

September 29, 2017

EnCana Oil & Gas - Parachute, CO

Sample Delivery Group: L938384
Samples Received: 09/22/2017
Project Number:
Description: NPR Quarterly
Site: NPR
Report To: Brett Middleton
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Shane Gambill

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

ONE LAB. NATIONWIDE.



20170921-ENPR15ST L938384-01 GW

Collected by
Brett Middleton

Collected date/time
09/21/17 10:50

Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023913	1	09/26/17 13:11	09/26/17 14:09	BS
Wet Chemistry by Method 2320 B-2011	WG1024998	1	09/27/17 10:41	09/27/17 10:41	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 15:44	09/29/17 15:44	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 16:07	09/26/17 16:07	MA
Wet Chemistry by Method 9040C	WG1023465	1	09/23/17 12:47	09/23/17 12:47	GB
Wet Chemistry by Method 9050A	WG1025796	1	09/28/17 23:58	09/28/17 23:58	JLJ
Wet Chemistry by Method 9056A	WG1023317	1	09/22/17 15:30	09/22/17 15:30	MAJ
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:05	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024153	1	09/25/17 13:53	09/25/17 13:53	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 02:06	09/24/17 02:06	BMB

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Gl

20170921-ENPR8MW L938384-02 GW

Collected by
Brett Middleton

Collected date/time
09/21/17 09:45

Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023913	1	09/26/17 13:11	09/26/17 14:09	BS
Wet Chemistry by Method 2320 B-2011	WG1025154	1	09/28/17 14:12	09/28/17 14:12	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 15:47	09/29/17 15:47	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 16:07	09/26/17 16:07	MA
Wet Chemistry by Method 9040C	WG1023666	1	09/29/17 11:45	09/29/17 11:45	ER
Wet Chemistry by Method 9050A	WG1025897	1	09/29/17 02:20	09/29/17 02:20	MZ
Wet Chemistry by Method 9056A	WG1023317	1	09/22/17 15:44	09/22/17 15:44	MAJ
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:08	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024153	1	09/25/17 13:55	09/25/17 13:55	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 02:23	09/24/17 02:23	BMB

⁷ Al

⁸ Sc

20170921-ENPR14ST L938384-03 GW

Collected by
Brett Middleton

Collected date/time
09/21/17 10:00

Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023913	1	09/26/17 13:11	09/26/17 14:09	BS
Wet Chemistry by Method 2320 B-2011	WG1025154	1	09/28/17 14:26	09/28/17 14:26	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 15:50	09/29/17 15:50	JER
Wet Chemistry by Method 4500S2 D-2011	WG1024478	1	09/26/17 16:07	09/26/17 16:07	MA
Wet Chemistry by Method 9040C	WG1023465	1	09/23/17 12:47	09/23/17 12:47	GB
Wet Chemistry by Method 9050A	WG1025897	1	09/29/17 02:20	09/29/17 02:20	MZ
Wet Chemistry by Method 9056A	WG1023317	1	09/22/17 15:59	09/22/17 15:59	MAJ
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:11	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024153	1	09/25/17 13:57	09/25/17 13:57	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 02:40	09/24/17 02:40	BMB

20170921-ENPR9MW L938384-04 GW

Collected by
Brett Middleton

Collected date/time
09/21/17 10:20

Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023913	1	09/26/17 13:11	09/26/17 14:09	BS
Wet Chemistry by Method 2320 B-2011	WG1025154	1	09/28/17 14:33	09/28/17 14:33	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 15:52	09/29/17 15:52	JER
Wet Chemistry by Method 4500S2 D-2011	WG1025429	1	09/28/17 21:29	09/28/17 21:29	MZ
Wet Chemistry by Method 9040C	WG1023465	1	09/23/17 12:47	09/23/17 12:47	GB
Wet Chemistry by Method 9050A	WG1025897	1	09/29/17 02:20	09/29/17 02:20	MZ
Wet Chemistry by Method 9056A	WG1023317	1	09/22/17 16:13	09/22/17 16:13	MAJ
Wet Chemistry by Method 9056A	WG1023317	5	09/22/17 16:28	09/22/17 16:28	MAJ

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

PROJECT:

SDG:

L938384

DATE/TIME:

09/29/17 17:44

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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20170921-ENPR9MW L938384-04 GW

Collected by
Brett Middleton

Collected date/time
09/21/17 10:20

Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:20	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024153	1	09/25/17 14:00	09/25/17 14:00	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 02:56	09/24/17 02:56	BMB

¹ Cp

² Tc

³ Ss

⁴ Cn

20170921-ENPR12ST L938384-05 GW

Collected by
Brett Middleton

Collected date/time
09/21/17 11:05

Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023913	1	09/26/17 13:11	09/26/17 14:09	BS
Wet Chemistry by Method 2320 B-2011	WG1025154	1	09/28/17 14:39	09/28/17 14:39	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 15:53	09/29/17 15:53	JER
Wet Chemistry by Method 4500S2 D-2011	WG1025429	1	09/28/17 21:30	09/28/17 21:30	MZ
Wet Chemistry by Method 9040C	WG1023465	1	09/23/17 12:47	09/23/17 12:47	GB
Wet Chemistry by Method 9050A	WG1025897	1	09/29/17 02:20	09/29/17 02:20	MZ
Wet Chemistry by Method 9056A	WG1023317	1	09/22/17 16:42	09/22/17 16:42	MAJ
Wet Chemistry by Method 9056A	WG1025431	2	09/29/17 09:51	09/29/17 09:51	NJM
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:23	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024153	1	09/25/17 14:03	09/25/17 14:03	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 03:13	09/24/17 03:13	BMB

⁵ Sr

⁶ Gl

⁷ Al

⁸ Sc

20170921-ENPR4W L938384-06 GW

Collected by
Brett Middleton

Collected date/time
09/21/17 11:15

Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023913	1	09/26/17 13:11	09/26/17 14:09	BS
Wet Chemistry by Method 2320 B-2011	WG1025154	1	09/28/17 14:46	09/28/17 14:46	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 15:59	09/29/17 15:59	JER
Wet Chemistry by Method 4500S2 D-2011	WG1025429	1	09/28/17 21:30	09/28/17 21:30	MZ
Wet Chemistry by Method 9040C	WG1023465	1	09/23/17 12:47	09/23/17 12:47	GB
Wet Chemistry by Method 9050A	WG1025897	1	09/29/17 02:20	09/29/17 02:20	MZ
Wet Chemistry by Method 9056A	WG1023317	1	09/22/17 16:56	09/22/17 16:56	MAJ
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:26	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024153	1	09/25/17 14:05	09/25/17 14:05	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 03:30	09/24/17 03:30	BMB

Collected by
Brett Middleton

Collected date/time
09/21/17 12:10

Received date/time
09/22/17 08:45

20170921-ENPR14MW L938384-07 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023913	1	09/26/17 13:11	09/26/17 14:09	BS
Wet Chemistry by Method 2320 B-2011	WG1025154	1	09/28/17 14:54	09/28/17 14:54	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 16:01	09/29/17 16:01	JER
Wet Chemistry by Method 4500S2 D-2011	WG1025429	1	09/28/17 21:30	09/28/17 21:30	MZ
Wet Chemistry by Method 9040C	WG1023465	1	09/23/17 12:47	09/23/17 12:47	GB
Wet Chemistry by Method 9050A	WG1025897	1	09/29/17 02:20	09/29/17 02:20	MZ
Wet Chemistry by Method 9056A	WG1023317	1	09/22/17 17:11	09/22/17 17:11	MAJ
Wet Chemistry by Method 9056A	WG1023317	5	09/22/17 17:25	09/22/17 17:25	MAJ
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:30	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024153	1	09/25/17 14:07	09/25/17 14:07	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 03:46	09/24/17 03:46	BMB

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20170921-ENPR L938384-08 GW

Collected by
Brett Middleton

Collected date/time
09/21/17 13:00

Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023913	1	09/26/17 13:11	09/26/17 14:09	BS
Wet Chemistry by Method 2320 B-2011	WG1025154	1	09/28/17 15:00	09/28/17 15:00	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 16:03	09/29/17 16:03	JER
Wet Chemistry by Method 4500S2 D-2011	WG1025429	1	09/28/17 21:30	09/28/17 21:30	MZ
Wet Chemistry by Method 9040C	WG1022865	1	09/22/17 17:05	09/22/17 17:05	TH
Wet Chemistry by Method 9050A	WG1025897	1	09/29/17 02:20	09/29/17 02:20	MZ
Wet Chemistry by Method 9056A	WG1023317	1	09/22/17 18:09	09/22/17 18:09	MAJ
Wet Chemistry by Method 9056A	WG1025431	5	09/29/17 10:21	09/29/17 10:21	NJM
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:33	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 10:26	09/25/17 10:26	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 04:03	09/24/17 04:03	BMB

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Gl

⁷ Al

⁸ Sc

20170921-ENPR11MW L938384-09 GW

Collected by
Brett Middleton

Collected date/time
09/21/17 13:20

Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023914	1	09/26/17 11:10	09/26/17 13:54	MMF
Wet Chemistry by Method 2320 B-2011	WG1025154	1	09/28/17 15:07	09/28/17 15:07	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 16:04	09/29/17 16:04	JER
Wet Chemistry by Method 4500S2 D-2011	WG1025429	1	09/28/17 21:31	09/28/17 21:31	MZ
Wet Chemistry by Method 9040C	WG1022865	1	09/22/17 17:05	09/22/17 17:05	TH
Wet Chemistry by Method 9050A	WG1025897	1	09/29/17 02:20	09/29/17 02:20	MZ
Wet Chemistry by Method 9056A	WG1023317	1	09/22/17 18:23	09/22/17 18:23	MAJ
Wet Chemistry by Method 9056A	WG1023317	5	09/22/17 18:37	09/22/17 18:37	MAJ
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:36	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 10:28	09/25/17 10:28	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 04:20	09/24/17 04:20	BMB

Collected by
Brett Middleton

Collected date/time
09/21/17 13:40

Received date/time
09/22/17 08:45

20170921-ENPR10MW L938384-10 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023914	1	09/26/17 11:10	09/26/17 13:54	MMF
Wet Chemistry by Method 2320 B-2011	WG1025154	1	09/28/17 15:31	09/28/17 15:31	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 16:06	09/29/17 16:06	JER
Wet Chemistry by Method 4500S2 D-2011	WG1025429	1	09/28/17 21:32	09/28/17 21:32	MZ
Wet Chemistry by Method 9040C	WG1022865	1	09/22/17 17:05	09/22/17 17:05	TH
Wet Chemistry by Method 9050A	WG1025897	1	09/29/17 02:20	09/29/17 02:20	MZ
Wet Chemistry by Method 9056A	WG1023317	1	09/22/17 18:52	09/22/17 18:52	MAJ
Wet Chemistry by Method 9056A	WG1023317	5	09/22/17 19:06	09/22/17 19:06	MAJ
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:39	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 10:30	09/25/17 10:30	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 04:36	09/24/17 04:36	BMB

Collected by
Brett Middleton

Collected date/time
09/21/17 12:25

Received date/time
09/22/17 08:45

20170921-ENPR16MW L938384-11 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1023914	1	09/26/17 11:10	09/26/17 13:54	MMF
Wet Chemistry by Method 2320 B-2011	WG1025154	1	09/28/17 15:38	09/28/17 15:38	MCG
Wet Chemistry by Method 350.1	WG1025661	1	09/29/17 16:07	09/29/17 16:07	JER
Wet Chemistry by Method 4500S2 D-2011	WG1025429	1	09/28/17 21:32	09/28/17 21:32	MZ
Wet Chemistry by Method 9040C	WG1023666	1	09/29/17 11:45	09/29/17 11:45	ER

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

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L938384

DATE/TIME:

09/29/17 17:44

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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20170921-ENPR16MW L938384-11 GW

Collected by
Brett MiddletonCollected date/time
09/21/17 12:25Received date/time
09/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9050A	WG1025897	1	09/29/17 02:20	09/29/17 02:20	MZ
Wet Chemistry by Method 9056A	WG1023521	1	09/22/17 19:54	09/22/17 19:54	NJM
Metals (ICP) by Method 6010B	WG1024220	1	09/29/17 08:31	09/29/17 12:42	CCE
Volatile Organic Compounds (GC) by Method RSK175	WG1024154	1	09/25/17 10:33	09/25/17 10:33	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1024009	1	09/24/17 04:53	09/24/17 04:53	BMB

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Gl⁷ Al⁸ Sc

ACCOUNT:

EnCana Oil & Gas - Parachute, CO

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SDG:

L938384

DATE/TIME:

09/29/17 17:44

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

Shane Gambill
Technical Service Representative





Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	455		10.0	1	09/26/2017 14:09	WG1023913

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	308		20.0	1	09/27/2017 10:41	WG1024998
Alkalinity,Bicarbonate	292		20.0	1	09/27/2017 10:41	WG1024998
Alkalinity,Carbonate	ND	P1	20.0	1	09/27/2017 10:41	WG1024998

Sample Narrative:

L938384-01 WG1024998: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	09/29/2017 15:44	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/26/2017 16:07	WG1024478

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.41	T8	1	09/23/2017 12:47	WG1023465

Sample Narrative:

L938384-01 WG1023465: 8.41 at 19.4c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	744		1	09/28/2017 23:58	WG1025796

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 15:30	WG1023317
Chloride	9.22		1.00	1	09/22/2017 15:30	WG1023317
Fluoride	0.588		0.100	1	09/22/2017 15:30	WG1023317
Nitrate as (N)	1.53		0.100	1	09/22/2017 15:30	WG1023317
Nitrite as (N)	ND		0.100	1	09/22/2017 15:30	WG1023317
Sulfate	92.4		5.00	1	09/22/2017 15:30	WG1023317

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:05	WG1024220
Barium,Dissolved	0.0698		0.00500	1	09/29/2017 12:05	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:05	WG1024220
Calcium,Dissolved	60.6		1.00	1	09/29/2017 12:05	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:05	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:05	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:05	WG1024220
Magnesium,Dissolved	36.3		1.00	1	09/29/2017 12:05	WG1024220
Manganese,Dissolved	ND		0.0100	1	09/29/2017 12:05	WG1024220
Potassium,Dissolved	2.27		1.00	1	09/29/2017 12:05	WG1024220
Selenium,Dissolved	ND		0.0100	1	09/29/2017 12:05	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:05	WG1024220
Sodium,Dissolved	48.8		1.00	1	09/29/2017 12:05	WG1024220

1
Cp2
Tc3
Ss4
Cn5
Sr6
Gl7
Al8
Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	09/25/2017 13:53	WG1024153
Ethane	ND		0.0130	1	09/25/2017 13:53	WG1024153
Ethene	ND		0.0130	1	09/25/2017 13:53	WG1024153

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 02:06	WG1024009
Toluene	ND		0.00100	1	09/24/2017 02:06	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 02:06	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 02:06	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 02:06	WG1024009
(S) Toluene-d8	103		80.0-120		09/24/2017 02:06	WG1024009
(S) Dibromofluoromethane	99.5		76.0-123		09/24/2017 02:06	WG1024009
(S) 4-Bromofluorobenzene	109		80.0-120		09/24/2017 02:06	WG1024009



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	388		10.0	1	09/26/2017 14:09	WG1023913

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	300		20.0	1	09/28/2017 14:12	WG1025154
Alkalinity,Bicarbonate	300		20.0	1	09/28/2017 14:12	WG1025154
Alkalinity,Carbonate	ND		20.0	1	09/28/2017 14:12	WG1025154

Sample Narrative:

L938384-02 WG1025154: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	09/29/2017 15:47	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/26/2017 16:07	WG1024478

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.80	T8	1	09/29/2017 11:45	WG1023666

Sample Narrative:

L938384-02 WG1023666: 7.8 at 16.2c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	640		1	09/29/2017 02:20	WG1025897

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 15:44	WG1023317
Chloride	6.84		1.00	1	09/22/2017 15:44	WG1023317
Fluoride	0.556		0.100	1	09/22/2017 15:44	WG1023317
Nitrate as (N)	0.811		0.100	1	09/22/2017 15:44	WG1023317
Nitrite as (N)	ND		0.100	1	09/22/2017 15:44	WG1023317
Sulfate	54.8		5.00	1	09/22/2017 15:44	WG1023317

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:08	WG1024220
Barium,Dissolved	0.0664		0.00500	1	09/29/2017 12:08	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:08	WG1024220
Calcium,Dissolved	56.0		1.00	1	09/29/2017 12:08	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:08	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:08	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:08	WG1024220
Magnesium,Dissolved	30.1		1.00	1	09/29/2017 12:08	WG1024220
Manganese,Dissolved	ND		0.0100	1	09/29/2017 12:08	WG1024220
Potassium,Dissolved	2.26		1.00	1	09/29/2017 12:08	WG1024220
Selenium,Dissolved	ND		0.0100	1	09/29/2017 12:08	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:08	WG1024220
Sodium,Dissolved	43.8		1.00	1	09/29/2017 12:08	WG1024220

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	09/25/2017 13:55	WG1024153
Ethane	ND		0.0130	1	09/25/2017 13:55	WG1024153
Ethene	ND		0.0130	1	09/25/2017 13:55	WG1024153

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 02:23	WG1024009
Toluene	ND		0.00100	1	09/24/2017 02:23	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 02:23	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 02:23	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 02:23	WG1024009
(S) Toluene-d8	106		80.0-120		09/24/2017 02:23	WG1024009
(S) Dibromofluoromethane	101		76.0-123		09/24/2017 02:23	WG1024009
(S) 4-Bromofluorobenzene	107		80.0-120		09/24/2017 02:23	WG1024009



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	419		10.0	1	09/26/2017 14:09	WG1023913

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	309		20.0	1	09/28/2017 14:26	WG1025154
Alkalinity,Bicarbonate	309		20.0	1	09/28/2017 14:26	WG1025154
Alkalinity,Carbonate	ND		20.0	1	09/28/2017 14:26	WG1025154

Sample Narrative:

L938384-03 WG1025154: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	09/29/2017 15:50	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/26/2017 16:07	WG1024478

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.89	T8	1	09/23/2017 12:47	WG1023465

Sample Narrative:

L938384-03 WG1023465: 7.89 at 19.4c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	688		1	09/29/2017 02:20	WG1025897

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 15:59	WG1023317
Chloride	7.71		1.00	1	09/22/2017 15:59	WG1023317
Fluoride	0.566		0.100	1	09/22/2017 15:59	WG1023317
Nitrate as (N)	1.19		0.100	1	09/22/2017 15:59	WG1023317
Nitrite as (N)	ND		0.100	1	09/22/2017 15:59	WG1023317
Sulfate	72.7		5.00	1	09/22/2017 15:59	WG1023317

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:11	WG1024220
Barium,Dissolved	0.0658		0.00500	1	09/29/2017 12:11	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:11	WG1024220
Calcium,Dissolved	59.3		1.00	1	09/29/2017 12:11	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:11	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:11	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:11	WG1024220
Magnesium,Dissolved	33.2		1.00	1	09/29/2017 12:11	WG1024220
Manganese,Dissolved	ND		0.0100	1	09/29/2017 12:11	WG1024220
Potassium,Dissolved	2.33		1.00	1	09/29/2017 12:11	WG1024220
Selenium,Dissolved	ND		0.0100	1	09/29/2017 12:11	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:11	WG1024220
Sodium,Dissolved	47.2		1.00	1	09/29/2017 12:11	WG1024220

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Gl⁷ Al⁸ Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	09/25/2017 13:57	WG1024153
Ethane	ND		0.0130	1	09/25/2017 13:57	WG1024153
Ethene	ND		0.0130	1	09/25/2017 13:57	WG1024153

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 02:40	WG1024009
Toluene	ND		0.00100	1	09/24/2017 02:40	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 02:40	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 02:40	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 02:40	WG1024009
(S) Toluene-d8	105		80.0-120		09/24/2017 02:40	WG1024009
(S) Dibromofluoromethane	99.4		76.0-123		09/24/2017 02:40	WG1024009
(S) 4-Bromofluorobenzene	108		80.0-120		09/24/2017 02:40	WG1024009



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	652		10.0	1	09/26/2017 14:09	WG1023913

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	334		20.0	1	09/28/2017 14:33	WG1025154
Alkalinity,Bicarbonate	334		20.0	1	09/28/2017 14:33	WG1025154
Alkalinity,Carbonate	ND		20.0	1	09/28/2017 14:33	WG1025154

Sample Narrative:

L938384-04 WG1025154: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	09/29/2017 15:52	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/28/2017 21:29	WG1025429

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.59	T8	1	09/23/2017 12:47	WG1023465

Sample Narrative:

L938384-04 WG1023465: 7.59 at 19.6c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1010		1	09/29/2017 02:20	WG1025897

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 16:13	WG1023317
Chloride	17.3		1.00	1	09/22/2017 16:13	WG1023317
Fluoride	0.654		0.100	1	09/22/2017 16:13	WG1023317
Nitrate as (N)	4.80		0.100	1	09/22/2017 16:13	WG1023317
Nitrite as (N)	ND		0.100	1	09/22/2017 16:13	WG1023317
Sulfate	179		25.0	5	09/22/2017 16:28	WG1023317

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:20	WG1024220
Barium,Dissolved	0.0678		0.00500	1	09/29/2017 12:20	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:20	WG1024220
Calcium,Dissolved	77.5		1.00	1	09/29/2017 12:20	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:20	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:20	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:20	WG1024220
Magnesium,Dissolved	51.6		1.00	1	09/29/2017 12:20	WG1024220
Manganese,Dissolved	ND		0.0100	1	09/29/2017 12:20	WG1024220
Potassium,Dissolved	2.90		1.00	1	09/29/2017 12:20	WG1024220
Selenium,Dissolved	0.0104		0.0100	1	09/29/2017 12:20	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:20	WG1024220
Sodium,Dissolved	65.7		1.00	1	09/29/2017 12:20	WG1024220

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Gl⁷ Al⁸ Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	09/25/2017 14:00	WG1024153
Ethane	ND		0.0130	1	09/25/2017 14:00	WG1024153
Ethene	ND		0.0130	1	09/25/2017 14:00	WG1024153

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 02:56	WG1024009
Toluene	ND		0.00100	1	09/24/2017 02:56	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 02:56	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 02:56	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 02:56	WG1024009
(S) Toluene-d8	103		80.0-120		09/24/2017 02:56	WG1024009
(S) Dibromofluoromethane	101		76.0-123		09/24/2017 02:56	WG1024009
(S) 4-Bromofluorobenzene	108		80.0-120		09/24/2017 02:56	WG1024009



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	480		10.0	1	09/26/2017 14:09	WG1023913

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	314		20.0	1	09/28/2017 14:39	WG1025154
Alkalinity,Bicarbonate	314		20.0	1	09/28/2017 14:39	WG1025154
Alkalinity,Carbonate	ND		20.0	1	09/28/2017 14:39	WG1025154

Sample Narrative:

L938384-05 WG1025154: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	09/29/2017 15:53	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/28/2017 21:30	WG1025429

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.28	T8	1	09/23/2017 12:47	WG1023465

Sample Narrative:

L938384-05 WG1023465: 8.28 at 19.3c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	790		1	09/29/2017 02:20	WG1025897

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 16:42	WG1023317
Chloride	7.07		1.00	1	09/22/2017 16:42	WG1023317
Fluoride	0.739		0.100	1	09/22/2017 16:42	WG1023317
Nitrate as (N)	0.559		0.100	1	09/22/2017 16:42	WG1023317
Nitrite as (N)	ND		0.100	1	09/22/2017 16:42	WG1023317
Sulfate	115		10.0	2	09/29/2017 09:51	WG1025431

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:23	WG1024220
Barium,Dissolved	0.0554		0.00500	1	09/29/2017 12:23	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:23	WG1024220
Calcium,Dissolved	53.5		1.00	1	09/29/2017 12:23	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:23	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:23	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:23	WG1024220
Magnesium,Dissolved	41.5		1.00	1	09/29/2017 12:23	WG1024220
Manganese,Dissolved	ND		0.0100	1	09/29/2017 12:23	WG1024220
Potassium,Dissolved	3.26		1.00	1	09/29/2017 12:23	WG1024220
Selenium,Dissolved	ND		0.0100	1	09/29/2017 12:23	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:23	WG1024220
Sodium,Dissolved	59.3		1.00	1	09/29/2017 12:23	WG1024220

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Gl⁷ Al⁸ Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	09/25/2017 14:03	WG1024153
Ethane	ND		0.0130	1	09/25/2017 14:03	WG1024153
Ethene	ND		0.0130	1	09/25/2017 14:03	WG1024153

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 03:13	WG1024009
Toluene	ND		0.00100	1	09/24/2017 03:13	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 03:13	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 03:13	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 03:13	WG1024009
(S) Toluene-d8	104		80.0-120		09/24/2017 03:13	WG1024009
(S) Dibromofluoromethane	101		76.0-123		09/24/2017 03:13	WG1024009
(S) 4-Bromofluorobenzene	109		80.0-120		09/24/2017 03:13	WG1024009



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	391		10.0	1	09/26/2017 14:09	WG1023913

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	284		20.0	1	09/28/2017 14:46	WG1025154
Alkalinity,Bicarbonate	284		20.0	1	09/28/2017 14:46	WG1025154
Alkalinity,Carbonate	ND		20.0	1	09/28/2017 14:46	WG1025154

Sample Narrative:

L938384-06 WG1025154: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	09/29/2017 15:59	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/28/2017 21:30	WG1025429

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.25	T8	1	09/23/2017 12:47	WG1023465

Sample Narrative:

L938384-06 WG1023465: 8.25 at 19.2c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	680		1	09/29/2017 02:20	WG1025897

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 16:56	WG1023317
Chloride	6.12		1.00	1	09/22/2017 16:56	WG1023317
Fluoride	0.736		0.100	1	09/22/2017 16:56	WG1023317
Nitrate as (N)	ND		0.100	1	09/22/2017 16:56	WG1023317
Nitrite as (N)	ND		0.100	1	09/22/2017 16:56	WG1023317
Sulfate	94.4		5.00	1	09/22/2017 16:56	WG1023317

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:26	WG1024220
Barium,Dissolved	0.0231		0.00500	1	09/29/2017 12:26	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:26	WG1024220
Calcium,Dissolved	33.8		1.00	1	09/29/2017 12:26	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:26	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:26	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:26	WG1024220
Magnesium,Dissolved	35.5		1.00	1	09/29/2017 12:26	WG1024220
Manganese,Dissolved	0.0437		0.0100	1	09/29/2017 12:26	WG1024220
Potassium,Dissolved	2.42		1.00	1	09/29/2017 12:26	WG1024220
Selenium,Dissolved	ND		0.0100	1	09/29/2017 12:26	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:26	WG1024220
Sodium,Dissolved	67.3		1.00	1	09/29/2017 12:26	WG1024220

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Gl⁷ Al⁸ Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	09/25/2017 14:05	WG1024153
Ethane	ND		0.0130	1	09/25/2017 14:05	WG1024153
Ethene	ND		0.0130	1	09/25/2017 14:05	WG1024153

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 03:30	WG1024009
Toluene	ND		0.00100	1	09/24/2017 03:30	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 03:30	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 03:30	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 03:30	WG1024009
(S) Toluene-d8	103		80.0-120		09/24/2017 03:30	WG1024009
(S) Dibromofluoromethane	101		76.0-123		09/24/2017 03:30	WG1024009
(S) 4-Bromofluorobenzene	107		80.0-120		09/24/2017 03:30	WG1024009



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	964		10.0	1	09/26/2017 14:09	WG1023913

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	451		20.0	1	09/28/2017 14:54	WG1025154
Alkalinity,Bicarbonate	451		20.0	1	09/28/2017 14:54	WG1025154
Alkalinity,Carbonate	ND		20.0	1	09/28/2017 14:54	WG1025154

Sample Narrative:

L938384-07 WG1025154: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	09/29/2017 16:01	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/28/2017 21:30	WG1025429

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.39	T8	1	09/23/2017 12:47	WG1023465

Sample Narrative:

L938384-07 WG1023465: 7.39 at 19.4c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1500		1	09/29/2017 02:20	WG1025897

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 17:11	WG1023317
Chloride	32.9		1.00	1	09/22/2017 17:11	WG1023317
Fluoride	0.790		0.100	1	09/22/2017 17:11	WG1023317
Nitrate as (N)	5.22		0.100	1	09/22/2017 17:11	WG1023317
Nitrite as (N)	ND		0.100	1	09/22/2017 17:11	WG1023317
Sulfate	329		25.0	5	09/22/2017 17:25	WG1023317

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:30	WG1024220
Barium,Dissolved	0.0540		0.00500	1	09/29/2017 12:30	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:30	WG1024220
Calcium,Dissolved	95.6		1.00	1	09/29/2017 12:30	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:30	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:30	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:30	WG1024220
Magnesium,Dissolved	82.6		1.00	1	09/29/2017 12:30	WG1024220
Manganese,Dissolved	ND		0.0100	1	09/29/2017 12:30	WG1024220
Potassium,Dissolved	4.46		1.00	1	09/29/2017 12:30	WG1024220
Selenium,Dissolved	0.0101		0.0100	1	09/29/2017 12:30	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:30	WG1024220
Sodium,Dissolved	116		1.00	1	09/29/2017 12:30	WG1024220

1
Cp2
Tc3
Ss4
Cn5
Sr6
Gl7
Al8
Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	09/25/2017 14:07	WG1024153
Ethane	ND		0.0130	1	09/25/2017 14:07	WG1024153
Ethene	ND		0.0130	1	09/25/2017 14:07	WG1024153

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 03:46	WG1024009
Toluene	ND		0.00100	1	09/24/2017 03:46	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 03:46	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 03:46	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 03:46	WG1024009
(S) Toluene-d8	103		80.0-120		09/24/2017 03:46	WG1024009
(S) Dibromofluoromethane	102		76.0-123		09/24/2017 03:46	WG1024009
(S) 4-Bromofluorobenzene	107		80.0-120		09/24/2017 03:46	WG1024009



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1250		10.0	1	09/26/2017 14:09	WG1023913

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	384		20.0	1	09/28/2017 15:00	WG1025154
Alkalinity,Bicarbonate	384		20.0	1	09/28/2017 15:00	WG1025154
Alkalinity,Carbonate	ND		20.0	1	09/28/2017 15:00	WG1025154

Sample Narrative:

L938384-08 WG1025154: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	09/29/2017 16:03	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/28/2017 21:30	WG1025429

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.56	T8	1	09/22/2017 17:05	WG1022865

Sample Narrative:

L938384-08 WG1022865: 7.56 at 15.9c

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1050		1	09/29/2017 02:20	WG1025897

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 18:09	WG1023317
Chloride	33.4		1.00	1	09/22/2017 18:09	WG1023317
Fluoride	0.719		0.100	1	09/22/2017 18:09	WG1023317
Nitrate as (N)	0.736		0.100	1	09/22/2017 18:09	WG1023317
Nitrite as (N)	ND		0.100	1	09/22/2017 18:09	WG1023317
Sulfate	131		25.0	5	09/29/2017 10:21	WG1025431

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:33	WG1024220
Barium,Dissolved	0.0599		0.00500	1	09/29/2017 12:33	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:33	WG1024220
Calcium,Dissolved	63.0		1.00	1	09/29/2017 12:33	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:33	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:33	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:33	WG1024220
Magnesium,Dissolved	45.4		1.00	1	09/29/2017 12:33	WG1024220
Manganese,Dissolved	ND		0.0100	1	09/29/2017 12:33	WG1024220
Potassium,Dissolved	3.16		1.00	1	09/29/2017 12:33	WG1024220
Selenium,Dissolved	ND		0.0100	1	09/29/2017 12:33	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:33	WG1024220
Sodium,Dissolved	93.4		1.00	1	09/29/2017 12:33	WG1024220

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	09/25/2017 10:26	WG1024154
Ethane	ND		0.0130	1	09/25/2017 10:26	WG1024154
Ethene	ND		0.0130	1	09/25/2017 10:26	WG1024154

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 04:03	WG1024009
Toluene	ND		0.00100	1	09/24/2017 04:03	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 04:03	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 04:03	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 04:03	WG1024009
(S) Toluene-d8	103		80.0-120		09/24/2017 04:03	WG1024009
(S) Dibromofluoromethane	98.2		76.0-123		09/24/2017 04:03	WG1024009
(S) 4-Bromofluorobenzene	107		80.0-120		09/24/2017 04:03	WG1024009



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	652		10.0	1	09/26/2017 13:54	WG1023914

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	383		20.0	1	09/28/2017 15:07	WG1025154
Alkalinity,Bicarbonate	383		20.0	1	09/28/2017 15:07	WG1025154
Alkalinity,Carbonate	ND		20.0	1	09/28/2017 15:07	WG1025154

Sample Narrative:

L938384-09 WG1025154: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	09/29/2017 16:04	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/28/2017 21:31	WG1025429

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.31	T8	1	09/22/2017 17:05	WG1022865

Sample Narrative:

L938384-09 WG1022865: 7.31 at 15.9c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1090		1	09/29/2017 02:20	WG1025897

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 18:23	WG1023317
Chloride	20.9		1.00	1	09/22/2017 18:23	WG1023317
Fluoride	0.609		0.100	1	09/22/2017 18:23	WG1023317
Nitrate as (N)	3.31		0.100	1	09/22/2017 18:23	WG1023317
Nitrite as (N)	ND		0.100	1	09/22/2017 18:23	WG1023317
Sulfate	170		25.0	5	09/22/2017 18:37	WG1023317

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:36	WG1024220
Barium,Dissolved	0.125		0.00500	1	09/29/2017 12:36	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:36	WG1024220
Calcium,Dissolved	87.0		1.00	1	09/29/2017 12:36	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:36	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:36	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:36	WG1024220
Magnesium,Dissolved	51.9		1.00	1	09/29/2017 12:36	WG1024220
Manganese,Dissolved	ND		0.0100	1	09/29/2017 12:36	WG1024220
Potassium,Dissolved	3.21		1.00	1	09/29/2017 12:36	WG1024220
Selenium,Dissolved	ND		0.0100	1	09/29/2017 12:36	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:36	WG1024220
Sodium,Dissolved	69.9		1.00	1	09/29/2017 12:36	WG1024220

1
Cp2
Tc3
Ss4
Cn5
Sr6
Gl7
Al8
Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	09/25/2017 10:28	WG1024154
Ethane	ND		0.0130	1	09/25/2017 10:28	WG1024154
Ethene	ND		0.0130	1	09/25/2017 10:28	WG1024154

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 04:20	WG1024009
Toluene	ND		0.00100	1	09/24/2017 04:20	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 04:20	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 04:20	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 04:20	WG1024009
(S) Toluene-d8	105		80.0-120		09/24/2017 04:20	WG1024009
(S) Dibromofluoromethane	102		76.0-123		09/24/2017 04:20	WG1024009
(S) 4-Bromofluorobenzene	110		80.0-120		09/24/2017 04:20	WG1024009



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	692		10.0	1	09/26/2017 13:54	WG1023914

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	385		20.0	1	09/28/2017 15:31	WG1025154
Alkalinity,Bicarbonate	385		20.0	1	09/28/2017 15:31	WG1025154
Alkalinity,Carbonate	ND		20.0	1	09/28/2017 15:31	WG1025154

Sample Narrative:

L938384-10 WG1025154: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	09/29/2017 16:06	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/28/2017 21:32	WG1025429

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.30	T8	1	09/22/2017 17:05	WG1022865

Sample Narrative:

L938384-10 WG1022865: 7.30 at 16.6c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1180		1	09/29/2017 02:20	WG1025897

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 18:52	WG1023317
Chloride	24.3		1.00	1	09/22/2017 18:52	WG1023317
Fluoride	0.672		0.100	1	09/22/2017 18:52	WG1023317
Nitrate as (N)	4.15		0.100	1	09/22/2017 18:52	WG1023317
Nitrite as (N)	ND		0.100	1	09/22/2017 18:52	WG1023317
Sulfate	208		25.0	5	09/22/2017 19:06	WG1023317

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:39	WG1024220
Barium,Dissolved	0.109		0.00500	1	09/29/2017 12:39	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:39	WG1024220
Calcium,Dissolved	89.1		1.00	1	09/29/2017 12:39	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:39	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:39	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:39	WG1024220
Magnesium,Dissolved	58.2		1.00	1	09/29/2017 12:39	WG1024220
Manganese,Dissolved	0.0107		0.0100	1	09/29/2017 12:39	WG1024220
Potassium,Dissolved	3.50		1.00	1	09/29/2017 12:39	WG1024220
Selenium,Dissolved	0.0133		0.0100	1	09/29/2017 12:39	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:39	WG1024220
Sodium,Dissolved	77.8		1.00	1	09/29/2017 12:39	WG1024220

1
Cp2
Tc3
Ss4
Cn5
Sr6
Gl7
Al8
Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	09/25/2017 10:30	WG1024154
Ethane	ND		0.0130	1	09/25/2017 10:30	WG1024154
Ethene	ND		0.0130	1	09/25/2017 10:30	WG1024154

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 04:36	WG1024009
Toluene	ND		0.00100	1	09/24/2017 04:36	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 04:36	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 04:36	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 04:36	WG1024009
(S) Toluene-d8	103		80.0-120		09/24/2017 04:36	WG1024009
(S) Dibromofluoromethane	101		76.0-123		09/24/2017 04:36	WG1024009
(S) 4-Bromofluorobenzene	108		80.0-120		09/24/2017 04:36	WG1024009



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	498		10.0	1	09/26/2017 13:54	WG1023914

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	332		20.0	1	09/28/2017 15:38	WG1025154
Alkalinity,Bicarbonate	332		20.0	1	09/28/2017 15:38	WG1025154
Alkalinity,Carbonate	ND		20.0	1	09/28/2017 15:38	WG1025154

Sample Narrative:

L938384-11 WG1025154: Endpoint pH 4.5

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	0.606		0.100	1	09/29/2017 16:07	WG1025661

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	09/28/2017 21:32	WG1025429

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.67	T8	1	09/29/2017 11:45	WG1023666

Sample Narrative:

L938384-11 WG1023666: 7.67 at 17.4c

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	832		1	09/29/2017 02:20	WG1025897

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	09/22/2017 19:54	WG1023521
Chloride	10.5		1.00	1	09/22/2017 19:54	WG1023521
Fluoride	0.543		0.100	1	09/22/2017 19:54	WG1023521
Nitrate as (N)	1.08		0.100	1	09/22/2017 19:54	WG1023521
Nitrite as (N)	ND		0.100	1	09/22/2017 19:54	WG1023521
Sulfate	86.4		5.00	1	09/22/2017 19:54	WG1023521

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/29/2017 12:42	WG1024220
Barium,Dissolved	0.105		0.00500	1	09/29/2017 12:42	WG1024220
Cadmium,Dissolved	ND		0.00200	1	09/29/2017 12:42	WG1024220
Calcium,Dissolved	68.5		1.00	1	09/29/2017 12:42	WG1024220



Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Dissolved	ND		0.0100	1	09/29/2017 12:42	WG1024220
Iron,Dissolved	ND		0.100	1	09/29/2017 12:42	WG1024220
Lead,Dissolved	ND		0.00500	1	09/29/2017 12:42	WG1024220
Magnesium,Dissolved	37.4		1.00	1	09/29/2017 12:42	WG1024220
Manganese,Dissolved	0.0579		0.0100	1	09/29/2017 12:42	WG1024220
Potassium,Dissolved	2.54		1.00	1	09/29/2017 12:42	WG1024220
Selenium,Dissolved	ND		0.0100	1	09/29/2017 12:42	WG1024220
Silver,Dissolved	ND		0.00500	1	09/29/2017 12:42	WG1024220
Sodium,Dissolved	51.5		1.00	1	09/29/2017 12:42	WG1024220

1
Cp2
Tc3
Ss4
Cn5
Sr6
Gl7
Al8
Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	0.0274		0.0100	1	09/25/2017 10:33	WG1024154
Ethane	ND		0.0130	1	09/25/2017 10:33	WG1024154
Ethene	ND		0.0130	1	09/25/2017 10:33	WG1024154

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/24/2017 04:53	WG1024009
Toluene	ND		0.00100	1	09/24/2017 04:53	WG1024009
Ethylbenzene	ND		0.00100	1	09/24/2017 04:53	WG1024009
Total Xylenes	ND		0.00300	1	09/24/2017 04:53	WG1024009
Methyl tert-butyl ether	ND		0.00100	1	09/24/2017 04:53	WG1024009
(S) Toluene-d8	103		80.0-120		09/24/2017 04:53	WG1024009
(S) Dibromofluoromethane	102		76.0-123		09/24/2017 04:53	WG1024009
(S) 4-Bromofluorobenzene	108		80.0-120		09/24/2017 04:53	WG1024009



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

ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
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.
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.
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.
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

P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Gl

⁷ A

⁸ Sc



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

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

State Accreditations

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

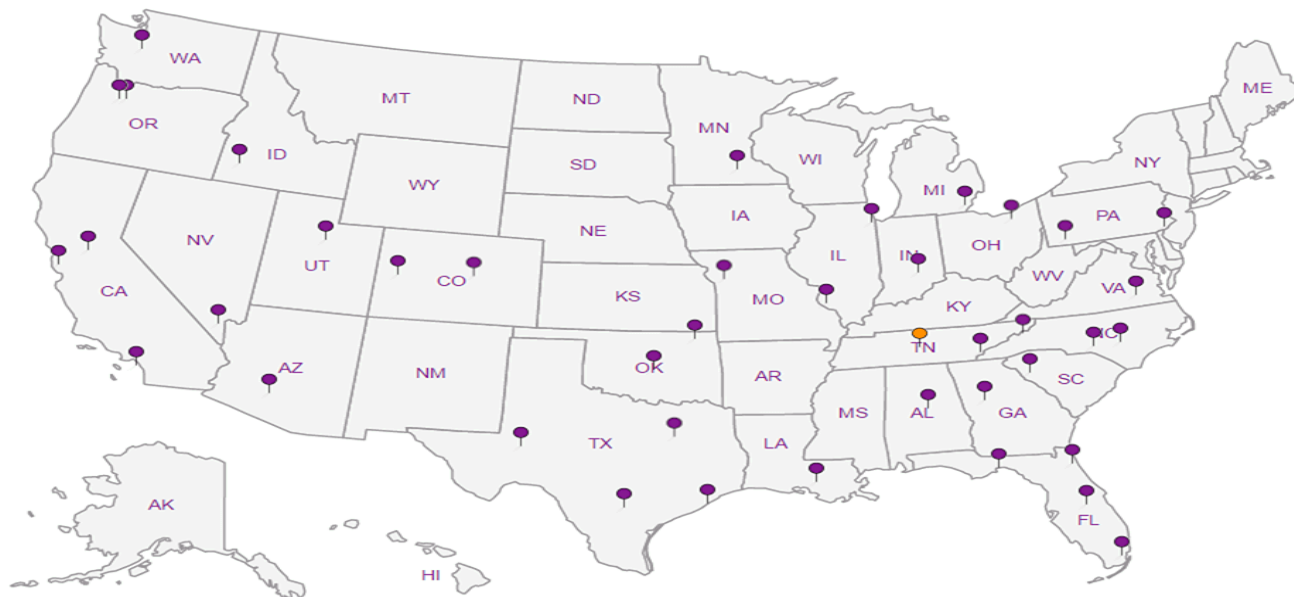
Third Party & Federal Accreditations

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

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

Our Locations

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



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Encana
143 Diamond Avenue
Parachute CO 81635

Report to:
Brett Middleton

Project
Description: **NPR Quarterly**

Phone: **970.285.2739**
Fax:

Collected by (print):
Brett M. Middleton

Collected by (signature):
[Signature]

Immediately
Packed on Ice: **N**

Billing Information:

Email To: *bmiddleton@encana.com*
brett.middleton@encana.com

City/State
Collected: **Parachute, CO**

Lab Project #

P.O. #

Quote #

Rush? (Lab MUST Be Notified)

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Date Results Needed
STD

No
of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No of Cntrs	ALK/ALKBI/ALKCA - 500ml HDPE No Pres	Br, Cl, F, SO ₄ , NO ₂ , NO ₃ - 500ml HDPE No Pres	Dissolved Metals - 250ml HDPE No Pres	Ammonia - 250ml HDPE w/H ₂ SO ₄	RSK175 - (3)40ml Amb w/HCl	Sulfide - 250ml HDPE Amb w/NaOH+ZnAc	BTEXM by 8260 - (3)40ml Amb w/HCl	pH/SPCON/TDS - 250ml HDPE No Pres
20170921-ENPR	Grab	GW		9/21/17	1300	12	X	X	X	X	X	X	X	X
20170921-ENPR 11AW	Grab	GW		9/21/17	1320	12	X	X	X	X	X	X	X	X
20170921-ENPR 10AW	Grab	GW		9/21/17	1340	12	X	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:

Metals: As, Ba, Cd, Cr, Pb, Ag, Ca, Fe, K, Mg, Mn, Na, Se

Samples returned via:
UPS ☒ FedEx ☐ Courier ☐

Relinquished by: (Signature)

Date: 9/21/17 Time: 1505

Relinquished by: (Signature)

Date: 9/21 Time: 1730

Relinquished by: (Signature)

Date: Time:

Tracking #

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)

pH Temp

Flow Other

Trip Blank Received: Yes/No
HCL/MeOH
TBR

Temp: °C Bottles Received: 132

Date: 9-22-17 Time: 8:45

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

If preservation required by Login: Date/Time

Hold:

Condition:
NO / OK

Analysis / Container / Preservative

Chain of Custody Page 3 of 3



YOUR LAB OF CHOICE

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



L# 938387

Table #

Acctnum: **ENCANACO**

Template:

Prelogin:

TSR: **Shane Gambill**

PB:

Shipped Via:

Remarks Sample # (lab only)

68

05

10

Matt Shacklock

Importance:

High

ESC Lab Sciences
Non-Conformance Form

Login #938384	Client: ENCANACO	Date: 9/22	Evaluated by: Matt S
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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.		If no Chain of Custody:
Broken container		Client did not "X" analysis.		Received by:
Broken container:		Chain of Custody is missing		Date/Time:
Sufficient sample remains				Temp./Cont. Rec./pH:
				Carrier:
				Tracking#

Login Comments: last ID on second page not marked

Client informed by:	Call	Email	Voice Mail	Date: 09/22/17	Time:
TSR Initials: CSG	Client Contact: Brett Middleton				

Login Instructions:

Please log this sample for all analysis listed on the COC.

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