</a>
o-Xylene	ND		1.00	1	11/22/2019 15:34	<a href="#">WG1385340</a>
m&p-Xylene	ND		2.00	1	11/22/2019 15:34	<a href="#">WG1385340</a>
(S) Toluene-d8	90.7		80.0-120		11/22/2019 15:34	<a href="#">WG1385340</a>
(S) 4-Bromofluorobenzene	91.8		77.0-126		11/22/2019 15:34	<a href="#">WG1385340</a>
(S) 1,2-Dichloroethane-d4	106		70.0-130		11/22/2019 15:34	<a href="#">WG1385340</a>

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	11/19/2019 13:42	<a href="#">WG1382656</a>
Residual Range Organics (RRO)	ND		250	1	11/19/2019 13:42	<a href="#">WG1382656</a>
(S) o-Terphenyl	92.6		52.0-156		11/19/2019 13:42	<a href="#">WG1382656</a>



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Bromomethane	ND	<u>JO</u>	5.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 10:57	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
4-Chlorotoluene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,2-Dibromoethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Dibromomethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,1-Dichloroethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,2-Dichloroethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,1-Dichloroethene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,2-Dichloropropane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,1-Dichloropropene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,3-Dichloropropane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
2,2-Dichloropropane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Di-isopropyl ether	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Ethylbenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Isopropylbenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
p-Isopropyltoluene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
2-Butanone (MEK)	ND		10.0	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Methylene Chloride	ND		5.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Naphthalene	ND		5.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
n-Propylbenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Styrene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Tetrachloroethene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Toluene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>

- 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 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Trichloroethene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Trichlorofluoromethane	ND		5.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
Vinyl chloride	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
o-Xylene	ND		1.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
m&p-Xylene	ND		2.00	1	11/23/2019 10:57	<a href="#">WG1385890</a>
(S) Toluene-d8	88.9		80.0-120		11/23/2019 10:57	<a href="#">WG1385890</a>
(S) 4-Bromofluorobenzene	92.9		77.0-126		11/23/2019 10:57	<a href="#">WG1385890</a>
(S) 1,2-Dichloroethane-d4	92.8		70.0-130		11/23/2019 10:57	<a href="#">WG1385890</a>

- 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 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Bromomethane	ND	<u>JO</u>	5.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 11:16	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
4-Chlorotoluene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,2-Dibromoethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Dibromomethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,1-Dichloroethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,2-Dichloroethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,1-Dichloroethene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,2-Dichloropropane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,1-Dichloropropene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,3-Dichloropropane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
2,2-Dichloropropane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Di-isopropyl ether	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Ethylbenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Isopropylbenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
p-Isopropyltoluene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
2-Butanone (MEK)	ND		10.0	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Methylene Chloride	ND		5.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Naphthalene	ND		5.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
n-Propylbenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Styrene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Tetrachloroethene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Toluene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>

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 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Trichloroethene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Trichlorofluoromethane	ND		5.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
Vinyl chloride	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
o-Xylene	ND		1.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
m&p-Xylene	ND		2.00	1	11/23/2019 11:16	<a href="#">WG1385890</a>
(S) Toluene-d8	88.4		80.0-120		11/23/2019 11:16	<a href="#">WG1385890</a>
(S) 4-Bromofluorobenzene	93.1		77.0-126		11/23/2019 11:16	<a href="#">WG1385890</a>
(S) 1,2-Dichloroethane-d4	91.1		70.0-130		11/23/2019 11:16	<a href="#">WG1385890</a>

- 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 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Acrolein	ND		50.0	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Acrylonitrile	ND		10.0	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Benzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Bromobenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Bromodichloromethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Bromoform	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Bromomethane	ND	<u>JO</u>	5.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
n-Butylbenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
sec-Butylbenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
tert-Butylbenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Carbon tetrachloride	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Chlorobenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Chlorodibromomethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Chloroethane	ND		5.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Chloroform	ND		5.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Chloromethane	ND		2.50	1	11/23/2019 11:36	<a href="#">WG1385890</a>
2-Chlorotoluene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
4-Chlorotoluene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,2-Dibromoethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Dibromomethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,2-Dichlorobenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,3-Dichlorobenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,4-Dichlorobenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Dichlorodifluoromethane	ND		5.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,1-Dichloroethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,2-Dichloroethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,1-Dichloroethene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
cis-1,2-Dichloroethene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
trans-1,2-Dichloroethene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,2-Dichloropropane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,1-Dichloropropene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,3-Dichloropropane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
cis-1,3-Dichloropropene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
trans-1,3-Dichloropropene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
2,2-Dichloropropane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Di-isopropyl ether	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Ethylbenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Hexachloro-1,3-butadiene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Isopropylbenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
p-Isopropyltoluene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
2-Butanone (MEK)	ND		10.0	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Methylene Chloride	ND		5.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Methyl tert-butyl ether	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Naphthalene	ND		5.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
n-Propylbenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Styrene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,1,1,2-Tetrachloroethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Tetrachloroethene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Toluene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,2,3-Trichlorobenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,2,4-Trichlorobenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>

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 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,1,2-Trichloroethane	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Trichloroethene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Trichlorofluoromethane	ND		5.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,2,3-Trichloropropane	ND		2.50	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,2,4-Trimethylbenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,2,3-Trimethylbenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
1,3,5-Trimethylbenzene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
Vinyl chloride	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
o-Xylene	ND		1.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
m&p-Xylene	ND		2.00	1	11/23/2019 11:36	<a href="#">WG1385890</a>
(S) Toluene-d8	90.3		80.0-120		11/23/2019 11:36	<a href="#">WG1385890</a>
(S) 4-Bromofluorobenzene	94.1		77.0-126		11/23/2019 11:36	<a href="#">WG1385890</a>
(S) 1,2-Dichloroethane-d4	94.6		70.0-130		11/23/2019 11:36	<a href="#">WG1385890</a>

- 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 date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	11/20/2019 02:59	<a href="#">WG1383395</a>
(S) a,a,a-Trifluorotoluene(FID)	106		78.0-120		11/20/2019 02:59	<a href="#">WG1383395</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	11/22/2019 15:55	<a href="#">WG1385340</a>
Toluene	ND		1.00	1	11/22/2019 15:55	<a href="#">WG1385340</a>
Ethylbenzene	ND		1.00	1	11/22/2019 15:55	<a href="#">WG1385340</a>
o-Xylene	ND		1.00	1	11/22/2019 15:55	<a href="#">WG1385340</a>
m&p-Xylene	ND		2.00	1	11/22/2019 15:55	<a href="#">WG1385340</a>
(S) Toluene-d8	90.3		80.0-120		11/22/2019 15:55	<a href="#">WG1385340</a>
(S) 4-Bromofluorobenzene	93.9		77.0-126		11/22/2019 15:55	<a href="#">WG1385340</a>
(S) 1,2-Dichloroethane-d4	106		70.0-130		11/22/2019 15:55	<a href="#">WG1385340</a>

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



Method Blank (MB)

(MB) R3476141-1 11/25/19 16:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ammonia Nitrogen	U		31.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1161399-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1161399-01 11/25/19 17:02 • (DUP) R3476141-3 11/25/19 17:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

L1161399-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1161399-19 11/25/19 17:45 • (DUP) R3476141-6 11/25/19 17:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ammonia Nitrogen	ND	0.000	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3476141-2 11/25/19 17:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Ammonia Nitrogen	7500	6860	91.4	90.0-110	

L1161399-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-05 11/25/19 17:10 • (MS) R3476141-4 11/25/19 17:12 • (MSD) R3476141-5 11/25/19 17:13

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	4510	4520	90.1	90.4	1	90.0-110			0.355	10

L1161399-20 Original Sample (OS) • Matrix Spike (MS)

(OS) L1161399-20 11/25/19 17:48 • (MS) R3476141-7 11/25/19 17:50

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ammonia Nitrogen	5000	ND	4600	91.9	1	90.0-110	



Method Blank (MB)

(MB) R3475683-1 11/24/19 20:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		19.7	100

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1161399-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1161399-01 11/24/19 20:19 • (DUP) R3475683-3 11/24/19 20:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	6280	6340	5	0.904		20

L1161399-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1161399-19 11/24/19 21:02 • (DUP) R3475683-6 11/24/19 21:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	4870	4880	1	0.164		20

Laboratory Control Sample (LCS)

(LCS) R3475683-2 11/24/19 20:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	4000	3940	98.5	90.0-110	

L1161399-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-05 11/24/19 20:26 • (MS) R3475683-4 11/24/19 20:28 • (MSD) R3475683-5 11/24/19 20:29

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	2500	2030	4360	4450	93.2	96.7	1	90.0-110			1.97	20

L1161399-20 Original Sample (OS) • Matrix Spike (MS)

(OS) L1161399-20 11/24/19 21:05 • (MS) R3475683-7 11/24/19 21:07

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2500	5190	7090	75.7	1	90.0-110	<a href="#">E J6</a>



Method Blank (MB)

(MB) R3473257-1 11/18/19 14:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1159986-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1159986-02 11/18/19 14:27 • (DUP) R3473257-5 11/18/19 14:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

L1160577-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1160577-05 11/18/19 14:33 • (DUP) R3473257-10 11/18/19 14:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3473257-2 11/18/19 14:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	546	109	85.0-115	

L1159986-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1159986-01 11/18/19 14:27 • (MS) R3473257-3 11/18/19 14:27 • (MSD) R3473257-4 11/18/19 14:27

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	U	873	880	87.3	88.0	1	80.0-120			0.799	20

L1160577-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1160577-01 11/18/19 14:30 • (MS) R3473257-6 11/18/19 14:31 • (MSD) R3473257-7 11/18/19 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
Sulfide	1000	U	756	759	75.6	75.9	1	80.0-120	<u>J6</u>	<u>J6</u>	0.396	20



L1160577-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1160577-02 11/18/19 14:31 • (MS) R3473257-8 11/18/19 14:31 • (MSD) R3473257-9 11/18/19 14:32

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 %
Sulfide	1000	U	754	758	75.4	75.8	1	80.0-120	<u>J6</u>	<u>J6</u>	0.529	20

L1161399-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-05 11/18/19 14:37 • (MS) R3473257-11 11/18/19 14:37 • (MSD) R3473257-12 11/18/19 14:37

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 %
Sulfide	1000	ND	791	790	79.1	79.0	1	80.0-120	<u>J6</u>	<u>J6</u>	0.127	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3473825-1 11/19/19 17:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1161399-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1161399-08 11/19/19 17:16 • (DUP) R3473825-5 11/19/19 17:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1161399-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1161399-17 11/19/19 17:17 • (DUP) R3473825-6 11/19/19 17:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3473825-2 11/19/19 17:09

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	517	103	85.0-115	

L1160584-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1160584-01 11/19/19 17:09 • (MS) R3473825-3 11/19/19 17:10 • (MSD) R3473825-4 11/19/19 17:10

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	U	1040	992	104	99.2	1	80.0-120			4.72	20





Method Blank (MB)

(MB) R3474543-1 11/21/19 12:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		6.50	50.0

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1161399-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1161399-11 11/21/19 12:40 • (DUP) R3474543-3 11/21/19 12:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

L1161428-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1161428-02 11/21/19 12:43 • (DUP) R3474543-6 11/21/19 12:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3474543-2 11/21/19 12:36

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	505	101	85.0-115	

L1161399-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-12 11/21/19 12:40 • (MS) R3474543-4 11/21/19 12:41 • (MSD) R3474543-5 11/21/19 12:41

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	998	1010	99.8	101	1	80.0-120			1.59	20



Method Blank (MB)

(MB) R3475624-1 11/23/19 05:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	186	↓	77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1161296-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1161296-01 11/23/19 07:59 • (DUP) R3475624-3 11/23/19 08:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	30900	30700	1	0.642		15

L1161399-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1161399-05 11/23/19 12:00 • (DUP) R3475624-5 11/23/19 12:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	7720	7630	1	1.25		15

Laboratory Control Sample (LCS)

(LCS) R3475624-2 11/23/19 06:14

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	39000	97.6	80.0-120	

L1161296-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1161296-01 11/23/19 07:59 • (MS) R3475624-4 11/23/19 08:29

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	30900	79300	96.8	1	80.0-120	

L1161399-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-05 11/23/19 12:00 • (MS) R3475624-6 11/23/19 12:59 • (MSD) R3475624-7 11/23/19 13:14

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	7720	57300	57400	99.2	99.3	1	80.0-120			0.108	15



Method Blank (MB)

(MB) R3475640-1 11/23/19 09:51

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1161399-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1161399-11 11/23/19 13:27 • (DUP) R3475640-3 11/23/19 13:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	10400	10300	1	0.883		15

L1161399-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1161399-20 11/23/19 17:09 • (DUP) R3475640-6 11/23/19 17:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	35000	35000	1	0.0445		15

Laboratory Control Sample (LCS)

(LCS) R3475640-2 11/23/19 10:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40000	38800	96.9	80.0-120	

L1161399-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-11 11/23/19 13:27 • (MS) R3475640-4 11/23/19 13:58 • (MSD) R3475640-5 11/23/19 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
Sulfate	50000	10400	61500	61700	102	103	1	80.0-120			0.308	15

L1161399-20 Original Sample (OS) • Matrix Spike (MS)

(OS) L1161399-20 11/23/19 17:09 • (MS) R3475640-7 11/23/19 17:41

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	35000	85300	100	1	80.0-120	



Method Blank (MB)

(MB) R3474325-1 11/20/19 18:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		0.250	2.00
Barium,Dissolved	0.531	↓	0.360	5.00
Iron,Dissolved	15.9	↓	15.0	100
Manganese,Dissolved	1.82	↓	0.250	5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3474325-2 11/20/19 18:12 • (LCSD) R3474325-3 11/20/19 18:16

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	48.3	48.0	96.5	95.9	80.0-120			0.609	20
Barium,Dissolved	50.0	47.1	45.9	94.2	91.9	80.0-120			2.51	20
Iron,Dissolved	5000	4920	4910	98.3	98.2	80.0-120			0.0991	20
Manganese,Dissolved	50.0	50.0	48.6	100	97.2	80.0-120			2.83	20

L1161399-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-01 11/20/19 18:19 • (MS) R3474325-4 11/20/19 18:26 • (MSD) R3474325-5 11/20/19 18:29

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,Dissolved	50.0	15.9	65.4	63.5	98.9	95.2	1	75.0-125			2.88	20
Barium,Dissolved	50.0	20.2	67.4	69.1	94.5	97.7	1	75.0-125			2.40	20
Iron,Dissolved	5000	ND	4820	4690	96.5	93.7	1	75.0-125			2.89	20
Manganese,Dissolved	50.0	202	254	248	105	91.6	1	75.0-125			2.58	20

L1161399-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-05 11/20/19 18:33 • (MS) R3474325-6 11/20/19 18:36 • (MSD) R3474325-7 11/20/19 18:39

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	4.56	54.0	55.9	98.9	103	1	75.0-125			3.47	20
Barium,Dissolved	50.0	22.5	70.4	72.5	95.8	99.9	1	75.0-125			2.86	20
Iron,Dissolved	5000	ND	5070	5210	101	104	1	75.0-125			2.77	20
Manganese,Dissolved	50.0	10.3	65.0	62.5	110	104	1	75.0-125			4.06	20



Method Blank (MB)

(MB) R3474300-1 11/20/19 16:34

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

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) R3474300-2 11/20/19 16:38 • (LCSD) R3474300-3 11/20/19 16:42

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	%	%	%			%	%
Arsenic	50.0	50.6	49.0	101	98.1	80.0-120			3.16	20
Barium	50.0	48.4	49.1	96.8	98.2	80.0-120			1.48	20

L1161306-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161306-09 11/20/19 16:45 • (MS) R3474300-5 11/20/19 16:53 • (MSD) R3474300-6 11/20/19 16:57

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	50.0	3.01	51.2	52.4	96.4	98.8	1	75.0-125			2.28	20
Barium	50.0	202	250	256	96.3	109	1	75.0-125			2.43	20



Method Blank (MB)

(MB) R3474162-1 11/20/19 12:43

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
Manganese,Dissolved	U		0.250	5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3474162-2 11/20/19 12:46 • (LCSD) R3474162-3 11/20/19 12:50

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	48.4	48.9	96.9	97.7	80.0-120			0.852	20
Iron,Dissolved	5000	4890	4960	97.9	99.2	80.0-120			1.33	20
Manganese,Dissolved	50.0	49.8	49.5	99.6	99.0	80.0-120			0.597	20

L1162531-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1162531-05 11/20/19 12:53 • (MS) R3474162-5 11/20/19 13:00 • (MSD) R3474162-6 11/20/19 13:03

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	ND	49.5	48.0	96.2	93.2	1	75.0-125			3.06	20
Iron,Dissolved	5000	25700	29200	28900	69.9	65.2	1	75.0-125	<u>V</u>	<u>V</u>	0.802	20
Manganese,Dissolved	50.0	1250	1270	1250	49.1	0.000	1	75.0-125	<u>V</u>	<u>V</u>	2.11	20



Method Blank (MB)

(MB) R3474256-2 11/20/19 00:36

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)	106			78.0-120

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS)

(LCS) R3474256-1 11/19/19 22:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5070	92.2	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			90.8	78.0-120	

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3474478-1 11/21/19 08:34

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1161286-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1161286-01 11/21/19 09:28 • (DUP) R3474478-2 11/21/19 09:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	U	0.000	1	0.000		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

L1162023-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1162023-06 11/21/19 10:39 • (DUP) R3474478-3 11/21/19 10:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	706	700	1	0.853		20
Ethane	47.4	46.6	1	1.70		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3474478-4 11/21/19 11:00 • (LCSD) R3474478-5 11/21/19 11:04

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	%	%	%			%	%
Methane	67.8	62.5	64.4	92.2	95.0	85.0-115			2.99	20
Ethane	129	112	121	86.8	93.8	85.0-115			7.73	20
Ethene	127	108	116	85.0	91.3	85.0-115			7.14	20





Volatile Organic Compounds (GC) by Method RSK175

[L1161399-01,04,05,07,08,09,10,13,16,17,18,19,20](#)

Method Blank (MB)

(MB) R3474669-1 11/21/19 14:12

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

L1161195-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1161195-01 11/21/19 14:16 • (DUP) R3474669-2 11/21/19 14:44

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

L1161949-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1161949-05 11/21/19 15:10 • (DUP) R3474669-3 11/21/19 15:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	74.3	72.9	1	1.90		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) R3474669-4 11/21/19 15:20 • (LCSD) R3474669-7 11/21/19 15:39

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	61.4	65.7	90.6	96.9	85.0-115			6.77	20
Ethane	129	112	124	86.8	96.1	85.0-115			10.2	20
Ethene	127	108	119	85.0	93.7	85.0-115			9.69	20



L1161399-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-05 11/21/19 14:25 • (MS) R3474669-5 11/21/19 15:31 • (MSD) R3474669-6 11/21/19 15:36

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	77.1	86.2	114	127	1	85.0-115		J5	11.1	20
Ethane	129	ND	149	166	116	129	1	85.0-115	J5	J5	10.8	20
Ethene	127	ND	144	161	113	127	1	85.0-115		J5	11.1	20

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



Method Blank (MB)

(MB) R3474953-1 11/22/19 07:51

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

L1161211-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1161211-01 11/22/19 08:26 • (DUP) R3474953-2 11/22/19 09:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	24.4	24.9	1	2.03		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1161599-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1161599-04 11/22/19 09:30 • (DUP) R3474953-3 11/22/19 09:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	220	226	1	2.69		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) R3474953-4 11/22/19 09:53 • (LCSD) R3474953-5 11/22/19 10:01

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	%	%	%			%	%
Methane	67.8	64.6	69.4	95.3	102	85.0-115			7.16	20
Ethane	129	117	128	90.7	99.2	85.0-115			8.98	20
Ethene	127	113	123	89.0	96.9	85.0-115			8.47	20



Method Blank (MB)

(MB) R3475181-3 11/21/19 21:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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	89.5			80.0-120
(S) 4-Bromofluorobenzene	95.6			77.0-126
(S) 1,2-Dichloroethane-d4	113			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3475181-1 11/21/19 20:09 • (LCSD) R3475181-2 11/21/19 20:29

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	5.00	4.40	4.26	88.0	85.2	70.0-123			3.23	20
Ethylbenzene	5.00	4.53	4.38	90.6	87.6	79.0-123			3.37	20
Toluene	5.00	4.47	4.30	89.4	86.0	79.0-120			3.88	20
o-Xylene	5.00	4.15	4.13	83.0	82.6	80.0-122			0.483	20
m&p-Xylenes	10.0	8.65	8.48	86.5	84.8	80.0-122			1.98	20
(S) Toluene-d8				93.5	89.8	80.0-120				
(S) 4-Bromofluorobenzene				100	96.9	77.0-126				
(S) 1,2-Dichloroethane-d4				116	112	70.0-130				



Method Blank (MB)

(MB) R3475140-3 11/22/19 11:04

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	91.1			80.0-120
(S) 4-Bromofluorobenzene	96.9			77.0-126
(S) 1,2-Dichloroethane-d4	112			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3475140-1 11/22/19 10:04 • (LCSD) R3475140-2 11/22/19 10:24

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	5.00	4.94	4.90	98.8	98.0	70.0-123			0.813	20
Ethylbenzene	5.00	4.65	4.91	93.0	98.2	79.0-123			5.44	20
Toluene	5.00	4.51	4.57	90.2	91.4	79.0-120			1.32	20
o-Xylene	5.00	4.62	4.63	92.4	92.6	80.0-122			0.216	20
m&p-Xylenes	10.0	9.31	9.45	93.1	94.5	80.0-122			1.49	20
(S) Toluene-d8				88.7	90.0	80.0-120				
(S) 4-Bromofluorobenzene				94.2	96.6	77.0-126				
(S) 1,2-Dichloroethane-d4				117	120	70.0-130				



Method Blank (MB)

(MB) R3475565-3 11/23/19 07:29

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3475565-3 11/23/19 07:29

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	91.5			80.0-120
(S) 4-Bromofluorobenzene	96.3			77.0-126
(S) 1,2-Dichloroethane-d4	92.8			70.0-130

- 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) R3475565-1 11/23/19 06:30 • (LCSD) R3475565-2 11/23/19 06:50

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	25.0	34.4	34.0	138	136	19.0-160			1.17	27
Acrolein	25.0	27.0	27.3	108	109	10.0-160			1.10	26
Acrylonitrile	25.0	28.1	27.6	112	110	55.0-149			1.80	20



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

(LCS) R3475565-1 11/23/19 06:30 • (LCSD) R3475565-2 11/23/19 06:50

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	5.00	4.95	4.99	99.0	99.8	70.0-123			0.805	20
Bromobenzene	5.00	4.75	4.55	95.0	91.0	73.0-121			4.30	20
Bromodichloromethane	5.00	4.73	4.99	94.6	99.8	75.0-120			5.35	20
Bromoform	5.00	4.45	4.27	89.0	85.4	68.0-132			4.13	20
Bromomethane	5.00	1.86	1.96	37.2	39.2	10.0-160			5.24	25
n-Butylbenzene	5.00	4.60	4.61	92.0	92.2	73.0-125			0.217	20
sec-Butylbenzene	5.00	4.71	4.70	94.2	94.0	75.0-125			0.213	20
tert-Butylbenzene	5.00	4.66	4.71	93.2	94.2	76.0-124			1.07	20
Carbon tetrachloride	5.00	5.15	4.81	103	96.2	68.0-126			6.83	20
Chlorobenzene	5.00	4.88	4.66	97.6	93.2	80.0-121			4.61	20
Chlorodibromomethane	5.00	4.49	4.45	89.8	89.0	77.0-125			0.895	20
Chloroethane	5.00	4.62	4.95	92.4	99.0	47.0-150			6.90	20
Chloroform	5.00	4.97	4.94	99.4	98.8	73.0-120			0.605	20
Chloromethane	5.00	4.05	4.38	81.0	87.6	41.0-142			7.83	20
2-Chlorotoluene	5.00	4.97	4.71	99.4	94.2	76.0-123			5.37	20
4-Chlorotoluene	5.00	4.61	4.62	92.2	92.4	75.0-122			0.217	20
1,2-Dibromo-3-Chloropropane	5.00	5.56	4.86	111	97.2	58.0-134			13.4	20
1,2-Dibromoethane	5.00	4.71	4.63	94.2	92.6	80.0-122			1.71	20
Dibromomethane	5.00	5.00	5.21	100	104	80.0-120			4.11	20
1,2-Dichlorobenzene	5.00	4.55	4.75	91.0	95.0	79.0-121			4.30	20
1,3-Dichlorobenzene	5.00	4.93	4.84	98.6	96.8	79.0-120			1.84	20
1,4-Dichlorobenzene	5.00	4.77	4.68	95.4	93.6	79.0-120			1.90	20
Dichlorodifluoromethane	5.00	6.39	6.49	128	130	51.0-149			1.55	20
1,1-Dichloroethane	5.00	4.93	5.12	98.6	102	70.0-126			3.78	20
1,2-Dichloroethane	5.00	5.23	5.06	105	101	70.0-128			3.30	20
1,1-Dichloroethene	5.00	4.99	5.27	99.8	105	71.0-124			5.46	20
cis-1,2-Dichloroethene	5.00	5.38	5.30	108	106	73.0-120			1.50	20
trans-1,2-Dichloroethene	5.00	4.98	5.32	99.6	106	73.0-120			6.60	20
1,2-Dichloropropane	5.00	5.20	5.18	104	104	77.0-125			0.385	20
1,1-Dichloropropene	5.00	4.88	4.95	97.6	99.0	74.0-126			1.42	20
1,3-Dichloropropane	5.00	4.95	4.78	99.0	95.6	80.0-120			3.49	20
cis-1,3-Dichloropropene	5.00	4.66	4.69	93.2	93.8	80.0-123			0.642	20
trans-1,3-Dichloropropene	5.00	4.47	4.32	89.4	86.4	78.0-124			3.41	20
2,2-Dichloropropane	5.00	4.66	4.83	93.2	96.6	58.0-130			3.58	20
Di-isopropyl ether	5.00	5.03	4.95	101	99.0	58.0-138			1.60	20
Ethylbenzene	5.00	4.61	4.70	92.2	94.0	79.0-123			1.93	20
Hexachloro-1,3-butadiene	5.00	4.27	4.23	85.4	84.6	54.0-138			0.941	20
Isopropylbenzene	5.00	4.66	4.66	93.2	93.2	76.0-127			0.000	20
p-Isopropyltoluene	5.00	4.58	4.70	91.6	94.0	76.0-125			2.59	20
2-Butanone (MEK)	25.0	31.1	30.1	124	120	44.0-160			3.27	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) R3475565-1 11/23/19 06:30 • (LCSD) R3475565-2 11/23/19 06:50

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	5.00	5.27	5.11	105	102	67.0-120			3.08	20
4-Methyl-2-pentanone (MIBK)	25.0	24.7	23.6	98.8	94.4	68.0-142			4.55	20
Methyl tert-butyl ether	5.00	5.19	5.04	104	101	68.0-125			2.93	20
Naphthalene	5.00	4.65	4.73	93.0	94.6	54.0-135			1.71	20
n-Propylbenzene	5.00	4.72	4.72	94.4	94.4	77.0-124			0.000	20
Styrene	5.00	4.73	4.47	94.6	89.4	73.0-130			5.65	20
1,1,1,2-Tetrachloroethane	5.00	4.68	4.47	93.6	89.4	75.0-125			4.59	20
1,1,2,2-Tetrachloroethane	5.00	4.56	4.51	91.2	90.2	65.0-130			1.10	20
Tetrachloroethene	5.00	4.65	4.65	93.0	93.0	72.0-132			0.000	20
Toluene	5.00	4.57	4.55	91.4	91.0	79.0-120			0.439	20
1,1,2-Trichlorotrifluoroethane	5.00	5.36	5.07	107	101	69.0-132			5.56	20
1,2,3-Trichlorobenzene	5.00	4.55	4.45	91.0	89.0	50.0-138			2.22	20
1,2,4-Trichlorobenzene	5.00	4.35	4.31	87.0	86.2	57.0-137			0.924	20
1,1,1-Trichloroethane	5.00	5.22	5.44	104	109	73.0-124			4.13	20
1,1,2-Trichloroethane	5.00	4.81	4.56	96.2	91.2	80.0-120			5.34	20
Trichloroethene	5.00	5.37	5.40	107	108	78.0-124			0.557	20
Trichlorofluoromethane	5.00	4.87	5.15	97.4	103	59.0-147			5.59	20
1,2,3-Trichloropropane	5.00	5.10	4.76	102	95.2	73.0-130			6.90	20
1,2,3-Trimethylbenzene	5.00	4.71	4.61	94.2	92.2	77.0-120			2.15	20
1,2,4-Trimethylbenzene	5.00	4.69	4.60	93.8	92.0	76.0-121			1.94	20
1,3,5-Trimethylbenzene	5.00	4.70	4.76	94.0	95.2	76.0-122			1.27	20
Vinyl chloride	5.00	4.59	4.84	91.8	96.8	67.0-131			5.30	20
o-Xylene	5.00	4.52	4.37	90.4	87.4	80.0-122			3.37	20
m&p-Xylenes	10.0	9.21	8.93	92.1	89.3	80.0-122			3.09	20
(S) Toluene-d8				87.6	86.8	80.0-120				
(S) 4-Bromofluorobenzene				94.6	92.1	77.0-126				
(S) 1,2-Dichloroethane-d4				91.9	95.6	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3476158-2 11/25/19 10:35

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3476158-2 11/25/19 10:35

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
1,2,4-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	91.2			80.0-120
(S) 4-Bromofluorobenzene	98.6			77.0-126
(S) 1,2-Dichloroethane-d4	117			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3476158-1 11/25/19 09:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	25.0	23.9	95.6	19.0-160	
Acrolein	25.0	26.6	106	10.0-160	
Acrylonitrile	25.0	26.2	105	55.0-149	
Benzene	5.00	5.03	101	70.0-123	



Laboratory Control Sample (LCS)

(LCS) R3476158-1 11/25/19 09:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromobenzene	5.00	5.05	101	73.0-121	
Bromodichloromethane	5.00	5.94	119	75.0-120	
Bromoform	5.00	4.36	87.2	68.0-132	
Bromomethane	5.00	5.61	112	10.0-160	
n-Butylbenzene	5.00	4.93	98.6	73.0-125	
sec-Butylbenzene	5.00	4.81	96.2	75.0-125	
tert-Butylbenzene	5.00	5.06	101	76.0-124	
Carbon tetrachloride	5.00	5.24	105	68.0-126	
Chlorobenzene	5.00	4.57	91.4	80.0-121	
Chlorodibromomethane	5.00	4.81	96.2	77.0-125	
Chloroethane	5.00	6.71	134	47.0-150	
Chloroform	5.00	5.79	116	73.0-120	
Chloromethane	5.00	5.49	110	41.0-142	
2-Chlorotoluene	5.00	5.27	105	76.0-123	
4-Chlorotoluene	5.00	5.09	102	75.0-122	
1,2-Dibromo-3-Chloropropane	5.00	4.53	90.6	58.0-134	
1,2-Dibromoethane	5.00	4.66	93.2	80.0-122	
Dibromomethane	5.00	5.27	105	80.0-120	
1,2-Dichlorobenzene	5.00	5.05	101	79.0-121	
1,3-Dichlorobenzene	5.00	4.69	93.8	79.0-120	
1,4-Dichlorobenzene	5.00	5.48	110	79.0-120	
Dichlorodifluoromethane	5.00	5.96	119	51.0-149	
1,1-Dichloroethane	5.00	5.31	106	70.0-126	
1,2-Dichloroethane	5.00	6.63	133	70.0-128	J4
1,1-Dichloroethene	5.00	4.78	95.6	71.0-124	
cis-1,2-Dichloroethene	5.00	5.57	111	73.0-120	
trans-1,2-Dichloroethene	5.00	5.08	102	73.0-120	
1,2-Dichloropropane	5.00	4.79	95.8	77.0-125	
1,1-Dichloropropene	5.00	5.22	104	74.0-126	
1,3-Dichloropropane	5.00	4.86	97.2	80.0-120	
cis-1,3-Dichloropropene	5.00	4.83	96.6	80.0-123	
trans-1,3-Dichloropropene	5.00	4.69	93.8	78.0-124	
2,2-Dichloropropane	5.00	6.35	127	58.0-130	
Di-isopropyl ether	5.00	5.05	101	58.0-138	
Ethylbenzene	5.00	5.03	101	79.0-123	
Hexachloro-1,3-butadiene	5.00	4.04	80.8	54.0-138	
Isopropylbenzene	5.00	4.61	92.2	76.0-127	
p-Isopropyltoluene	5.00	5.03	101	76.0-125	
2-Butanone (MEK)	25.0	26.5	106	44.0-160	
Methylene Chloride	5.00	4.32	86.4	67.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Laboratory Control Sample (LCS)

(LCS) R3476158-1 11/25/19 09:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
4-Methyl-2-pentanone (MIBK)	25.0	24.0	96.0	68.0-142	
Methyl tert-butyl ether	5.00	5.77	115	68.0-125	
Naphthalene	5.00	3.58	71.6	54.0-135	
n-Propylbenzene	5.00	4.87	97.4	77.0-124	
Styrene	5.00	4.80	96.0	73.0-130	
1,1,1,2-Tetrachloroethane	5.00	4.87	97.4	75.0-125	
1,1,2,2-Tetrachloroethane	5.00	4.65	93.0	65.0-130	
Tetrachloroethene	5.00	4.86	97.2	72.0-132	
Toluene	5.00	4.76	95.2	79.0-120	
1,1,2-Trichlorotrifluoroethane	5.00	5.02	100	69.0-132	
1,2,4-Trichlorobenzene	5.00	4.54	90.8	57.0-137	
1,1,1-Trichloroethane	5.00	6.01	120	73.0-124	
1,1,2-Trichloroethane	5.00	4.89	97.8	80.0-120	
Trichloroethene	5.00	5.33	107	78.0-124	
Trichlorofluoromethane	5.00	5.90	118	59.0-147	
1,2,3-Trichloropropane	5.00	5.17	103	73.0-130	
1,2,3-Trimethylbenzene	5.00	5.36	107	77.0-120	
1,2,4-Trimethylbenzene	5.00	4.94	98.8	76.0-121	
1,3,5-Trimethylbenzene	5.00	5.27	105	76.0-122	
Vinyl chloride	5.00	4.93	98.6	67.0-131	
o-Xylene	5.00	4.77	95.4	80.0-122	
m&p-Xylenes	10.0	9.19	91.9	80.0-122	
(S) Toluene-d8			87.0	80.0-120	
(S) 4-Bromofluorobenzene			95.4	77.0-126	
(S) 1,2-Dichloroethane-d4			116	70.0-130	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L1161399-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-05 11/25/19 16:58 • (MS) R3476158-3 11/25/19 18:58 • (MSD) R3476158-4 11/25/19 19:18

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 %
Acetone	25.0	ND	26.5	25.4	106	102	1	10.0-160			4.24	35
Acrolein	25.0	ND	27.4	29.1	110	116	1	10.0-160			6.02	39
Acrylonitrile	25.0	ND	30.7	29.8	123	119	1	21.0-160			2.98	32
Benzene	5.00	ND	6.94	6.37	139	127	1	17.0-158			8.56	27
Bromobenzene	5.00	ND	6.52	6.48	130	130	1	30.0-149			0.615	28
Bromodichloromethane	5.00	ND	7.20	7.70	144	154	1	31.0-150		J5	6.71	27
Bromoform	5.00	ND	5.19	5.14	104	103	1	29.0-150			0.968	29
Bromomethane	5.00	ND	7.75	8.02	155	160	1	10.0-160			3.42	38



L1161399-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-05 11/25/19 16:58 • (MS) R3476158-3 11/25/19 18:58 • (MSD) R3476158-4 11/25/19 19:18

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 %
n-Butylbenzene	5.00	ND	5.55	5.37	111	107	1	31.0-150			3.30	30
sec-Butylbenzene	5.00	ND	6.27	5.82	125	116	1	33.0-155			7.44	29
tert-Butylbenzene	5.00	ND	6.53	6.06	131	121	1	34.0-153			7.47	28
Carbon tetrachloride	5.00	ND	7.04	6.92	141	138	1	23.0-159			1.72	28
Chlorobenzene	5.00	ND	6.12	5.59	122	112	1	33.0-152			9.05	27
Chlorodibromomethane	5.00	ND	5.72	5.75	114	115	1	37.0-149			0.523	27
Chloroethane	5.00	ND	9.27	7.85	185	157	1	10.0-160	J5		16.6	30
Chloroform	5.00	ND	7.48	7.31	150	146	1	29.0-154			2.30	28
Chloromethane	5.00	ND	8.26	8.14	165	163	1	10.0-160	J5	J5	1.46	29
2-Chlorotoluene	5.00	ND	6.65	6.07	133	121	1	32.0-153			9.12	28
4-Chlorotoluene	5.00	ND	6.33	6.15	127	123	1	32.0-150			2.88	28
1,2-Dibromo-3-Chloropropane	5.00	ND	4.68	4.83	93.6	96.6	1	22.0-151			3.15	34
1,2-Dibromoethane	5.00	ND	6.16	5.64	123	113	1	34.0-147			8.81	27
Dibromomethane	5.00	ND	6.76	6.32	135	126	1	30.0-151			6.73	27
1,2-Dichlorobenzene	5.00	ND	6.11	5.83	122	117	1	34.0-149			4.69	28
1,3-Dichlorobenzene	5.00	ND	6.15	6.13	123	123	1	36.0-146			0.326	27
1,4-Dichlorobenzene	5.00	ND	6.47	6.26	129	125	1	35.0-142			3.30	27
Dichlorodifluoromethane	5.00	ND	8.15	7.63	163	153	1	10.0-160	J5		6.59	29
1,1-Dichloroethane	5.00	ND	6.95	6.84	139	137	1	25.0-158			1.60	27
1,2-Dichloroethane	5.00	ND	7.19	7.38	144	148	1	29.0-151			2.61	27
1,1-Dichloroethene	5.00	ND	7.96	7.04	159	141	1	11.0-160			12.3	29
cis-1,2-Dichloroethene	5.00	ND	6.97	6.47	139	129	1	10.0-160			7.44	27
trans-1,2-Dichloroethene	5.00	ND	6.76	6.38	135	128	1	17.0-153			5.78	27
1,2-Dichloropropane	5.00	ND	6.45	5.76	129	115	1	30.0-156			11.3	27
1,1-Dichloropropene	5.00	ND	7.85	7.02	157	140	1	25.0-158			11.2	27
1,3-Dichloropropane	5.00	ND	5.86	5.73	117	115	1	38.0-147			2.24	27
cis-1,3-Dichloropropene	5.00	ND	6.63	5.40	133	108	1	34.0-149			20.4	28
trans-1,3-Dichloropropene	5.00	ND	5.72	5.73	114	115	1	32.0-149			0.175	28
2,2-Dichloropropane	5.00	ND	7.64	7.32	153	146	1	24.0-152	J5		4.28	29
Di-isopropyl ether	5.00	ND	6.63	6.08	133	122	1	21.0-160			8.65	28
Ethylbenzene	5.00	ND	5.98	5.65	120	113	1	30.0-155			5.67	27
Hexachloro-1,3-butadiene	5.00	ND	4.44	4.06	88.8	81.2	1	20.0-154			8.94	34
Isopropylbenzene	5.00	ND	6.01	5.86	120	117	1	28.0-157			2.53	27
p-Isopropyltoluene	5.00	ND	6.26	6.32	125	126	1	30.0-154			0.954	29
2-Butanone (MEK)	25.0	ND	29.6	29.4	118	118	1	10.0-160			0.678	32
Methylene Chloride	5.00	ND	6.77	6.44	135	129	1	23.0-144			5.00	28
4-Methyl-2-pentanone (MIBK)	25.0	ND	28.7	28.3	115	113	1	29.0-160			1.40	29
Methyl tert-butyl ether	5.00	ND	7.40	6.62	148	132	1	28.0-150			11.1	29
Naphthalene	5.00	ND	4.09	3.82	30.4	25.0	1	12.0-156			6.83	35
n-Propylbenzene	5.00	ND	6.69	6.00	134	120	1	31.0-154			10.9	28

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1161399-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-05 11/25/19 16:58 • (MS) R3476158-3 11/25/19 18:58 • (MSD) R3476158-4 11/25/19 19:18

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 %
Styrene	5.00	ND	5.89	5.84	118	117	1	33.0-155			0.853	28
1,1,1,2-Tetrachloroethane	5.00	ND	6.11	6.01	122	120	1	36.0-151			1.65	29
1,1,2,2-Tetrachloroethane	5.00	ND	6.12	5.77	122	115	1	33.0-150			5.89	28
Tetrachloroethene	5.00	ND	6.56	6.50	131	130	1	10.0-160			0.919	27
Toluene	5.00	ND	6.33	6.17	127	123	1	26.0-154			2.56	28
1,1,2-Trichlorotrifluoroethane	5.00	ND	7.28	6.90	146	138	1	23.0-160			5.36	30
1,2,4-Trichlorobenzene	5.00	ND	4.41	4.26	88.2	85.2	1	24.0-150			3.46	33
1,1,1-Trichloroethane	5.00	ND	8.39	7.42	168	148	1	23.0-160	J5		12.3	28
1,1,2-Trichloroethane	5.00	ND	5.98	6.49	120	130	1	35.0-147			8.18	27
Trichloroethene	5.00	ND	8.04	6.77	161	135	1	10.0-160	J5		17.2	25
Trichlorofluoromethane	5.00	ND	8.48	8.67	170	173	1	17.0-160	J5	J5	2.22	31
1,2,3-Trichloropropane	5.00	ND	7.11	6.07	142	121	1	34.0-151			15.8	29
1,2,3-Trimethylbenzene	5.00	ND	6.33	5.78	127	116	1	32.0-149			9.08	28
1,2,4-Trimethylbenzene	5.00	ND	5.93	5.78	119	116	1	26.0-154			2.56	27
1,3,5-Trimethylbenzene	5.00	ND	6.45	6.10	129	122	1	28.0-153			5.58	27
Vinyl chloride	5.00	ND	8.44	7.37	169	147	1	10.0-160	J5		13.5	27
o-Xylene	5.00	ND	5.34	5.24	107	105	1	45.0-144			1.89	26
m&p-Xylenes	10.0	ND	11.3	11.0	113	110	1	43.0-146			2.69	26
(S) Toluene-d8					83.8	88.3		80.0-120				
(S) 4-Bromofluorobenzene					89.8	95.3		77.0-126				
(S) 1,2-Dichloroethane-d4					118	112		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3476295-3 11/25/19 19:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,2,3-Trichlorobenzene	U		0.230	1.00
(S) Toluene-d8	108			80.0-120
(S) 4-Bromofluorobenzene	96.3			77.0-126
(S) 1,2-Dichloroethane-d4	93.4			70.0-130

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

(LCS) R3476295-1 11/25/19 18:44 • (LCSD) R3476295-2 11/25/19 19:03

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 %
1,2,3-Trichlorobenzene	5.00	6.82	7.91	136	158	50.0-138		J4	14.8	20
(S) Toluene-d8				107	105	80.0-120				
(S) 4-Bromofluorobenzene				98.7	100	77.0-126				
(S) 1,2-Dichloroethane-d4				107	94.3	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3473420-1 11/18/19 10:57

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>	124			52.0-156

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

(LCS) R3473420-2 11/18/19 11:19 • (LCSD) R3473420-3 11/18/19 11:40

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)	1500	1450	1580	96.7	105	50.0-150			8.58	20
<i>(S) o-Terphenyl</i>				142	116	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) R3473594-1 11/19/19 09:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
(S) o-Terphenyl	90.0			52.0-156

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

(LCS) R3473594-2 11/19/19 10:30 • (LCSD) R3473594-3 11/19/19 11:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Diesel Range Organics (DRO)	1500	1610	1600	107	107	50.0-150			0.623	20
(S) o-Terphenyl				117	123	52.0-156				

L1161399-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1161399-05 11/19/19 16:36 • (MS) R3473594-4 11/19/19 16:57 • (MSD) R3473594-5 11/19/19 17:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Diesel Range Organics (DRO)	1430	ND	1300	1390	81.7	88.0	1	50.0-150			6.69	20
(S) o-Terphenyl					108	109		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) R3474253-1 11/20/19 12:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Residual Range Organics (RRO)	U		83.3	250
Diesel Range Organics (DRO)	U		66.7	200
<i>(S) o-Terphenyl</i>	80.0			52.0-156

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

(LCS) R3474253-2 11/20/19 12:22 • (LCSD) R3474253-3 11/20/19 12:43

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 %
Diesel Range Organics (DRO)	1500	1480	1500	98.7	100	50.0-150			1.34	20
<i>(S) o-Terphenyl</i>				106	107	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) R3473002-3 11/18/19 01:31

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	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	0.0223	U	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	0.00932	U	0.00821	0.250
2-Methylnaphthalene	0.0104	U	0.00902	0.250
<i>(S) Nitrobenzene-d5</i>	124			31.0-160
<i>(S) 2-Fluorobiphenyl</i>	101			48.0-148
<i>(S) p-Terphenyl-d14</i>	118			37.0-146

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Method Blank (MB)

(MB) R3473119-1 11/18/19 08:48

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	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



Method Blank (MB)

(MB) R3473119-1 11/18/19 08:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	0.0276	J	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	0.00958	J	0.00821	0.250
2-Methylnaphthalene	0.0109	J	0.00902	0.250
(S) Nitrobenzene-d5	101			31.0-160
(S) 2-Fluorobiphenyl	103			48.0-148
(S) p-Terphenyl-d14	116			37.0-146

Method Blank (MB)

(MB) R3473275-1 11/18/19 13:17

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	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	0.0325	J	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	0.0102	J	0.00821	0.250
2-Methylnaphthalene	0.0150	J	0.00902	0.250
(S) Nitrobenzene-d5	108			31.0-160
(S) 2-Fluorobiphenyl	104			48.0-148
(S) p-Terphenyl-d14	131			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) R3473417-1 11/18/19 17:12

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	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	0.0104	U	0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
<i>(S) Nitrobenzene-d5</i>	151			31.0-160
<i>(S) 2-Fluorobiphenyl</i>	105			48.0-148
<i>(S) p-Terphenyl-d14</i>	132			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) R3473493-1 11/18/19 16:20

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	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



Method Blank (MB)

(MB) R3473493-1 11/18/19 16:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	0.0332	U	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	0.00954	U	0.00821	0.250
2-Methylnaphthalene	0.0117	U	0.00902	0.250
(S) Nitrobenzene-d5	78.5			31.0-160
(S) 2-Fluorobiphenyl	97.5			48.0-148
(S) p-Terphenyl-d14	116			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) R3473002-1 11/18/19 00:48 • (LCSD) R3473002-2 11/18/19 01:09

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	2.15	2.09	108	105	67.0-150			2.83	20
Acenaphthene	2.00	2.26	2.25	113	112	65.0-138			0.443	20
Acenaphthylene	2.00	2.73	2.45	137	122	66.0-140			10.8	20
Benzo(a)anthracene	2.00	2.30	2.39	115	119	61.0-140			3.84	20
Benzo(a)pyrene	2.00	2.15	2.20	108	110	60.0-143			2.30	20
Benzo(b)fluoranthene	2.00	1.92	1.95	96.0	97.5	58.0-141			1.55	20
Benzo(g,h,i)perylene	2.00	2.28	2.35	114	117	52.0-153			3.02	20
Benzo(k)fluoranthene	2.00	2.45	2.32	122	116	58.0-148			5.45	20
Chrysene	2.00	2.33	2.35	117	117	64.0-144			0.855	20
Dibenz(a,h)anthracene	2.00	2.09	2.21	105	111	52.0-155			5.58	20
Fluoranthene	2.00	2.53	2.56	126	128	69.0-153			1.18	20
Fluorene	2.00	2.15	2.24	108	112	64.0-136			4.10	20
Indeno(1,2,3-cd)pyrene	2.00	2.07	2.19	103	109	54.0-153			5.63	20
Naphthalene	2.00	2.15	2.15	108	108	61.0-137			0.000	20
Phenanthrene	2.00	2.17	2.18	108	109	62.0-137			0.460	20
Pyrene	2.00	2.39	2.16	119	108	60.0-142			10.1	20
1-Methylnaphthalene	2.00	2.08	2.15	104	108	66.0-142			3.31	20
2-Methylnaphthalene	2.00	2.14	1.98	107	99.0	62.0-136			7.77	20
(S) Nitrobenzene-d5				131	132	31.0-160				
(S) 2-Fluorobiphenyl				106	109	48.0-148				
(S) p-Terphenyl-d14				127	117	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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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.
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.
J0	J0: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration method criteria.
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.





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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

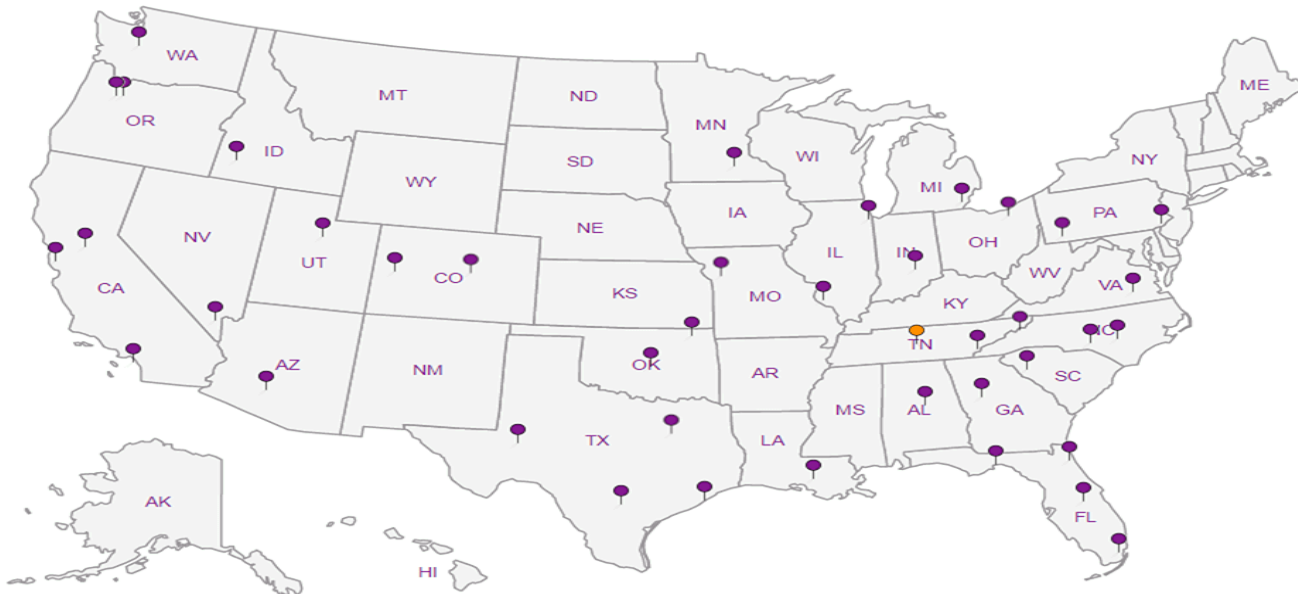
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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 3 of 34



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



Report to:  
Katie Haskins

Email To: KatieTeague@kennedyjenks.com;  
RyanHultgren@kennedyjenks.com;

Project Description: BNSF - Wishram Rail yard, WA

City/State Collected: **Wishram, WA**

Please Circle:  
PT MT CT ET

Phone: 253-835-6400  
Fax:

Client Project #  
1996120\*00

Lab Project #  
BNSF1KEN-WISHRAM

Collected by (print):  
K. HASKINS

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

Immediately Packed on Ice  N  Y  
 Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Date Results Needed

No. of  
Ctrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Ctrs	Dis	NH3	NWTPHDXLVI	NWTPHGX	PAHSIMLVI	RSK175	SULFATE	SULFIDE	Total As	V8260BTEXC	Remarks	Sample # (lab only)
5 WMW-23-20191113	6196	GW	—	11/13/19	0815	11	X	X	X			X	X	X		X		-01
2 WMW-24-20191112		GW		11/12/19	1635	11	X	X	X			X	X	X			pg 2	-02
2 DUP-01-20191112		GW		11/12/19	1640	11	X	X	X			X	X	X			pg 2	-03
1 WMW-26-20191113		GW		11/13/19	0725	11	X	X	X			X	X	X				-04
3 WMW-27-20191113		GW		11/13/19	0935	13	X	X	X			X	X	X			+MS/MSD	-05
2 WMW-28-20191112		GW		11/12/19	1615	11	X	X	X			X	X	X				-06
3 WMW-29-20191113		GW		11/13/19	0810	11	X	X	X			X	X	X				-07
3 WMW-30-20191113		GW			1050	12	X	X	X			X	X	X				-08
2 WMW-31-20191113		GW			1415	11	X	X	X			X	X	X				-09
1 WMW-32-20191113		GW			1315	11	X	X	X			X	X	X				-10

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:  
pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

COC Seal Present/Intact:	<input checked="" type="checkbox"/> NP	<input type="checkbox"/> Y	<input type="checkbox"/> N
COC Signed/Accurate:	<input checked="" type="checkbox"/>	<input type="checkbox"/> Y	<input type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/> Y	<input type="checkbox"/> N
Correct bottles used:	<input checked="" type="checkbox"/>	<input type="checkbox"/> Y	<input type="checkbox"/> N
Sufficient volume sent:	<input checked="" type="checkbox"/>	<input type="checkbox"/> Y	<input type="checkbox"/> N
If Applicable			
VOA Zero Headspace:	<input checked="" type="checkbox"/>	<input type="checkbox"/> Y	<input type="checkbox"/> N
Preservation Correct/Checked:	<input checked="" type="checkbox"/>	<input type="checkbox"/> Y	<input type="checkbox"/> N
RAD Screen <0.5 mR/hr:	<input checked="" type="checkbox"/>	<input type="checkbox"/> Y	<input type="checkbox"/> N

Relinquished by: (Signature)  
*K. Haskins*

Date: 11/14/19

Time: Received by: (Signature)  
FedEx

Trip Blank Received: Yes/No  
HCL/MeOH  
TBR

Relinquished by: (Signature)

Date:

Time: Received by: (Signature)

Temp: °C  
2.0 ± 0.18 °C  
Bottles Received: 237

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time: Received for lab by: (Signature)  
*R. Hultgren*

Date: 11/15 Time: 0830

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

Report to:  
Katie Haskins

Email To: KatieTeague@kennedyjenks.com;  
RyanHultgren@kennedyjenks.com;

Project  
Description: BNSF - Wishram Rail yard, WA

City/State  
Collected: **Wishram, WA**

Please Circle:  
PT MT CT ET

Phone: 253-835-6400  
Fax:

Client Project #  
1996120\*00

Lab Project #  
BNSF1KEN-WISHRAM

Collected by (print):  
K. HASKINS

Site/Facility ID #

P.O. #

Collected by (signature):  
*K. Haskins*

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  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
5 WMW-18-20191113	Grab	GW	-	11/13/19	1320	9
2 WMW-24-20191112		GW		11/12/19	1635	11
2 DUP-01-20191112		GW		11/12/19		11
1 WMW-26-20191113		GW		11/13/19	0725	11
3 WMW-27-20191113		GW		11/13/19	0935	11
2 WMW-28-20191112		GW		11/12/19	1615	11
3 WMW-29-20191113		GW		11/13/19	0810	11
3 WMW-30-20191113		GW			1050	12
2 WMW-31-20191113		GW			1415	11
1 WMW-32-20191113					1315	11

V8260C 40mlAmb-HCl

Dissolved AS 6020 (FF)  
 Total Ba 6020 (FF)  
 Dissolved Ba 6020 (FF)

Analysis / Container / Preservative



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



SDG #  
Table #  
Acctnum: BNSF1KEN  
Template: T158262  
Prelogin: P737753  
PM: 134 - Mark W. Beasley  
PB: 11-4-196  
Shipped Via: FedEx Ground

Remarks | Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Remarks	Sample # (lab only)
5 WMW-18-20191113	Grab	GW	-	11/13/19	1320	9	X	-16
2 WMW-24-20191112		GW		11/12/19	1635	11	X	-02
2 DUP-01-20191112		GW		11/12/19		11	X	-03
1 WMW-26-20191113		GW		11/13/19	0725	11	X	-04
3 WMW-27-20191113		GW		11/13/19	0935	11	X	+MS/MSD -05
2 WMW-28-20191112		GW		11/12/19	1615	11	X	-06
3 WMW-29-20191113		GW		11/13/19	0810	11	X	-07
3 WMW-30-20191113		GW			1050	12	X X	-08
2 WMW-31-20191113		GW			1415	11	X	-09
1 WMW-32-20191113					1315	11	X	-10

\* 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:	<input checked="" type="checkbox"/> 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
RAD Screen <0.5 mR/hr:		Y N

Samples returned via:  
\_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier \_\_\_\_\_ Tracking # \_\_\_\_\_

Relinquished by: (Signature) <i>K. Haskins</i>	Date: 11/14/19	Time:	Received by: (Signature) <i>FedEx</i>	Trip Blank Received: <input checked="" type="checkbox"/> Yes / No HCL / MeOH TBR	Temp: _____ Bottles Received: 237	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 11/15 Time: 0830	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

Report to:  
**Katie Haskins**

Email To: **KatieTeague@kennedyjenks.com;**  
**RyanHultgren@kennedyjenks.com;**

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

City/State  
 Collected: **Wishram, WA**

Please Circle:  
 PT MT CT ET

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

Client Project #  
**1996120\*00**

Lab Project #  
**BNSF1KEN-WISHRAM**

Collected by (print):  
**K. HASKINS**

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 #

Immediately  
 Packed on Ice N  Y

Date Results Needed

No. of  
 Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Dissolve Fe, Mn (FF) 250mlHDPE-HNO3	NH3, NO2NO3 250mlHDPE-H2SO4	NWTPDXLVI No SGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PAHSIMLVI 40mlAmb-NoPres-WT	RSK175 40mlAmb HCl	SULFATE 125mlHDPE-NoPres	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total As 250mlHDPE-HNO3	V8260BTECX 40mlAmb-HCl
1 WMW-14-20191114	Grab	GW	—	11/14/19	0730	8	X	X	X			X	X	X		
4 WMW-15-20191114		GW		11/14/19	0755	8	X	X	X			X	X	X		
4 WMW-16-20191113		GW		11/13/19	1445	13	X	X	X	X	X	X	X	X		
4 WMW-17-20191114		GW		11/14/19	0905	12	X	X	X	X		X	X	X	X	pg 4
4 DUP-02-20191114		GW		11/14/19	0910	12	X	X	X	X		X	X	X	X	pg 4
5 WMW-18-20191113		GW		11/13/19	1320	9	X	X	X			X	X	X	X	next pg.
1 WMW-19-20191113		GW			1515	11	X	X	X			X	X	X		X
5 WMW-20-20191113		GW			1200	11	X	X	X			X	X	X		X
5 WMW-21-20191113		GW			1030	11	X	X	X			X	X	X		X
5 WMW-22-20191113		GW			0915	11	X	X	X			X	X	X		X

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

Remarks: **All dissolved metals samples field filtered.**  
**No spaces in sample names please.**

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  
 RAD Screen <0.5 mR/hr:  Y  N

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **1329 2018 6485**

Relinquished by: (Signature)  
*[Signature]*

Date: **11/14/19**

Received by: (Signature)  
**FedEx**

Trip Blank Received:  Yes / No  
 HCL/MeOH  
 TBR

Relinquished by: (Signature)

Date:

Received by: (Signature)

Temp: **20.2 = 1.8 °C**  
 Bottles Received: **237**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Received for lab by: (Signature)  
*[Signature]*

Date: **11/15** Time: **0830**

Hold: Condition: NCF / OK

**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



SDG #  
**A120**  
 Account: **BNSF1KEN**  
 Template: **T158262**  
 Prelogin: **P737753**  
 PM: **134 - Mark W. Beasley**  
 PB: **11-4-196**  
 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:  
Katie Haskins

Email To: KatieTeague@kennedyjenks.com;  
RyanHultgren@kennedyjenks.com;

Project  
Description: BNSF - Wishram Railyard, WA

City/State  
Collected: Wishram, WA

Please Circle:  
PT MT CT ET

Phone: 253-835-6400  
Fax:

Client Project #  
1996120\*00

Lab Project #  
BNSF1KEN-WISHRAM

Collected by (print):  
K. HASKINS

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  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts
TB-01-20191114	—	GW	—	11/14/19	—	1
TB-02-20191114	↓	GW	↓	↓	↓	1
TB-03-20191114	↓	GW	↓	↓	↓	1
TB-04-20191114	↓	GW	↓	↓	↓	1
TB-05-20191114	↓	GW	↓	↓	↓	1
WMW-17-20191114	Grab	GW	↓	0905	12	1
DVP-02-20191114	↓	GW	↓	0910	12	1
		GW				
		GW				
		GW				

V8260C 40ml/Amb-HCl

BTEX

TOTAL AS 6020

DISSOLVED AS 6020 (FF)

NMTPH-6X

Analysis / Container / Preservative

Chain of Custody Page 4 of 4



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



SDG #  
Table #  
Acctnum: BNSF1KEN  
Template: T158262  
Prelogin: P737753  
PM: 134 - Mark W. Beasley  
PB: 114-196  
Shipped Via: FedEx Ground  
Remarks | Sample # (lab only)

\* 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:  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 \_\_\_  
RAD Screen <0.5 mR/hr:  Y \_\_\_ N \_\_\_

Samples returned via: \_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier \_\_\_  
Tracking #

Relinquished by: (Signature)

*[Signature]*

Date: 11/14/19

Time:

Received by: (Signature)

*[Signature]*  
FedEx

Trip Blank Received:  Yes / No  
HCL/MeOH  
TBR

Temp: 20.20 / 8.00 °C  
Bottles Received: 237

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Received for lab by: (Signature)

*[Signature]*

Date: 11/15 Time: 0830

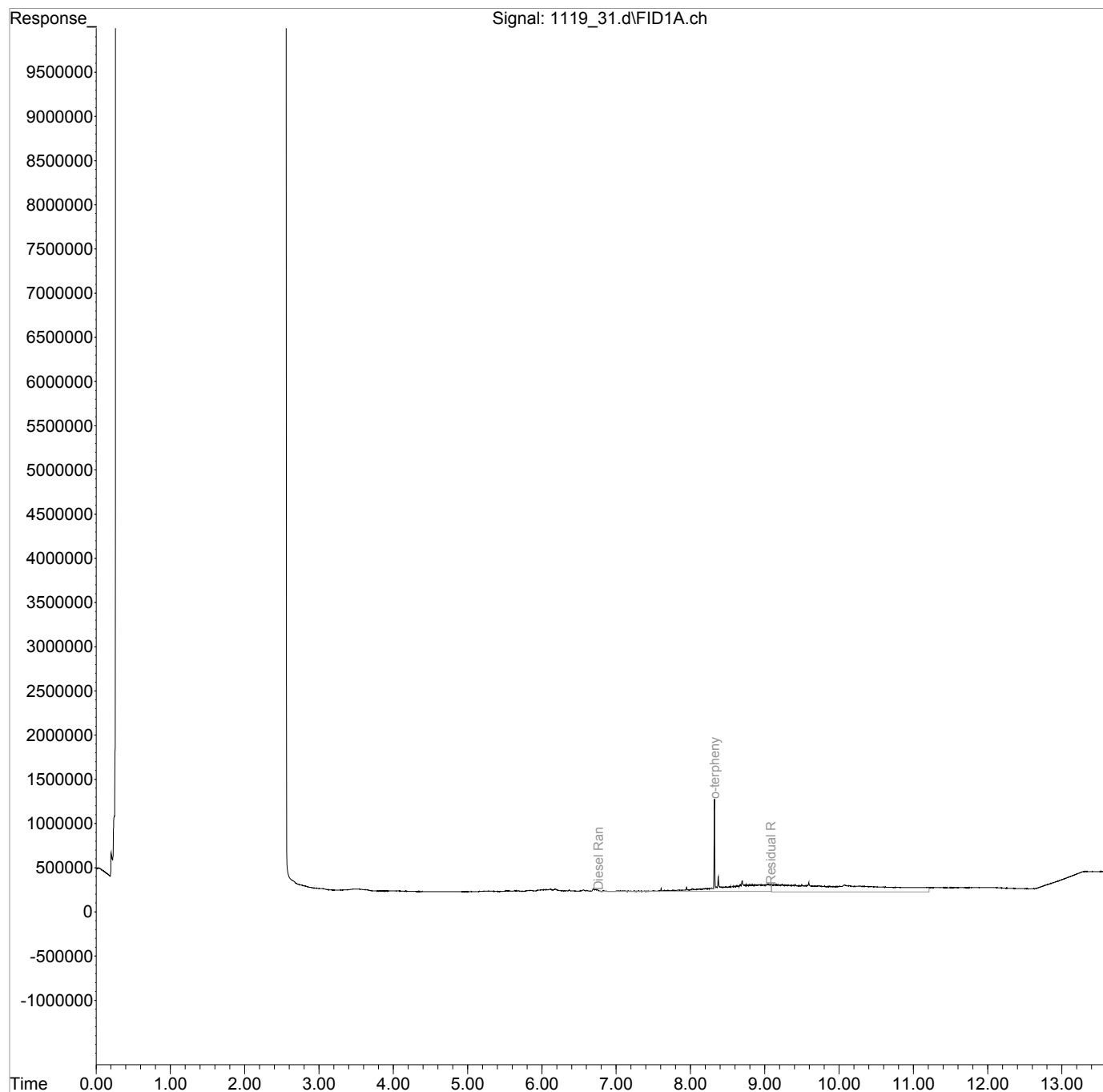
Hold:

Condition:  
NCF / OK

Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_31.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 3:53 pm  
Operator : 784  
Sample : L1161399-01 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 16 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 17:55:32 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

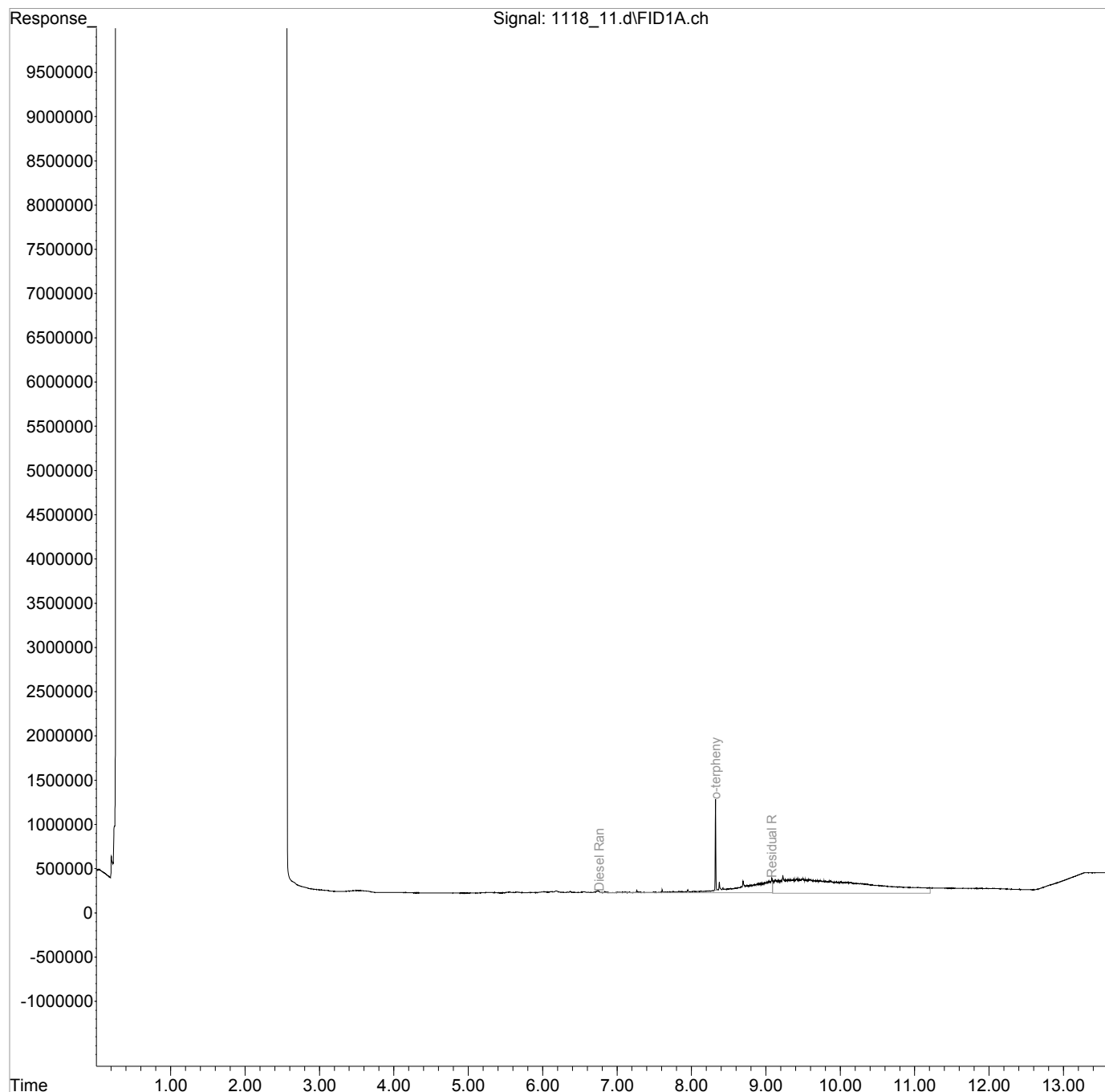
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111819\  
Data File : 1118\_11.d  
Signal(s) : FID1A.ch  
Acq On : 18 Nov 2019 12:01 pm  
Operator : 843  
Sample : L1161399-02 1x WG1382350  
Misc : M.Is on ranges are corrections  
ALS Vial : 9 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 18 13:31:14 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

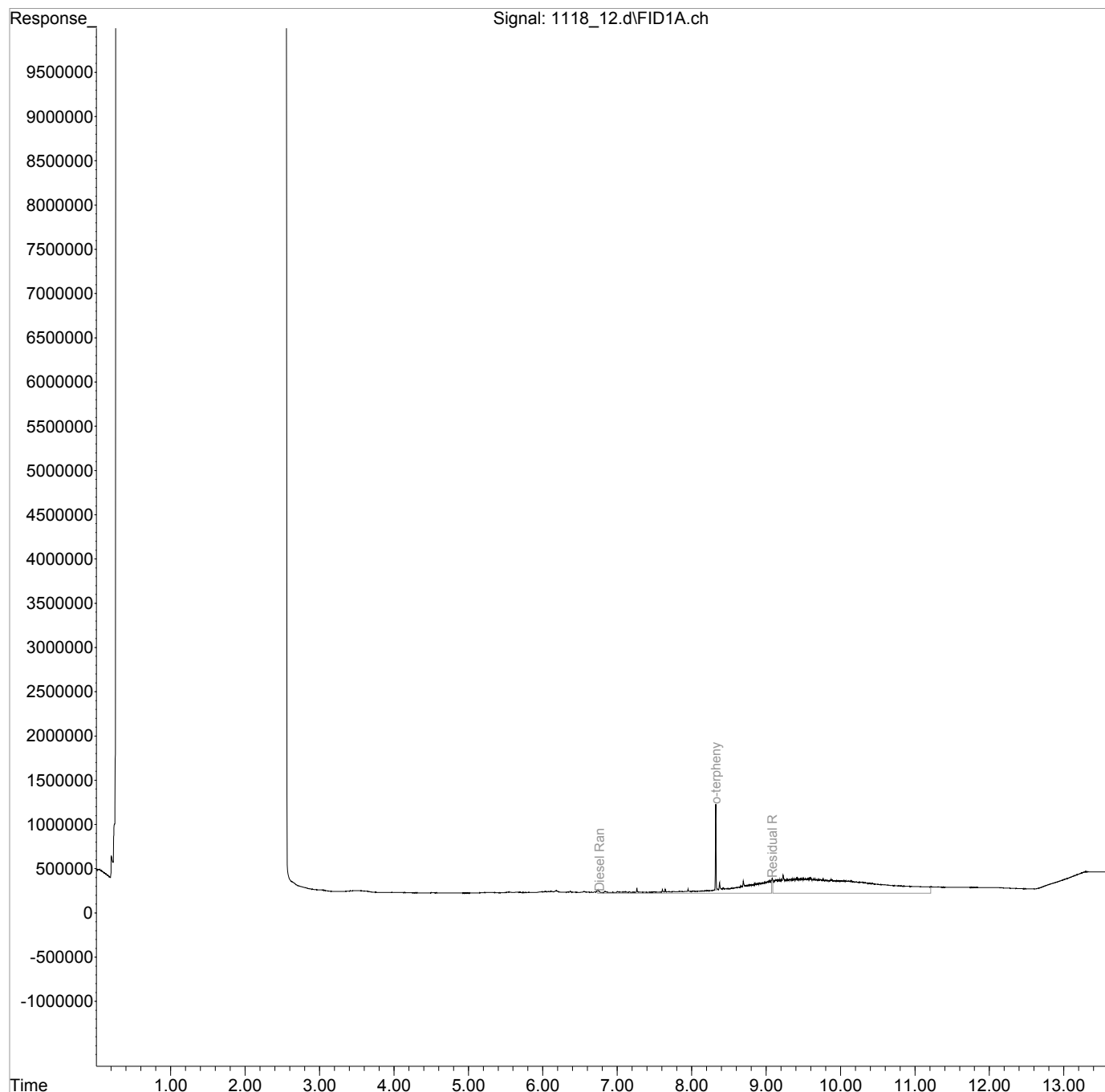
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111819\  
Data File : 1118\_12.d  
Signal(s) : FID1A.ch  
Acq On : 18 Nov 2019 12:23 pm  
Operator : 843  
Sample : L1161399-03 1x WG1382350  
Misc : M.Is on ranges are corrections  
ALS Vial : 10 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 18 13:52:26 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

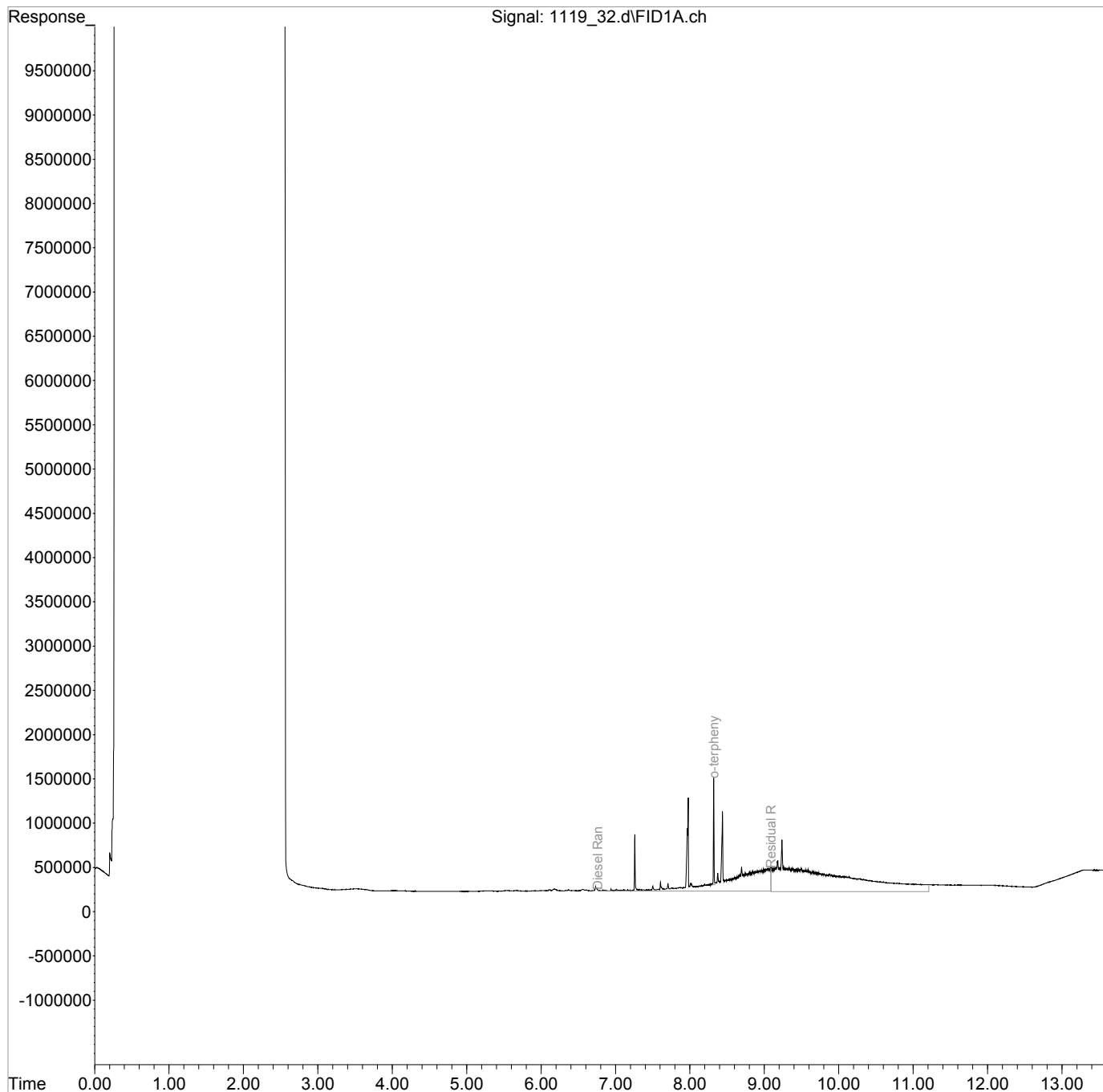




Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_32.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 4:14 pm  
Operator : 784  
Sample : L1161399-04 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 17:56:08 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

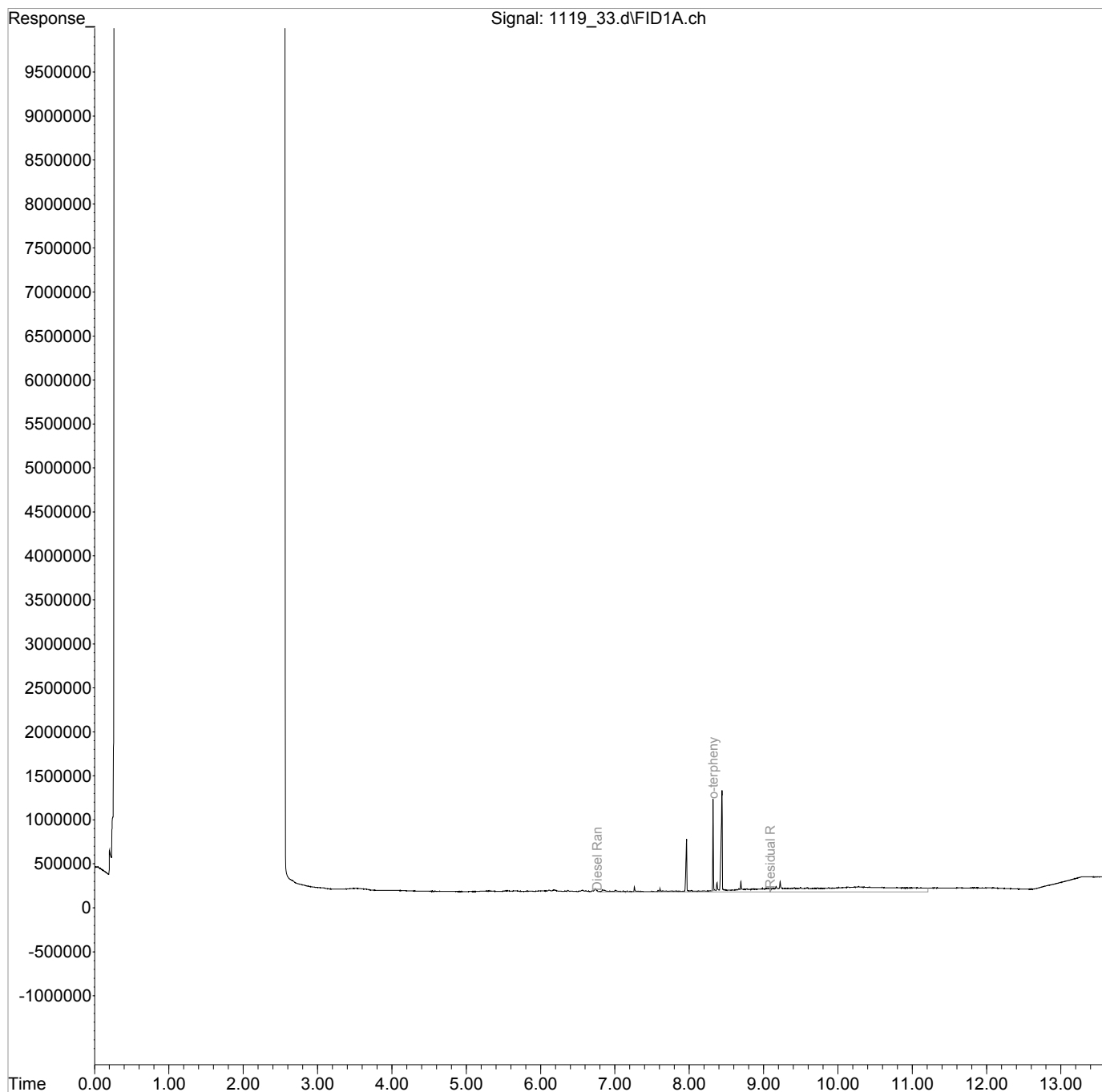
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_33.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 4:36 pm  
Operator : 784  
Sample : L1161399-05 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 18 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 17:56:23 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

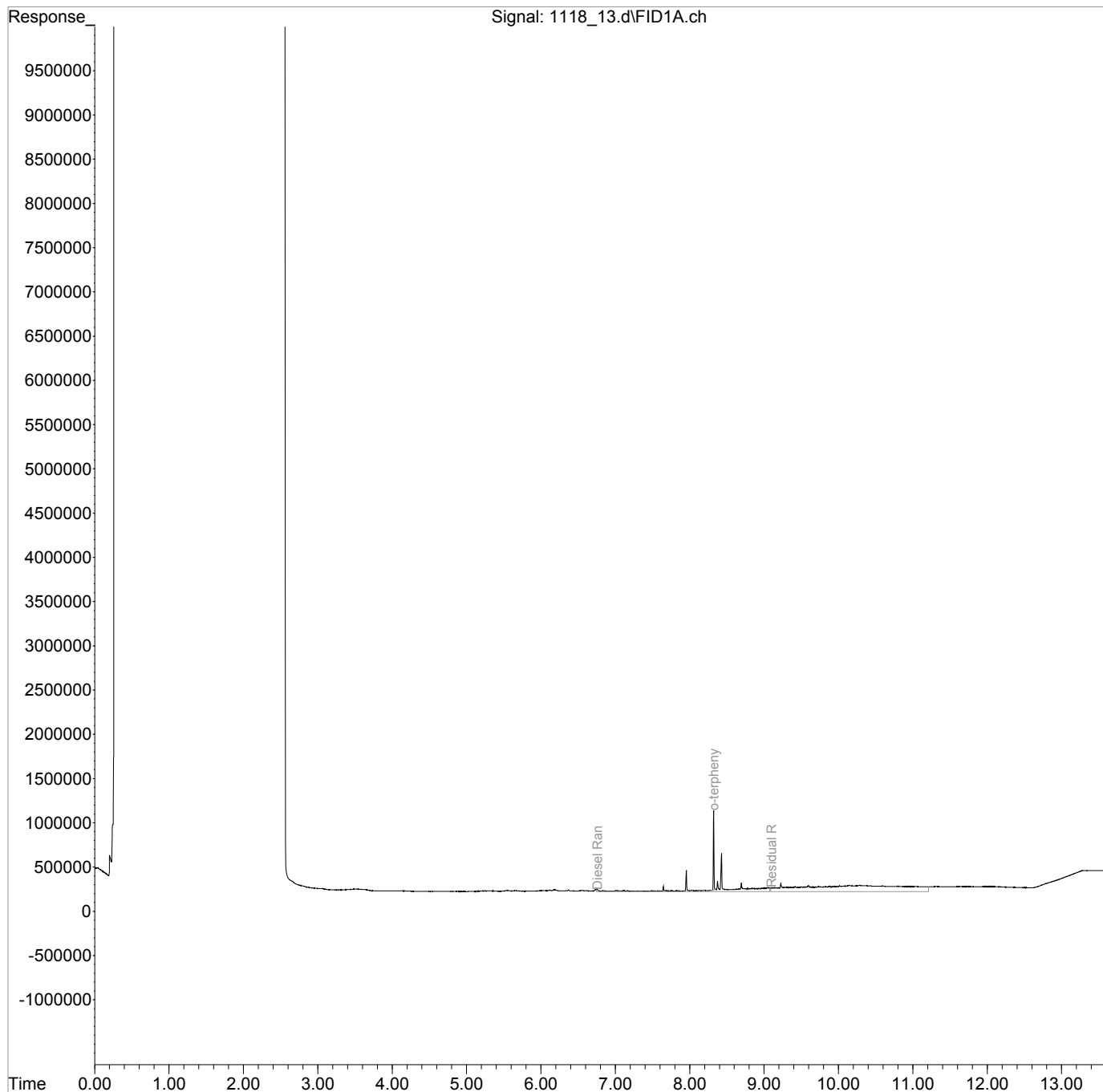
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111819\  
Data File : 1118\_13.d  
Signal(s) : FID1A.ch  
Acq On : 18 Nov 2019 12:44 pm  
Operator : 843  
Sample : L1161399-06 1x WG1382350  
Misc : M.Is on ranges are corrections  
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 18 13:53:06 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

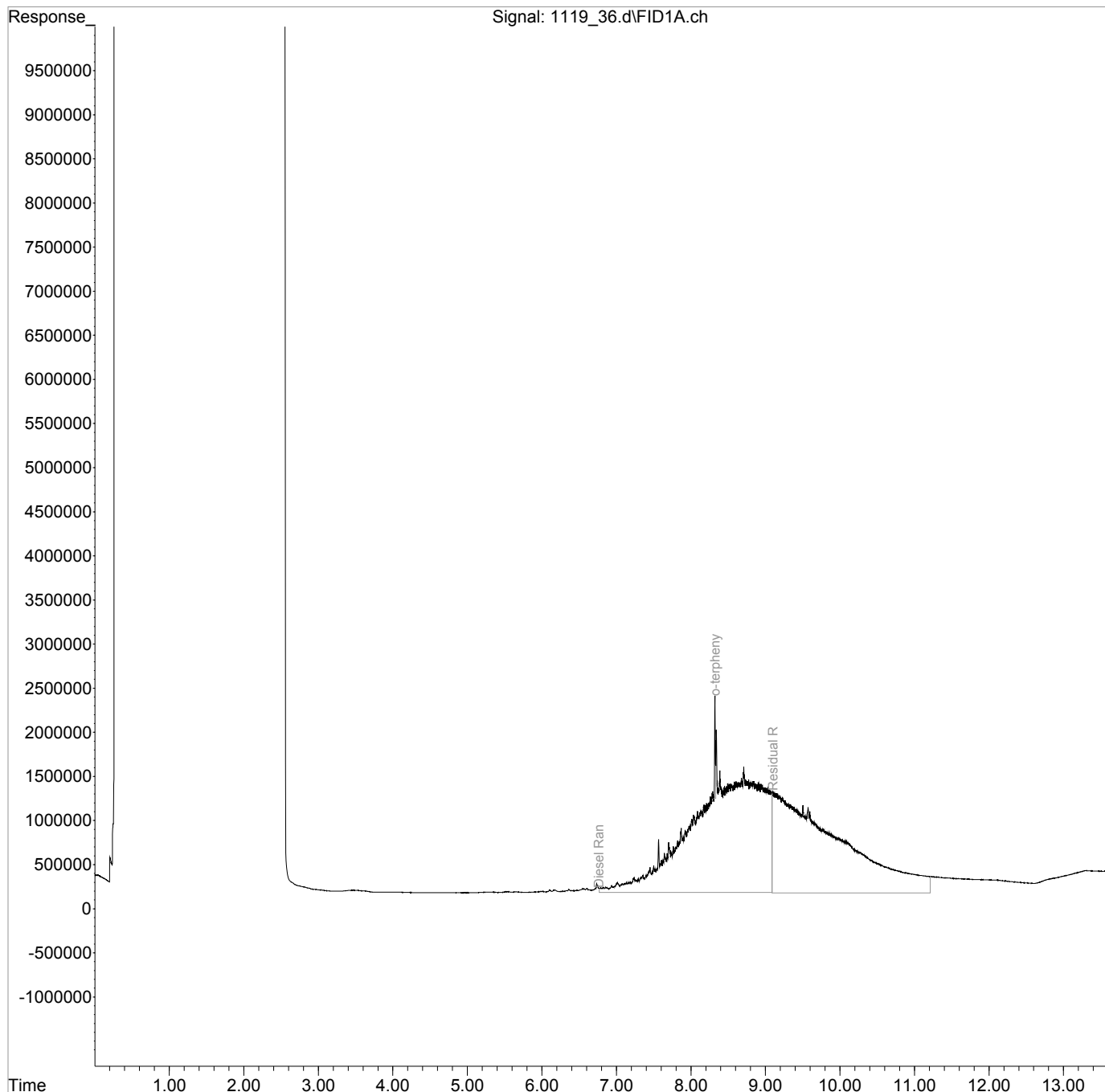
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_36.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 5:54 pm  
Operator : 784  
Sample : L1161399-07 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 22 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 19:15:00 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

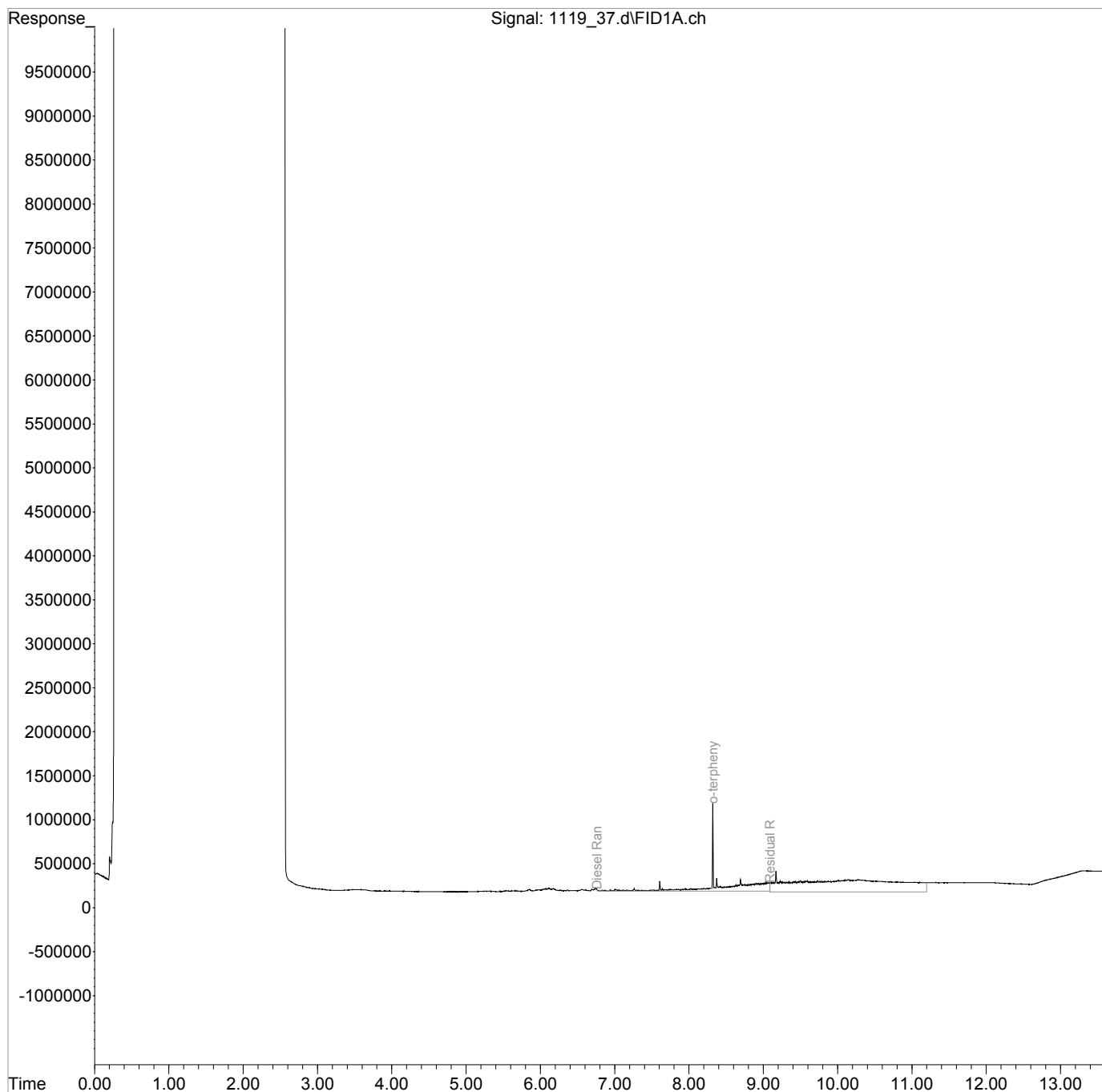
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_37.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 6:15 pm  
Operator : 784  
Sample : L1161399-08 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 19:16:04 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

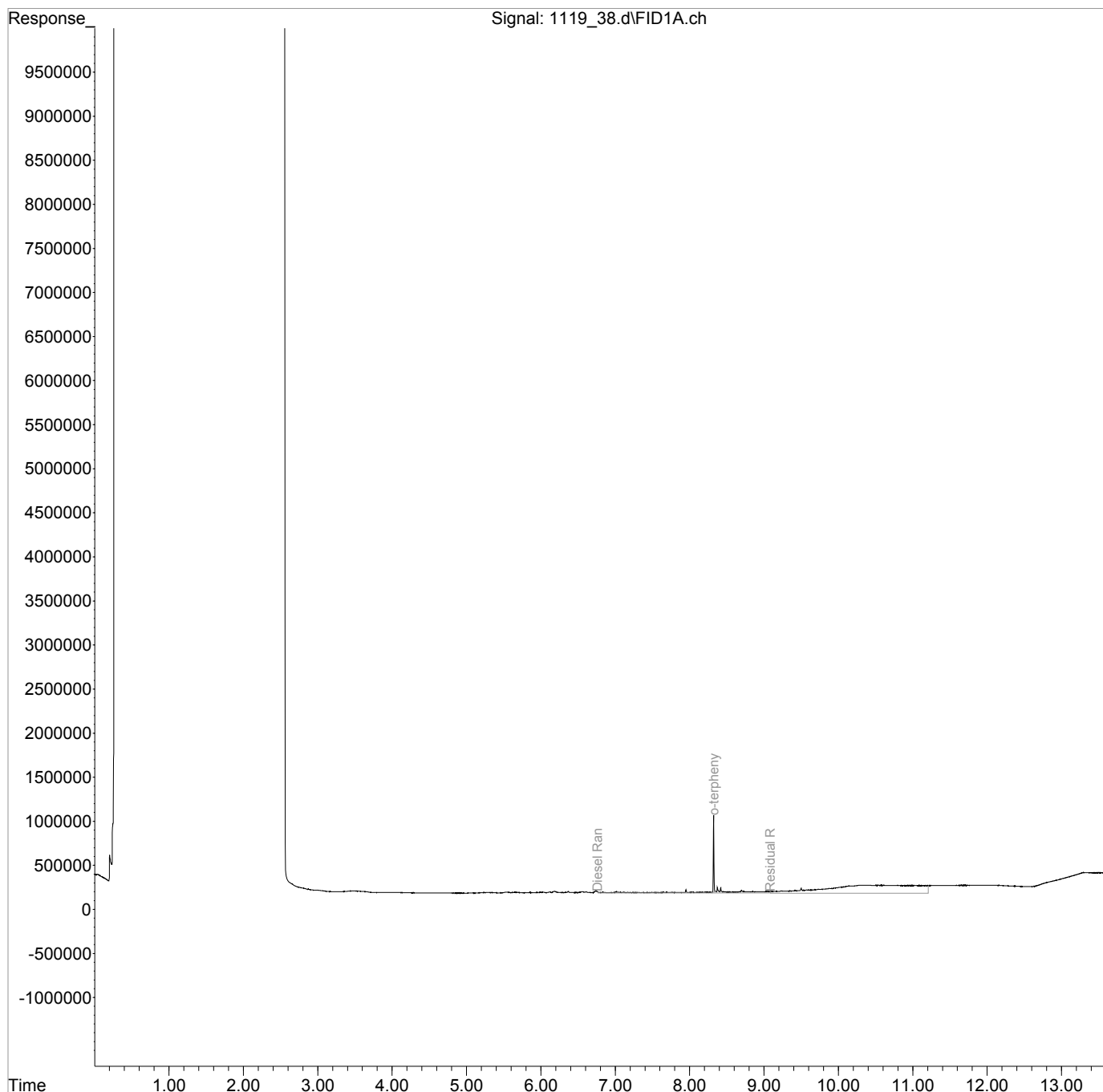
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_38.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 6:47 pm  
Operator : 784  
Sample : L1161399-09 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 19:16:19 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

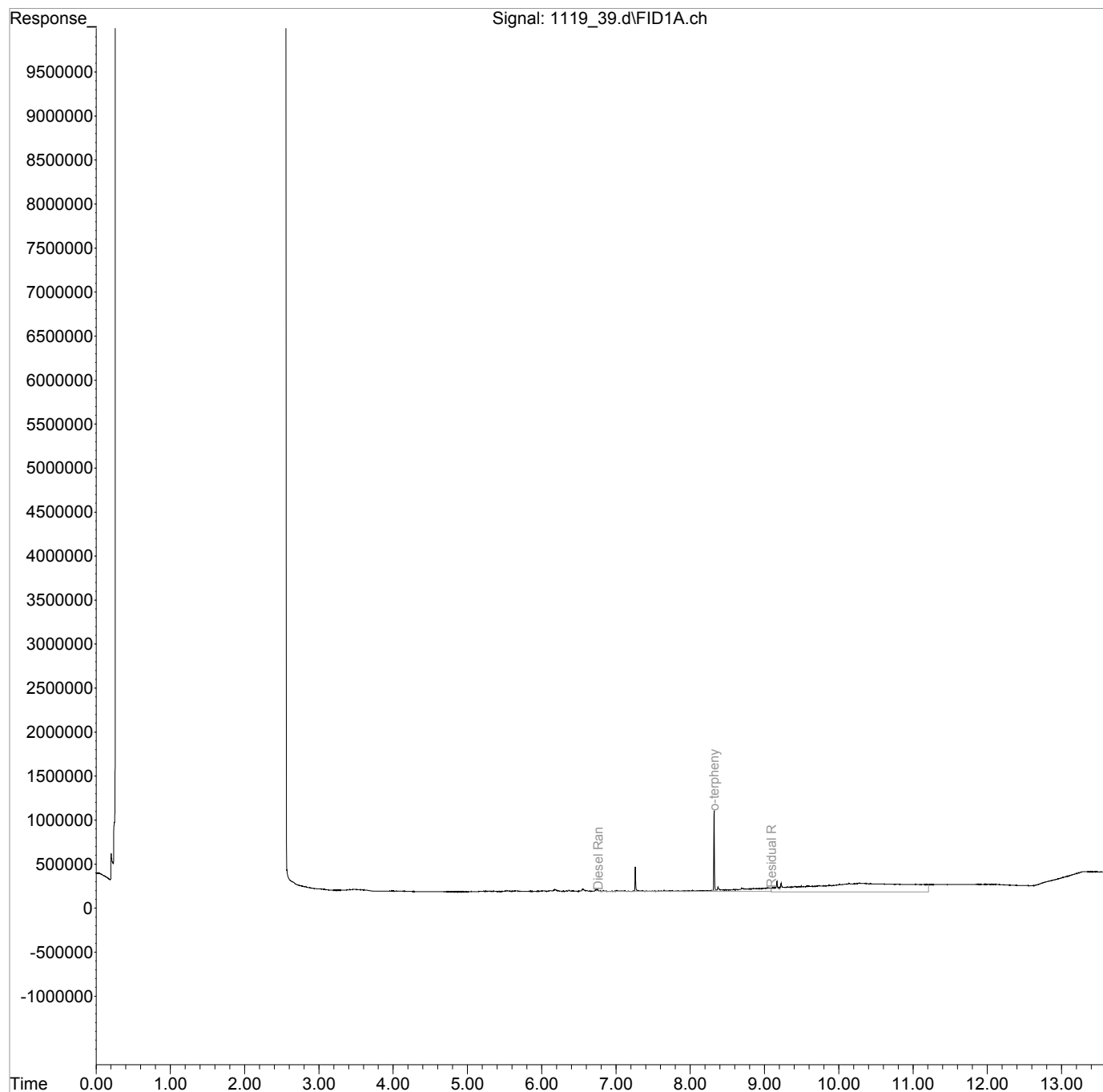
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_39.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 7:12 pm  
Operator : 784  
Sample : L1161399-10 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 25 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 22:45:58 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

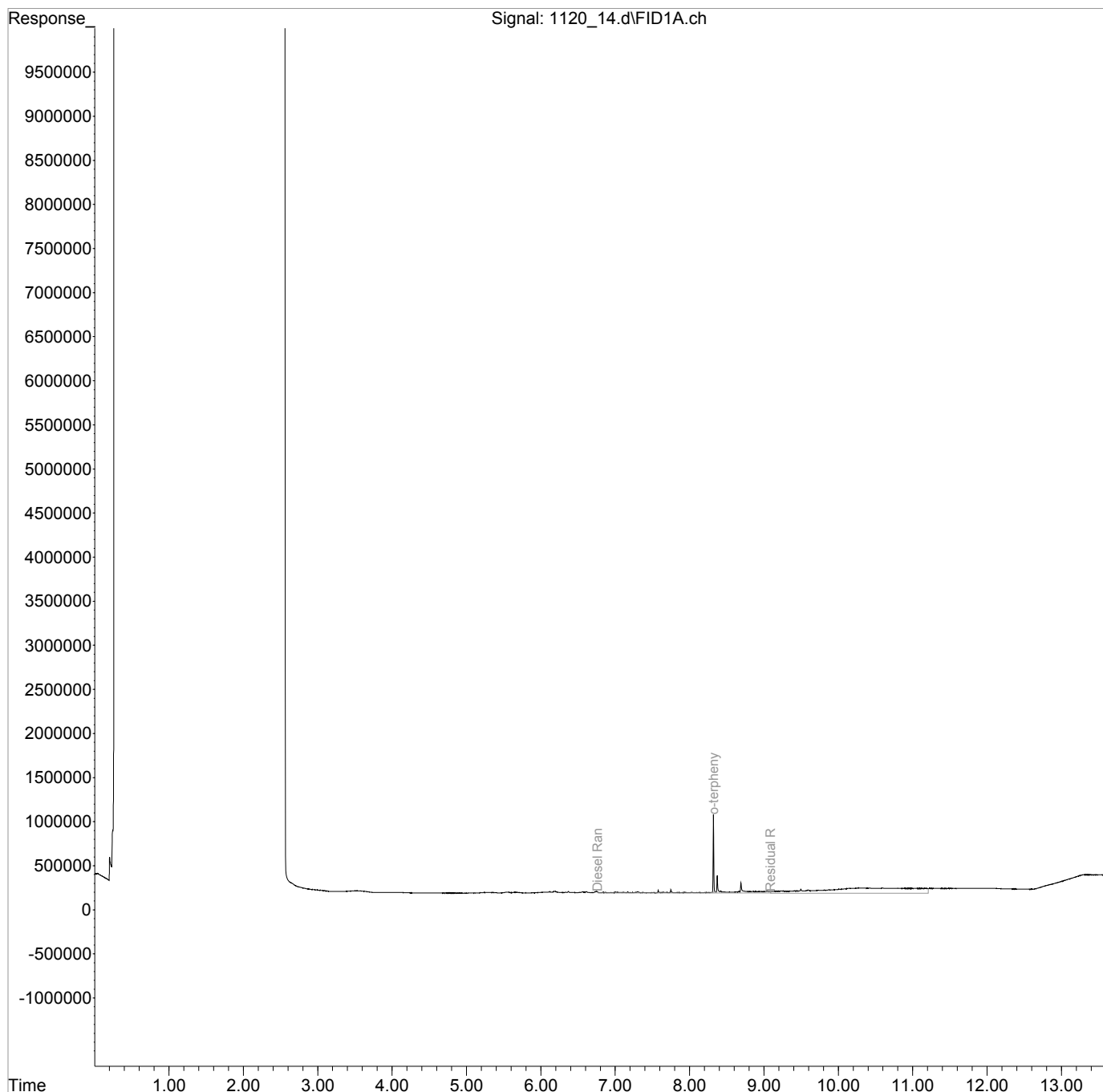
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\112019\  
Data File : 1120\_14.d  
Signal(s) : FID1A.ch  
Acq On : 20 Nov 2019 1:46 pm  
Operator : 843  
Sample : L1161399-11 1x WG1383281  
Misc : M.Is on ranges are corrections  
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 20 14:15:14 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

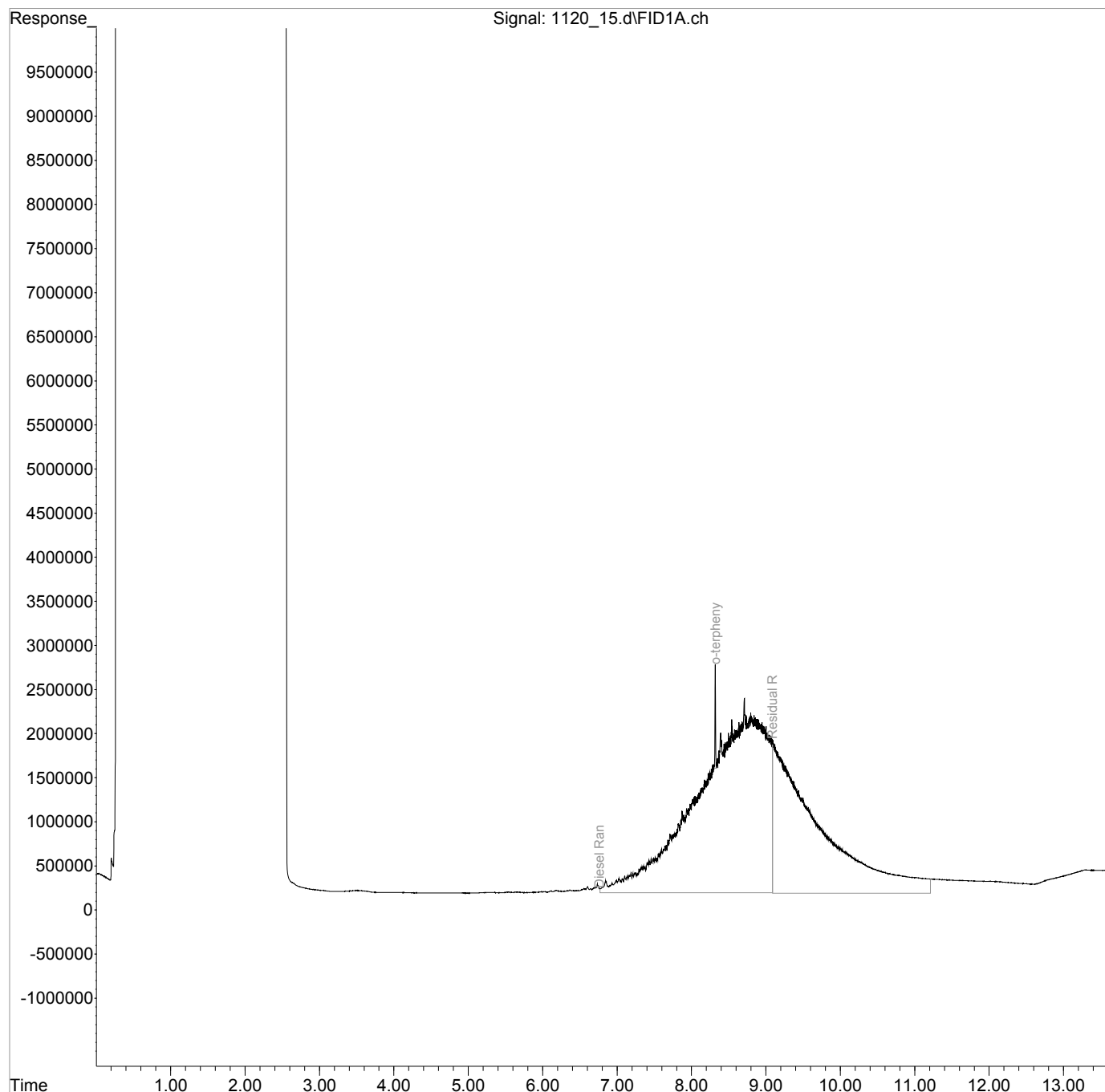




Data Path : C:\msdchem\1\data\112019\  
Data File : 1120\_15.d  
Signal(s) : FID1A.ch  
Acq On : 20 Nov 2019 2:07 pm  
Operator : 843  
Sample : L1161399-12 1x WG1383281  
Misc : M.Is on ranges are corrections  
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 20 15:10:06 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

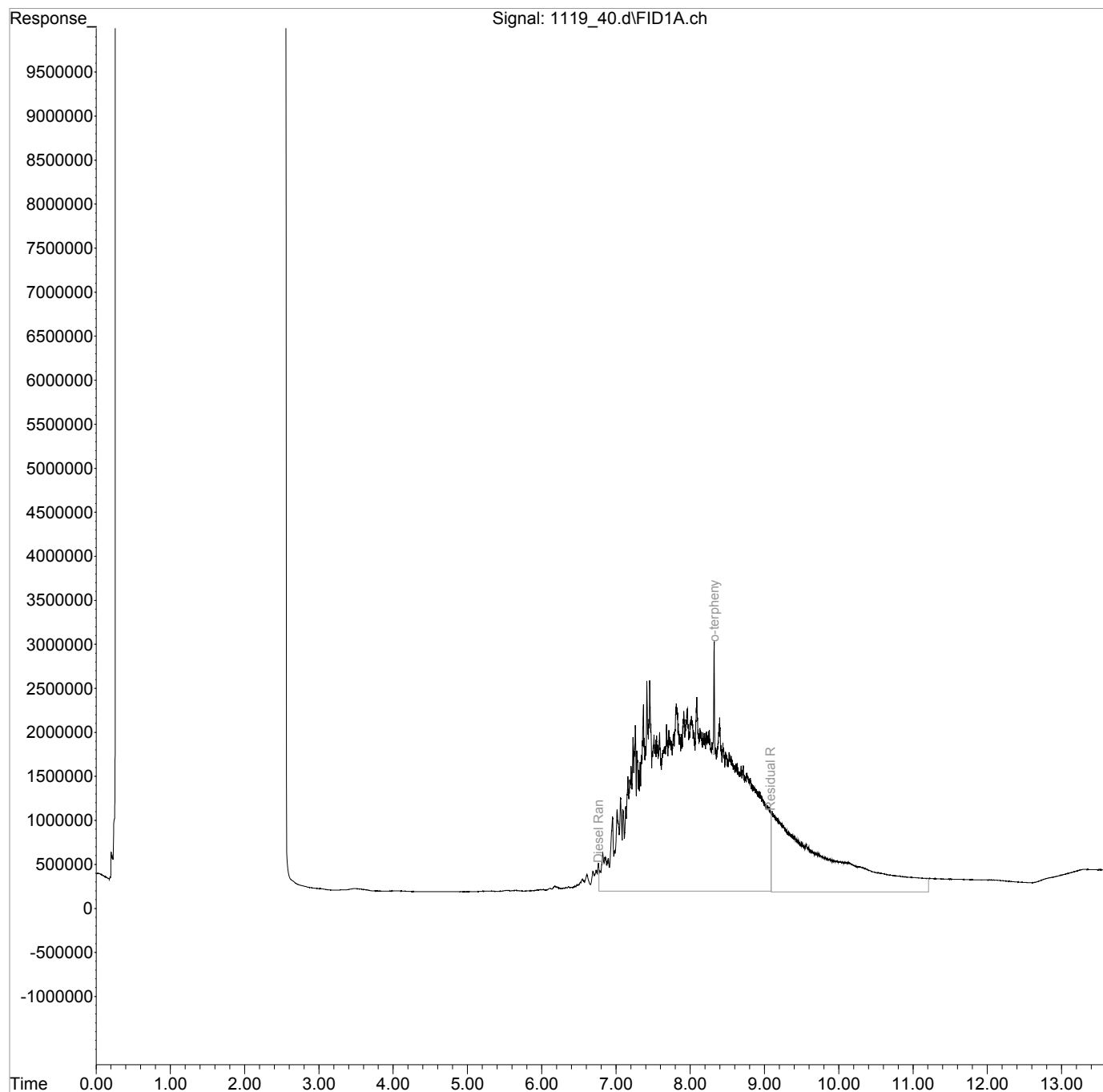
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_40.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 7:42 pm  
Operator : 784  
Sample : L1161399-13 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 26 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 22:46:31 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

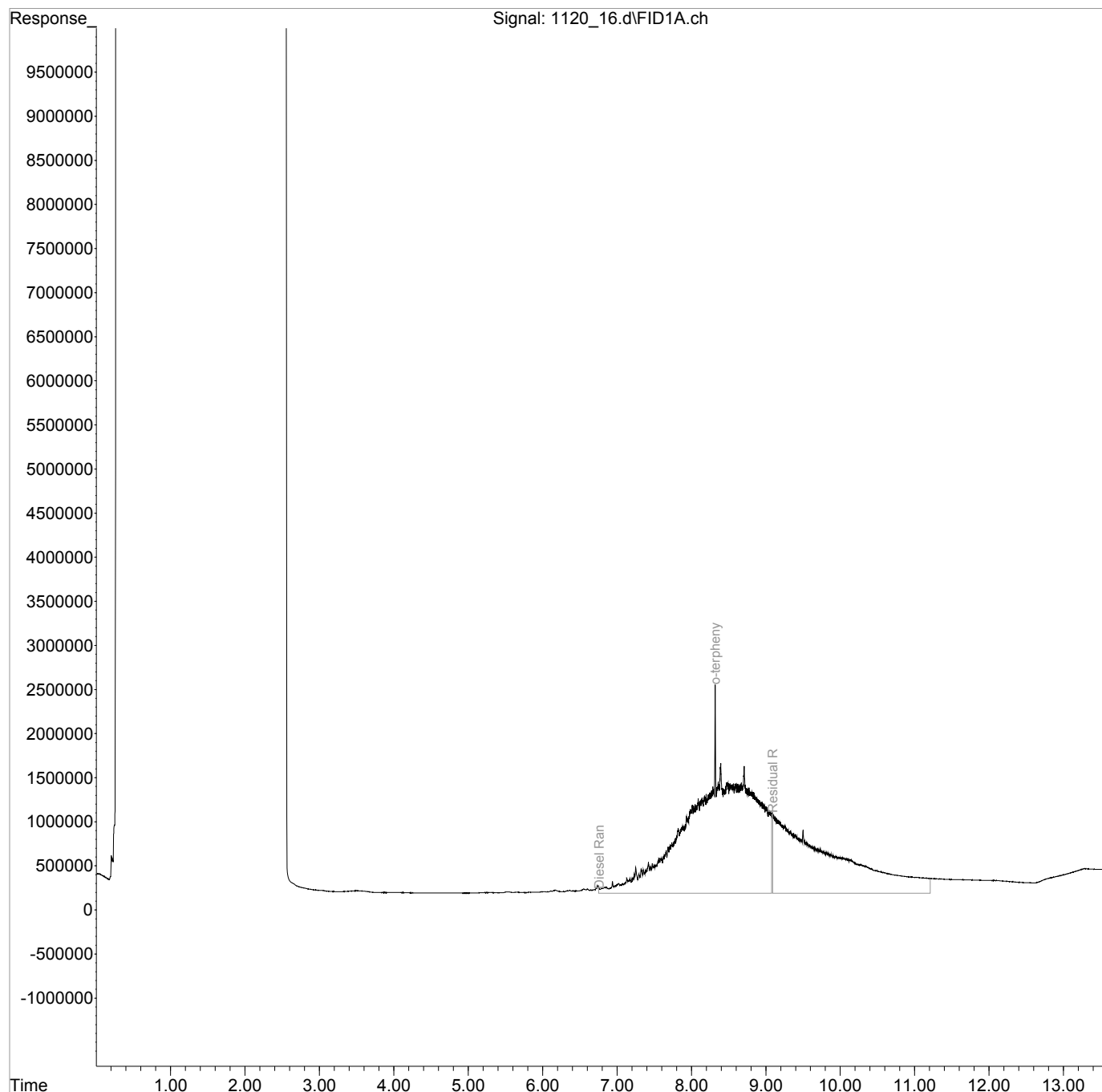
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\112019\  
Data File : 1120\_16.d  
Signal(s) : FID1A.ch  
Acq On : 20 Nov 2019 2:28 pm  
Operator : 843  
Sample : L1161399-14 1x WG1383281  
Misc : M.Is on ranges are corrections  
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 20 15:11:06 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

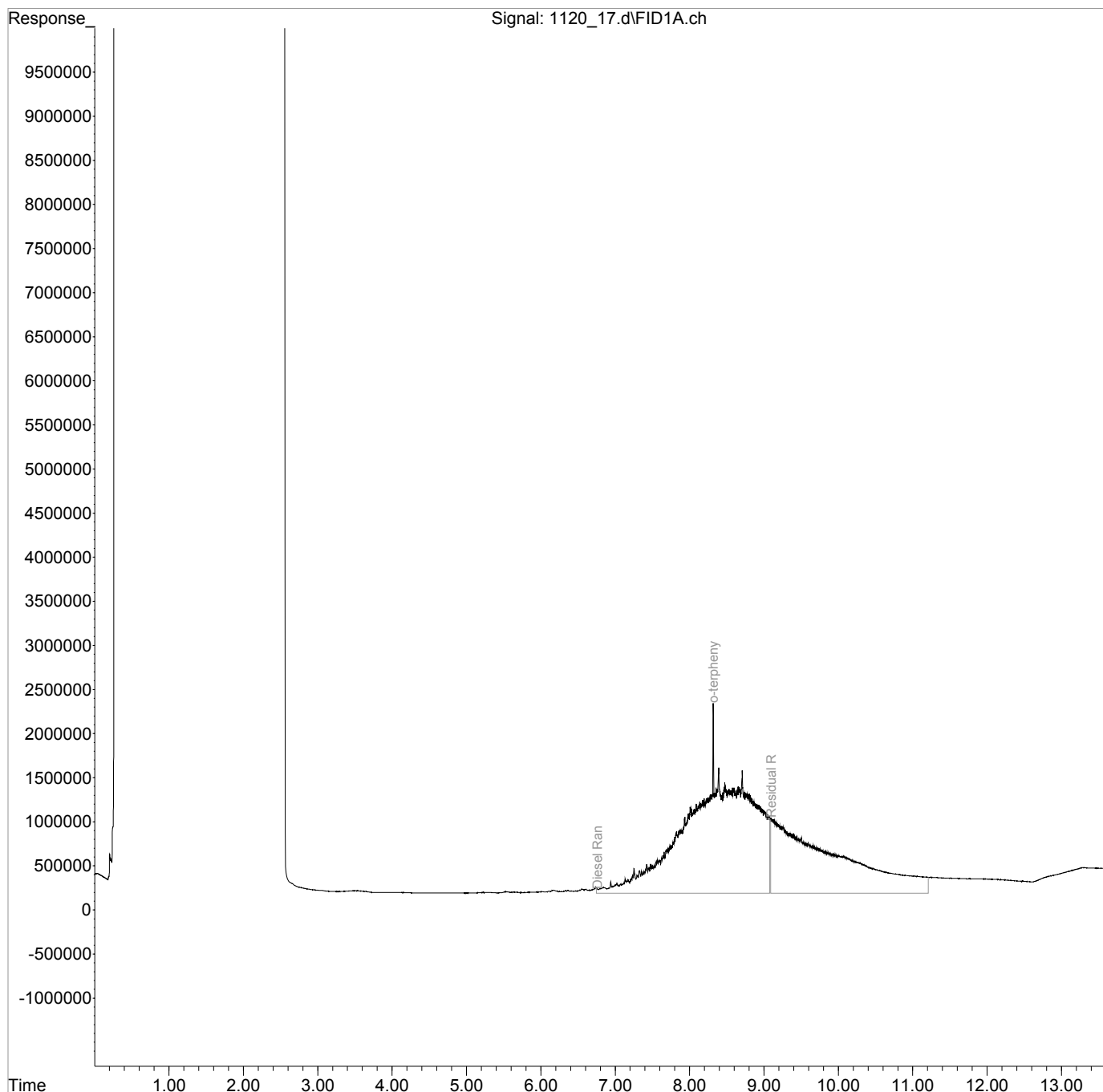
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\112019\  
Data File : 1120\_17.d  
Signal(s) : FID1A.ch  
Acq On : 20 Nov 2019 2:49 pm  
Operator : 843  
Sample : L1161399-15 1x WG1383281  
Misc : M.Is on ranges are corrections  
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 20 15:12:16 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

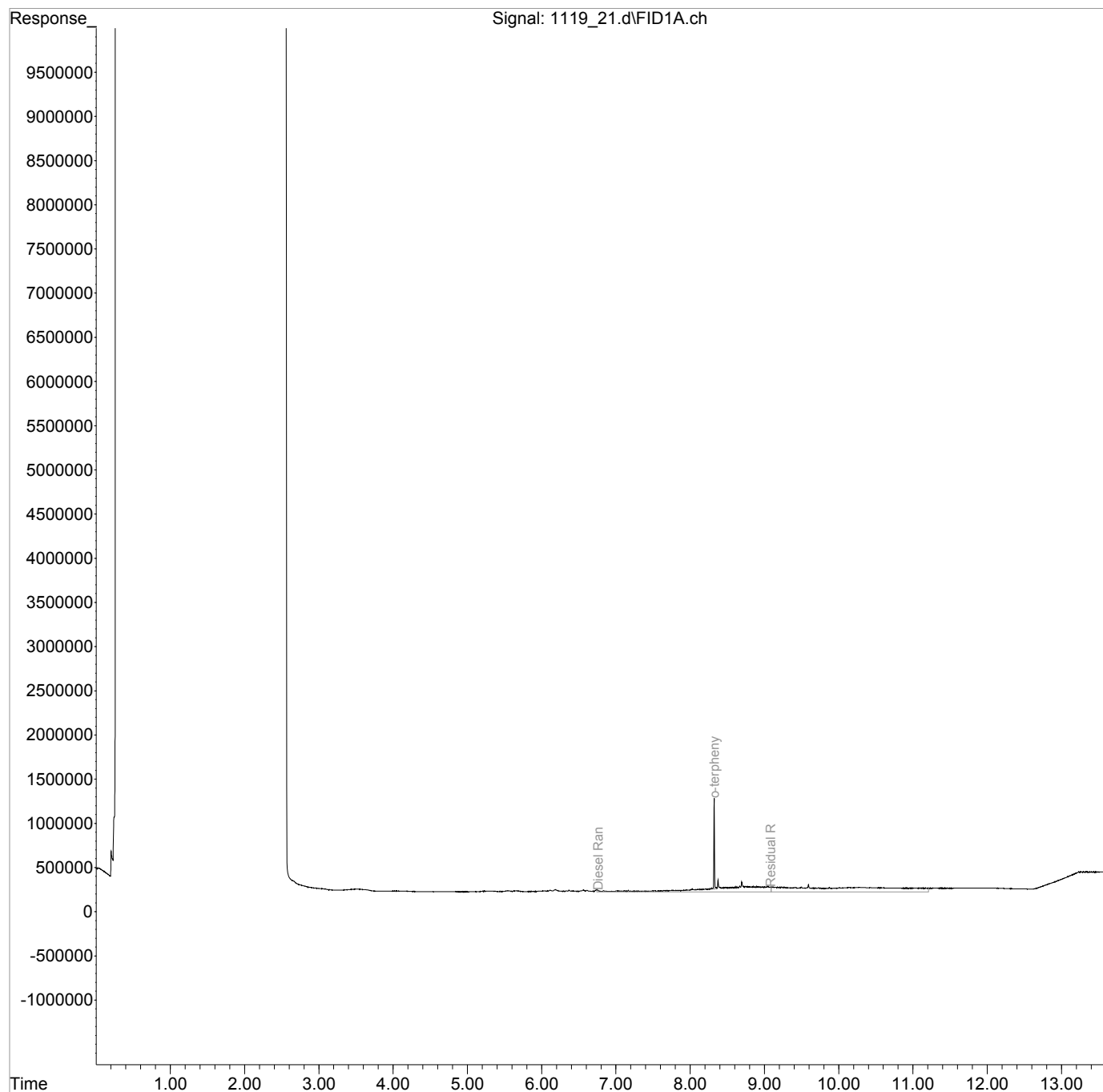
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_21.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 12:15 pm  
Operator : 784  
Sample : L1161399-16 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 11 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 13:00:02 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

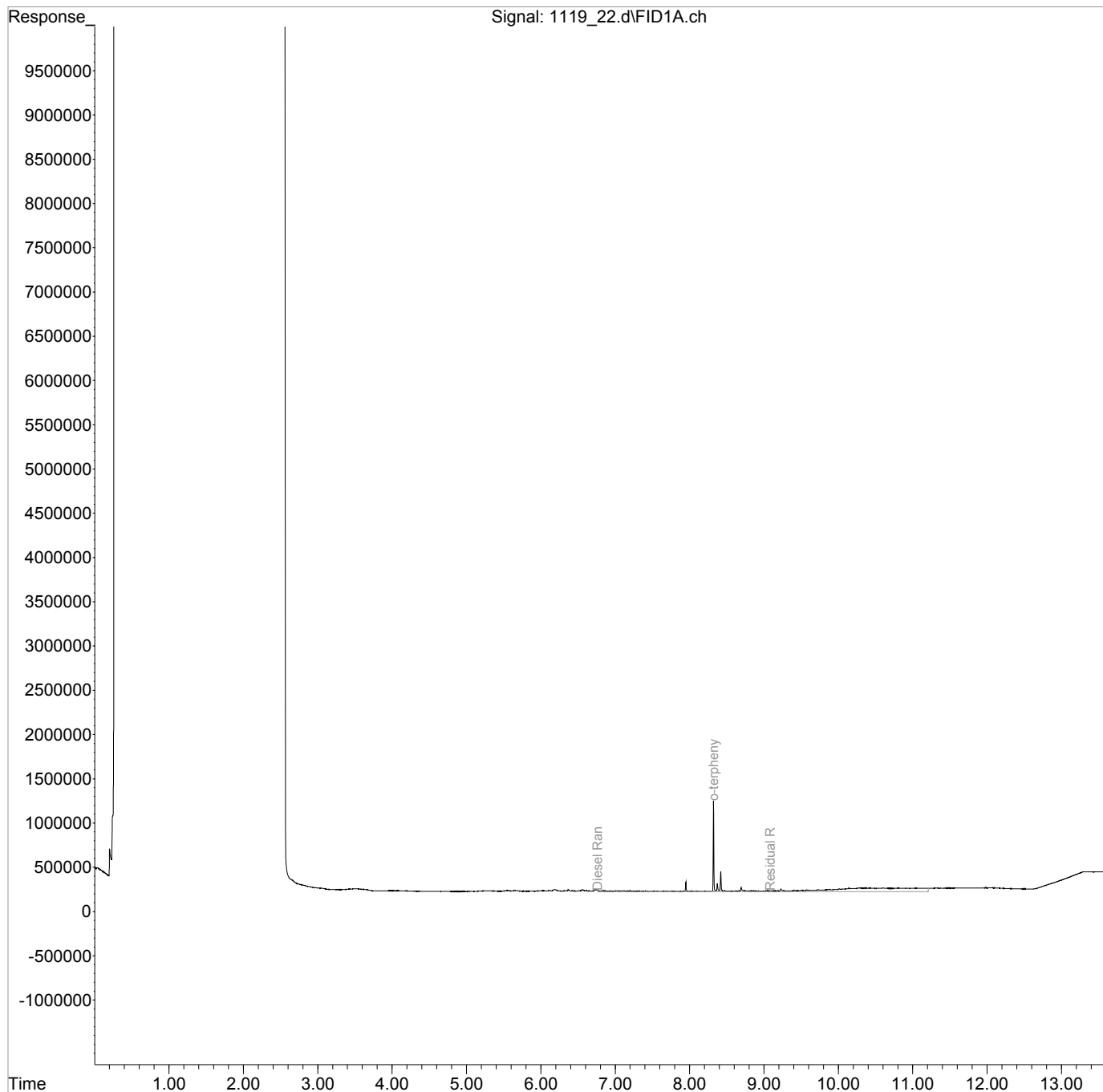
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_22.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 12:37 pm  
Operator : 784  
Sample : L1161399-17 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 12 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 13:00:31 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

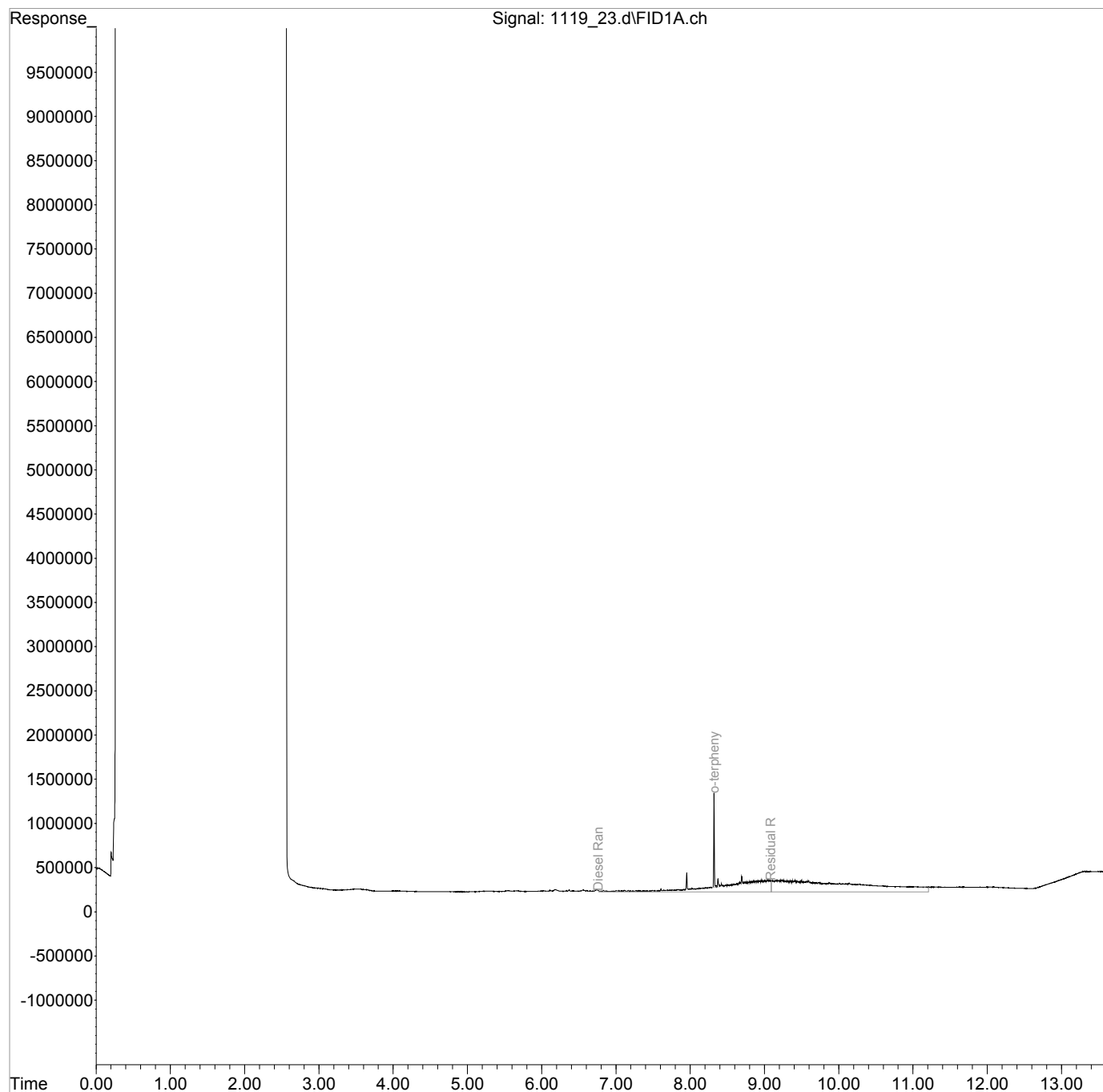
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_23.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 12:58 pm  
Operator : 784  
Sample : L1161399-18 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 13 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 13:35:00 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

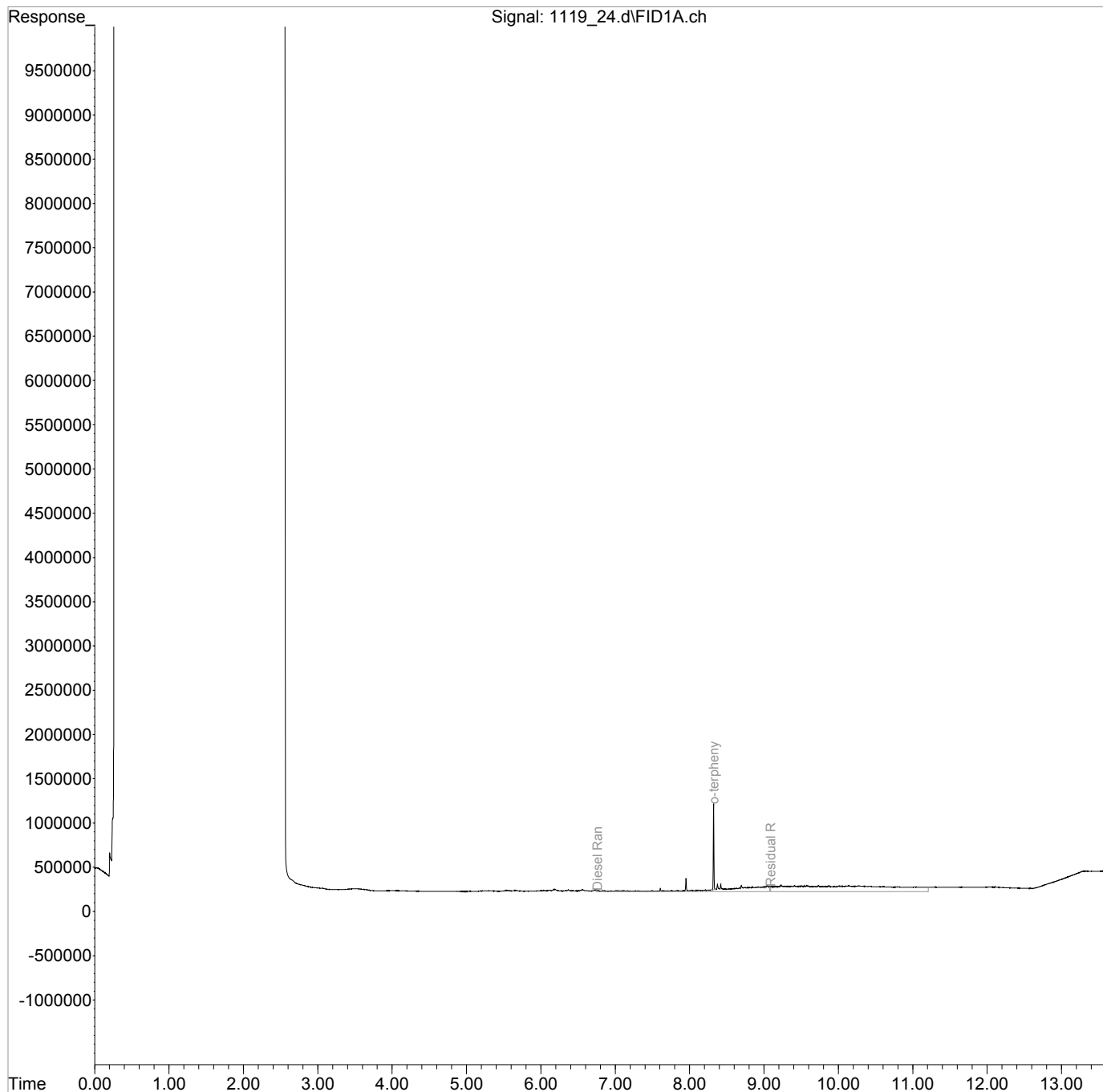
Volume Inj. :  
Signal Phase :  
Signal Info :



Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_24.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 1:20 pm  
Operator : 784  
Sample : L1161399-19 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 14 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 13:57:43 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. :  
Signal Phase :  
Signal Info :

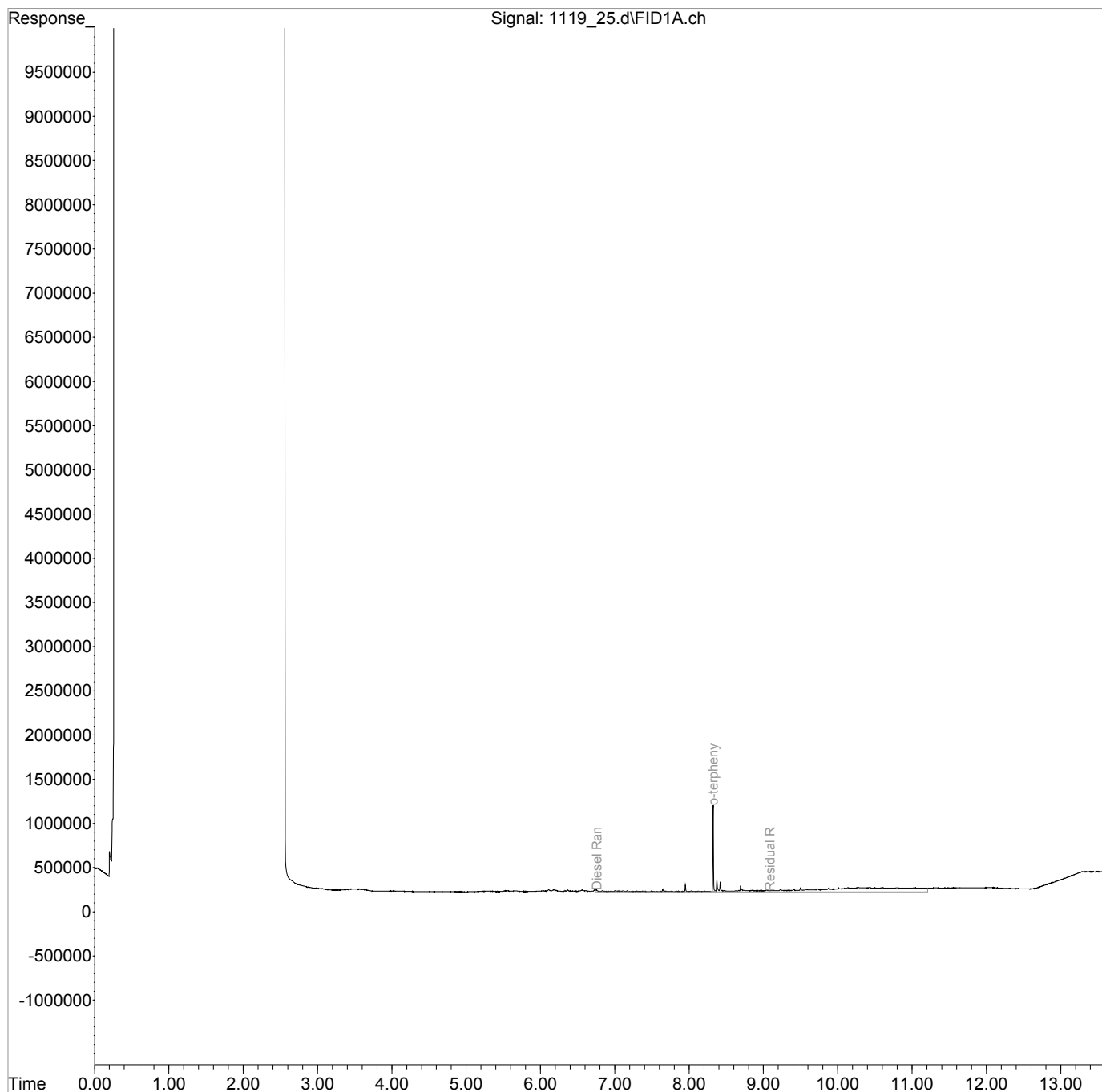




Data Path : C:\msdchem\1\data\111919\  
Data File : 1119\_25.d  
Signal(s) : FID1A.ch  
Acq On : 19 Nov 2019 1:42 pm  
Operator : 784  
Sample : L1161399-20 1x WG1382656  
Misc : M.Is on ranges are corrections  
ALS Vial : 15 Sample Multiplier: 1

Integration File: events.e  
Quant Time: Nov 19 14:17:40 2019  
Quant Method : C:\msdchem\1\methods\DM34K12S.M  
Quant Title :  
QLast Update : Tue Nov 12 23:34:07 2019  
Response via : Initial Calibration  
Integrator: ChemStation

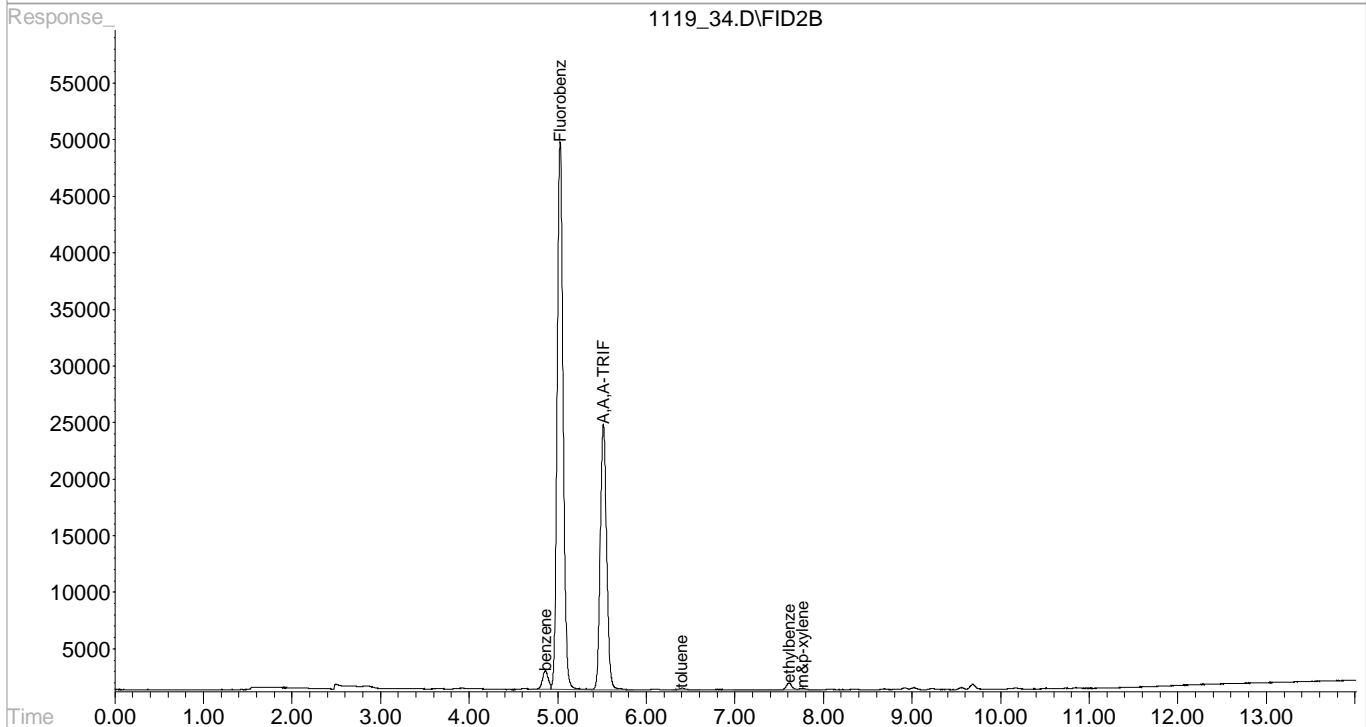
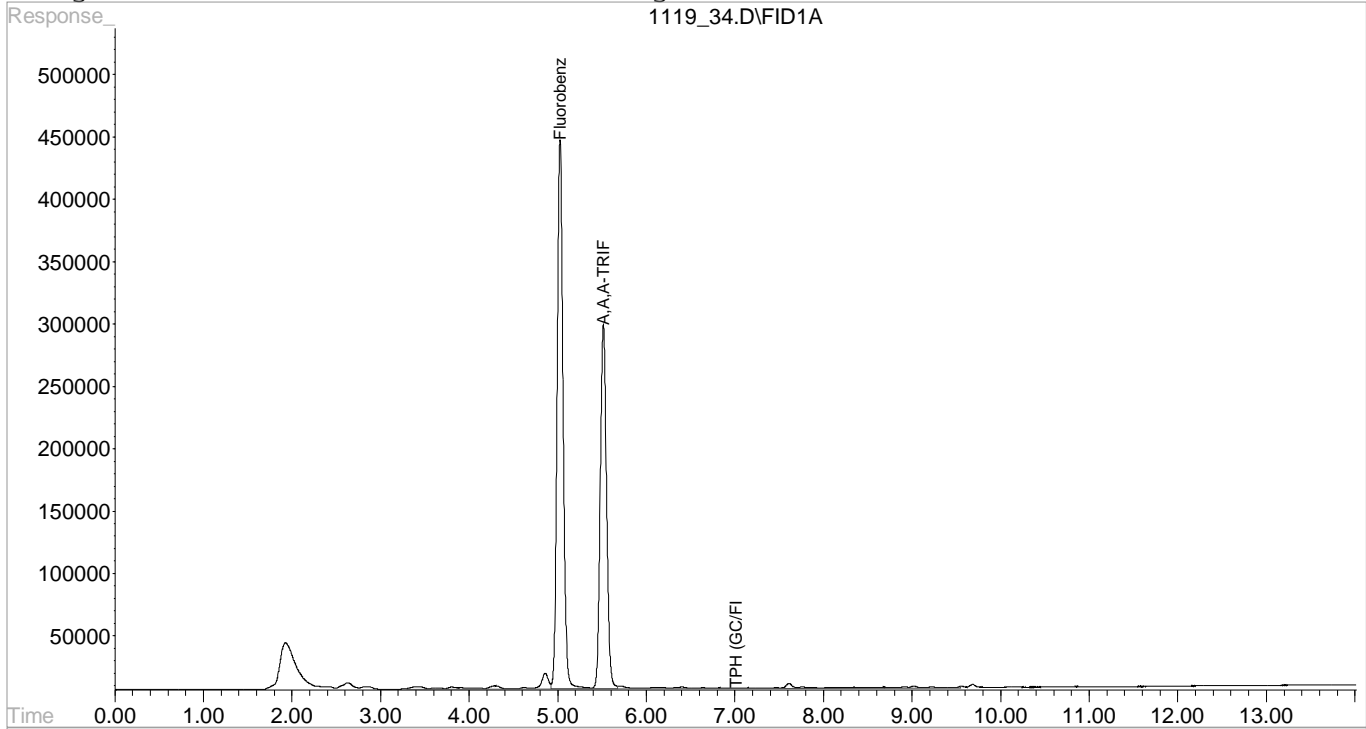
Volume Inj. :  
Signal Phase :  
Signal Info :



Signal #1 : C:\HPCHEM\1\DATA\111919\1119 34.D\FID1A.CH Vial: 32  
 Signal #2 : C:\HPCHEM\1\DATA\111919\1119 34.D\FID2B.CH  
 Acq On : 20 Nov 2019 1:47 am Operator: 605  
 Sample : L1161399-13 1x WG1383395 Inst : VOCGC6  
 Misc : water Multiplr: 1.00  
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
 Quant Time: Nov 20 14:47 2019 Quant Results File: BG06G23S.RES

Quant Method : C:\HPCHEM\1\METHODS\BG06G23S.M (Chemstation Integrator)  
 Title : Volatile Organics by GC/FID/PID  
 Last Update : Wed Jul 24 10:55:20 2019  
 Response via : Single Level Calibration  
 DataAcq Meth : GROW.M

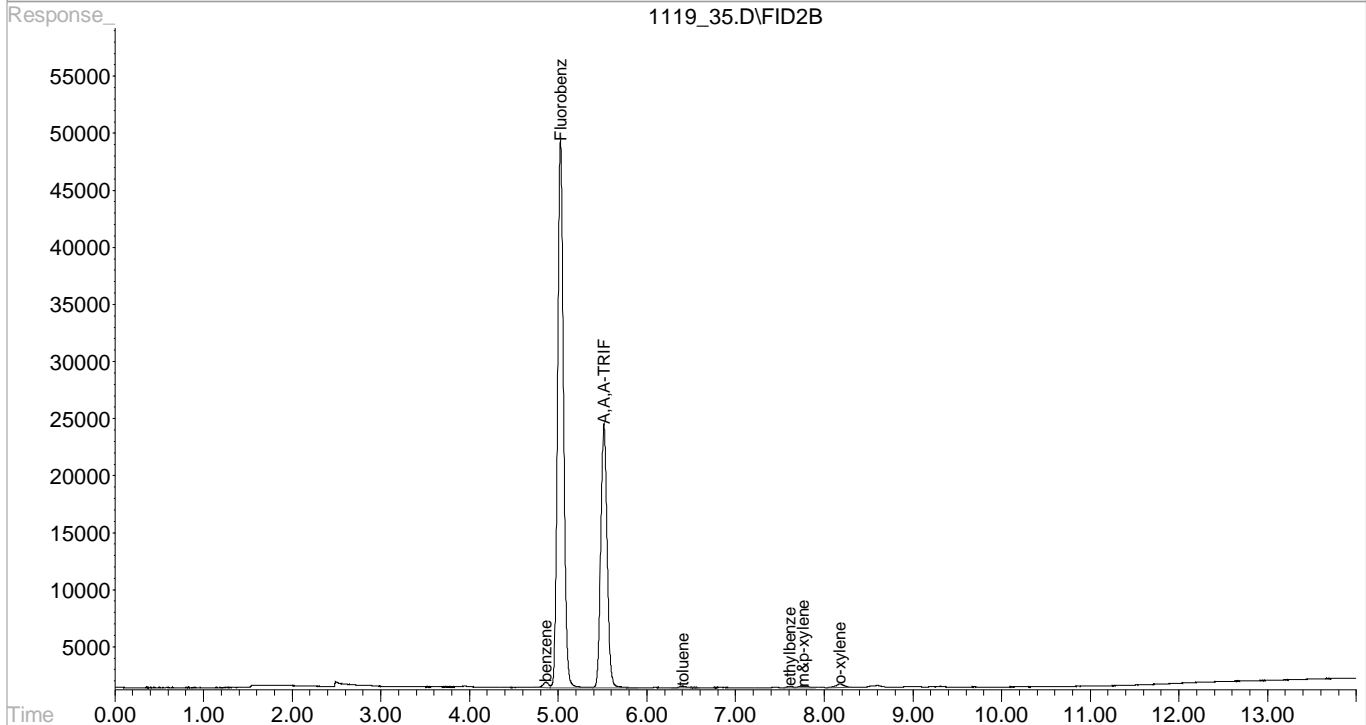
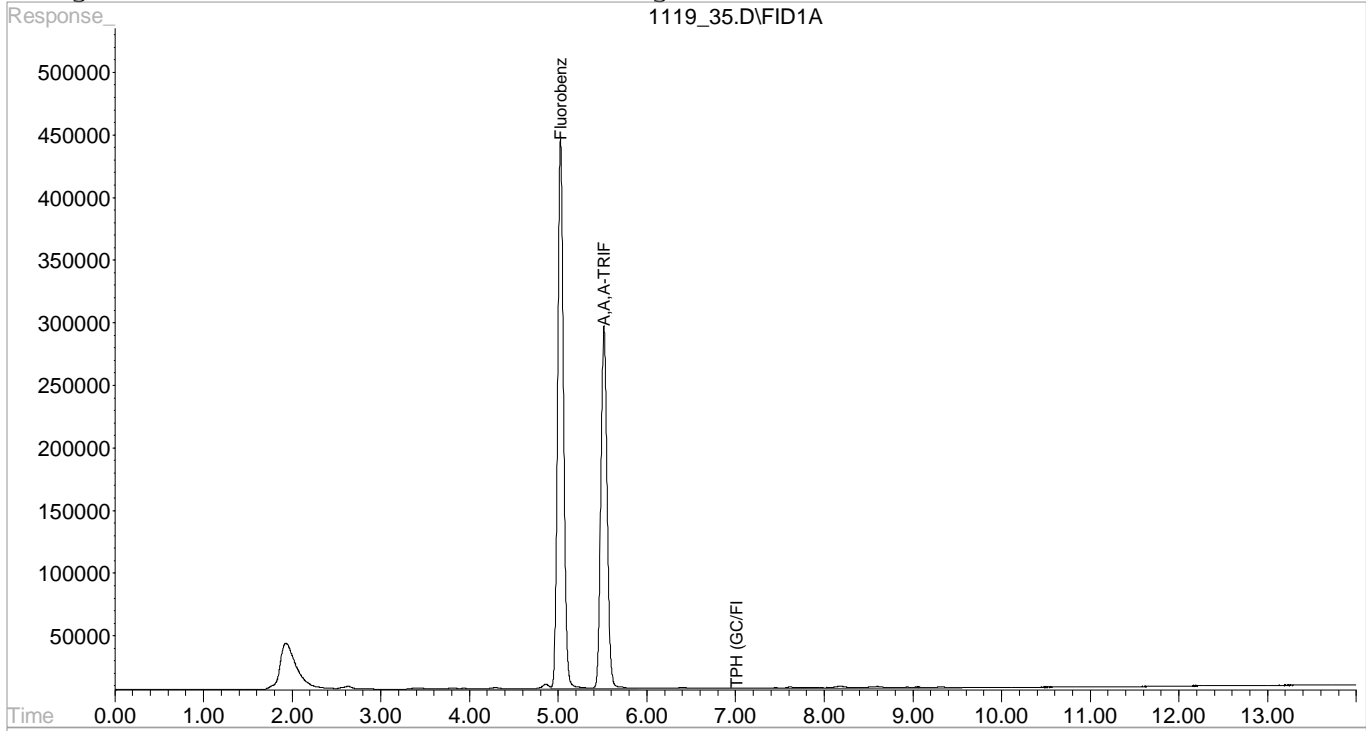
Volume Inj. :  
 Signal #1 Phase : Signal #2 Phase:  
 Signal #1 Info : Signal #2 Info :



Signal #1 : C:\HPCHEM\1\DATA\111919\1119 35.D\FID1A.CH Vial: 33  
 Signal #2 : C:\HPCHEM\1\DATA\111919\1119 35.D\FID2B.CH  
 Acq On : 20 Nov 2019 2:11 am Operator: 605  
 Sample : L1161399-14 1x WG1383395 Inst : VOCGC6  
 Misc : water Multiplr: 1.00  
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
 Quant Time: Nov 20 14:47 2019 Quant Results File: BG06G23S.RES

Quant Method : C:\HPCHEM\1\METHODS\BG06G23S.M (Chemstation Integrator)  
 Title : Volatile Organics by GC/FID/PID  
 Last Update : Wed Jul 24 10:55:20 2019  
 Response via : Single Level Calibration  
 DataAcq Meth : GROW.M

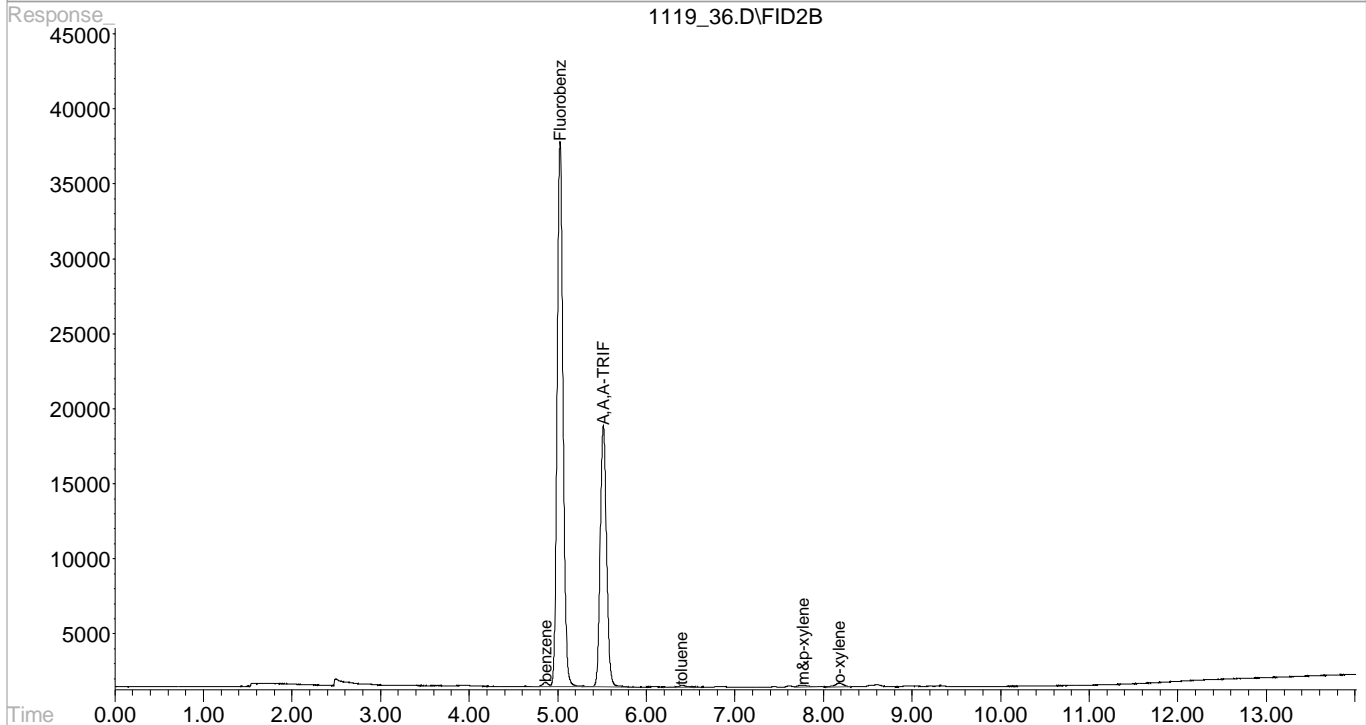
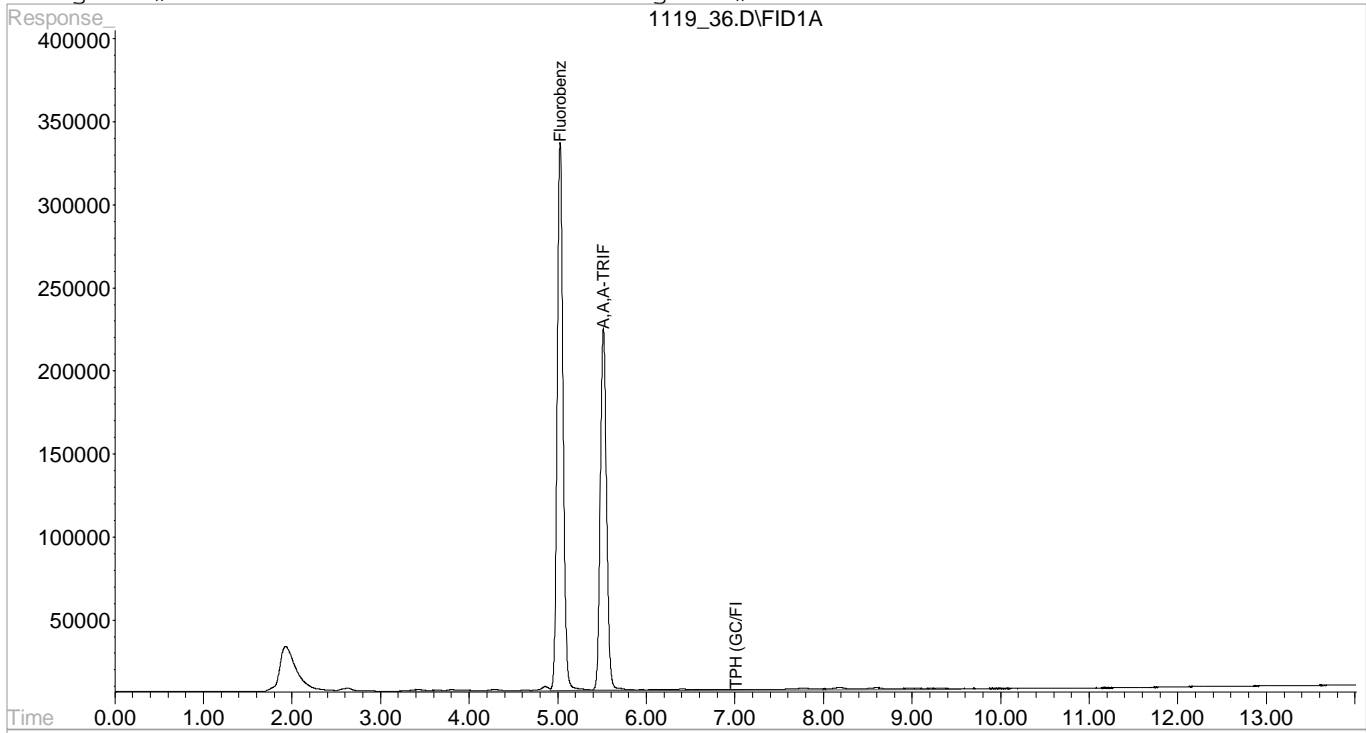
Volume Inj. :  
 Signal #1 Phase : Signal #2 Phase:  
 Signal #1 Info : Signal #2 Info :



Signal #1 : C:\HPCHEM\1\DATA\111919\1119 36.D\FID1A.CH Vial: 34  
 Signal #2 : C:\HPCHEM\1\DATA\111919\1119 36.D\FID2B.CH  
 Acq On : 20 Nov 2019 2:35 am Operator: 605  
 Sample : L1161399-15 1x WG1383395 Inst : VOCGC6  
 Misc : water Multiplr: 1.00  
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
 Quant Time: Nov 20 14:47 2019 Quant Results File: BG06G23S.RES

Quant Method : C:\HPCHEM\1\METHODS\BG06G23S.M (Chemstation Integrator)  
 Title : Volatile Organics by GC/FID/PID  
 Last Update : Wed Jul 24 10:55:20 2019  
 Response via : Single Level Calibration  
 DataAcq Meth : GROW.M

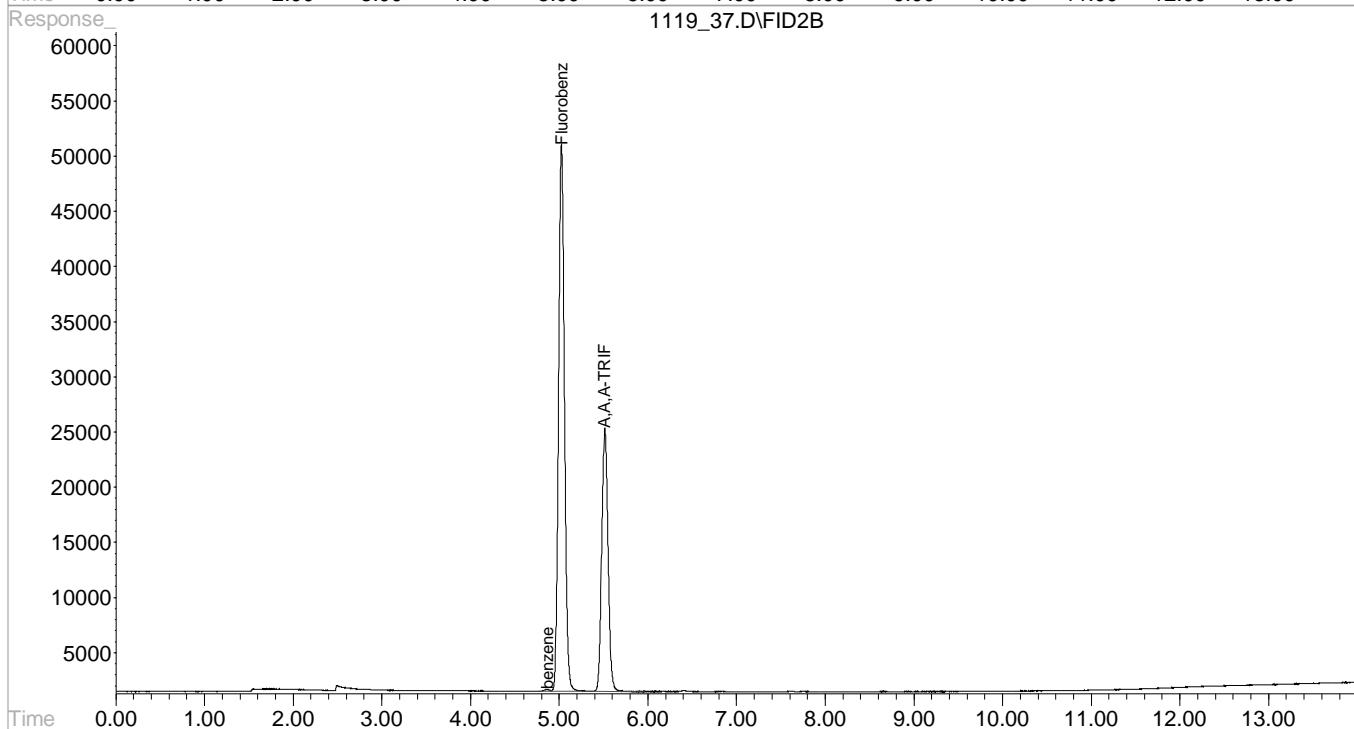
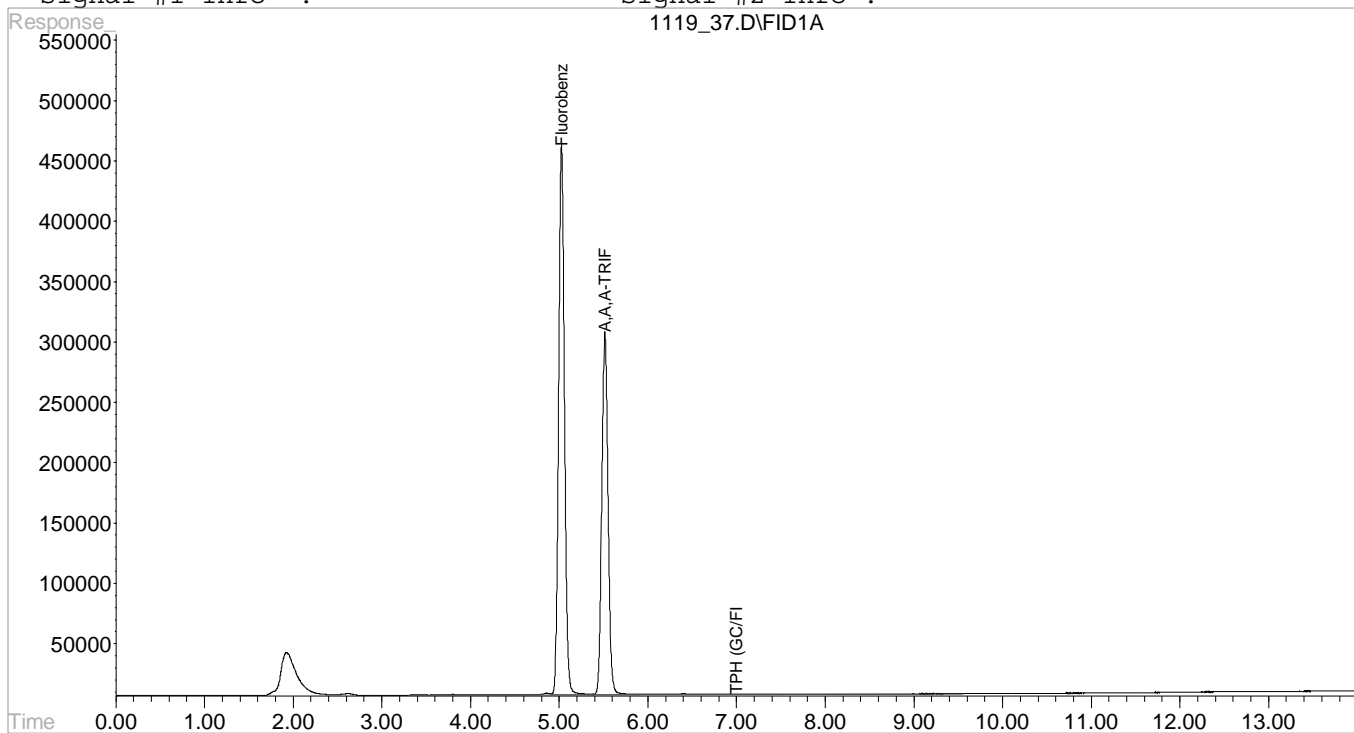
Volume Inj. :  
 Signal #1 Phase : Signal #2 Phase:  
 Signal #1 Info : Signal #2 Info :



Signal #1 : C:\HPCHEM\1\DATA\111919\1119 37.D\FID1A.CH Vial: 35  
 Signal #2 : C:\HPCHEM\1\DATA\111919\1119 37.D\FID2B.CH  
 Acq On : 20 Nov 2019 2:59 am Operator: 605  
 Sample : L1161399-24 1x WG1383395 Inst : VOCGC6  
 Misc : water Multiplr: 1.00  
 IntFile Signal #1: BTEX.E IntFile Signal #2: EVENTS3.E  
 Quant Time: Nov 20 14:47 2019 Quant Results File: BG06G23S.RES

Quant Method : C:\HPCHEM\1\METHODS\BG06G23S.M (Chemstation Integrator)  
 Title : Volatile Organics by GC/FID/PID  
 Last Update : Wed Jul 24 10:55:20 2019  
 Response via : Single Level Calibration  
 DataAcq Meth : GROW.M

Volume Inj. :  
 Signal #1 Phase : Signal #2 Phase:  
 Signal #1 Info : Signal #2 Info :



---

Light Non-Aqueous Phase Liquid  
May and August 2019

## Kennedy/Jenks Con-BNSF Region 1

Sample Delivery Group: L1097316  
Samples Received: 05/09/2019  
Project Number: 1996120.00  
Description: BNSF - Wishram Railyard, WA

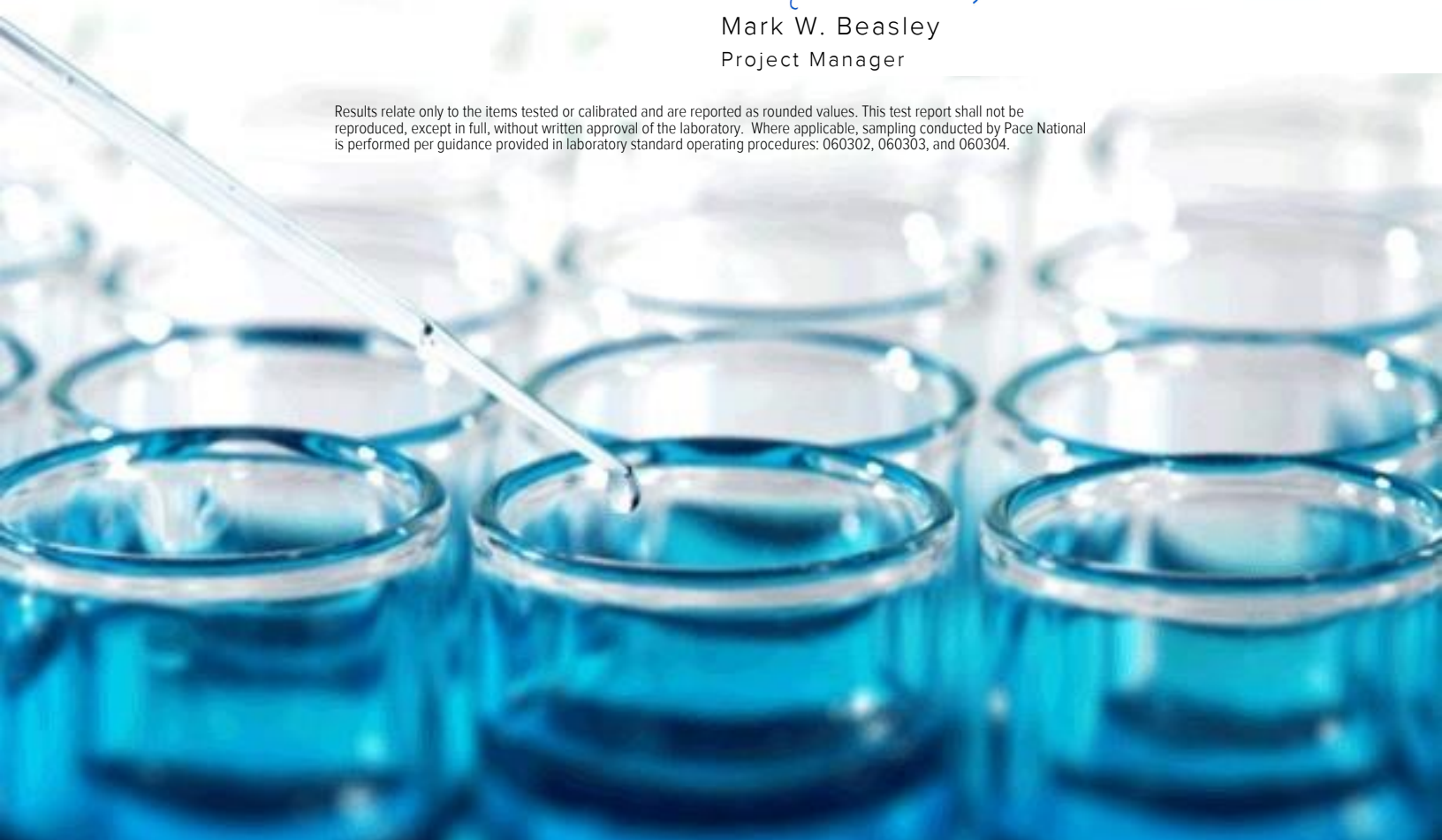
Report To: Ryan Hultgren  
32001 32nd Avenue South, Ste 100  
Federal Way, WA 98001

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



## OHM-1-20190506 L1097316-01 Solid

Collected by: K. Teague  
 Collected date/time: 05/06/19 15:20  
 Received date/time: 05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7471B	WG1281392	1	05/15/19 10:43	05/15/19 21:22	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1281248	1	05/15/19 10:57	05/16/19 12:47	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1282251	100	05/10/19 10:59	05/16/19 13:00	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1282255	6000	05/16/19 17:07	05/16/19 21:38	KME	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082M	WG1280529	1	05/14/19 10:13	05/14/19 17:42	MTJ	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

## OHM-3-20190506 L1097316-02 Solid

Collected by: K. Teague  
 Collected date/time: 05/06/19 16:45  
 Received date/time: 05/09/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7471B	WG1281392	1	05/15/19 10:43	05/15/19 21:28	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1281248	1	05/15/19 10:57	05/16/19 12:50	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1282251	40	05/10/19 10:59	05/16/19 13:22	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1282255	6000	05/16/19 17:07	05/16/19 21:50	KME	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082M	WG1280529	1	05/14/19 10:13	05/14/19 17:56	MTJ	Mt. Juliet, TN

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

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



Collected date/time: 05/06/19 15:20

L1097316

## Mercury by Method 7471B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.00752	<u>B</u> <u>J</u>	0.00280	0.0200	1	05/15/2019 21:22	<a href="#">WG1281392</a>

## Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	U		0.460	2.00	1	05/16/2019 12:47	<a href="#">WG1281248</a>
Barium	U		0.170	0.500	1	05/16/2019 12:47	<a href="#">WG1281248</a>
Cadmium	U		0.0700	0.500	1	05/16/2019 12:47	<a href="#">WG1281248</a>
Chromium	U		0.140	1.00	1	05/16/2019 12:47	<a href="#">WG1281248</a>
Copper	1.01	<u>J</u>	0.530	2.00	1	05/16/2019 12:47	<a href="#">WG1281248</a>
Lead	U		0.190	0.500	1	05/16/2019 12:47	<a href="#">WG1281248</a>
Nickel	0.619	<u>J</u>	0.490	2.00	1	05/16/2019 12:47	<a href="#">WG1281248</a>
Selenium	U		0.620	2.00	1	05/16/2019 12:47	<a href="#">WG1281248</a>
Silver	U		0.120	1.00	1	05/16/2019 12:47	<a href="#">WG1281248</a>
Zinc	U		0.590	5.00	1	05/16/2019 12:47	<a href="#">WG1281248</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		1.37	2.50	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Acrylonitrile	U		0.190	1.25	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Benzene	U		0.0400	0.100	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Bromobenzene	U		0.105	1.25	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Bromodichloromethane	U		0.0788	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Bromoform	U		0.598	2.50	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Bromomethane	U		0.370	1.25	100	05/16/2019 13:00	<a href="#">WG1282251</a>
n-Butylbenzene	10.7		0.384	1.25	100	05/16/2019 13:00	<a href="#">WG1282251</a>
sec-Butylbenzene	12.9		0.253	1.25	100	05/16/2019 13:00	<a href="#">WG1282251</a>
tert-Butylbenzene	1.65		0.155	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Carbon tetrachloride	U		0.108	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Chlorobenzene	U		0.0573	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Chlorodibromomethane	U		0.0450	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Chloroethane	U		0.108	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Chloroform	U		0.0415	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Chloromethane	U		0.139	1.25	100	05/16/2019 13:00	<a href="#">WG1282251</a>
2-Chlorotoluene	U		0.0920	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
4-Chlorotoluene	U		0.113	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,2-Dibromo-3-Chloropropane	U		0.510	2.50	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,2-Dibromoethane	U		0.0525	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Dibromomethane	U		0.100	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,2-Dichlorobenzene	U		0.145	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,3-Dichlorobenzene	U		0.170	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,4-Dichlorobenzene	U		0.197	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Dichlorodifluoromethane	U		0.0818	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,1-Dichloroethane	U		0.0575	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,2-Dichloroethane	U		0.0475	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,1-Dichloroethene	U		0.0500	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
cis-1,2-Dichloroethene	U		0.0690	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
trans-1,2-Dichloroethene	U		0.143	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,2-Dichloropropane	U		0.127	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,1-Dichloropropene	U		0.0700	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,3-Dichloropropane	U		0.175	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
cis-1,3-Dichloropropene	U		0.0678	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
trans-1,3-Dichloropropene	U		0.153	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
2,2-Dichloropropane	U		0.0793	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/06/19 15:20

L1097316

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Di-isopropyl ether	U		0.0350	0.100	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Ethylbenzene	0.0974	J	0.0530	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Hexachloro-1,3-butadiene	U		1.27	2.50	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Isopropylbenzene	12.5		0.0863	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
p-Isopropyltoluene	5.28		0.233	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
2-Butanone (MEK)	U		1.25	2.50	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Methylene Chloride	U		0.664	2.50	100	05/16/2019 13:00	<a href="#">WG1282251</a>
4-Methyl-2-pentanone (MIBK)	U		1.00	2.50	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Methyl tert-butyl ether	U		0.0295	0.100	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Naphthalene	7.89		0.312	1.25	100	05/16/2019 13:00	<a href="#">WG1282251</a>
n-Propylbenzene	15.9		0.118	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Styrene	U		0.273	1.25	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,1,1,2-Tetrachloroethane	U		0.0500	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,1,2,2-Tetrachloroethane	U		0.0390	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,1,2-Trichlorotrifluoroethane	U		0.0675	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Tetrachloroethene	U		0.0700	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Toluene	U		0.125	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,2,3-Trichlorobenzene	U		0.0625	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,2,4-Trichlorobenzene	U		0.482	1.25	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,1,1-Trichloroethane	U		0.0275	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,1,2-Trichloroethane	U		0.0883	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Trichloroethene	U		0.0400	0.100	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Trichlorofluoromethane	U		0.0500	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,2,3-Trichloropropane	U		0.510	1.25	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,2,4-Trimethylbenzene	22.5		0.116	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,2,3-Trimethylbenzene	4.53		0.115	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
Vinyl chloride	U		0.0683	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
1,3,5-Trimethylbenzene	U		0.108	0.500	100	05/16/2019 13:00	<a href="#">WG1282251</a>
o-Xylene	U		0.100	0.250	100	05/16/2019 13:00	<a href="#">WG1282251</a>
m&p-Xylene	1.44	B	0.150	0.400	100	05/16/2019 13:00	<a href="#">WG1282251</a>
(S) Toluene-d8	104			75.0-131		05/16/2019 13:00	<a href="#">WG1282251</a>
(S) 4-Bromofluorobenzene	161	J1		67.0-138		05/16/2019 13:00	<a href="#">WG1282251</a>
(S) 1,2-Dichloroethane-d4	95.2			70.0-130		05/16/2019 13:00	<a href="#">WG1282251</a>

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

## Sample Narrative:

L1097316-01 WG1282251: Non-target compounds too high to run at a lower dilution.

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	303000		7980	24000	6000	05/16/2019 21:38	<a href="#">WG1282255</a>
Residual Range Organics (RRO)	300000		20000	60000	6000	05/16/2019 21:38	<a href="#">WG1282255</a>
(S) o-Terphenyl	0.000	J7		18.0-148		05/16/2019 21:38	<a href="#">WG1282255</a>

## Polychlorinated Biphenyls (GC) by Method 8082M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.330	1.00	1	05/14/2019 17:42	<a href="#">WG1280529</a>
PCB 1221	U		0.330	1.00	1	05/14/2019 17:42	<a href="#">WG1280529</a>
PCB 1232	U		0.330	1.00	1	05/14/2019 17:42	<a href="#">WG1280529</a>
PCB 1242	U		0.330	1.00	1	05/14/2019 17:42	<a href="#">WG1280529</a>
PCB 1248	U		0.330	1.00	1	05/14/2019 17:42	<a href="#">WG1280529</a>
PCB 1254	U		0.330	1.00	1	05/14/2019 17:42	<a href="#">WG1280529</a>
PCB 1260	U		0.330	1.00	1	05/14/2019 17:42	<a href="#">WG1280529</a>
(S) Decachlorobiphenyl	57.5	J2		60.0-140		05/14/2019 17:42	<a href="#">WG1280529</a>



Polychlorinated Biphenyls (GC) by Method 8082M

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
(S) Tetrachloro-m-xylene	281	J1	0.330	60.0-140		05/14/2019 17:42	WG1280529

Sample Narrative:

L1097316-01 WG1280529: Surrogate failures due to matrix interference.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



## Mercury by Method 7471B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.00642	<u>B</u> <u>J</u>	0.00280	0.0200	1	05/15/2019 21:28	<a href="#">WG1281392</a>

## Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	U		0.460	2.00	1	05/16/2019 12:50	<a href="#">WG1281248</a>
Barium	U		0.170	0.500	1	05/16/2019 12:50	<a href="#">WG1281248</a>
Cadmium	U		0.0700	0.500	1	05/16/2019 12:50	<a href="#">WG1281248</a>
Chromium	U		0.140	1.00	1	05/16/2019 12:50	<a href="#">WG1281248</a>
Copper	U		0.530	2.00	1	05/16/2019 12:50	<a href="#">WG1281248</a>
Lead	U		0.190	0.500	1	05/16/2019 12:50	<a href="#">WG1281248</a>
Nickel	1.53	<u>J</u>	0.490	2.00	1	05/16/2019 12:50	<a href="#">WG1281248</a>
Selenium	U		0.620	2.00	1	05/16/2019 12:50	<a href="#">WG1281248</a>
Silver	U		0.120	1.00	1	05/16/2019 12:50	<a href="#">WG1281248</a>
Zinc	U		0.590	5.00	1	05/16/2019 12:50	<a href="#">WG1281248</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.548	1.00	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Acrylonitrile	U		0.0760	0.500	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Benzene	U		0.0160	0.0400	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Bromobenzene	U		0.0420	0.500	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Bromodichloromethane	U		0.0315	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Bromoform	U		0.239	1.00	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Bromomethane	U		0.148	0.500	40	05/16/2019 13:22	<a href="#">WG1282251</a>
n-Butylbenzene	6.54		0.154	0.500	40	05/16/2019 13:22	<a href="#">WG1282251</a>
sec-Butylbenzene	5.19		0.101	0.500	40	05/16/2019 13:22	<a href="#">WG1282251</a>
tert-Butylbenzene	0.772		0.0620	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Carbon tetrachloride	U		0.0432	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Chlorobenzene	U		0.0229	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Chlorodibromomethane	U		0.0180	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Chloroethane	U		0.0432	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Chloroform	U		0.0166	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Chloromethane	U		0.0556	0.500	40	05/16/2019 13:22	<a href="#">WG1282251</a>
2-Chlorotoluene	U		0.0368	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
4-Chlorotoluene	U		0.0452	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,2-Dibromo-3-Chloropropane	U		0.204	1.00	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,2-Dibromoethane	U		0.0210	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Dibromomethane	U		0.0400	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,2-Dichlorobenzene	U		0.0580	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,3-Dichlorobenzene	U		0.0680	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,4-Dichlorobenzene	U		0.0788	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Dichlorodifluoromethane	U		0.0327	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,1-Dichloroethane	U		0.0230	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,2-Dichloroethane	U		0.0190	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,1-Dichloroethene	U		0.0200	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
cis-1,2-Dichloroethene	U		0.0276	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
trans-1,2-Dichloroethene	U		0.0572	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,2-Dichloropropane	U		0.0508	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,1-Dichloropropene	U		0.0280	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,3-Dichloropropane	U		0.0700	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
cis-1,3-Dichloropropene	U		0.0271	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
trans-1,3-Dichloropropene	U		0.0612	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
2,2-Dichloropropane	U		0.0317	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

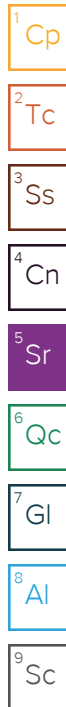


Collected date/time: 05/06/19 16:45

L1097316

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Di-isopropyl ether	U		0.0140	0.0400	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Ethylbenzene	0.105		0.0212	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Hexachloro-1,3-butadiene	U		0.508	1.00	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Isopropylbenzene	5.48		0.0345	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
p-Isopropyltoluene	4.39		0.0932	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
2-Butanone (MEK)	U		0.500	1.00	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Methylene Chloride	U		0.266	1.00	40	05/16/2019 13:22	<a href="#">WG1282251</a>
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Methyl tert-butyl ether	U		0.0118	0.0400	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Naphthalene	10.7		0.125	0.500	40	05/16/2019 13:22	<a href="#">WG1282251</a>
n-Propylbenzene	6.82		0.0472	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Styrene	U		0.109	0.500	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,1,1,2-Tetrachloroethane	U		0.0200	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,1,2,2-Tetrachloroethane	U		0.0156	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Tetrachloroethene	U		0.0280	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Toluene	U		0.0500	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,2,3-Trichlorobenzene	U		0.0250	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,2,4-Trichlorobenzene	U		0.193	0.500	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,1,1-Trichloroethane	U		0.0110	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,1,2-Trichloroethane	U		0.0353	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Trichloroethene	U		0.0160	0.0400	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Trichlorofluoromethane	U		0.0200	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,2,3-Trichloropropane	U		0.204	0.500	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,2,4-Trimethylbenzene	17.5		0.0464	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,2,3-Trimethylbenzene	30.9		0.0460	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
Vinyl chloride	U		0.0273	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
1,3,5-Trimethylbenzene	U		0.0432	0.200	40	05/16/2019 13:22	<a href="#">WG1282251</a>
o-Xylene	0.675		0.0400	0.100	40	05/16/2019 13:22	<a href="#">WG1282251</a>
m&p-Xylene	2.04		0.0600	0.160	40	05/16/2019 13:22	<a href="#">WG1282251</a>
(S) Toluene-d8	113			75.0-131		05/16/2019 13:22	<a href="#">WG1282251</a>
(S) 4-Bromofluorobenzene	215	J1		67.0-138		05/16/2019 13:22	<a href="#">WG1282251</a>
(S) 1,2-Dichloroethane-d4	96.2			70.0-130		05/16/2019 13:22	<a href="#">WG1282251</a>



## Sample Narrative:

L1097316-02 WG1282251: Non-target compounds too high to run at a lower dilution.

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	370000		7980	24000	6000	05/16/2019 21:50	<a href="#">WG1282255</a>
Residual Range Organics (RRO)	376000		20000	60000	6000	05/16/2019 21:50	<a href="#">WG1282255</a>
(S) o-Terphenyl	0.000	J7		18.0-148		05/16/2019 21:50	<a href="#">WG1282255</a>

## Polychlorinated Biphenyls (GC) by Method 8082M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.330	1.00	1	05/14/2019 17:56	<a href="#">WG1280529</a>
PCB 1221	U		0.330	1.00	1	05/14/2019 17:56	<a href="#">WG1280529</a>
PCB 1232	U		0.330	1.00	1	05/14/2019 17:56	<a href="#">WG1280529</a>
PCB 1242	U		0.330	1.00	1	05/14/2019 17:56	<a href="#">WG1280529</a>
PCB 1248	U		0.330	1.00	1	05/14/2019 17:56	<a href="#">WG1280529</a>
PCB 1254	U		0.330	1.00	1	05/14/2019 17:56	<a href="#">WG1280529</a>
PCB 1260	U		0.330	1.00	1	05/14/2019 17:56	<a href="#">WG1280529</a>
(S) Decachlorobiphenyl	57.0	J2		60.0-140		05/14/2019 17:56	<a href="#">WG1280529</a>



Polychlorinated Biphenyls (GC) by Method 8082M

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
(S) Tetrachloro-m-xylene	261	J1	0.330	60.0-140		05/14/2019 17:56	<a href="#">WG1280529</a>

Sample Narrative:

L1097316-02 WG1280529: Surrogate failures due to matrix interference.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3411604-1 05/15/19 20:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	0.00532	↓	0.00280	0.0200

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

(LCS) R3411604-2 05/15/19 20:39 • (LCSD) R3411604-3 05/15/19 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 %
Mercury	0.300	0.303	0.305	101	102	80.0-120			0.602	20

L1097305-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097305-10 05/15/19 20:44 • (MS) R3411604-4 05/15/19 20:46 • (MSD) R3411604-5 05/15/19 20:48

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.355	0.0230	0.362	0.377	95.2	99.6	1	75.0-125			4.15	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3411959-1 05/16/19 12:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.460	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Copper	U		0.530	2.00
Lead	U		0.190	0.500
Nickel	U		0.490	2.00
Selenium	U		0.620	2.00
Silver	U		0.120	1.00
Zinc	U		0.590	5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R3411959-2 05/16/19 12:30 • (LCSD) R3411959-3 05/16/19 12:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	95.4	92.7	95.4	92.7	80.0-120			2.86	20
Barium	100	107	104	107	104	80.0-120			3.03	20
Cadmium	100	101	97.7	101	97.7	80.0-120			2.94	20
Chromium	100	93.7	90.3	93.7	90.3	80.0-120			3.74	20
Copper	100	97.6	94.2	97.6	94.2	80.0-120			3.46	20
Lead	100	97.7	94.8	97.7	94.8	80.0-120			3.00	20
Nickel	100	96.8	93.9	96.8	93.9	80.0-120			3.05	20
Selenium	100	99.5	96.7	99.5	96.7	80.0-120			2.90	20
Silver	20.0	18.4	17.8	91.8	89.0	80.0-120			3.10	20
Zinc	100	96.5	93.9	96.5	93.9	80.0-120			2.80	20

L1097303-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097303-03 05/16/19 12:35 • (MS) R3411959-6 05/16/19 12:42 • (MSD) R3411959-7 05/16/19 12:45

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	125	ND	111	110	88.2	87.7	1	75.0-125			0.625	20
Barium	125	55.2	192	193	110	110	1	75.0-125			0.410	20
Cadmium	125	ND	123	122	98.8	98.0	1	75.0-125			0.862	20
Chromium	125	35.2	147	146	89.8	88.8	1	75.0-125			0.826	20
Copper	125	38.6	171	169	106	105	1	75.0-125			0.853	20
Lead	125	6.83	134	133	102	101	1	75.0-125			0.516	20



L1097303-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097303-03 05/16/19 12:35 • (MS) R3411959-6 05/16/19 12:42 • (MSD) R3411959-7 05/16/19 12:45

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 %
Nickel	125	13.3	142	141	103	103	1	75.0-125			0.754	20
Selenium	125	ND	113	113	90.3	90.2	1	75.0-125			0.107	20
Silver	25.0	ND	22.3	22.1	89.1	88.4	1	75.0-125			0.812	20
Zinc	125	25.1	146	147	97.2	97.6	1	75.0-125			0.350	20

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



Method Blank (MB)

(MB) R3411931-2 05/16/19 10:03

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3411931-2 05/16/19 10:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	0.0361		0.0125	0.0250
Methylene Chloride	0.00667	↓	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	0.00149	↓	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	0.00191	↓	0.00150	0.00400
(S) Toluene-d8	105			75.0-131
(S) 4-Bromofluorobenzene	98.8			67.0-138
(S) 1,2-Dichloroethane-d4	94.3			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Laboratory Control Sample (LCS)

(LCS) R3411931-1 05/16/19 08:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.622	99.5	10.0-160	
Acrylonitrile	0.625	0.670	107	45.0-153	
Benzene	0.125	0.116	92.4	70.0-123	
Bromobenzene	0.125	0.119	95.6	73.0-121	



Laboratory Control Sample (LCS)

(LCS) R3411931-1 05/16/19 08:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromodichloromethane	0.125	0.120	95.7	73.0-121	
Bromoform	0.125	0.121	97.1	64.0-132	
Bromomethane	0.125	0.124	99.4	56.0-147	
n-Butylbenzene	0.125	0.120	96.0	68.0-135	
sec-Butylbenzene	0.125	0.121	97.1	74.0-130	
tert-Butylbenzene	0.125	0.124	99.6	75.0-127	
Carbon tetrachloride	0.125	0.128	102	66.0-128	
Chlorobenzene	0.125	0.122	97.5	76.0-128	
Chlorodibromomethane	0.125	0.122	97.5	74.0-127	
Chloroethane	0.125	0.119	94.9	61.0-134	
Chloroform	0.125	0.117	93.4	72.0-123	
Chloromethane	0.125	0.107	85.7	51.0-138	
2-Chlorotoluene	0.125	0.121	96.9	75.0-124	
4-Chlorotoluene	0.125	0.122	97.9	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.111	88.7	59.0-130	
1,2-Dibromoethane	0.125	0.127	101	74.0-128	
Dibromomethane	0.125	0.130	104	75.0-122	
1,2-Dichlorobenzene	0.125	0.120	96.1	76.0-124	
1,3-Dichlorobenzene	0.125	0.123	98.2	76.0-125	
1,4-Dichlorobenzene	0.125	0.118	94.2	77.0-121	
Dichlorodifluoromethane	0.125	0.131	105	43.0-156	
1,1-Dichloroethane	0.125	0.119	94.8	70.0-127	
1,2-Dichloroethane	0.125	0.107	85.6	65.0-131	
1,1-Dichloroethene	0.125	0.125	100	65.0-131	
cis-1,2-Dichloroethene	0.125	0.122	97.6	73.0-125	
trans-1,2-Dichloroethene	0.125	0.122	97.4	71.0-125	
1,2-Dichloropropane	0.125	0.122	97.2	74.0-125	
1,1-Dichloropropene	0.125	0.124	99.1	73.0-125	
1,3-Dichloropropane	0.125	0.122	97.6	80.0-125	
cis-1,3-Dichloropropene	0.125	0.125	99.9	76.0-127	
trans-1,3-Dichloropropene	0.125	0.127	101	73.0-127	
2,2-Dichloropropane	0.125	0.134	107	59.0-135	
Di-isopropyl ether	0.125	0.114	91.3	60.0-136	
Ethylbenzene	0.125	0.119	95.0	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.100	80.1	57.0-150	
Isopropylbenzene	0.125	0.119	95.3	72.0-127	
p-Isopropyltoluene	0.125	0.124	99.4	72.0-133	
2-Butanone (MEK)	0.625	0.603	96.5	30.0-160	
Methylene Chloride	0.125	0.120	95.8	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.603	96.5	56.0-143	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Laboratory Control Sample (LCS)

(LCS) R3411931-1 05/16/19 08:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Methyl tert-butyl ether	0.125	0.132	106	66.0-132	
Naphthalene	0.125	0.109	86.9	59.0-130	
n-Propylbenzene	0.125	0.121	96.5	74.0-126	
Styrene	0.125	0.123	98.3	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.122	97.3	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.128	102	68.0-128	
Tetrachloroethene	0.125	0.127	101	70.0-136	
Toluene	0.125	0.116	92.9	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.123	98.7	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.105	83.8	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.108	86.4	62.0-137	
1,1,1-Trichloroethane	0.125	0.115	91.8	69.0-126	
1,1,2-Trichloroethane	0.125	0.119	95.5	78.0-123	
Trichloroethene	0.125	0.117	93.3	76.0-126	
Trichlorofluoromethane	0.125	0.120	96.3	61.0-142	
1,2,3-Trichloropropane	0.125	0.127	102	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.119	95.5	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.122	97.8	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.122	97.5	73.0-127	
Vinyl chloride	0.125	0.123	98.3	63.0-134	
o-Xylene	0.125	0.125	100	79.0-124	
m&p-Xylenes	0.250	0.241	96.5	76.0-126	
(S) Toluene-d8			101	75.0-131	
(S) 4-Bromofluorobenzene			100	67.0-138	
(S) 1,2-Dichloroethane-d4			99.2	70.0-130	

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3413008-1 05/16/19 19:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		399	1200
Residual Range Organics (RRO)	U		999	3000
<i>(S) o-Terphenyl</i>	74.5			18.0-148

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

(LCS) R3413008-2 05/16/19 19:41 • (LCSD) R3413008-3 05/16/19 19:54

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)	10000	8940	8790	89.4	87.9	50.0-150			1.69	20
<i>(S) o-Terphenyl</i>				87.5	92.0	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) R3411183-1 05/14/19 16:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
PCB 1260	U		0.330	1.00
PCB 1016	U		0.330	1.00
PCB 1221	U		0.330	1.00
PCB 1232	U		0.330	1.00
PCB 1242	U		0.330	1.00
PCB 1248	U		0.330	1.00
PCB 1254	U		0.330	1.00
(S) Decachlorobiphenyl	91.5			60.0-140
(S) Tetrachloro-m-xylene	97.0			60.0-140

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3411183-2 05/14/19 16:34 • (LCSD) R3411183-3 05/14/19 16:48

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	1.00	0.960	0.970	96.0	97.0	60.0-140			1.04	20
PCB 1016	1.00	1.03	1.07	103	107	60.0-140			3.81	20
(S) Decachlorobiphenyl				88.0	87.0	60.0-140				
(S) Tetrachloro-m-xylene				95.0	99.0	60.0-140				

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> 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.
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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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.
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.
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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

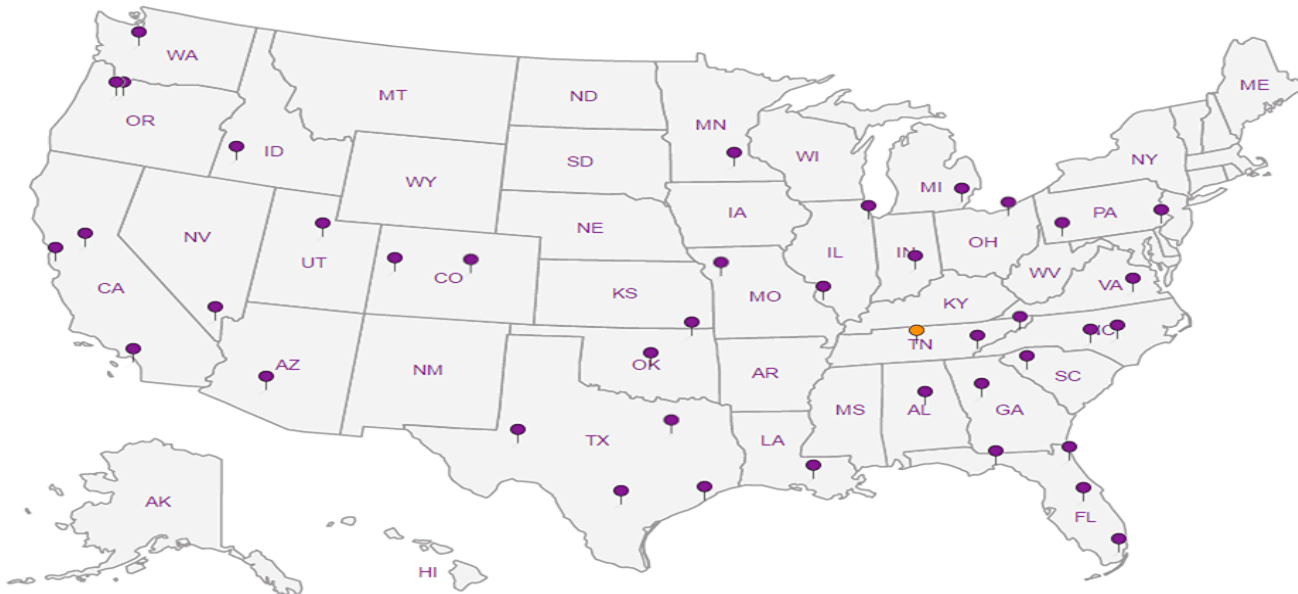
## Third Party Federal Accreditations

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

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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 1 of 1



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 #  
199612000

Lab Project #  
BNSF1KEN-WISHRAM

Collected by (print):  
K. Teague

Site/Facility ID #

P.O. #

Collected by (signature):  
*K. Teague*

Rush? (Lab MUST Be Notified)

Quote #

Immediately  
Packed on Ice N    Y X

Same Day    Five Day     
Next Day    5 Day (Rad Only)     
Two Day    10 Day (Rad Only)     
Three Day   

Date Results Needed

No.  
of  
Cntrs

MRCRAB 4ozClr-NoPres + Cu, Ni, Zn  
PCBOIL 4ozClr-NoPres  
V8260 4ozClr-NoPres  
V8260C 4ozClr-NoPres  
NWTPTA-DX W10 SGT

L# 1097316

**C034**

Acctnum: BNSF1KEN

Template: T149556

Prelogin: P705633

TSR: 134 - Mark W. Beasley

PB: *4-26-196*

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRAB 4ozClr-NoPres + Cu, Ni, Zn	PCBOIL 4ozClr-NoPres	V8260 4ozClr-NoPres	V8260C 4ozClr-NoPres	NWTPTA-DX W10 SGT	Remarks	Sample # (lab only)
DHM-1-20190506	Grab	SS	-	5/6/19	1520	13	X	X	X		X		-01
DHM-3-20190506	Grab	SS	-	5/6/19	1645	13	X	X	X	X	KT	X	-02

\* 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 # Fedex 4876 1094 810Z

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  
**RAD SCREEN: <0.5 mR/hr**

Relinquished by: (Signature) <i>K. Teague</i>	Date: 5/8/19	Time: 1000	Received by: (Signature) FedEX	Trip Blank Received: Yes/No <input type="checkbox"/> HCL/MeOH <input type="checkbox"/> TBR	Temp: °C 1.9 + 1 = 2.0 AM Z	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
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Blank</i>	Date: 5/9/19	Time: 8:45	Hold: Condition: NCF / (OK)



12 August 2019

Ryan Hultgren  
Kennedy Jenks Consultants  
32001 - 32nd Avenue South, Suite 100  
Federal Way, WA 98001

RE: BNSF Wishram

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)  
19G0330

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.*





# Chain of Custody Record & Laboratory Analysis Request



**Analytical Resources, Incorporated**  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)  
 www.arilabs.com

ARI Assigned Number: <b>19G0330</b>		Turn-around Requested:		Page: <b>1</b> of <b>1</b>					
ARI Client Company: <b>Kennedy Jenks</b>		Phone: <b>253 835 6400</b>		Date: <b>7/23/19</b>	Ice Present? <b>YES</b>				
Client Contact: <b>Ryan Hultgren</b>		Client Project Name: <b>BNSF Wishram</b>		No. of Coolers: <b>1</b>	Cooler Temps: <b>10.9</b>				
Client Project #: <b>1990120-07</b>		Samplers: <b>K. Teague</b>		Analysis Requested					
Sample ID	Date	Time	Matrix	No. Containers	EPH	NWTPH-DX w/ Bunker C			
<b>OHM-1-NAPL-20190722</b>	<b>7/22/19</b>	<b>1015</b>	<b>oil</b>	<b>1</b>	<b>X</b>	<b>X</b>			
<b>OHM-2-NAPL-20190722</b>	<b>7/22/19</b>	<b>1155</b>	<b>oil</b>	<b>1</b>	<b>X</b>	<b>X</b>			
<b>OHM-3-NAPL-20190722</b>	<b>7/22/19</b>	<b>1650</b>	<b>oil</b>	<b>1</b>	<b>X</b>	<b>X</b>			
Comments/Special Instructions <b>No silica gel on dx analysis</b>		Relinquished by: (Signature) <b>Katie Teague</b>		Received by: (Signature) <b>FedEx</b>		Relinquished by: (Signature) <b>[Signature]</b>		Received by: (Signature)	
		Printed Name: <b>Katie Teague</b>		Printed Name:		Printed Name: <b>Erin Sailer</b>		Printed Name:	
		Company: <b>KJ</b>		Company:		Company: <b>ARI</b>		Company:	
		Date & Time: <b>7/23/19 1330</b>		Date & Time:		Date & Time: <b>7/23/19 0957</b>		Date & Time:	

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Kennedy Jenks Consultants  
32001 - 32nd Avenue South, Suite 100  
Federal Way WA, 98001

Project: BNSF Wishram  
Project Number: 1996120.07  
Project Manager: Ryan Hultgren

**Reported:**  
12-Aug-2019 10:08

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OHM-1-NAPL-20190722	19G0330-01	Oil	22-Jul-2019 10:15	25-Jul-2019 09:52
OHM-2-NAPL-20190722	19G0330-02	Oil	22-Jul-2019 11:55	25-Jul-2019 09:52
OHM-3-NAPL-20190722	19G0330-03	Oil	22-Jul-2019 16:50	25-Jul-2019 09:52



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Reported:  
12-Aug-2019 10:08

## Work Order Case Narrative

### Sample receipt

Samples as listed on the preceding page were received July 25, 2019 under ARI work order 19G0330. For details regarding sample receipt, please refer to the Cooler Receipt Form.

### Extractable Organic Hydrocarbons - WA-Ecology

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements closing C21-C34 Aromatics and Aliphatics fail high. The samples were ran twice with repeated failure due to high sample concentration. Data reported as-is.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

### Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.





# Cooler Receipt Form

ARI Client: Kennedy Jenks

Project Name: NSF W. Shram

COC No(s): \_\_\_\_\_ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_

Assigned ARI Job No: 19G0330

Tracking No: 788670879793 NA

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of the 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) 10.9  
 Time 0952

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: DOO5206

Cooler Accepted by: [Signature] Date: 7/25/19 Time: 0952

**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   
 How were bottles sealed in plastic bags? Individually  Grouped  Not   
 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: \_\_\_\_\_  
 Were the sample(s) split by ARI? NA  YES  Date/Time: \_\_\_\_\_ Equipment: \_\_\_\_\_ Split by: \_\_\_\_\_

Samples Logged by: [Signature] Date: 7/25/19 Time: 1105 Labels checked by: [Signature]

**\*\* 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:**  
 Oil has leaked out of OHM-1-NAPL-20190722 + OHM-2-NAPL-20190722 rendering the labels illegible, OHM-1-NAPL-20190722 is slightly more legible. OHM-2-NAPL-20190722's leak seems to be coming out of the bottom of the jar

By: [Signature] Date: 7/25/19



# Cooler Temperature Compliance Form

ARI Work Order: 19G0330

Cooler#: \_\_\_\_\_ Temperature(°C): 10.9

Sample ID	Bottle Count	Bottle Type
<u>Samples above 6°C</u>	<u>3</u>	

Cooler#: \_\_\_\_\_ Temperature(°C): \_\_\_\_\_

Sample ID	Bottle Count	Bottle Type

Cooler#: \_\_\_\_\_ Temperature(°C): \_\_\_\_\_

Sample ID	Bottle Count	Bottle Type

Cooler#: \_\_\_\_\_ Temperature(°C): \_\_\_\_\_

Sample ID	Bottle Count	Bottle Type

Completed by: [Signature] Date: 7/25/19 Time: 0952  
00070F Cooler Temperature Compliance Form Version 000  
3/3/09



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Project: BNSF Wishram  
Project Number: 1996120.07  
Project Manager: Ryan Hultgren

Reported:  
12-Aug-2019 10:08

**OHM-1-NAPL-20190722**  
**19G0330-01 (Oil)**

**Petroleum Hydrocarbons**

Method: NWTPH-Dx

Sampled: 07/22/2019 10:15

Instrument: FID4 Analyst: JGR

Analyzed: 08/09/2019 12:25

Sample Preparation:

Preparation Method: EPA 3580A (Waste Dilution)

Extract ID: 19G0330-01 A 03

Preparation Batch: BHG0623

Sample Size: 1 g (wet)

Prepared: 26-Jul-2019

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24) HC ID: DRO	DRO	20	100000	<b>461000</b>	mg/kg	D
Motor Oil Range Organics (C24-C38) HC ID: MOTOR OIL	RRO	20	200000	<b>347000</b>	mg/kg	D
Bunker C Range Organics (C10-C38) HC ID: BUNKER C		20	500000	<b>1360000</b>	mg/kg	D
<i>Surrogate: o-Terphenyl</i>			50-150 %	116	%	



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Reported:  
12-Aug-2019 10:08

**OHM-1-NAPL-20190722**  
**19G0330-01 (Oil)**

**Washington Department of Ecology Methods**

Method: WA EPH Sampled: 07/22/2019 10:15  
Instrument: FID8 Analyst: JGR Analyzed: 08/01/2019 00:15

Sample Preparation: Preparation Method: EPA 3580A (Waste Dilution) Extract ID: 19G0330-01 A 01  
Preparation Batch: BHG0622 Sample Size: 1 g (wet)  
Prepared: 26-Jul-2019 Final Volume: 100 mL

Sample Cleanup: Cleanup Method: Silica Gel Extract ID: 19G0330-01 A 01  
Cleanup Batch: CHG0167 Initial Volume: 100 mL  
Cleaned: 26-Jul-2019 Final Volume: 100 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics		1	2000000	<b>7610000</b>	ug/kg	
C10-C12 Aliphatics		1	2000000	<b>19200000</b>	ug/kg	
C12-C16 Aliphatics		1	2000000	<b>69300000</b>	ug/kg	
C16-C21 Aliphatics		1	2000000	<b>86700000</b>	ug/kg	
C21-C34 Aliphatics		1	2000000	<b>114000000</b>	ug/kg	
<i>Surrogate: 1-Chloro-octadecane</i>			30-160 %	64.3	%	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics		1	2000000	ND	ug/kg	U
C10-C12 Aromatics		1	2000000	ND	ug/kg	U
C12-C16 Aromatics		1	2000000	<b>8950000</b>	ug/kg	
C16-C21 Aromatics		1	2000000	<b>50900000</b>	ug/kg	
C21-C34 Aromatics		1	2000000	<b>73300000</b>	ug/kg	
<i>Surrogate: o-Terphenyl</i>			30-160 %	57.6	%	



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**Reported:**  
12-Aug-2019 10:08

**OHM-2-NAPL-20190722**  
**19G0330-02 (Oil)**

**Petroleum Hydrocarbons**

Method: NWTPH-Dx

Sampled: 07/22/2019 11:55

Instrument: FID4 Analyst: JGR

Analyzed: 08/09/2019 12:46

Sample Preparation:

Preparation Method: EPA 3580A (Waste Dilution)

Extract ID: 19G0330-02 A 03

Preparation Batch: BHG0623

Sample Size: 1 g (wet)

Prepared: 26-Jul-2019

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24) HC ID: DRO	DRO	20	100000	<b>388000</b>	mg/kg	D
Motor Oil Range Organics (C24-C38) HC ID: MOTOR OIL	RRO	20	200000	<b>335000</b>	mg/kg	D
Bunker C Range Organics (C10-C38) HC ID: BUNKER C		20	500000	<b>1200000</b>	mg/kg	D
<i>Surrogate: o-Terphenyl</i>			50-150 %	107	%	



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Reported:  
12-Aug-2019 10:08

**OHM-2-NAPL-20190722**  
**19G0330-02 (Oil)**

**Washington Department of Ecology Methods**

Method: WA EPH Sampled: 07/22/2019 11:55  
Instrument: FID8 Analyst: JGR Analyzed: 08/01/2019 00:37

Sample Preparation: Preparation Method: EPA 3580A (Waste Dilution) Extract ID: 19G0330-02 A 01  
Preparation Batch: BHG0622 Sample Size: 1 g (wet)  
Prepared: 26-Jul-2019 Final Volume: 100 mL

Sample Cleanup: Cleanup Method: Silica Gel Extract ID: 19G0330-02 A 01  
Cleanup Batch: CHG0167 Initial Volume: 100 mL  
Cleaned: 26-Jul-2019 Final Volume: 100 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics		1	2000000	<b>3950000</b>	ug/kg	
C10-C12 Aliphatics		1	2000000	<b>14600000</b>	ug/kg	
C12-C16 Aliphatics		1	2000000	<b>58700000</b>	ug/kg	
C16-C21 Aliphatics		1	2000000	<b>76300000</b>	ug/kg	
C21-C34 Aliphatics		1	2000000	<b>103000000</b>	ug/kg	
<i>Surrogate: 1-Chloro-octadecane</i>			30-160 %	57.5	%	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics		1	2000000	ND	ug/kg	U
C10-C12 Aromatics		1	2000000	ND	ug/kg	U
C12-C16 Aromatics		1	2000000	<b>8390000</b>	ug/kg	
C16-C21 Aromatics		1	2000000	<b>47300000</b>	ug/kg	
C21-C34 Aromatics		1	2000000	<b>73800000</b>	ug/kg	
<i>Surrogate: o-Terphenyl</i>			30-160 %	55.0	%	





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Reported:  
12-Aug-2019 10:08

**OHM-3-NAPL-20190722**  
**19G0330-03 (Oil)**

**Petroleum Hydrocarbons**

Method: NWTPH-Dx

Sampled: 07/22/2019 16:50

Instrument: FID4 Analyst: JGR

Analyzed: 08/09/2019 13:08

Sample Preparation:

Preparation Method: EPA 3580A (Waste Dilution)

Extract ID: 19G0330-03 A 03

Preparation Batch: BHG0623

Sample Size: 1 g (wet)

Prepared: 26-Jul-2019

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24) HC ID: DRO	DRO	20	100000	<b>431000</b>	mg/kg	D
Motor Oil Range Organics (C24-C38) HC ID: MOTOR OIL	RRO	20	200000	<b>382000</b>	mg/kg	D
Bunker C Range Organics (C10-C38) HC ID: BUNKER C		20	500000	<b>1330000</b>	mg/kg	D
<i>Surrogate: o-Terphenyl</i>			50-150 %	107	%	



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Reported:  
12-Aug-2019 10:08

**OHM-3-NAPL-20190722**  
**19G0330-03 (Oil)**

**Washington Department of Ecology Methods**

Method: WA EPH Sampled: 07/22/2019 16:50  
Instrument: FID8 Analyst: JGR Analyzed: 08/01/2019 00:58

Sample Preparation: Preparation Method: EPA 3580A (Waste Dilution) Extract ID: 19G0330-03 A 01  
Preparation Batch: BHG0622 Sample Size: 1 g (wet)  
Prepared: 26-Jul-2019 Final Volume: 100 mL

Sample Cleanup: Cleanup Method: Silica Gel Extract ID: 19G0330-03 A 01  
Cleanup Batch: CHG0167 Initial Volume: 100 mL  
Cleaned: 26-Jul-2019 Final Volume: 100 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics		1	2000000	<b>4610000</b>	ug/kg	
C10-C12 Aliphatics		1	2000000	<b>16500000</b>	ug/kg	
C12-C16 Aliphatics		1	2000000	<b>63900000</b>	ug/kg	
C16-C21 Aliphatics		1	2000000	<b>79200000</b>	ug/kg	
C21-C34 Aliphatics		1	2000000	<b>114000000</b>	ug/kg	
<i>Surrogate: 1-Chloro-octadecane</i>			30-160 %	57.0	%	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics		1	2000000	ND	ug/kg	U
C10-C12 Aromatics		1	2000000	ND	ug/kg	U
C12-C16 Aromatics		1	2000000	<b>9080000</b>	ug/kg	
C16-C21 Aromatics		1	2000000	<b>53800000</b>	ug/kg	
C21-C34 Aromatics		1	2000000	<b>88700000</b>	ug/kg	
<i>Surrogate: o-Terphenyl</i>			30-160 %	56.1	%	





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Reported:  
12-Aug-2019 10:08

**Petroleum Hydrocarbons - Quality Control**

**Batch BHG0623 - EPA 3580A (Waste Dilution)**

Instrument: FID4 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Blank (BHG0623-BLK1)</b>		Prepared: 26-Jul-2019 Analyzed: 09-Aug-2019 11:43								
Diesel Range Organics (C12-C24)	ND	5000	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	10000	mg/kg							U
<i>Surrogate: o-Terphenyl</i>	2560		mg/kg	2250		114	50-150			
<b>LCS (BHG0623-BS1)</b>		Prepared: 26-Jul-2019 Analyzed: 09-Aug-2019 12:04								
Diesel Range Organics (C12-C24)	161000	5000	mg/kg	150000		107	63-120			
<i>Surrogate: o-Terphenyl</i>	2620		mg/kg	2250		116	50-150			



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Reported:  
12-Aug-2019 10:08

Washington Department of Ecology Methods - Quality Control

Batch BHG0622 - EPA 3580A (Waste Dilution)

Instrument: FID8 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Blank (BHG0622-BLK1)</b>										
Prepared: 26-Jul-2019 Analyzed: 31-Jul-2019 23:33										
C8-C10 Aliphatics	ND	2000000	ug/kg							U
C10-C12 Aliphatics	ND	2000000	ug/kg							U
C12-C16 Aliphatics	ND	2000000	ug/kg							U
C16-C21 Aliphatics	ND	2000000	ug/kg							U
C21-C34 Aliphatics	ND	2000000	ug/kg							U
Surrogate: 1-Chloro-octadecane	1020000		ug/kg	15000000		68.1	30-160			
<b>Blank (BHG0622-BLK2)</b>										
Prepared: 26-Jul-2019 Analyzed: 31-Jul-2019 01:14										
C8-C10 Aromatics	ND	2000000	ug/kg							U
C10-C12 Aromatics	ND	2000000	ug/kg							U
C12-C16 Aromatics	ND	2000000	ug/kg							U
C16-C21 Aromatics	ND	2000000	ug/kg							U
C21-C34 Aromatics	ND	2000000	ug/kg							U
Surrogate: o-Terphenyl	9730000		ug/kg	15000000		64.9	30-160			
<b>LCS (BHG0622-BS1)</b>										
Prepared: 26-Jul-2019 Analyzed: 31-Jul-2019 23:54										
C8-C10 Aliphatics	4720000	2000000	ug/kg	7500000		62.9	30-160			
C10-C12 Aliphatics	4860000	2000000	ug/kg	7500000		64.8	30-160			
C12-C16 Aliphatics	5160000	2000000	ug/kg	7500000		68.8	30-160			
C16-C21 Aliphatics	6660000	2000000	ug/kg	7500000		88.8	30-160			
C21-C34 Aliphatics	6160000	2000000	ug/kg	7500000		82.1	30-160			
Surrogate: 1-Chloro-octadecane	9820000		ug/kg	15000000		65.5	30-160			
<b>LCS (BHG0622-BS2)</b>										
Prepared: 26-Jul-2019 Analyzed: 31-Jul-2019 01:35										
C10-C12 Aromatics	4160000	2000000	ug/kg	7500000		55.5	30-160			
C12-C16 Aromatics	4900000	2000000	ug/kg	7500000		65.3	30-160			
C16-C21 Aromatics	13300000	2000000	ug/kg	15000000		88.7	30-160			
C21-C34 Aromatics	5480000	2000000	ug/kg	7500000		73.1	30-160			
Surrogate: o-Terphenyl	9720000		ug/kg	15000000		64.8	30-160			



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12-Aug-2019 10:08

**Certified Analyses included in this Report**

**Analyte**

**Certifications**

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	01/31/2021
CALAP	California Department of Public Health CAELAP	2748	06/30/2019
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	01/01/2021
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2020
WADOE	WA Dept of Ecology	C558	06/30/2019
WA-DW	Ecology - Drinking Water	C558	06/30/2019



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**Reported:**  
12-Aug-2019 10:08

### **Notes and Definitions**

- \* Flagged value is not within established control limits.
- D The reported value is from a dilution
- U This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
- 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.

# Appendix F

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## Data Validation Reports

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Soil, Reconnaissance, and LNAPL

**DATA VALIDATION SUMMARY – L852412**  
**AUGUST 2016 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L852412 Includes: NWTPH-Dx, NWTPH-Gx, VOCs, SVOCs (SIM), metals	18 August 2016	Solid Samples: B-16-20-10FT, B-16-23-10FT, B-16-19-12FT, B-16-13-11FT, B-16-21-13FT, B-16-11-12FT, B-16-10-10 FT, B-16-14FT, B-16-22-10FT, B-16-17-10FT, B-16-15-12FT, B-16-16-12FT Duplicate Samples: DUP-0809

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 3.2 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 1 below.
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	No	See Note 2 below.
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Not applicable	No laboratory duplicate samples were analyzed with this batch of samples.
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	Field duplicate DUP-0809 and primary sample B-16-22-10FT (solid) had detections of barium, chromium, lead, and benzene with RPDs within 50 percent, per the project-specific QAPP recommendations.

**NOTES**

- Percent recovery of TPHg in the MS/MSD analyses for batch R3156710 were below laboratory control limits, indicating poor performance for the MS/MSD pair. Percent recoveries of TPHg were within control limits for the LCS/LCSD pair; therefore, no action was taken. Relative percent difference for TPHg in batch R3157321 (MS/MSD pair) was outside laboratory control limits. Because the individual percent recoveries were within control limits, and percent recoveries of TPHg were within control limits for the LCS/LCSD pair, no action was taken. Percent recovery of 6 VOCs in the MS/MSD samples for batch R3156727 were outside laboratory control limits. Percent recoveries were within control limits for the LCS/LCSD pair; therefore, no action was taken. Percent recovery of most VOCs in the MS/MSD analyses for batch R3156994 were below laboratory control limits, indicating poor performance for the MS/MSD pair. Percent recoveries of all compounds were within control limits for the LCS/LCSD pair; therefore, no action was taken.

**DATA VALIDATION SUMMARY – L852412  
AUGUST 2016 SAMPLING EVENT  
BNSF Wishram**

2. Relative percent difference for 7 VOCs in batch R3156727 (LCS/LCSD pair) were outside laboratory control limits. Because the individual percent recoveries were within control limits, and percent recoveries of TPHg were within control limits for the LCS/LCSD pair, no action was taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.



**DATA VALIDATION SUMMARY – L852470**  
**AUGUST 2016 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L852470 Includes: NWTPH-Dx, NWTPH-Gx, VOCs, SVOCs (SIM)	24 August 2016	Aqueous Samples: B-16-14 (10.0)(20160808), B-16-13 (10.0)(20160808), B-16-11 (10.0)(20160808), B-16-10 (10.0)(20160808), B-16-23 (10.0)(20160808), B-16-20 (10.0)(20160808), B-16-19 (10.0)(20160808), B-16-21 (10.0)(20160808), B-16-22 (10.0)(20160809), B-16-17 (10.0)(20160809), B-16-16 (10.0)(20160809), B-16-15 (10.0)(20160809), Field Duplicate: DUP-01 (20160809) Trip Blank: TB-01 (20160809) Equipment Blank: FB-01 (20160809)

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 3.7 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 1 below.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	No	See Note 2 below.
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Not applicable	No laboratory duplicate samples were analyzed with this batch of samples.
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Not applicable	Field duplicate DUP-01(20160809) was submitted for primary sample B-16-15 (10.0)(20160809). Relative percent difference could not be calculated since target analytes were not detected in the primary and duplicate sample.

**NOTES**

- 1,2,3-Trichlorobenzene was detected at 0.385 J µg/L in the method blank for batch R3157452. Because 1,2,3-Trichlorobenzene was not detected in any of the field samples, no action was taken.

**DATA VALIDATION SUMMARY – L852470  
AUGUST 2016 SAMPLING EVENT  
BNSF Wishram**

2. The percent recovery of 1,4-Dichlorobenzene in batch R3157452 (LCS only) was less than the laboratory control limit. Because the percent recovery in the LCSD was within control limits, and 1,4-Dichlorobenzene was not detected in any field samples, no action was taken. The relative percent difference for 18 VOCs for batch R3157452 (LCS/LCSD) were outside the laboratory control limits. Because individual percent recoveries were within control limits, no action was taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L853409**  
**AUGUST 2016 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L853409 Includes: NWTPH-Dx, NWTPH-Gx, VOCs, SVOCs (SIM), metals, PCBs	23 August 2016	Solid Samples: B-16-24-29, B-16-24-12, B-16-09-15, B-16-12-10, B-16-05-04, B-16-05-10, B-16-18-10, B-16-04-04, B-16-04-10  Aqueous Samples: B-16-18(10.0)(20160811), B-16-24(25.0)(20160810), B-16-24(10.0)(20160811), B-16-09-15, B-16-12(10.0)(20160809)  Field Duplicate: DUP-0811  Trip Blank: TRIP BLANK

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 2.9 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 1 below.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 2 below.
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	No	See Note 3 below.
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Not applicable	No laboratory duplicate samples were analyzed with this batch of samples.
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	Field duplicate DUP-0811 and primary sample B-16-18-10 (solid) had detections of lead, arsenic, barium, and chromium with RPDs within 50 percent, per the project-specific QAPP recommendations.

**NOTES**

- Chromium was detected at 1.80 J µg/L in the method blank for batch R3157094. Because chromium was either not detected in any of the field samples, or was detected at concentrations greater than 10x the method blank concentration, no action was taken. Barium was detected at 5.55 J µg/L in the method blank for batch R3157967. Because barium was at concentrations greater than 10x the method blank concentration, no action was taken. 1,2,3-Trichlorobenzene was detected at 0.241 J µg/L in the method blank for batch R3157761. Because 1,2,3-Trichlorobenzene was not detected in any of the field samples, no action was taken. 1,2,3-Trichlorobenzene was detected at 0.459 J µg/kg in the method blank for batch

**DATA VALIDATION SUMMARY – L853409  
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- R3158349. Because 1,2,3-Trichlorobenzene was not detected in any of the field samples, no action was taken. Six SVOCs were detected in the method blank for batch R3157096. Because phenanthrene was detected in B-16-12(10.0)(20160809) at 0.0607 B µg/L, less than 10x the method blank concentration, phenanthrene was qualified with "J+" indicating an estimated concentration with potential high bias.
2. The relative percent difference for mercury in batch R3157074 (MS/MSD) were outside the laboratory control limits. Because individual percent recoveries were within control limits, no action was taken. The percent recoveries of 2-chloroethylvinylether in batch L853829 (MS/MSD) were 0% due to acid preservation, which causes this analyte to readily decompose. Because the percent recoveries were within control limits in the LCS/LCSD, no action was taken. The percent recoveries for total xylenes in batch L853829 (MS/MSD) were outside the laboratory control limits. Because the percent recoveries and relative percent difference were within control limits in the LCS/LCSD, no action was taken. The percent recoveries of 2-chloroethylvinylether for batch R3158349 (MS/MSD) were 0% due to acid preservation, which causes this analyte to readily decompose. Because the percent recoveries were within control limits in the LCS/LCSD, no action was taken. The percent recovery of MIBK for batch R3158349 (MSD only) was outside the laboratory control limits. Because the percent recoveries were within control limits in the LCS/LCSD, no action was taken. The percent recovery for RRO in batch R3156984 (MSD only) was outside laboratory control limits. Because percent recoveries in the LCS/LCSD were within control limits, no action was taken. The relative percent difference for 1-methylnaphthalene and 2-methylnaphthalene in batch R3157989 (MS/MSD) were outside laboratory control limits. Because individual percent recoveries for these compounds were within control limits, and percent recoveries in the LCS/LCSD were within control limits, no action was taken.
  3. The relative percent difference for n-butylbenzene, 1,2-dichlorobenzene, 2,2-dichloropropane, naphthalene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, and 1,2,3-trimethylbenzene were outside laboratory control limits. Because individual percent recoveries were within laboratory control limits and these compounds had percent recoveries and relative percent difference in the LCS/LCSD, no action was taken. The percent recoveries for 1,4-dichlorobenzene, ethylbenzene, and 1,3,5-trimethylbenzene in batch R3157761 (LCS only) were outside the laboratory control limits. Because the percent recovery in the LCSD and relative percent difference were within control limits for each of these compounds, no action was taken. The relative percent difference for acrylonitrile, bromoform, 1,3-dichloropropane, and 1,1,2-tetrachloroethane in batch R3157761 (LCS/LCSD) were outside the laboratory control limits. Because individual percent recoveries were within control limits, no action was taken. The percent recovery for dichlorodifluoromethane in batch R3158200 (LCS only) was outside the laboratory control limit. Because the percent recovery in the LCSD, relative percent difference for LCS/LCSD, and percent recoveries in the MS/MSD were within control limits, no action was taken. The relative percent difference for RRO for batch R3156984 was outside laboratory control limits. Because individual percent recoveries were within control limits, no action was taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L853761**  
**AUGUST 2016 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L853761 Includes: NWTPH-Dx, VOCs, metals	22 August 2016	Chain-of-Custody includes the following 17 samples, however, all samples except RIVER NODULE, B-16-17(10.0)(20160812), and TB-01 (20160815) were re-logged and reported under ESC L855238  Solid Samples: RIVER NODULE  Aqueous Samples: B-16-16(10.0)(20160812), B-16-11(10.0)(20160811), B-16-10(10.0)(20160811), B-16-09(10.0)(20160812), B-16-20(10.0)(20160812), B-16-21(10.0)(20160812), B-16-23(10.0)(20160811), B-16-15(10.0)(20160812), B-16-13(10.0)(20160811), B-16-17(10.0)(20160812), B-16-14(10.0)(20160811), B-16-19(10.0)(20160812), B-16-12A(10.0)(20160812), B-16-22(10.0)(20160812)  Field Duplicate: DUP-01(10.0)(20160812)  Trip Blank: TB-01 (20160815)

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	14 samples relogged and reported under different sample delivery group (L855238)
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 2.9 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 1 below.
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note 2 below.
<u>Laboratory control sample</u> – Control limits met?	No	See Note 3 below.
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Not applicable	No laboratory duplicate samples were analyzed with this batch of samples.
<u>Field duplicate samples (if submitted)</u> –	Not applicable	

**DATA VALIDATION SUMMARY – L853761**  
**AUGUST 2016 SAMPLING EVENT**  
**BNSF Wishram**

Relative percent differences within control limits?		
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**NOTES**

1. Percent recoveries of 2-chloroethylvinylether for batch R3158361 (MS/MSD pair) were 0% due to acid preservation, which causes this analyte to readily decompose. Because 2-chloroethylvinylether was not detected in the field samples, no action was taken.
2. Percent recovery for surrogate compound o-Terphenyl in sample "River Nodule" was outside the laboratory control limit due to matrix interference. No action was taken solely based on surrogate percent recovery.
3. Percent recovery of 2-chloroethylvinylether for batch R3158361 (LCSD only) and relative percent difference (LCS/LCSD pair) were outside laboratory control limits. Because 2-chloroethylvinylether was not detected in the field samples, no action was taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L855238**  
**AUGUST 2016 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L855238 Includes: Metals	26 August 2016	Aqueous Samples: B-16-16(10.0)(20160812), B-16-11(10.0)(20160811), B-16-10(10.0)(20160811), B-16-09(10.0)(20160812), B-16-20 (10.0)(20160812), B-16-21(10.0)(20160812), B-16-23(10.0)(20160811), B-16-15(10.0)(20160812), B-16-13(10.0)(20160811), B-16-14(10.0)(20160811), B-16-19(10.0)(20160812), B-16-12A(10.0)(20160812), B-16-22(10.0)(20160812) Field Duplicate: DUP-01(10.0)(20160812)

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 2.9 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 1 below.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	Not applicable	No trip blank samples were submitted with the batch of samples.
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 2 below.
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Not applicable	No laboratory duplicate samples were analyzed with this batch of samples.
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	No	Field duplicate DUP-01(10.0)(20160812) and primary sample B-16-15(10.0)(20160812) (aqueous) had detections of barium, lead, arsenic, cadmium and chromium with RPDs within 20 percent, per the project-specific QAPP recommendations. RPD for mercury was outside the 20 percent recommended limit (43.2%D).

**NOTES**

- Barium was detected at 5.55 µg/L in the method blank for batch R3157967. Because barium was detected in 6 field samples at concentrations less than 10x the method blank concentration, these results are considered estimated with a high bias and qualified with a “J+”.

**DATA VALIDATION SUMMARY – L855238  
AUGUST 2016 SAMPLING EVENT  
BNSF Wishram**

2. Relative percent difference for mercury in batches R3158926 and R3158883 (MS/MSD) was outside laboratory control limits. Because individual percent recoveries of mercury were within control limits in the MS and MSD analyses, as well as the LCS and LCSD analyses, no action was taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.



**DATA VALIDATION SUMMARY – L855414**  
**AUGUST 2016 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L855414 Includes: NWTPH-Dx, VOCs, SVOCs (SIM)	19 August 2016	Solid Samples: B-16-07-11, RMD-2-18, RMD-2-39, B-16-06-07, RMD-1-39, RMD-1-44.5, B-16-08-25, B-16-07-17, B-16-06-05, RMD-2-51, B-16-08-14, RMD-4-30, RMD-3-60, RMD-3-19, RIVER-NAPL, RMD-4-60, RMD-1-18

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 2.4 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 1 below.
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note 2 below.
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Not applicable	No laboratory duplicate samples were analyzed with this batch of samples.
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Not applicable	No field duplicate samples were analyzed with this batch of samples.

**NOTES**

- Percent recovery of all VOCs in the MS/MSD analyses for batch R3156881 were below laboratory control limits, indicating poor performance for the MS/MSD pair. Percent recoveries of all compounds were within control limits for the LCS/LCSD pair; therefore, no action was taken. Percent recovery of RRO was outside laboratory control limits in the MS sample for batch R3157228, and relative percent difference for DRO and ORO were outside laboratory control limits for the MS/MSD pairs. Percent recoveries and relative percent difference were within control limits for the LCS/LCSD pair; therefore, no action was taken.
- Percent recovery of surrogate compound p-Terphenyl-d14 for sample RMD-2-18 was outside laboratory control limits due to 50x dilution. Percent recovery of o-Terphenyl for sample RMD-4-60 and for the MS for batch R3157228 were outside laboratory control limits. No action was taken based on percent recoveries of surrogate compounds.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L866626  
OCTOBER 2016 SAMPLING EVENT  
BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L866626 Includes: NWTPH-Dx, SVOCs (SIM)	26 October 2016	Solid Samples: MW-13-12, MW-17-18, MW-18-16, MW-12-12, RMD-4-60R, RMD-4-65, B-16-03-22, B-16-02-19, MW-13-12, MW-17-18, MW-18-16, MW-12-12, RMD-4-60R, B-16-03-22, B-16-02-19  Aqueous Samples: RIVER NAPL 03; RIVER NAPL 04  Field Duplicates: DUP-01 & DUP-01

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 3.1 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	Not applicable	No trip blank samples were submitted with this batch of samples.
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 1 below.
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note 2 below.
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	Field duplicate DUP-01 and primary sample RMD-4-60R (solid) both were non-detect for NWTPH-Dx analysis with and without silica gel clean up.

**NOTES**

- The percent recoveries of anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, fluoranthene, naphthalene, phenanthrene, pyrene, and 2-methylnaphthalene were outside the laboratory control limits in the MS and/or the MSD for batch R3172348. Relative percent difference for anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, and 2-methylnaphthalene were outside the laboratory control limits for the MS/MSD pair in batch R3172348. Because the LCS/LCSD recoveries and relative percent difference were within laboratory control limits, no action was taken.
- Percent recovery of surrogate compound o-Terphenyl was outside laboratory control limits in samples "RIVER NAPL 03" and "RIVER NAPL 04" due to dilution and matrix interference.

**DATA VALIDATION SUMMARY – L866626  
OCTOBER 2016 SAMPLING EVENT  
BNSF Wishram**

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L868141**  
**OCTOBER 2016 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L868141 Includes: NWTPH-Dx, SVOCs (SIM), VOCs	1 November 2016	Solid Samples: MW-17-20, MW-14-20, MW-15-20, OHM-3-34, OHM-4-25, OHM-3-26, B-16-01-07

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 3.1 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	Not applicable	No trip blank samples were submitted with this batch of samples.
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 1 below.
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note 2 below.
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Not applicable	

**NOTES**

- The percent recovery of benzidine was outside the laboratory control limits for the MS in batch R3174443. Because the LCS/LCSD recoveries and relative percent difference were within laboratory control limits, no action was taken. Relative percent difference for acetone was outside the laboratory control limits for the MS/MSD pair in batch R3174755. Because the LCS/LCSD recoveries and relative percent difference were within laboratory control limits, no action was taken.
- Percent recovery of surrogate compound o-Terphenyl was outside laboratory control limits in samples MW-17-20, OHM-3-34, OHM-4-25, OHM-3-26, and B-16-01-07. Percent recoveries of 2 surrogate compounds were outside laboratory control limits for VOCs analysis of B-16-01-07. Percent recoveries of 3 surrogate compounds were outside laboratory control limits for SVOCs analysis of B-16-01-07.
- The percent difference or percent recovery for 2-butanone (MEK) for the continuing calibration verification (CCV) was outside the laboratory control limit. The reported result in sample B-16-01-07 (0.0185 mg/kg) should be considered estimated and qualified with a “J”.
- The internal standard for VOCs for sample B-16-01-07 was outside the laboratory acceptance criteria. The reported result for 1,2,3-trimethylbenzene (0.00430 mg/kg) in sample B-16-01-07 should be considered estimated with a potential high bias and qualified with a “J+”.

**DATA VALIDATION SUMMARY – L868141  
OCTOBER 2016 SAMPLING EVENT  
BNSF Wishram**

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L870190  
OCTOBER/NOVEMBER 2016 SAMPLING EVENT  
BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L870190 Includes: NWTPH-Dx	10 November 2016	Solid Samples: OHM-2-38, OHM-2-10, OHM-1-51, OHM-1-20

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 3.1 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	Not applicable	No trip blank samples were submitted with this batch of samples.
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note 1 below.
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Not applicable	

**NOTES**

- Percent recovery of surrogate compound o-Terphenyl was outside laboratory control limits in samples OHM-2-38, OHM-2-10, OHM-1-51, and OHM-1-20.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L928067**  
**AUGUST 2017 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L928067 Includes: NTWPH-Dx (without silica gel cleanup), SVOCs by SIM	August 18, 2017	Aqueous samples: RIVER SHEEN-080217 RIVER NAPL-080317 Field Duplicates: None Taken Equipment Blank: None Taken Trip Blanks: None Taken

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 1.7 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	No	See Note 1 below
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	NA	

**NOTES**

- Sample RIVER NAPL-080317 was analyzed for NWTPH-Dx and SW 8270D outside the recommended holding time. The NWTPH-DX was not preserved so a 7 day holding time applies for this sample. Detect and non-detect results for both methods were qualified estimated, J.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1017463 Analyses: Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, VOCs	<b>Report Date:</b> 8/21/2018 <b>Sample Dates:</b> 8/9/2018- 8/9/2018 <b>Validation Date:</b> 9/12/2018	Aqueous Samples: B-18-14, B-18-16, B-18-18, RB-02-20180809  Field Duplicates: Not Collected  Trip/Equipment Blank: Not Collected  Trip Blank: Not Collected

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	

**Temperature Note:** Samples arrived at a temperature of 2.1- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Benzo(g,h,i)perylene and Benzo(b)fluoranthene were detected in the method blank for batch WG1152400 at a concentrations of 0.00231 J and 0.00228 J ug/l respectively, no action was taken as the sample results were non-detect.

Mercury,Dissolved was detected in the method blank for batch WG1154478 at a concentration of 0.0702 J ug/l, no action was taken as the sample results were non-detect.



**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

### BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1017869 Analyses: Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 8/22/2018  <b>Sample Dates:</b> 8/13/2018- 8/14/2018  <b>Validation Date:</b> 9/12/2018	Aqueous Samples: B-18-06, B-18-07, B-18-12, B-18-13, B-18-15, B-18-17  Field Duplicates: DUP-01-20180814 (duplicate of B-18-12) Trip/Equipment Blank: Not Collected Trip Blank: TB-07-20180814, TB-08-20180814

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	No	See Note
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	No	See Note
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	See Note
<u>Other Issues?</u>	No	

**COC Note:** Sample Dup-01-20180814 not on COC, added and ran for metals, TPH-Dx, SVOCs-SIM, and VOCs

**Temperature Note:** Samples arrived at a temperature of 3.1- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Naphthalene was detected in the method blank for batch WG1153565 at a concentration of 0.0301 µg/l, no action was taken as the sample results were non-detect or the sample result was greater than 5 times the method blank.

1,2,3-Trichlorobenzene was detected in the method blank for batch WG1154074 at a concentration of 0.336 J ug/l, no action was taken as the sample results were non-detect.

**LCS Note:** The LCS or LCSD recoveries for 1,3-Dichlorobenzene and 1,2,3-Trichloropropane were above the laboratory acceptance criteria for batch WG1154074. The associated samples were non-detects, no action was taken.

**Field Duplicate Note:** Duplicate pair B-18-12 and DUP-01-20180814 had an RPD ranging from 0.6 to 6.39% for detections, no action was taken as the RPD was below 30%.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

### BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1018582 Analyses: TPH-NWTPH-DXNOSG	<b>Report Date:</b> 8/20/2018  <b>Sample Dates:</b> 8/7/2018- 8/7/2018  <b>Validation Date:</b> 9/12/2018	Aqueous Samples: RIVERSHEEN-20180807  Field Duplicates: Not Collected  Trip/Equipment Blank: Not Collected  Trip Blank: Not Collected

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	No	See Note
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	

**COC Note:** Sample re-logged from SDG L1016263.

**Temperature Note:** Samples arrived at a temperature of 4.4- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1018764 Analyses: Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 8/24/2018 <b>Sample Dates:</b> 8/15/2018- 8/16/2018 <b>Validation Date:</b> 9/12/2018	Aqueous Samples: B-18-01, B-18-02, B-18-03, B-18-04, B-18-05, B-18-08, B-18-26, B-18-27, B-18-28, B-18-29, B-18-30, RB-03-20180815  Field Duplicates: Not Collected  Trip/Equipment Blank: Not Collected  Trip Blank: TB-10-20180816, TB-12-20180816

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	No	See Note
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	

**Temperature Note:** Samples arrived at a temperature of 1.6- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** 1,2,3-Trichlorobenzene was detected in the method blank for batch WG1154074 at a concentration of 0.336 J ug/l, no action was taken as the sample results were non-detect.

Mercury, Dissolved was detected in the method blank for batch WG1154478 at a concentration of 0.0702 J ug/l, no action was taken as the sample results were non-detect.

**LCS Note:** The LCS or LCSD recoveries for 1,3-Dichlorobenzene and 1,2,3-Trichloropropane were above the laboratory acceptance criteria for batch WG1154074. The associated sample results were non-detects, no action was taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1016263 Analyses: SVOCs - SIM, TPH-NWTPH-DXNOSG, VOCs	<b>Report Date:</b> 8/16/2018 <b>Sample Dates:</b> 8/7/2018- 8/7/2018 <b>Validation Date:</b> 9/12/2018	Aqueous Samples: RIVERSHEEN-20180807 Field Duplicates: Not Collected  Trip/Equipment Blank: Not Collected Trip Blank: Not Collected

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	

**Temperature Note:** Samples arrived at a temperature of 4.4- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Benzo(b)fluoranthene and Naphthalene were detected in the method blank for batch WG1150325 at a concentrations of 0.00218 J and 0.0337 J ug/l respectively, no action was taken as the sample results were non-detect.



**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

### BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1019065 Analyses: Metals, Moisture, SVOCs - SIM, TPH, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 8/28/2018  <b>Sample Dates:</b> 8/16/2018-8/17/2018  <b>Validation Date:</b> 9/12/2018	Solid Samples: B-18-10(2.0-2.5), B-18-10(9.5-10.0), B-18-11(2.0-2.5), B-18-11(9.5-10.0), B-18-19(2.0-2.5), B-18-20(2.0-2.5), B-18-21(3.0-3.5), B-18-22(9.5-10.0), B-18-23(3.0-3.5), B-18-23(9.5-10.0)  Aqueous Samples: B-18-22, B-18-23  Field Duplicates: Not Collected  Trip/Equipment Blank: Not Collected Trip Blank: Not Collected

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	No	See Note
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	Yes	See Note

**Temperature Note:** Samples arrived at a temperature of 4.4- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Mercury, Dissolved was detected in batch WG1154478 at a concentration of 0.0702J ug/l, the sample results were non-detect or greater than 5 times the method blank.

Benzo(b)fluoranthene, Benzo(g,h,i)perylene and Naphthalene were detected in batch WG1155351 at a concentration of 0.00407J ug/l, 0.00234J ug/l and 0.0337J ug/l, respectively, the sample results were non-detect or greater than 5 times the method blank.

m&p-Xylenes was detected in batch WG1155724 at a concentration of 0.00169J mg/kg, the sample results were non-detect or greater than 5 times the method blank.

Total Solids was detected in batch WG1156889 at a concentration of 0.00100 %, the sample results were non-detect or greater than 5 times the method blank.

Total Solids was detected in batch WG1156890 at a concentration of 0.00100 %, the sample results were non-detect or greater than 5 times the method blank.

**MS/MSD Note:** The RPD for Naphthalene was above the laboratory acceptance criteria, no action was taken based on RPD alone.

The RPD for Benzo(a)anthracene was above the laboratory acceptance criteria, no action was taken based on RPD alone.

The RPD for Anthracene was above the laboratory acceptance criteria, no action was taken based on RPD alone.

The matrix spike duplicate recovery and the RPD for Fluoranthene were above the laboratory acceptance criteria, no action was taken as the associated results were non-detect.

The matrix spike duplicate recovery and the RPD for Phenanthrene were above the laboratory acceptance criteria, no action was taken as the associated results were non-detect.

The matrix spike duplicate recovery and the RPD for Pyrene were above the laboratory acceptance criteria, no action was taken as the associated results were non-detect.

The RPD for the matrix spike and matrix spike duplicate for Chrysene was above the laboratory acceptance criteria, no action was taken based on RPD alone.

**LCS Note:** The LCS RPD for Styrene was above the laboratory acceptance criteria in batch WG1155415. No action was taken based on RPD alone.

The LCS RPD for n-Propylbenzene was above the laboratory acceptance criteria in batch WG1155415. No action was taken based on RPD alone.

The LCS spike recovery for Bromobenzene was slightly above the laboratory acceptance criteria in batch WG1155415. No action was taken.

The LCS RPD for Bromobenzene was above the laboratory acceptance criteria in batch WG1155415. No action was taken based on RPD alone.

The LCS RPD for Chloroethane was above the laboratory acceptance criteria in batch WG1155415. No action was taken based on RPD alone.

The LCS RPD for Vinyl chloride was above the laboratory acceptance criteria in batch WG1155415. No action was taken based on RPD alone.

The LCS RPD for 1,1-Dichloroethene was above the laboratory acceptance criteria in batch WG1155415. No action was taken based on RPD alone.

The LCS RPD for 1,1,2-Trichlorotrifluoroethane was above the laboratory acceptance criteria in batch WG1155415. No action was taken based on RPD alone.

The LCS RPD for 1,1,2,2-Tetrachloroethane was above the laboratory acceptance criteria in batch WG1155415. No action was taken based on RPD alone.

The LCS RPD for Isopropylbenzene was above the laboratory acceptance criteria in batch WG1155415. No action was taken based on RPD alone.

**Other Note:** The calibration verification for 2-Butanone (MEK) was outside of the acceptance limits. The results in the associated analytical batch are qualified as estimated, J.

The calibration verification for Acrolein was outside of the acceptance limits. The results in the associated analytical batch are qualified as estimated, J.

The calibration verification for Bromomethane was outside of the acceptance limits. The results in the associated analytical batch are qualified as estimated, J.

The calibration verification for Trichlorofluoromethane was outside of the acceptance limits. The results in the associated analytical batch are qualified as estimated, J.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

### BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1020170 Analyses: Metals, Moisture, SVOCs - SIM, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 8/31/2018  <b>Sample Dates:</b> 8/20/2018- 8/21/2018  <b>Validation Date:</b> 9/12/2018	Solid Samples: B-18-09(9.5-10.0), B-18-09(2.0-2.5), B-18-18(52.5-53.0), B-18-18(67.5-68.0), B-18-19(9.5-10.0), B-18-20(12.0-12.5), B-18-21(7.5-8.0), B-18-24(22.5-23.0), B-18-24(9.0-9.5), B-18-24(13.5-14.0), B-18-24(2.0-2.5), B-18-25(9.5-10), B-18-25(2-2.5)  Aqueous Samples: B-18-09, B-18-10, B-18-11, B-18-19, B-18-21, B-18-24  Field Duplicates: DUP-04-20180821 (duplicate of B-18-25(2-2.5))  Trip/Equipment Blank: RB-04-20180821  Trip Blank: TB-13-20180822, TB-14-20180822

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	No	See Note
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	No	See Note
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	No	See Note
<u>Other Issues?</u>	Yes	See Note

**COC Note:** Analyses for B-18-18(67.5-68.0) and B-18-18(52.5-53.0) were not marked, new COC was sent electronically with analyses marked. Extra samples for MS/MSD PAH not received. No action taken.

**Temperature Note:** Samples arrived at a temperature of 3.1- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** 1,2,4-Trimethylbenzene was detected in batch WG1157215 at a concentration of 0.00221J mg/kg, the sample result for DUP-04-20180821 was within 5 times the method blank and reported as estimated, J.

Benzo(b)fluoranthene was detected in batch WG1156689 at a concentration of 0.00237J ug/l, the sample results were non-detect or greater than 5 times the method blank.

Mercury was detected in batch WG1157003 at a concentration of 0.00478J mg/kg, the sample results were non-detect or greater than 5 times the method blank.

Hexachloro-1,3-butadiene was detected in batch WG1157010 at a concentration of 0.301J ug/l, the sample results were non-detect or greater than 5 times the method blank.

Total Solids was detected in batch WG1157153 at a concentration of 0.00100 %, the sample results were non-detect or greater than 5 times the method blank.

Total Solids was detected in batch WG1157158 at a concentration of 0.00100 %, the sample results were non-detect or greater than 5 times the method blank.

Residual Range Organics (RRO) was detected in batch WG1157625 at a concentration of 115J ug/l, the sample results were non-detect or greater than 5 times the method blank.

**MS/MSD Note:** The matrix spike and matrix spike duplicate recoveries for 2-Butanone (MEK) were above the acceptance criteria. There were no detections in the associated sample, no action was taken.

The matrix spike recovery for n-Butylbenzene was above the acceptance criteria. The associated result was qualified as estimated, J.

The matrix spike recovery and RPD for diesel range organics and residual range organics was above the acceptance criteria. There were no detections in the associated sample, no action was taken.

**Surrogate Recovery Note:** Surrogate recovery of o-Terphenyl for sample B-18-03(2.0-2.5) was below the laboratory acceptance criteria, the sample was diluted 10 times, no action was taken.

The surrogate recovery was out of range for p-Terphenyl-d14 for sample B-18-24(13.5-14.0), the sample was highly diluted, no action was taken.

The surrogate recovery was out of range for Nitrobenzene-d5 for sample B-18-24(13.5-14.0), the sample was highly diluted, no action was taken.

The surrogate recovery was out of range for 2-Fluorobiphenyl for sample B-18-24(13.5-14.0), the sample was highly diluted, no action was taken.

The surrogate recovery was out of range for o-Terphenyl for sample B-18-24(13.5-14.0), the sample was highly diluted, no action was taken.

The surrogate recovery was out of range for p-Terphenyl-d14 for sample B-18-24(9.0-9.5), the sample was highly diluted, no action was taken.

The surrogate recovery was out of range for Nitrobenzene-d5 for sample B-18-24(9.0-9.5), the sample was highly diluted, no action was taken.

The surrogate recovery was out of range for 2-Fluorobiphenyl for sample B-18-24(9.0-9.5), the sample was highly diluted, no action was taken.

Surrogate recovery of 2-Fluorobiphenyl for sample B-18-03(2.0-2.5) was below the laboratory acceptance criteria, other surrogates in the same analysis were within range, no action was taken.

The surrogate recovery was out of range for o-Terphenyl for sample B-18-24(9.0-9.5), the sample was highly diluted, no action was taken.

The surrogate recovery was out of range for o-Terphenyl for sample B-18-25(2-2.5), the sample was highly diluted, no action was taken.

**LCS Note:** The LCS spike recovery for Dichlorodifluoromethane was slightly above the laboratory acceptance criteria in batch WG1156644. No action was taken.

**Field Duplicate Note:** For the duplicate pair, B-18-25(2-2.5) and DUP-04-20180821, the RPD was above the recommended criteria of 50%, ranging from 50-92%. No action was taken based on RPD.



**Other Note:** The calibration verification for Acetone was outside of the acceptance limits. The results in the associated analytical batch are qualified as estimated, J.

The calibration verification for Acrolein was outside of the acceptance limits. The results in the associated analytical batch are qualified as estimated, J.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

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Groundwater

**DATA VALIDATION SUMMARY – L873914**  
**NOVEMBER 2016 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L873914 Includes: Metals (total and dissolved), SVOCs, NWTPH-Dx, NWTPH-Gx, VOCs, General Chemistry	30 November 2016	Aqueous Samples: RMD-4-20161115, WMW-18-20161115, RMD-3-20161115, WMW-16-20161115, RMD-2-20161116, WMW-17-20161116, WMW-14-20161116, WMW-11-20161116, WMW-10-20161116, WMW-1-20161116, WMW-9-20161116, WMW-13-20161116, RMD-1-20161117, WMW-15-20161117, WMW-5-20161117, WMW-7-20161117, WMW-12-20161117, MW-3-20161117  Field Duplicate: DUP-20161117

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 2.4 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 1 below.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	Not applicable	No trip blank samples were submitted with this batch of samples.
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 2 below.
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	No	See Note 3 below.

**NOTES**

1. Iron (dissolved) was detected at 19.0 µg/L in the method blank for batch WG92877. Detected concentrations in the field samples less than 10X the method blank were qualified by the laboratory with “B” qualifiers. TPHG C6-C12 was detected at 49.6 J µg/L in the method blank for batch WG930020. Detected concentrations in the field samples less than 10X the method blank were qualified by the laboratory with “B” qualifiers. Benzo(b)fluoroanthene (0.0035 J µg/L) and naphthalene (0.0179 J µg/L) were detected in the method blank for batch WG928432. There were no concentrations in the field samples less than 10X the method blank, therefore no action was taken.

**DATA VALIDATION SUMMARY – L873914  
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2. Percent recovery of nitrate-nitrate in the MS for batch WG928611 was outside the laboratory control limits (biased low). Because the percent recoveries in the second MS (and MSD), as well as the LCS/LCSD pair for batch WG928611 were within laboratory control limits, no action was taken.
3. Relative percent difference (RPD) calculations for primary field sample WMW-12-20161117 and field duplicate DUP-20161117 for nitrate-nitrite and sulfate were greater than 30% (the criteria for aqueous samples presented in the QAPP). For RPD results greater than 30%, detected concentrations were qualified as estimated with a “J”.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L875439**  
**NOVEMBER 2016 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L875439 Includes: VOCs	1 December 2016	TRIP BLANK-1, TRIP BLANK-2, TRIP BLANK-3, TRIP BLANK-4

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 2.4 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	Four trip blank samples were submitted with this batch of samples.
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	Not applicable	No MS/MSD samples were analyzed with the batch of samples.
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Not applicable	No laboratory duplicate samples were analyzed with the batch of samples.
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Not applicable	No field duplicate samples were analyzed with the batch of samples.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L886938**  
**JANUARY 2017 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L886938 Includes: Metals, SVOCs, NWTPHDx, NWTPHGx, VOCs, wet chemistry	7 February 2017	Aqueous samples: MW-18-20170127, MW-17-20170127, MW-16-20170127, MW-15-20170127, MW-14-20170127  Field duplicate: DUP-20170127 (from MW-15) Trip blanks: TRIP BLANK-01, TRIP BLANK-02

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 3.1 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 1
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Not applicable	No laboratory duplicate samples were analyzed with the batch of samples.
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	

**NOTES**

1. Naphthalene was detected in the method blank for batch WG948613. As naphthalene was not detected in the associated field samples, no action was taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L888357  
JANUARY 2017 SAMPLING EVENT  
BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L888357 Includes: SVOCs by SIM	15 February 2017	Aqueous samples: MW-18-20170127, MW-17-20170127, MW-16-20170127

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 3.1 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	No	See Note 1 below.
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 2 below.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not applicable	No field/equipment blank samples were submitted with the batch of samples.
<u>Trip blank samples</u> – Analytes present in trip blank samples?	Not applicable	No trip blank samples were submitted with this sample delivery group.
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	Not applicable	No MS/MSD samples were analyzed with the batch of samples.
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Not applicable	No laboratory duplicate samples were analyzed with the batch of samples.
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Not applicable	No field duplicate samples were analyzed with the batch of samples.

**NOTES**

- Three aqueous samples were extracted outside the recommended 7 day hold time but analyzed within the recommended 40 day hold time. Detections were qualified as estimated (with “J” qualifier) and no action was taken for non-detect results since the hold time was not grossly exceeded.
- Benzo(g,h,i)perylene and naphthalene were detected in the method blank for batch WG951041. As these compounds were not detected in the associated field samples, no action was taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L903886**  
**APRIL 2017 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L903886 Includes: NWTPH-Gx, NTWPH-Dx (without silica gel cleanup), VOCs, SVOCs by SIM, metals, wet chemistry	3 May 2017	Aqueous samples: WMW-14-20170418, RMD-2-20170418, RMD-3-20170417, RMD-4-20170417, WMW-15-20170418, WMW-16-20170418, WMW-17-20170417, WMW-18-20170417, RMD-1-20170418, WMW-1-20170418, WMW-5-20170418, WMW-13-20170417, WMW-10-20170417, WMW-9-20170417, WMW-11-20170417, WMW-12-20170417, WMW-3-20170418  Field Duplicates: D-1-20170417, D-2-20170418  Equipment Blank: FB-01-20170418  Trip Blanks: TB-1, TB-2, TB-3, TB-4, TB-5, TB-6

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 3.3 degrees Celsius (°C), which was within the recommended temperature of 4°C ± 2°.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 1 below.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 2 below.
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note 3 below.
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	No	See Note 4 below.
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	Two field duplicate samples were analyzed with the batch of samples and RPDs ranged from 0.2 to 18 percent.



**DATA VALIDATION SUMMARY – L903886  
APRIL 2017 SAMPLING EVENT  
BNSF Wishram**

**NOTES**

1. Manganese (dissolved), nitrate-nitrite, and naphthalene were detected in the method blanks for batches WG972678, WG972525, and WG972578, respectively. As these compounds were not detected in the associated field samples at concentrations less than 5x the method blank concentration, no action was taken.
2. Percent recovery of nitrate-nitrite in the MS for batch WG972525 was less than the laboratory control limit. Percent recovery of sulfate in the MS for batch WG972469 was greater than the laboratory control limit. Percent recovery of manganese (dissolved) in the MSD for batch WG972678 was less than the laboratory control limit. Because the percent recoveries were acceptable in the LCS/LCSD, no action was taken.
3. Percent recovery of surrogate 4-bromofluorobenzene in sample WMW-13-20170417 was slightly less than the laboratory control limit. No action was taken based on surrogate recoveries as this one occurrence does not appear to affect overall data quality.
4. Relative percent difference for nitrate-nitrite for lab duplicate in batches WG972525 and WG973650 were outside the laboratory control limit. No action was taken because RPDs for these batches were not applicable for sample concentrations less than 5x the laboratory method reporting limit.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L938609**  
**SEPTEMBER 2017 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L938609 Includes: NWTPH-Gx, NTWPH-Dx (without silica gel cleanup), VOCs, SVOCs by SIM, metals, wet chemistry	3 October 2017	Aqueous samples: RMD-1-20170919, RMD-2-20170919, RMD-3-20170920, RMD-4-20170920, WMW-1-20170920, WMW-10-20170919, WMW-11-20170920, WMW-12-20170919, WMW-13-20170919, WMW-14-20170919, WMW-15-20170919, WMW-16-20170919, WMW-17-20170920, WMW-18-20170920, WMW-3-20170920, WMW-5-20170920 Field Duplicates: D-2-20170919, D-1-20170920 Equipment Blank: Trip Blanks: TRIPBLANK--20170919-1, TRIPBLANK--20170919-2, TRIPBLANK--20170920-2

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 0.8 which was within the recommended temperature of $\leq 6^{\circ}\text{C}$ . Samples arrived at a temperature of $6.8^{\circ}\text{C}$ which is just above the $\leq 6^{\circ}\text{C}$ recommended temperature. No action was taken.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 1 below.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 2 below.
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note 3 below.
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	Two field duplicate samples were analyzed with the batch of samples and RPDs ranged from 0.0 to 24.7 percent.

**NOTES**

- Lead, lead (dissolved), and manganese (dissolved) were detected in the method blanks for batches WG1025448, WG1025162, and WG1025162, respectively. As these compounds were not detected in the

**DATA VALIDATION SUMMARY – L938609**  
**SEPTEMBER 2017 SAMPLING EVENT**  
**BNSF Wishram**

associated field samples at concentrations less than 5x the method blank concentration, no action was taken.

2. Percent recovery of nitrate-nitrite in the MS for batch WG1025665 was less than the laboratory control limit. Because the percent recoveries were acceptable in the LCS/LCSD and this was not a project specific sample, no action was taken. Percent recovery of sulfide in the MS/MSD for batch WG1024988 was less than the laboratory control limit. Because the percent recoveries were acceptable in the LCS/LCSD and the spike amount was significantly higher than the sample concentration, no action was taken. Percent recovery of manganese (dissolved) in the MS/MSD for batch WG1025162 was less than the laboratory control limit. The sample concentration was too high to evaluate accurate spike recoveries and the percent recoveries were acceptable in the LCS/LCSD, no action was taken. Percent recovery of Gasoline Range Organics-NWTPH in the MSD was high and the RPD was also above the laboratory control limit. Because the percent recoveries were acceptable in the LCS/LCSD and the spike amount was significantly higher than the sample concentration, no action was taken.
3. Percent recovery of surrogate Nitrobenzene-d5 in sample WMW-16-20170919 was slightly more than the laboratory control limit. No action was taken based on surrogate recoveries as this one occurrence does not appear to affect overall data quality.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L954618**  
**DECEMBER 2017 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L954618 Includes: NWTPH-Gx, NTWPH-Dx (without silica gel cleanup), VOCs, SVOCs by SIM, metals, wet chemistry	18 December 2017	Aqueous samples: WMW-14-20171130, WMW-15-20171130, WMW-16-20171130, WMW-17-20171130, WMW-18-20171129  Field Duplicates: D-1-20171130 Equipment Blank: Trip Blanks: TRIPBLANK--201701130

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 4.7, 1.6, and 4.7 degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 1 below.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not Applicable	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 2 below.
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note 3 below.
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	No	See Note 4 below.
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	No	For the duplicate pair WMW-17-20171130 and D-1-20171130 the RPDs ranged from 0.0 to 43.4 percent. See Note 5 below.

**DATA VALIDATION SUMMARY – L954618  
DECEMBER 2017 SAMPLING EVENT  
BNSF Wishram**

**NOTES**

1. Iron (dissolve), Benzo(a)pyrene, and Naphthalene were detected in the method blanks for batches WG1048869, and WG1050329, respectively. As these compounds were not detected in the associated field samples at concentrations less than 5x the method blank concentration, no action was taken. Manganese (dissolved) was detected in the method blanks for batch WG1048869. It was detected in sample WMW-14-20171130 at a concentration less than 5x the method blank concentration, however no action was taken as the result was above the reporting limit and 4x the method blank concentration.
2. Percent recovery of nitrate-nitrite in the MS for batch WG1050207 was less than the laboratory control limit. Because the percent recoveries were acceptable in the LCS/LCSD and this was not a project specific sample, no action was taken.  
Percent recovery of sulfide in the MS/MSD for batch WG1049071 was less than the laboratory control limit. Because the percent recoveries were acceptable in the LCS/LCSD and the spike amount was significantly higher than the sample concentration, no action was taken.  
The matrix spike for sulfate exceeded the calibration range but was within the acceptable limits for batch WG1048854. This was not a project specific sample and no action was taken.
3. The surrogate recovery for o-terphenyl for TPH-Dx-SGT was below the acceptable limit for sample WMW-16-20171130. The recovery was acceptable for Diesel Range Organics which was diluted, however the results for Residual Range Organics may be biased low and have been qualified as estimates, J-.
4. The laboratory duplicate for ammonia nitrogen and Nitrate-Nitrite were above the acceptable limit for RPD in batch WG1050197 and WG1050207 respectively. No action was taken as the result value was less than 5 times the reporting limit.
5. Arsenic and arsenic(dissolved) were above the 30% threshold for RPD in the duplicate pair WMW-17-20171130 and D-1-20171130. The results have been qualified as estimates, J.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L974320**  
**FEBRUARY 2018 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L974320 Includes: NWTPH-Gx, NTWPH-Dx (without silica gel cleanup), VOCs, SVOCs by SIM, metals, wet chemistry	18 March 2018	Aqueous samples: WMW-14-20180227, WMW-15-20180227, WMW-16-20180227, WMW-17-20180227, WMW-18-20180227 Field Duplicates: DUP-20180227 Equipment Blank: Trip Blanks:

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 1.8 degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 1.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not Applicable	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	Not Applicable	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 2
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	No	See Note 3
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	For the duplicate pair WMW-17-20180227 and DUP-20180227 the RPDs ranged from 0.0 to 7.0 percent.

**DATA VALIDATION SUMMARY – L974320  
FEBRUARY 2018 SAMPLING EVENT  
BNSF Wishram**

**NOTES**

1. Benzo(b)fluoranthene was detected in the method blank for batch WG1080437. As this compound was not detected in the associated field samples, no action was taken.
2. Percent recovery of nitrate-nitrite in the MS for batch WG1080684 was less than the laboratory control limit. Because the percent recoveries were acceptable in the LCS/LCSD and this was not a project specific sample, no action was taken.  
Percent recovery of sulfide in the MS/MSD for batch WG1080132 was less than the laboratory control limit. Because the percent recoveries were acceptable in the LCS/LCSD and the spike amount was significantly higher than the sample concentration, no action was taken.
3. The recovery of the laboratory control sample for Anthracene, Acenaphthylene, and 2-Chloronaphthalene in batch WG1080437 were slightly above the laboratory control limits. These compounds were not detected in the associated field sample, no action was taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L989723**  
**APRIL 2018 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L989723 Includes: NWTPH-Gx, NTWPH-Dx (without silica gel cleanup), VOCs, SVOCs by SIM, metals, wet chemistry	09 May 2018	Aqueous samples: RMD-1-20180426, RMD-2-20180425, RMD-3-20180425, RMD-4-20180425, WMW-01-20180425, WMW-03-20180425, WMW-05-20180425, WMW-09-20180425, WMW-10-20180425, WMW-11-20180425, WMW-13-20180425, WMW-14-20180426, WMW-15-20180426, WMW-16-20180426, WMW-17-20180425, WMW-18-20180425  Field Duplicates: D-1-20180425, D-2-20180425 Equipment Blank: Trip Blanks: TRIP BLANK-20180425

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	No	See note 1.
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 1.8 degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 2.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not Applicable	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 3.
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note 4.
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	No	For the duplicate pair WMW-17-20180227 and DUP-20180227 the RPDs ranged from 0.0 to 164 percent. See Note 5.



**DATA VALIDATION SUMMARY – L989723**  
**APRIL 2018 SAMPLING EVENT**  
**BNSF Wishram**

**NOTES**

1. PAHs for RMD-1-20180430, RMD-4-20180430, and WMW-16-20180430 were indicated on the COC but not analyzed. The analyses were performed under SDG L990329. WMW-12-20180430 has several analyses indicated on the COC but no analyses were performed, the analyses were performed under SDG L990329.

WMW-01-20180425 was analyzed for NWTPh-Dx with and without silica gel cleanup, the COC is correct and indicates that the with silica gel analysis was run in error.

2. Sulfate was detected in the method blank at a concentration of 184J ug/l in batch WG1106224. There were either no detections or the results were much higher than the method blank result, no action was taken.

Gasoline range organics were detected in the method blanks at a concentration of 41.2J ug/l in batch WG1105159 and 34.7J ug/l in batch WG1106198. There were either no detections or the results were much higher than the method blank result, with the exception of the result for WMW-17-20180425 which has been qualified as estimated biased high, "J+", based on the method blank contamination.

Benzo(b)fluoranthene and Benzo(g,h,i)perylene were detected in the method blank for batch WG1105080 at concentrations of 0.00309J and 0.00255J ug/l respectively. There were either no detections or the results were much higher than the method blank result, no action was taken.

3. The matrix spike recovery for Nitrate-Nitrite in sample WMW-03-20180425 and the matrix spike/matrix spike duplicate in sample WMW-18-20180425 were below the laboratory control limit in batch WG1106047. The associate sample results were qualified as estimates, "J".

The matrix spike and matrix spike duplicate recovery for Nitrate-Nitrite in batch WG1107936 were below the laboratory control limit, no action was taken as project specific samples were not used and the laboratory control sample was within the acceptance criteria.

The matrix spike and matrix spike duplicate recoveries were above the laboratory acceptance criteria for sulfide in sample WMW-16-20180426 in batch WG1105792. The associated result is qualified as an estimate, "J".

4. The surrogate recovery for O-Terphenyl was below the laboratory control limit for sample WMW-03-20180425 for TPH-Dx without silica gel. The sample was diluted and the TPH-Dx with silica gel surrogate recovery was in range, no action was taken.
5. The RPD for methane in field duplicate pair RMD-2-20180425 and D-2-20180425 was 164% which is above the acceptance criteria of 30%, the associated samples were qualified as estimated, "J".

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY – L990329**  
**APRIL 2018 SAMPLING EVENT**  
**BNSF Wishram**

Laboratory Reports included in Data Validation	Report Date	Sample IDs
ESC L990329 Includes: NWTPH-Gx, NTWPH-Dx (without silica gel cleanup), VOCs, SVOCs by SIM, metals, wet chemistry	09 May 2018	Aqueous samples: RMD-1-20180426, RMD-2-20180425, RMD-3-20180425, RMD-4-20180425, WMW-01-20180425, WMW-03-20180425, WMW-05-20180425, WMW-09-20180425, WMW-10-20180425, WMW-11-20180425, WMW-13-20180425, WMW-14-20180426, WMW-15-20180426, WMW-16-20180426, WMW-17-20180425, WMW-18-20180425  Field Duplicates: D-1-20180425, D-2-20180425 Equipment Blank: Trip Blanks: TRIP BLANK-20180425

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody</u> – Chain-of-custody protocol followed?	Yes	See note 1.
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	Samples arrived at a temperature of 1.4 degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note 2.
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	Not Applicable	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix spikes/matrix spike duplicate samples</u> – Control limits met?	No	See Note 3.
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory control sample</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Not Applicable	

**DATA VALIDATION SUMMARY – L990329**  
**APRIL 2018 SAMPLING EVENT**  
**BNSF Wishram**

**NOTES**

1. PAHs for RMD-1-20180430, RMD-4-20180430, and WMW-16-20180430 were indicated on the COC for SDG L989723 but not analyzed. The analyses were performed under this SDG L990329. WMW-12-20180430 has several analyses indicated on the COC for SDG L989723 but no analyses were performed, the analyses were performed under this SDG L990329.
2. Sulfate was detected in the method blank at a concentration of 190J ug/l in batch WG1107647. There were either no detections or the results were much higher than the method blank result, no action was taken.

Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Dibenz(a,h)anthracene, and Naphthalene were detected at a concentration of 0.00446 J, 0.00521 J, 0.00462 J, 0.0241 J respectively in batch WG1106612. There were either no detections or the results were much higher than the method blank result, no action was taken.

3. The matrix spike and matrix spike duplicate recovery for Nitrate-Nitrite in batch WG1107937 were below the laboratory control limit, no action was taken as project specific samples were not used and the laboratory control sample was within the acceptance criteria.

The matrix spike and matrix spike duplicate recoveries were below the laboratory acceptance criteria for sulfate in sample WMW-12-20180430 in batch WG1107647. The associated result is qualified as an estimate, "J".

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1020953 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG	<b>Report Date:</b> 9/6/2018 <b>Sample Dates:</b> 8/22/2018- 8/23/2018 <b>Validation Date:</b> 9/12/2018	Aqueous Samples: RMD-1-20180822, RMD-2-20180822, RMD-3-20180822, RMD-4-20180822, WMW-01-20180823, WMW-03-20180823, WMW-05-20180823, WMW-09-20180823, WMW-10-20180823, WMW-11-20180823, WMW-12-20180823, WMW-13-20180823, WMW-14-20180822, WMW-15-20180822, WMW-16-20180822, WMW-17-20180822, WMW-18-20180822 Field Duplicates: D-1-20180822 (duplicate of RMD-2-20180822), D-2-20180823 (duplicate of WMW-03-20180823)  Trip/Equipment Blank: Not Collected Trip Blank: Not Collected

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	No	See Note
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	No	See Note
<u>Other Issues?</u>	No	

**COC Note:** Empty vial received, no action taken.

**Temperature Note:** Samples arrived at a temperature of 2- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Residual Range Organics (RRO) was detected in batch WG1157625 at a concentration of 115J ug/l, the sample results were non-detect or greater than 5 times the method blank.

Gasoline Range Organics-NWTPH was detected in batch WG1159472 at a concentration of 39.5J ug/l, the sample results were non-detect or greater than 5 times the method blank.

**Field Duplicate Note:** For the duplicate pair, RMD-2-20180822 and D-1-20180822, the RPD was above the recommended criteria of 20%, ranging from 40-182%. No action was taken based on RPD.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1021969 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 9/10/2018 <b>Sample Dates:</b> 8/27/2018- 8/29/2018 <b>Validation Date:</b> 9/12/2018	Aqueous Samples: WMW-19-20180827, WMW-20-20180827, WMW-21-20180827, WMW-22-20180827, WMW-23-20180827, WMW-28-20180827, WMW-31-20180827, WMW-32-20180827  Field Duplicates: D-1-20180829 (duplicate of WMW-28-20180827)  Trip/Equipment Blank: Not Collected Trip Blank: TB-15-20180827

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	

**Temperature Note:** Samples arrived at a temperature of 0.5- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Lead was detected in batch WG1160033 at a concentration of 0.286J ug/l, the sample results were non-detect or greater than 5 times the method blank.

Gasoline Range Organics-NWTPH was detected in batch WG1160460 at a concentration of 34.9J ug/l, the sample results were non-detect or greater than 5 times the method blank.

**MS/MSD Note:** The matrix spike for Nitrate-Nitrite was slight below the laboratory acceptance criteria, no action was taken.

The matrix spike for Mercury,Dissolved was slight below the laboratory acceptance criteria, no action was taken.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1022656 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 9/12/2018 <b>Sample Dates:</b> 8/29/2018- 8/30/2018 <b>Validation Date:</b>	Aqueous Samples: WMW-24-20180829, WMW-26-20180829, WMW-30-20180829  Field Duplicates: Not Collected  Equipment Blank: Not Collected Trip Blank: TRIPBLANK-20180829

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	No	See Note
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	

**COC Note:** Sample ID WMW-24-20180830 is written as WMW-24-20180829 on the second page of the COC, WMW-24-20180830 is correct, no action taken.

**Temperature Note:** Samples arrived at a temperature of 3.3- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Mercury was detected in batch WG1160814 at a concentration of 0.0511J ug/l, the sample results were non-detect, no action was taken.



Naphthalene was detected in batch WG1161305 and WG1161850 at concentrations of 0.0275J ug/l and 0.0229J ug/l respectively, the sample results were non-detect, no action was taken.

Benzo(b)fluoranthene, Benzo(g,h,i)perylene, and Phenanthrene were detected in batch WG1161850 at concentrations of 0.00478J, 0.00363J, and 0.00968J ug/l respectively, the sample results were non-detect, no action was taken.

**MS/MSD Note:** The matrix spike and matrix spike duplicate recoveries for Nitrate-Nitrite and Sulfide were below the laboratory acceptance criteria, no action was taken as the sample was not delivery group specific.

The matrix spike duplicate recoveries for Mercury, Dissolved was below the laboratory acceptance criteria and the RPD was above the laboratory acceptance criteria, no action was taken as the sample was not delivery group specific.

The matrix spike duplicate recovery for Manganese, Dissolved was below the laboratory acceptance criteria, no action was taken as the sample was not delivery group specific and the sample concentration was greater than 4 times the spike amount.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1022664 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, VOCs	<b>Report Date:</b> 9/12/2018 <b>Sample Dates:</b> 8/30/2018- 8/30/2018 <b>Validation Date:</b>	Aqueous Samples: WMW-27-20180830  Field Duplicates: Not Collected  Equipment Blank: Not Collected  Trip Blank: TRIPBLANK-20180830-1

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	

**Temperature Note:** Samples arrived at a temperature of 2.1- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Mercury was detected in the method blank in batch WG1160813 at a concentration of 0.0550J ug/l, the associated results were non-detect, no action was taken.

Manganese, Dissolved was detected in the method blank in batch WG1161806 at a concentration of 0.403J ug/l the associated sample results were more than 5 times the blank results, no action was taken.

Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Napthalene, andPhenanthrene were detected in batch WG1161850 at concentrations of 0.00478J, 0.00363J, 0.0229J, and 0.00968J ug/l repectively, the sample results were non-detect, no action was taken.

**MS/MSD Note:** The matrix spike and matrix spike duplicate recoveries were below the acceptance criteria for Nitrate-Nitrite for sample WMW-27-20180830, the associated results were qualified as estimates, J. The matrix spike recovery for a non-delivery group specific sample was also below the acceptance criteria for Nitrate-Nitrite, no action was taken.

The matrix spike and matrix spike duplicate recovery for sulfide were below the laboratory acceptance criteria, no action was taken as the sample was not delivery group specific.

The matrix spike duplicate recovery for Mercury, Dissolved was slightly below the laboratory acceptance criteria the RPD was above the acceptance criteria, the associated result was qualified as estimated, J.

The matrix spike duplicate recovery for Manganese, Dissolved was slightly below the laboratory acceptance criteria no action was taken as the spike concentration was less than 4 times the original concentration.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1022689 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 9/12/2018 <b>Sample Dates:</b> 8/30/2018- 8/31/2018 <b>Validation Date:</b>	Aqueous Samples: RMD-5-20180830, RMD-6-20180831, WMW-29-20180831  Field Duplicates: Not Collected  Equipment Blank: Not Collected Trip Blank: TRIPBLANK-20180830-2

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	See Note
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	No	See Note
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	

**COC Note:** Sample ID RMD-6-20180831 is RMD-6-20180830 on the second page of the COC, RMD-6-20180830 is the correct ID, no action taken.

**Temperature Note:** Samples arrived at a temperature of 4.7- degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Sulfate was detected in the method blank in batch WG1161634 at a concentration of 347J ug/l. The associated sample results were greater than 5x the method blank concentration, no action was taken.

Mercury was detected in the method blank in batch WG1160814 at a concentration of 0.0511J ug/l. The associated sample results were non-detect, no action was taken.

Lead, Dissolved and Manganese, Dissolved were detected in the method blank in batch WG1162700 at a concentration of 0.317J and 1.34J ug/l respectively, the associated sample results were more than 5 times the blank result or non-detect, no action was taken.

Naphthalene was detected in the method blank in batch WG1161306 at a concentration of 0.0240J ug/l. The associated sample results were non-detect, no action was taken.

**MS/MSD Note:** The matrix spike and matrix spike duplicate recovery for nitrate-nitrite and sulfide were below the laboratory acceptance criteria, no action was taken as the sample was not delivery group specific.

The matrix spike and matrix spike duplicate recovery for sulfate was below the laboratory acceptance criteria, the results exceeded the calibration range, and the original result was greater than 4 times the spike, no action was taken as the sample was not delivery group specific.

The matrix spike duplicate recovery for Mercury, Dissolved was below the laboratory acceptance criteria and the RPD was above the laboratory acceptance criteria, no action was taken as the sample was not delivery group specific.

**Lab Duplicate Note:** The laboratory duplicate result exceeded the calibration curve, no action was taken.

## **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY**  
**BNSF Wishram Washington**

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1042954 Analyses: Anions, Gases, Metals, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 11/21/2018  <b>Sample Dates:</b> 11/6/2018-11/7/2018  <b>Validation Date:</b> 12/5/2018	Aqueous Samples: WMW-19-20181107, WMW-20-20181106, WMW-21-20181106, WMW-22-20181106, WMW-23-20181106, WMW-24-20181106, WMW-26-20181106, WMW-27-20181106, WMW-28-20181106, WMW-29-20181106, WMW-30-20181106, WMW-31-20181106, WMW-32-20181106  Field Duplicates: D-1-20181106 (duplicate of WMW-28-20181106)  Equipment Blank: Not Collected Trip Blank: TB-01-20181107

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	No	See Note
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	No	See Note
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	No	See Note
<u>Other Issues?</u>	No	

**COC Note:** Trip blank analyses not marked, VOC analysis requested.

**Temperature Note:** Samples arrived at a temperature of 0.1, 0.5, and 0.6 degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Diesel Range Organics (DRO) were detected in the method blank in batch WG1194933 at a concentration of 110J ug/l, the associated results were non-detect, no action was taken.

Hexachloro-1,3-butadiene was detected in the method blank in batch WG1195898 at a concentration of 0.266J ug/l, the associated results were non-detect, no action was taken.

**MS/MSD Note:** The matrix spike recovery for Nitrate-Nitrite was below the laboratory acceptance criteria, the associated result was qualified as estimated, J.

**Surrogate Recovery Note:** The surrogate recovery of o-Terphenyl was slightly below the laboratory acceptance criteria for sample WMW-21-20181106, no action was taken.

**LCS Note:** The laboratory control sample recovery was slightly above the laboratory acceptance criteria, for Diesel Range Organics in batch WG1194933, no action was taken.

**Field Duplicate Note:** The RPD for the duplicate pair WMW-28-20181106 and D-1-20181106 for Residual Range Organics was above the acceptance criteria with an RPD of 35%, the associated results have been qualified as estimated, J.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

**DATA VALIDATION SUMMARY**  
**BNSF Wishram Washington**

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1042805 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH, TPH-NWTPH-DXNOSG	<b>Report Date:</b> 11/19/2018  <b>Sample Dates:</b> 11/7/2018- 11/7/2018  <b>Validation Date:</b> 12/5/2018	Aqueous Samples: WMW-14-20181107, WMW-15-20181107, WMW-16-20181107, WMW-17-20181107, WMW-18-20181107  Field Duplicates: D-2-20181107 (duplicate of WMW-17-20181107)  Equipment Blank: Not Collected Trip Blank: TB-02-20181107

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	See Note
<u>Other Issues?</u>	No	

**Temperature Note:** Samples arrived at a temperature of 0.1 and 0.2 degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Naphthalene was detected in the method blank in batch WG1195399 at a concentration of 0.0350 J ug/l. The associated sample results were greater than 5x the method blank concentration, no action was taken.

**MS/MSD Note:** The matrix spike recovery for Ammonia Nitrogen in batch WG1195348 was below the laboratory acceptance criteria, no action was taken as the sample was not delivery group specific.

The matrix spike recovery for Nitrate-Nitrite in batch WG1195353 was below the laboratory acceptance criteria, no action was taken as the sample was not delivery group specific.

**Field Duplicate Note:** For the duplicate pair, WMW-17-20181107 and D2-20181107, the RPD was within the recommended criteria of <20%, ranging from 1-15%.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.



## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ESC SDG: L1075084 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH, TPH-NWTPH-DXNOSG, VOCs	<b>Report Date:</b> 3/11/2019 <b>Sample Dates:</b> 3/1/2019- 3/1/2019 <b>Validation Date:</b> 4/10/2019	Aqueous Samples: WMW-14-20190301, WMW-15-20190301, WMW-16-20190301, WMW-17-20190228, WMW-18-20190228, WMW-19-20190301, WMW-20-20190228, WMW-21-20190228, WMW-22-20190228, WMW-23-20190228, WMW-24-20190228, WMW-26-20190228, WMW-27-20190228, WMW-28-20190228, WMW-29-20190228, WMW-30-20190301, WMW-31-20190301, WMW-32-20190301  Field Duplicates: D-1-20190228 (duplicate of WMW-17-20190228)  Equipment Blank: Not Collected  Trip Blank: Not Collected

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	No	See Note
<u>Other Issues?</u>	No	

**Method Blank Note:** Dissolved Manganese was detected in the method blank for batch WG1244547, no action was taken as the results were non-detect or much higher than the blank result.

**MS/MSD Note:** The matrix spike recovery in batch WG1246347 of Nitrate-Nitrite was below the acceptance criteria for sample WMW-18-20190228 and above for sample WMW-23-20190228 which also exceeded the calibration curve. The result for sample WMW-18-20190228 was qualified as estimated, J.

BNSF Wishram Washington

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**Surrogate Recovery Note:** The surrogate recovery of (S) Nitrobenzene-d5 in sample WMW-16-20190301 was 0%, re-analysis at a dilution factor of 1 does not appear to have been performed. Results associated with this surrogate have been qualified as rejected, R, for non-detects and estimated, J, for detections.

**Field Duplicate Note:** For the duplicate pair WMW-17-20190228 and D-1-20190228 the RPD for Arsenic total and dissolved, Ammonia Nitrogen, and Methane were above the acceptance criteria. The associated results have been qualified as estimated, J.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results with the exception of those qualified as rejected due to poor surrogate recovery.

## DATA VALIDATION SUMMARY

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Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt.Juliet, TN SDG: L1097209 Analyses: Anions, Gases, Metals, NWTPHGX, SVOCs - SIM, TPH- NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 5/21/2019 <b>Sample Dates:</b> 5/7/2019- 5/8/2019 <b>Validation Date:</b> 6/11/2019	Aqueous Samples: RMD-1-20190507, RMD-2-20190507, RMD-3-20190507, RMD-5-20190507, WMW-12-20190508, WMW-14-20190507, WMW-15-20190507, WMW-16-20190507, WMW-17-20190508, WMW-19-20190507, WMW-24-20190507, WMW-26-20190507, WMW-28-20190507, WMW-29-20190507, WMW-30-20190507 Field Duplicates: DUP-01-20190507 (duplicate of WMW-28-20190507), DUP-02-20190508 (duplicate of WMW-17-20190508) Equipment Blank: Not Collected Trip Blank: TB-01-20190507, TB-02-20190507, TB-03-20190507, TB-04-20190507

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	No	See Note
<u>Other Issues?</u>	Yes	See Note

**Temperature Note:** Samples arrived at a temperature of 1.8 degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Ammonia Nitrogen was detected in the method blank for batch WG1281425 at a concentration of 36.0 J ug/l. The results for RMD-2-20190507 and WMW-16-20190507 were qualified as estimated, J.

Selenium was detected in the method blank for batch WG1279590 at a concentration of 0.448 J ug/l, no action was taken as the associated results were non-detect or much high than the method blank.

Gasoline Range Organics-NWTPH were detected in the method blank for batch WG1279922 at a concentration of 98.0 J ug/l, no action was taken as the associated results were non-detect or much high than the method blank.

Residual Range Organics (RRO) were detected in the method blank for batch WG1280920 at a concentration of 255 ug/l, no action was taken as the associated results were non-detect or much high than the method blank.

Benzo(a)anthracene was detected in the method blank for batch WG1278969 at a concentration of 0.00555 J ug/l, no action was taken as the associated results were non-detect or much high than the method blank.

**MS/MSD Note:** The MS exceeded the calibration range and the MSD recovery was low for nitrate-nitrite in batch WG1281636, no action was taken as the sample result was more than 4x the spiked amount.

The MS/MSD exceeded the calibration range and the recovery was low for nitrate-nitrite in batch WG1282741, no action was taken due to the exceedance of the calibration range.

The recovery or RPD in batches WG1279590 and WG1278969 were out of range, no action was taken as the sample was non-delivery group specific.

**Field Duplicate Note:** Duplicate pair WMW-17-20190508 and DUP-02-20190508 had RPD below the acceptance criteria of 30%. The results for Nitrate-Nitrite were qualified as estimated, J, the parent result was non-detect and the duplicate result was greater than 5 times the reporting limit.

**Other Note:** Several dissolved metals were greater than the associated total metal results, no action was taken.

## SUMMARY

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

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Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt.Juliet, TN SDG: L1098098 Analyses: Anions, Gases, Metals, NWTPHGX, SVOCs - SIM, TPH- NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 5/22/2019 <b>Sample Dates:</b> 5/8/2019- 5/9/2019 <b>Validation Date:</b> 6/11/2019	Aqueous Samples: RMD-4-20190508, RMD-6-20190508, WMW-01-20190509, WMW-03-20190509, WMW-05-20190508, WMW-09-20190508, WMW-10-20190508, WMW-11-20190509, WMW-13-20190509, WMW-18-20190509, WMW-20-20190508, WMW-21-20190508, WMW-22-20190508, WMW-23-20190508, WMW-27-20190509, WMW-31-20190508, WMW-32-20190509 Field Duplicates: Not Collected Equipment Blank: Not Collected Trip Blank: TB-05-20190509, TB-06-20190509, TB-07-20190509, TB-08-20190509, TB-09-20190509

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	Yes	See Note

**Temperature Note:** Samples arrived at a temperature of 2.6 degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Barium was detected in batch WG1280931 at a concentration of 0.784 J ug/l, no action was taken as the associated results were non-detect or much higher than the method blank.

Dissolved manganese was detected in batch WG1280954 at a concentration of 0.838 J ug/l, no action was taken as the associated results were non-detect or much higher than the method blank.

Dissolved mercury was detected in batch WG1279901 and WG1279904 at concentrations of 0.0494 J and 0.0582 J ug/l, no action was taken as the associated results were non-detect or much higher than the method blank.

Mercury was detected in batch WG1279896 at a concentration of 0.0588 J ug/l, no action was taken as the associated results were non-detect or much higher than the method blank.

Lead was detected in batch WG1280927 at a concentration of 0.245 J ug/l, no action was taken as the associated results were non-detect or much higher than the method blank.

Residual Range Organics (RRO) were detected in the method blank for batch WG1280920 at a concentration of 255 ug/l, no action was taken as the associated results were non-detect or much high than the method blank.

Naphthalene was detected in batch WG1280936 at a concentration of 0.0302 J ug/l, no action was taken as the associated results were non-detect or much higher than the method blank.

1,2,3-Trichlorobenzene and Hexachloro-1,3-butadiene were detected in batch WG1281103 at concentrations of 0.328 J and 0.437 J ug/l, respectively, no action was taken as the associated results were non-detect or much higher than the method blank.

Ammonia Nitrogen was detected in batch WG1283668 at a concentration of 63.0 J ug/l, no action was taken as the associated results were non-detect or much higher than the method blank.

**MS/MSD Note:** The recovery or RPD in batch WG1282741 was out of range, no action was taken as the sample was non-delivery group specific.

The MS/MSD exceeded the calibration range and the recovery was low for nitrate-nitrite in batch WG1283677, no action was taken due to the exceedance of the calibration range.

The MS recovery was low and the RPD was above the laboratory acceptance criteria for Mercury in batch WG1279896, the associated result was qualified as estimated, J.

The MS recovery was slightly below the laboratory acceptance criteria for Ethane and Ethene in batch WG1280551, no action was taken.

**Surrogate Recovery Note:** The surrogate recovery of a,a,a-Trifluorotoluene for method 8260 was 0% for all analyses as a,a,a-Trifluorotoluene was mistakenly left out of the surrogate mix, no action was taken as the laboratory further clarified that the surrogate a,a,a-Trifluorotoluene does not apply to 8260 methodology and will not be present in future reports.

**Other Note:** WMW-18-20180509 analyzed for total arsenic by method 6010, the other samples were analyzed by 6020. No action was taken as the methods are comparable and the result was greater than the reporting limit.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

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Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt. Juliet, TN SDG: L1107629 Analyses: Metals	<b>Report Date:</b> 6/19/2019 <b>Sample Dates:</b> 5/9/2019- 5/9/2019 <b>Validation Date:</b> 7/23/2019	Aqueous Samples: WMW-18-20190509  Field Duplicates: Not Collected  Equipment Blank: Not Collected Trip Blank: Not Collected

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	See Note
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	See Note
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	See Note
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	See Note
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	See Note
<u>Other Issues?</u>	Yes	See Note

**Field Blank Note:** Not Collected

**Trip Blank Note:** Not Collected

**MS/MSD Note:** Not applicable

**Surrogate Recovery Note:** Not applicable

**Lab Duplicate Note:** Not applicable

**Field Duplicate Note:** Not applicable

**Other Note:** WMW-18-20190509 was initially analyzed for metals by method 6010 in SDG not consistent with the project. This SDG provides the reanalysis by the appropriate method 6020.

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## DATA VALIDATION SUMMARY

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Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt. Juliet, TN SDG: L1131642 Analyses: Anions, Gases, Metals, NWTPHGX, SVOCs - SIM, TPH- NWTPH-DXNOSG, TPH-NWTPH-DXSG	<b>Report Date:</b> 9/3/2019 <b>Sample Dates:</b> 8/21/2019- 8/21/2019 <b>Validation Date:</b> 9/18/2019	Aqueous Samples: RMD-2-20190821, RMD-3-20190821, WMW-17-20190821  Field Duplicates: DUP-01-20190821 (duplicate of WMW-17-20190821)  Equipment Blank: Not Collected  Trip Blank: TB-04-20190821

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	See Note
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	See Note

**Method Blank Note:** Iron, Dissolved was detected in the method blank at 68.8J ug/L for batch WG1333547. The associated sample results are much higher than that detected in the method blank or not detected. No action taken.

Manganese, Dissolved was detected in the method blank at 0.278J ug/L for batch WG1333547. The associated sample detects are much higher than that detected in the method blank or not detected. No action taken.

Hexachloro-1,3-Butadiene was detected in the method blank at 0.779 ug/L. The associated sample was not detected. No action taken.

**Field Blank Note:** Not collected

**MS/MSD Note:** QC Sample ID: (MS) R3443863-5 Parent Sample ID: L1131642-01(RMD-2-20190821) Batch: WG1333547

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The matrix spike recovery for Manganese was above the laboratory acceptance criteria at 293%. The sample concentration is too high (>4x spike amount) to evaluate accurate spike recoveries. No action taken.

QC Sample ID: (MSD) R3443863-6 Parent Sample ID: L1131642-01(RMD-2-20190821) Batch: WG1333547

The matrix spike duplicate recovery for Manganese was above the laboratory acceptance criteria at 324%. The sample concentration is too high (>4x spike amount) to evaluate accurate spike recoveries. No action taken.

**Other Note:** No chain of custody seals present. No action taken.

N-Butylbenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,4-Dichlorobenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

Hexachloro-1,3-Butadiene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,2,3-Trichlorobenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,3,5-Trimethylbenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

Lab noted "pH not in range" for Sulfide for RMD-2 and RMD-3 at pH 10. Preserved in lab. No action taken.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

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Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt. Juliet, TN SDG: L1131652 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 9/3/2019 <b>Sample Dates:</b> 8/20/2019- 8/20/2019 <b>Validation Date:</b> 9/24/2019	Aqueous Samples: RMD-6-20190820, WMW-20-20190820, WMW-21-20190820, WMW-22-20190820, WMW-23-20190820  Field Duplicates: Not Collected  Equipment Blank: Not Collected  Trip Blank: TB-03-20190821

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	See Note
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	See Note
<u>Other Issues?</u>	No	See Note

**Method Blank Note:** Mercury was detected in the method blank at 0.0682J ug/L for batch WG1333344. The associated sample results were not detected. No action taken.

Mercury, Dissolved was detected in the method blank at 0.07J ug/L for batch WG1333413. The associated sample results were not detected. No action taken.

Chromium was detected in the method blank at 1,55J ug/L for batch WG1333542. The associated sample results were not detected. No action taken.

Barium, Dissolved was detected in the method blank at 0.431J ug/L for batch WG1333547. The associated sample results were not detected or much higher than the method blank. No action taken.

Chromium, Dissolved was detected in the method blank at 0.602J ug/L for batch WG1333547. The associated sample results were not detected. No action taken.

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Iron, Dissolved was detected in the method blank at 68.8J ug/L for batch WG1333547. The associated sample results were not detected. No action taken.

Lead, Dissolved was detected in the method blank at 0.762J ug/L for batch WG1333547. The associated sample results were not detected. No action taken.

Manganese, Dissolved was detected in the method blank at 0.278J ug/L for batch WG1333547. The associated sample results were much higher than the method blank or not detected. No action taken.

Hexachloro-1,3-butadiene was detected in the method blank at 0.779J ug/L for batch WG1336242. The associated sample results were not detected. No action taken.

Naphthalene was detected in the method blank at 0.0226J ug/L for batch WG1335039. The associated sample results were not detected. No action taken.

2-Methylnaphthalene was detected in the method blank at 0.0119J ug/L for batch WG1335039. The associated sample results were not detected. No action taken.

**Field Blank Note:** Not Collected

**MS/MSD Note:** Not applicable

**Field Duplicate Note:** Not applicable

**Other Note:** No chain of custody seals present. No action taken.

N-Butylbenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,4-Dichlorobenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

Hexachloro-1,3-Butadiene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,2,3-Trichlorobenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,3,5-Trimethylbenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt. Juliet, TN SDG: L1131661 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 9/3/2019 <b>Sample Dates:</b> 8/20/2019- 8/20/2019 <b>Validation Date:</b> 9/24/2019	Aqueous Samples: WMW-05-20190820, WMW-24-20190820, WMW-26-20190820, WMW-29-20190820, WMW-30-20190820  Field Duplicates: Not Collected  Equipment Blank: Not Collected  Trip Blank: TB-01-20190821

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	No	See Note
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	See Note
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	No	See Note
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	See Note
<u>Other Issues?</u>	Yes	See Note

**Holding Time Note:** The VOC pH for WMW-29-20190820 for Method 8260C was outside of the method requirement and the analysis time was >7 days, the results were qualified as estimated,J.

**Method Blank Note:** Mercury was detected in the method blank at 0.0682J ug/L for batch WG1333344. The associated sample results were not detected. No action taken.

Chromium was detected in the method blank at 1.55J ug/L for batch WG1333542. Detect in associated sample WMW-24-20190820 is much higher than that detected in the method blank. No action taken. Detect in associated sample WMW-26-20190820 at 3.02 ug/L is qualified as estimated,J.

Iron, Dissolved was detected in the method blank at 68.8J ug/L for batch WG1333547. The associated sample results were not detected. No action taken.

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Manganese, Dissolved was detected in the method blank at 0.278J ug/L for batch WG1333547. The associated sample results were much higher than that detected in the method blank or not detected. No action taken.

Hexachloro-1,3-Butadiene was detected in method blank at 0.779J ug/L for batch WG1336242. The associated sample results were not detected. No action taken.

**Field Blank Note:** Not Collected

**LCS Note:** The LCS recovery for Selenium, Dissolved for batch WG1334768 was above the laboratory acceptance criteria at 126%. The associated sample results were not detected. No action taken.

**Field Duplicate Note:** Not applicable

**Other Note:** No chain of custody seals present. No action taken.

N-Butylbenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,4-Dichlorobenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

Hexachloro-1,3-Butadiene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,2,3-Trichlorobenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,3,5-Trimethylbenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

Lab noted "pH not in range" for Sulfide for WMW-30 at a pH 10. Preserved in lab. No action taken.

The VOC pH for WMW-29-20190820 for Method 8260C was outside of the method requirement and the analysis time was >7 days, the results were qualified as estimated, J.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt. Juliet, TN SDG: L1131721 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 9/6/2019 <b>Sample Dates:</b> 8/20/2019- 8/20/2019 <b>Validation Date:</b> 9/23/2019	Aqueous Samples: WMW-09-2019820, WMW-13-2019820, WMW-27-2019820  Field Duplicates: Not Collected  Equipment Blank: Not Collected  Trip Blank: TB-02-20190821

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	See Note
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	No	See Note
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	See Note
<u>Other Issues?</u>	Yes	See Note

**Method Blank Note:** Mercury was detected in the method blank at 0.0682J ug/L for batch WG1333344. The associated sample results were not detected. No action taken.

Chromium was detected in the method blank at 1.55J ug/L for batch WG1333542. The associated sample results were not detected. No action taken.

Hexachloro-1,3-Butadiene was detected in the method blank at 0.779J ug/L for batch WG1336242. The associated sample results were not detected. No action taken.

**Field Blank Note:** Not Collected

**MS/MSD Note:** QC Sample ID: (MS) R3444534-3 Parent Sample ID: WMW-27-2019820 Batch: WG1335156

The matrix spike recovery for Ammonia Nitrogen was below the laboratory acceptance criteria at 72.5%. The associated sample result is qualified as estimated,J.

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QC Sample ID: (MS) R3444534-3 (MSD) R3444534-4 Parent Sample ID: WMW-27-2019820 Batch: WG1335156  
The RPD for Ammonia Nitrogen exceeded the laboratory acceptance criteria at 26.8%. No action taken based upon RPD.

QC Sample ID: (MS) R3443515-4 Parent Sample ID: WMW-27-2019820 Batch: WG133344  
The matrix spike recovery for Mercury was below the laboratory acceptance criteria at 71.0%. The associated sample result is qualified as estimated, J.

QC Sample ID: (MS) R3443515-4 (MSD) R3443515-5 Parent Sample ID: WMW-27-2019820 Batch: WG133344  
The RPD for Mercury exceeded the laboratory acceptance criteria at 32.3%. No action taken based upon RPD.

QC Sample ID: (MS) R3443536-4 and (MSD) R3443516-5 Parent Sample ID: WMW-27-2019820 Batch: WG1333413  
The RPD for Mercury, Dissolved exceeded the laboratory acceptance criteria at 30.7%. No action taken based upon RPD.

QC Sample ID: (MS) R3444512-5 Parent Sample ID: WMW-28-2019820 Batch: WG1334768  
The matrix spike recovery for Selenium, Dissolved was above the laboratory acceptance criteria at 133%. The associated sample was not detected. No action taken.

QC Sample ID: (MS) R3446209-3 Parent Sample ID: WMW-28-2019820 Batch: WG1332642  
The matrix spike recovery for Acrolein was above the laboratory acceptance criteria at 196%. The associated sample was not detected. No action taken.

QC Sample ID: (MSD) R3446209-4 Parent Sample ID: WMW-28-2019820 Batch: WG1332642  
The matrix spike duplicate recovery for Acrolein was above the laboratory acceptance criteria at 231%. The associated sample was not detected. No action taken.

QC Sample ID: (MS) R3446209-3 and (MSD) R3446209-4 Parent Sample ID: WMW-27-2019820 Batch: WG1336242  
The RPD for 1,1,2-Trichlorotrifluoroethane exceeded the laboratory acceptance criteria at 30.5%. No action taken based upon RPD.

**LCS Note:** The LCS recovery for Selenium, Dissolved for batch WG1334768 was above the laboratory acceptance criteria at 126%. The associated sample results were not detected. No action taken.

**Field Duplicate Note:** Not applicable

**Other Note:** No chain of custody seals present. No action taken.

N-Butylbenzene was identified but the concentration is considered an estimate for results flagged as 'JO', the results were qualified as estimated, J.

1,4-Dichlorobenzene was identified but the concentration is considered an estimate for results flagged as 'JO', the results were qualified as estimated, J.

Hexachloro-1,3-Butadiene was identified but the concentration is considered an estimate for results flagged as 'JO', the results were qualified as estimated, J.

1,2,3-Trichlorobenzene was identified but the concentration is considered an estimate for results flagged as 'JO', the results were qualified as estimated, J.

1,3,5-Trimethylbenzene was identified but the concentration is considered an estimate for results flagged as 'JO', the results were qualified as estimated, J.

#### SUMMARY

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

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## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt. Juliet, TN SDG: L1131738 Analyses: Anions, Gases, Metals, NWTPHGX, SVOCs - SIM, TPH- NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 9/3/2019 <b>Sample Dates:</b> 8/21/2019- 8/21/2019 <b>Validation Date:</b> 9/23/2019	Aqueous Samples: WMW-01-20190821, WMW-03-20190821, WMW-16-21090821, WMW-31-20190821  Field Duplicates: Not Collected  Equipment Blank: Not Collected  Trip Blank: TB-05-20190821

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	See Note
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	See Note
<u>Other Issues?</u>	Yes	See Note

**Method Blank Note:** Mercury, Dissolved was detected in the method blank at 0.07J ug/L for batch WG1333413. The associated sample results were not detected. No action taken.

Chromium was detected in the method blank at 1.55J ug/L for batch WG133542. The associated sample results were not detected. No action taken.

Barium, Dissolved was detected in the method blank at 0.431J for batch WG1333547. The associated sample result was much higher than that detected in the blank. No action taken.

Chromium, Dissolved was detected in the method blank at 0.602 ug/L for batch WG1333547. The associated sample result was not detected. No action taken.

Iron, Dissolved was detected in the method blank at 68.8J ug/L for batch WG1333547. The associated sample results were not detected. No action taken.

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Lead, Dissolved was detected in the method blank at 0.762 ug/L for batch WG1333547. The associated sample results were not detected. No action taken.

Manganese, Dissolved was detected in the method blank at 0.278 ug/L for batch WG1333547. The associated sample results were much higher than that detected in the method blank. No action taken.

Gasoline Range Organics-NWTPH was present in the method blank at 46.7J ug/L for batch WG1335657. The associated sample result was not detected. No action taken.

Hexachloro-1,3-Butadiene was detected in the method blank at 0.779J ug/L for batch WG1336242. The associated sample results were not detected. No action taken.

Benzo(b)fluoranthene was detected in the method blank at 0.00242 ug/L for batch WG1335514. The associated sample results were not detected. No action taken.

Benzo(g,h,i)perylene was detected in the method blank at 0.00590 ug/L for batch WG1335514. The associated sample results were not detected. No action taken.

Naphthalene was detected in the method blank at 0.0223J ug/L for batch WG1335514.. The associated sample results were not detected. No action taken.

**Field Blank Note:** Not Collected

**MS/MSD Note:** QC Sample ID: (MS) R3445464-8 Parent Sample ID: WMW-01-20190821 Batch: WG1335355

The matrix spike recovery for Nitrate-Nitrite was above the laboratory acceptance criteria at 115%. The associated sample was not detected. No action taken.

**Field Duplicate Note:** Not applicable

**Other Note:** No chain of custody seals present. No action taken.

N-Butylbenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,4-Dichlorobenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

Hexachloro-1,3-Butadiene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,2,3-Trichlorobenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

1,3,5-Trimethylbenzene was identified but the concentration is considered an estimate for results flagged as 'J0', the results were qualified as estimated, J.

The laboratory noted Sulfide for WMW-03 was received at the lab at a pH of 9. Preserved in lab. No action taken.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt. Juliet, TN SDG: L1132612 Analyses: Anions, Gases, Metals, NWTPHGX, SVOCs - SIM, TPH- NWTPH-DXNOSG, VOCs	<b>Report Date:</b> 9/5/2019 <b>Sample Dates:</b> 8/22/2019- 8/22/2019 <b>Validation Date:</b> 9/23/2019	Aqueous Samples: WMW-19-20190822, WMW-28-20190822, WMW-32-20190822  Field Duplicates: DUP-02-20190822 (duplicate of WMW-28-20190822)  Equipment Blank: Not Collected  Trip Blank: TB-06-20190823

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	See Note
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	No	See Note
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	See Note

**Method Blank Note:** Gasoline Range Organics-NWTPH was present in the method blank for batch WG1339137 at 39.1J ug/L. The associated sample results were not detected. No action taken.

Styrene was present in the method blank for batch WG1338754 at 0.462J ug/L. The associated sample results were not detected. No action taken.

Benzo(b)fluoranthene was present in the method blank for batch WG1336569 at 0.00316J ug/L. The associated sample results were not detected. No action taken.

2-Methylnaphthalene was present in the method blank in batch WG1336569 at 0.0101J ug/L. The associated sample results were not detected. No action taken.

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**Field Blank Note:** Not collected

**MS/MSD Note:** QC Sample ID: (MS) R3446152-4 Parent sample ID: WMW-28-20190822 Batch: WG1335361

Nitrate-Nitrite was recovered below the laboratory acceptance limit at 81.2%. The analyte concentration exceeded the upper calibration range of the instrument. No action taken.

QC Sample ID: (MSD) R3446152-5 Parent sample ID: WMW-28-20190822 Batch: WG1335361

Nitrate-Nitrite was recovered below the laboratory acceptance limit at 89.2%. The analyte concentration exceeded the upper calibration range of the instrument. No action taken.

**LCS Note:** The LCS recovery for Selenium, Dissolved in batch WG1334768 was above the laboratory acceptance criteria at 126%. The associated sample results were not detected. No action taken.

**Other Note:** No chain of custody seals present. No action taken.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt. Juliet, TN SDG: L1132628 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG, VOCs	<b>Report Date:</b> 9/5/2019 <b>Sample Dates:</b> 8/21/2019- 8/22/2019 <b>Validation Date:</b> 9/20/2019	Aqueous Samples: RMD-1-20190822, RMD-5-20190822, WMW-10-20190822, WMW-11-20190822, WMW-12-20190822, WMW-14-20190822, WMW-15-20190822  Field Duplicates: Not Collected  Equipment Blank: Not Collected  Trip Blank: TB-07-20190823

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	See Note
<u>Trip blank samples</u> – Analytes present in trip blank samples?	Yes	See Note
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	See Note
<u>Other Issues?</u>	No	See Note

**Method Blank Note:** Benzo(b)fluoranthene was present in the method blank for batch WG1336569 at 0.00316J ug/L. The associated sample results were not detected. No action taken.

2-Methylnaphthalene was present in the method blank in batch WG1336569 at 0.0101J ug/L. The associated sample results were not detected. No action taken.

**Field Blank Note:** Not Collected

**Trip Blank Note:** Trip blank received by the lab on COC but instructions on COC were to not log in. No action taken.

**MS/MSD Note:** Not applicable

**Field Duplicate Note:** Not applicable

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**Other Note:** No chain of custody seals present. No action taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt. Juliet, TN SDG: L1132636 Analyses: Anions, Gases, Metals, SVOCs - SIM, TPH-NWTPH-DXNOSG, TPH-NWTPH-DXSG	<b>Report Date:</b> 9/6/2019 <b>Sample Dates:</b> 8/22/2019- 8/22/2019 <b>Validation Date:</b> 9/20/2019	Aqueous Samples: RMD-4-20190822, WMW-18-20190822  Field Duplicates: Not Collected  Equipment Blank: Not Collected Trip Blank: Not Collected

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	See Note
<u>Trip blank samples</u> – Analytes present in trip blank samples?	Yes	See Note
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	See Note
<u>Other Issues?</u>	No	See Note

**Method Blank Note:** Benzo(b)fluoranthene was present in the method blank for batch WG1336569 at 0.00316J ug/L. The associated sample results were not detected. No action taken.

2-Methylnaphthalene was present in the method blank in batch WG1336569 at 0.0101J ug/L. The associated sample results were not detected. No action taken.

**Field Blank Note:** Not Collected

**Trip Blank Note:** Trip blank received by the lab on COC but instructions on COC were to not log in. No action taken.

**MS/MSD Note:** QC Sample ID: (MS) R344439-6 Parent sample ID: RMD-4-20190822 Batch: WG1334826

Sulfate exceeded the upper limit of the calibration range of the instrument. No action taken.

QC Sample ID: (MSD) R344439-7 Parent sample ID: RMD-4-20190822 Batch: WG1334826

Sulfate exceeded the upper limit of the calibration range of the instrument. No action taken.

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**Field Duplicate Note:** Not applicable

**Other Note:** No chain of custody seals present. No action taken.

**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.



## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt. Juliet, TN SDG: L1161399 Analyses: Anions, Gases, Metals, NWTPHGX, SVOCs - SIM, TPH- NWTPH-DXNOSG, VOCs	<b>Report Date:</b> 11/27/2019 <b>Sample Dates:</b> 11/12/2019- 11/14/2019 <b>Validation Date:</b> 12/13/2019	Aqueous Samples: WMW-14-20191114, WMW-15-20191114, WMW-16-20191113, WMW-17-20191114, WMW-18-20191113, WMW-19-20191113, WMW-20-20191113, WMW-21-20191113, WMW-22-20191113, WMW-23-20191113, WMW-24-20191112, WMW-26-20191113, WMW-27-20191113, WMW-28-20191113, WMW-29-20191113, WMW-30-20191113, WMW-31-20191113, WMW-32-20191113  Field Duplicates: DUP-01-20191112 (duplicate of WMW-24-20191112), DUP-02-20191114 (duplicate of WMW-17-20191114)  Equipment Blank: Not Collected  Trip Blank: TB-01-20191114, TB-02-20191114, TB-03-20191114, TB-04-20191114, TB-05-20191114

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	See Note
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	No	See Note
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	No	See Note
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	No	See Note
<u>Other Issues?</u>	Yes	See Note

**Method Blank Note:** Sulfate was detected in the method blank in batch WG1384929 at 186J ug/L. The associated sample results were much higher than that detected in the method blank. No action taken.

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Barium, Dissolved was detected in the method blank in batch WG1381609 at 0.531J ug/L. The associated sample result was much higher than that detected in the method blank. No action taken.

Iron, Dissolved was detected in the method blank in batch WG1381609 at 15.9J ug/L. The associated sample results were much higher than that detected in the method blank. No action taken.

Manganese, Dissolved was detected in the method blank in batch WG1381609 at 1.82J ug/L. Sample results were at least 5x higher than that detected in the method blank, no action taken.

Naphthalene was detected in the method blank in batch WG1382191 at 0.0223J ug/L, 0.0276J ug/L, 0.0325J ug/L and 0.0332J ug/L. The associated sample results were not detected. No action taken.

1-Methylnaphthalene was detected in the method blank in batch WG1382191 at 0.00932J ug/L, 0.00958J ug/L, 0.0102J ug/L and 0.00954J ug/L. The associated sample results were much higher than that detected in the method blank. No action taken.

2-Methylnaphthalene was detected in the method blank in batch WG1382191 at 0.0104J ug/L, 0.0109J ug/L, 0.0150J ug/L, 0.0104J ug/L and 0.0117J ug/L. The associated sample results were not detected. No action taken.

**Field Blank Note:** Not collected

**MS/MSD Note:** Lab Sample: L1161399-20 Parent Sample ID: WMW-22-20191113 Batch: WG1385642

The MS recovery for Nitrate-Nitrite was below the laboratory acceptance criteria at 75.7%. The analyte concentration exceeded the upper range of the instrument. No action taken.

Lab Sample: L1161399-05 Parent Sample ID: WMW-27-20191113 Batch: WG1382380

The MS/MSD recovery for Sulfide was below the laboratory acceptance criteria at 79.1%(MS) and 79.0%(MSD). The associated result was qualified as estimated, J.

Lab Sample: L1161399-05 Parent Sample ID: WMW-27-20191113 Batch: WG1384371

The MS recovery for Ethane was above the laboratory acceptance criteria at 116%. The MSD recovery for Methane was above the laboratory acceptance criteria at 127%. The MSD recovery for Ethane was above the laboratory acceptance criteria at 129%. The MSD recovery for Ethene was above the laboratory acceptance criteria at 127%. The associated sample results were not detected, no action taken.

Lab Sample: L1161399-05 Parent Sample ID: WMW-27-20191133 Batch: WG1386388

The MSD recovery for Bromodichloromethane was above the laboratory acceptance criteria at 154%.

The MS recovery for Chloroethane was above the laboratory acceptance criteria at 185%.

The MS/MSD recovery for Chloromethane was above the laboratory acceptance criteria at 165%(MS) and 163%(MSD).

The MS recovery for Dichlorodifluoromethane was above the laboratory acceptance criteria at 163%.

The MS recovery for 2,2-Dichloropropane was above the laboratory acceptance criteria at 153%.

The MS recovery for 1,1,1-Trichloroethane was above the laboratory acceptance criteria at 168%.

The MS recovery for Trichloroethene was above the laboratory acceptance criteria at 161%.

The MS/MSD recovery for Trichlorofluoromethane was above the laboratory acceptance criteria at 170%(MS) and 173%(MSD).

The MS recovery for Vinyl chloride was above the laboratory acceptance criteria at 169%.

The associated sample results were not detected, no action taken.

**LCS Note:** The LCS recovery for 1,2-Dichloroethane was above the laboratory acceptance criteria at 133%. The associated sample WMW-27-20191113 was not detected. No action taken.

The LCSD recovery for 1,2,3-Trichlorobenzene was above the laboratory acceptance criteria at 158%. The associated sample WMW-27-20191113 was not detected. No action taken.

**Field Duplicate Note:** The RPD for the duplicate pair DUP-01-20191112 and WMW-24-20191112 ranged from 0-13%, which is within the acceptance criteria.

The RPD for the duplicate pair DUP-02-20191114 and MWM-17-20191114 ranged from 0-12%, which is within the acceptance criteria.

**Other Note:** Custody seals not present. No action taken.

Bromomethane in samples WMW-31-20191113, WMW-24-20191112, DUP-01-20191112, WMW-26-20191113, WMW-28-20191113, WMW-29-20191113, WMW-30-20191113, WMW-32-20191113, TB-01-20191114, TB-02-20191114 and TB-03-20191114 were qualified by the lab with J0 due to CCV failure. Qualify sample results as estimated, J.

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**SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

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Light Non-Aqueous Phase Liquid

## DATA VALIDATION SUMMARY

## BNSF Wishram Washington

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: Pace Analytical Services, Mt.Juliet, TN SDG: L1097316 Analyses: Metals, PCBs, TPH-NWTPH-DXNOSG, VOCs	<b>Report Date:</b> <b>Sample Dates:</b> 5/6/2019- 5/6/2019 <b>Validation Date:</b> 6/11/2019	Oil: OHM-1-20190506, OHM-3-20190506  Field Duplicates: Not Collected  Equipment Blank: Not Collected  Trip Blank: Not Collected

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	Yes	
<u>Temperature Blank</u> – Sample temperature criteria met?	Yes	
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	Yes	See Note
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	No	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	No	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	Yes	
<u>Surrogate percent recoveries</u> – Control limits met?	No	See Note
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	Yes	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	Yes	
<u>Other Issues?</u>	No	

**Temperature Note:** Samples arrived at a temperature of 2.0 degrees Celsius (°C) which was within the recommended temperature of 0- 6°C.

**Method Blank Note:** Mercury was detected in the method blank for batch WG1281392 at a concentration of 0.00532 J mg/kg. The results for OHM-1-20190506 and OHM-3-20190506 were qualified as non-detect, U, at the reporting limit.

1,2,4-Trimethylbenzene, 2-Butanone (MEK), Methylene Chloride, and m&p-Xylene were detected in batch WG1282251 at concentrations of 0.00149 J, 0.0361 J, 0.00667 J, and 0.00191 J mg/kg, respectively, no action was taken as the associated results were non-detect or much higher than the method blank.

**Surrogate Recovery Note:** 4-Bromofluorobenzene was above the laboratory acceptance criteria for sample OHM-1-20190506 and OHM-3-20190506. No action was taken as the sample was highly diluted.

o-Terphenyl was below the laboratory acceptance criteria for sample OHM-1-20190506 and OHM-3-20190506. No action was taken as the sample was highly diluted.

Decachlorobiphenyl was slightly below the acceptance criteria and Tetrachloro-m-xylene was above the acceptance criteria for sample OHM-1-20190506 and OHM-3-20190506. No action was taken.

#### **SUMMARY**

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

## DATA VALIDATION SUMMARY

### BNSF Wishram

Laboratory Reports included in Data Validation	Dates	Sample IDs
Laboratory: ARI SDG: 19G0330 Analyses: EPH, NWTPH-DX-w/BunkerC	<b>Report Date:</b> 08/12/2019  <b>Sample Dates:</b> 07/22/2019  <b>Validation Date:</b> 08/30/2019	Oil Samples: OHM-1-NAPL-20190722, OHM-2-NAPL-20190722 OHM-3-NAPL-20190722  Field Duplicates: Not collected Equipment Blank: Not collected Trip Blank: Not collected

Criteria	(Yes or No)	Comment
<u>Chain-of-Custody (COC)</u> – Chain-of-custody protocol followed?	No	See note
<u>Temperature Blank</u> – Sample temperature criteria met?	No	See note
<u>Holding times</u> – Samples analyzed within specified holding time?	Yes	
<u>Laboratory method blank samples</u> – Analytes present in method blank samples?	No	
<u>Field/Equipment blank samples</u> – Analytes present in field/equipment blank samples?	NA	
<u>Trip blank samples</u> – Analytes present in trip blank samples?	NA	
<u>Matrix Spikes (MS)/Matrix Spike Duplicate (MSD) samples</u> – Control limits met?	NA	
<u>Surrogate percent recoveries</u> – Control limits met?	Yes	
<u>Laboratory Control Sample (LCS)</u> – Control limits met?	Yes	
<u>Laboratory duplicate samples (if applicable)</u> – Control limits met?	NA	
<u>Field duplicate samples (if submitted)</u> – Relative percent differences within control limits?	NA	
<u>Other Issues?</u>	No	See note

**COC Note:** Chain of custody signed under relinquished by instead of received by upon receipt. No action taken.

**Temperature Note:** Samples arrived at the lab at 10.9C which is above the acceptance criteria. Transit time was >24 hours. Results qualified as estimated, J.

**Other Note:** Received confirmation from the lab that the NWTPH-Dx analysis was performed without no acid/silica clean up.

#### SUMMARY

Overall, the findings with respect to the quality assurance/quality control (QA/QC) data do not adversely affect the use of the analytical results.

«ProjectPreferredName»

«ProjectNumber»