

## EnCana Oil & Gas - Parachute, CO

Sample Delivery Group: L917718  
Samples Received: 06/22/2017  
Project Number: NPR QRT  
Description: NPR Quarterly 2nd  
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.



## 20170621-ENPR08MW L917718-01 GW

			Collected by BKR/MK	Collected date/time 06/21/17 08:20	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG993145	1	06/27/17 18:03	06/27/17 18:29	EG
Wet Chemistry by Method 2320 B-2011	WG993343	1	06/28/17 18:10	06/28/17 18:10	MCG
Wet Chemistry by Method 350.1	WG993001	1	06/27/17 12:56	06/27/17 12:56	JER
Wet Chemistry by Method 4500S2 D-2011	WG991876	1	06/22/17 15:57	06/22/17 15:57	MAJ
Wet Chemistry by Method 9040C	WG991791	1	06/24/17 15:58	06/24/17 15:58	GB
Wet Chemistry by Method 9050A	WG991870	1	06/23/17 11:34	06/23/17 11:34	MAJ
Wet Chemistry by Method 9056A	WG991886	1	06/22/17 13:09	06/22/17 13:09	DR
Wet Chemistry by Method 9056A	WG993488	5	06/28/17 19:18	06/28/17 19:18	SAM
Metals (ICP) by Method 6010B	WG993211	1	06/27/17 17:59	06/28/17 10:31	RDS
Volatile Organic Compounds (GC) by Method RSK175	WG992015	1	06/23/17 12:04	06/23/17 12:04	AMC
Volatile Organic Compounds (GC/MS) by Method 8260B	WG993715	1	06/28/17 18:01	06/28/17 18:01	JAH



## 20170621-ENPR14ST L917718-02 GW

			Collected by BKR/MK	Collected date/time 06/21/17 08:45	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG993145	1	06/27/17 18:03	06/27/17 18:29	EG
Wet Chemistry by Method 2320 B-2011	WG993343	1	06/28/17 18:16	06/28/17 18:16	MCG
Wet Chemistry by Method 350.1	WG993001	1	06/27/17 12:57	06/27/17 12:57	JER
Wet Chemistry by Method 4500S2 D-2011	WG991876	1	06/22/17 15:57	06/22/17 15:57	MAJ
Wet Chemistry by Method 9040C	WG991791	1	06/24/17 15:58	06/24/17 15:58	GB
Wet Chemistry by Method 9050A	WG991870	1	06/23/17 11:34	06/23/17 11:34	MAJ
Wet Chemistry by Method 9056A	WG991886	1	06/22/17 13:39	06/22/17 13:39	DR
Metals (ICP) by Method 6010B	WG993211	1	06/27/17 17:59	06/28/17 10:34	RDS
Volatile Organic Compounds (GC) by Method RSK175	WG992015	1	06/23/17 12:06	06/23/17 12:06	AMC
Volatile Organic Compounds (GC/MS) by Method 8260B	WG993715	1	06/28/17 18:18	06/28/17 18:18	JAH

## 20170621-ENPR09MW L917718-03 GW

			Collected by BKR/MK	Collected date/time 06/21/17 09:00	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG993145	1	06/27/17 18:03	06/27/17 18:29	EG
Wet Chemistry by Method 2320 B-2011	WG993343	1	06/28/17 18:23	06/28/17 18:23	MCG
Wet Chemistry by Method 350.1	WG993001	1	06/27/17 13:03	06/27/17 13:03	JER
Wet Chemistry by Method 4500S2 D-2011	WG991876	1	06/22/17 15:58	06/22/17 15:58	MAJ
Wet Chemistry by Method 9040C	WG991791	1	06/24/17 15:58	06/24/17 15:58	GB
Wet Chemistry by Method 9050A	WG991870	1	06/23/17 11:34	06/23/17 11:34	MAJ
Wet Chemistry by Method 9056A	WG991886	1	06/22/17 14:09	06/22/17 14:09	DR
Wet Chemistry by Method 9056A	WG993488	5	06/28/17 19:28	06/28/17 19:28	SAM
Metals (ICP) by Method 6010B	WG993211	1	06/27/17 17:59	06/28/17 10:37	RDS
Volatile Organic Compounds (GC) by Method RSK175	WG992015	1	06/23/17 12:09	06/23/17 12:09	AMC
Volatile Organic Compounds (GC/MS) by Method 8260B	WG993715	1	06/28/17 18:35	06/28/17 18:35	JAH

## 20170621-ENPR04WW L917718-04 GW

			Collected by BKR/MK	Collected date/time 06/21/17 09:25	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG993145	1	06/27/17 18:03	06/27/17 18:29	EG
Wet Chemistry by Method 2320 B-2011	WG993343	1	06/28/17 18:29	06/28/17 18:29	MCG
Wet Chemistry by Method 350.1	WG993001	1	06/27/17 13:05	06/27/17 13:05	JER
Wet Chemistry by Method 4500S2 D-2011	WG991876	1	06/22/17 15:58	06/22/17 15:58	MAJ
Wet Chemistry by Method 9040C	WG991791	1	06/24/17 15:58	06/24/17 15:58	GB

ACCOUNT:

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06/29/17 15:40

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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## 20170621-ENPRO4WW L917718-04 GW

Collected by  
BKR/MK

Collected date/time  
06/21/17 09:25

Received date/time  
06/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9050A	WG991870	1	06/23/17 11:34	06/23/17 11:34	MAJ
Wet Chemistry by Method 9056A	WG991886	1	06/22/17 14:24	06/22/17 14:24	DR
Wet Chemistry by Method 9056A	WG993488	5	06/28/17 23:52	06/28/17 23:52	SAM
Metals (ICP) by Method 6010B	WG993211	1	06/27/17 17:59	06/28/17 10:40	RDS
Volatile Organic Compounds (GC) by Method RSK175	WG992015	1	06/23/17 12:11	06/23/17 12:11	AMC
Volatile Organic Compounds (GC/MS) by Method 8260B	WG993715	1	06/28/17 18:52	06/28/17 18:52	JAH

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Gl

<sup>7</sup> Al

<sup>8</sup> Sc

## 20170621-ENPR12ST L917718-05 GW

Collected by  
BKR/MK

Collected date/time  
06/21/17 09:35

Received date/time  
06/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG993145	1	06/27/17 18:03	06/27/17 18:29	EG
Wet Chemistry by Method 2320 B-2011	WG993343	1	06/28/17 19:01	06/28/17 19:01	MCG
Wet Chemistry by Method 350.1	WG993001	1	06/27/17 13:07	06/27/17 13:07	JER
Wet Chemistry by Method 4500S2 D-2011	WG991876	1	06/22/17 15:58	06/22/17 15:58	MAJ
Wet Chemistry by Method 9040C	WG991791	1	06/24/17 15:58	06/24/17 15:58	GB
Wet Chemistry by Method 9050A	WG991870	1	06/23/17 11:34	06/23/17 11:34	MAJ
Wet Chemistry by Method 9056A	WG991886	1	06/22/17 15:23	06/22/17 15:23	DR
Metals (ICP) by Method 6010B	WG993211	1	06/27/17 17:59	06/28/17 10:42	RDS
Volatile Organic Compounds (GC) by Method RSK175	WG992015	1	06/23/17 12:13	06/23/17 12:13	AMC
Volatile Organic Compounds (GC/MS) by Method 8260B	WG993715	1	06/28/17 19:08	06/28/17 19:08	JAH

## 20170621-ENPR10MW L917718-06 GW

Collected by  
BKR/MK

Collected date/time  
06/21/17 09:55

Received date/time  
06/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG993425	1	06/28/17 15:57	06/28/17 16:22	MZ
Wet Chemistry by Method 2320 B-2011	WG993343	1	06/28/17 19:08	06/28/17 19:08	MCG
Wet Chemistry by Method 350.1	WG993001	1	06/27/17 13:08	06/27/17 13:08	JER
Wet Chemistry by Method 4500S2 D-2011	WG991876	1	06/22/17 15:58	06/22/17 15:58	MAJ
Wet Chemistry by Method 9040C	WG991791	1	06/24/17 15:58	06/24/17 15:58	GB
Wet Chemistry by Method 9050A	WG991870	1	06/23/17 11:34	06/23/17 11:34	MAJ
Wet Chemistry by Method 9056A	WG991886	1	06/22/17 15:38	06/22/17 15:38	DR
Wet Chemistry by Method 9056A	WG991886	10	06/22/17 15:53	06/22/17 15:53	DR
Metals (ICP) by Method 6010B	WG993211	1	06/27/17 17:59	06/28/17 10:45	RDS
Volatile Organic Compounds (GC) by Method RSK175	WG992015	1	06/23/17 12:15	06/23/17 12:15	AMC
Volatile Organic Compounds (GC/MS) by Method 8260B	WG993715	1	06/28/17 19:25	06/28/17 19:25	JAH

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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 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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Gl

<sup>7</sup> Al

<sup>8</sup> Sc



## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	468		10.0	1	06/27/2017 18:29	WG993145

1 Cp

2 Tc

## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	320		20.0	1	06/28/2017 18:10	WG993343
Alkalinity,Bicarbonate	320		20.0	1	06/28/2017 18:10	WG993343
Alkalinity,Carbonate	ND		20.0	1	06/28/2017 18:10	WG993343

3 Ss

4 Cn

5 Sr

## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	06/27/2017 12:56	WG993001

6 Gl

7 Al

## Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	06/22/2017 15:57	WG991876

8 Sc

## Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.55	T8	1	06/24/2017 15:58	WG991791

## Sample Narrative:

9040C L917718-01 WG991791: 7.55 at 12.7c

## Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	744		1	06/23/2017 11:34	WG991870

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/22/2017 13:09	WG991886
Chloride	ND		1.00	1	06/22/2017 13:09	WG991886
Fluoride	ND		0.100	1	06/22/2017 13:09	WG991886
Nitrate as (N)	2.20		0.100	1	06/22/2017 13:09	WG991886
Nitrite as (N)	ND		0.100	1	06/22/2017 13:09	WG991886
Sulfate	90.7		25.0	5	06/28/2017 19:18	WG993488

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	06/28/2017 10:31	WG993211
Barium,Dissolved	0.0825		0.00500	1	06/28/2017 10:31	WG993211
Cadmium,Dissolved	ND		0.00200	1	06/28/2017 10:31	WG993211
Calcium,Dissolved	72.4		1.00	1	06/28/2017 10:31	WG993211
Chromium,Dissolved	ND		0.0100	1	06/28/2017 10:31	WG993211
Copper,Dissolved	ND		0.0100	1	06/28/2017 10:31	WG993211
Iron,Dissolved	ND		0.100	1	06/28/2017 10:31	WG993211



## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/28/2017 10:31	WG993211
Magnesium,Dissolved	39.4		1.00	1	06/28/2017 10:31	WG993211
Manganese,Dissolved	ND		0.0100	1	06/28/2017 10:31	WG993211
Potassium,Dissolved	2.55	B	1.00	1	06/28/2017 10:31	WG993211
Selenium,Dissolved	ND		0.0100	1	06/28/2017 10:31	WG993211
Silver,Dissolved	ND		0.00500	1	06/28/2017 10:31	WG993211
Sodium,Dissolved	49.2		1.00	1	06/28/2017 10:31	WG993211

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	06/23/2017 12:04	WG992015
Ethane	ND		0.0130	1	06/23/2017 12:04	WG992015
Ethene	ND		0.0130	1	06/23/2017 12:04	WG992015

## 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	06/28/2017 18:01	WG993715
Toluene	ND		0.00100	1	06/28/2017 18:01	WG993715
Ethylbenzene	ND		0.00100	1	06/28/2017 18:01	WG993715
Total Xylenes	ND		0.00300	1	06/28/2017 18:01	WG993715
Methyl tert-butyl ether	ND		0.00100	1	06/28/2017 18:01	WG993715
(S) Toluene-d8	107		80.0-120		06/28/2017 18:01	WG993715
(S) Dibromofluoromethane	95.7		76.0-123		06/28/2017 18:01	WG993715
(S) 4-Bromofluorobenzene	96.6		80.0-120		06/28/2017 18:01	WG993715



## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	434		10.0	1	06/27/2017 18:29	WG993145

1 Cp

2 Tc

## Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	305		20.0	1	06/28/2017 18:16	WG993343
Alkalinity,Bicarbonate	305		20.0	1	06/28/2017 18:16	WG993343
Alkalinity,Carbonate	ND		20.0	1	06/28/2017 18:16	WG993343

3 Ss

4 Cn

5 Sr

## 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	06/27/2017 12:57	WG993001

6 Gl

7 Al

## 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	06/22/2017 15:57	WG991876

8 Sc

## Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.76	T8	1	06/24/2017 15:58	WG991791

## Sample Narrative:

9040C L917718-02 WG991791: 7.76 at 12.1c

## Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	690		1	06/23/2017 11:34	WG991870

## Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/22/2017 13:39	WG991886
Chloride	8.70		1.00	1	06/22/2017 13:39	WG991886
Fluoride	0.574		0.100	1	06/22/2017 13:39	WG991886
Nitrate as (N)	1.68		0.100	1	06/22/2017 13:39	WG991886
Nitrite as (N)	ND		0.100	1	06/22/2017 13:39	WG991886
Sulfate	79.3		5.00	1	06/22/2017 13:39	WG991886

## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	06/28/2017 10:34	WG993211
Barium,Dissolved	0.0708		0.00500	1	06/28/2017 10:34	WG993211
Cadmium,Dissolved	ND		0.00200	1	06/28/2017 10:34	WG993211
Calcium,Dissolved	58.8		1.00	1	06/28/2017 10:34	WG993211
Chromium,Dissolved	ND		0.0100	1	06/28/2017 10:34	WG993211
Copper,Dissolved	ND		0.0100	1	06/28/2017 10:34	WG993211
Iron,Dissolved	ND		0.100	1	06/28/2017 10:34	WG993211





## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/28/2017 10:34	WG993211
Magnesium,Dissolved	33.8		1.00	1	06/28/2017 10:34	WG993211
Manganese,Dissolved	ND		0.0100	1	06/28/2017 10:34	WG993211
Potassium,Dissolved	2.31	B	1.00	1	06/28/2017 10:34	WG993211
Selenium,Dissolved	ND		0.0100	1	06/28/2017 10:34	WG993211
Silver,Dissolved	ND		0.00500	1	06/28/2017 10:34	WG993211
Sodium,Dissolved	44.8		1.00	1	06/28/2017 10:34	WG993211

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	06/23/2017 12:06	WG992015
Ethane	ND		0.0130	1	06/23/2017 12:06	WG992015
Ethene	ND		0.0130	1	06/23/2017 12:06	WG992015

## 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	06/28/2017 18:18	WG993715
Toluene	ND		0.00100	1	06/28/2017 18:18	WG993715
Ethylbenzene	ND		0.00100	1	06/28/2017 18:18	WG993715
Total Xylenes	ND		0.00300	1	06/28/2017 18:18	WG993715
Methyl tert-butyl ether	ND		0.00100	1	06/28/2017 18:18	WG993715
(S) Toluene-d8	106		80.0-120		06/28/2017 18:18	WG993715
(S) Dibromofluoromethane	93.9		76.0-123		06/28/2017 18:18	WG993715
(S) 4-Bromofluorobenzene	98.1		80.0-120		06/28/2017 18:18	WG993715



## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	810		10.0	1	06/27/2017 18:29	WG993145

1 Cp

2 Tc

## Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	336		20.0	1	06/28/2017 18:23	WG993343
Alkalinity,Bicarbonate	336		20.0	1	06/28/2017 18:23	WG993343
Alkalinity,Carbonate	ND		20.0	1	06/28/2017 18:23	WG993343

3 Ss

4 Cn

5 Sr

## 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	06/27/2017 13:03	WG993001

6 Gl

7 Al

## 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	06/22/2017 15:58	WG991876

8 Sc

## Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.34	T8	1	06/24/2017 15:58	WG991791

## Sample Narrative:

9040C L917718-03 WG991791: 7.34 at 10.6c

## Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	894		1	06/23/2017 11:34	WG991870

## Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/22/2017 14:09	WG991886
Chloride	17.1		1.00	1	06/22/2017 14:09	WG991886
Fluoride	0.717		0.100	1	06/22/2017 14:09	WG991886
Nitrate as (N)	3.11		0.100	1	06/22/2017 14:09	WG991886
Nitrite as (N)	ND		0.100	1	06/22/2017 14:09	WG991886
Sulfate	143		25.0	5	06/28/2017 19:28	WG993488

## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	06/28/2017 10:37	WG993211
Barium,Dissolved	0.0608		0.00500	1	06/28/2017 10:37	WG993211
Cadmium,Dissolved	ND		0.00200	1	06/28/2017 10:37	WG993211
Calcium,Dissolved	70.9		1.00	1	06/28/2017 10:37	WG993211
Chromium,Dissolved	ND		0.0100	1	06/28/2017 10:37	WG993211
Copper,Dissolved	ND		0.0100	1	06/28/2017 10:37	WG993211
Iron,Dissolved	ND		0.100	1	06/28/2017 10:37	WG993211



## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/28/2017 10:37	WG993211
Magnesium,Dissolved	47.6		1.00	1	06/28/2017 10:37	WG993211
Manganese,Dissolved	ND		0.0100	1	06/28/2017 10:37	WG993211
Potassium,Dissolved	2.78	B	1.00	1	06/28/2017 10:37	WG993211
Selenium,Dissolved	ND		0.0100	1	06/28/2017 10:37	WG993211
Silver,Dissolved	ND		0.00500	1	06/28/2017 10:37	WG993211
Sodium,Dissolved	63.6		1.00	1	06/28/2017 10:37	WG993211

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	06/23/2017 12:09	WG992015
Ethane	ND		0.0130	1	06/23/2017 12:09	WG992015
Ethene	ND		0.0130	1	06/23/2017 12:09	WG992015

## 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	06/28/2017 18:35	WG993715
Toluene	ND		0.00100	1	06/28/2017 18:35	WG993715
Ethylbenzene	ND		0.00100	1	06/28/2017 18:35	WG993715
Total Xylenes	ND		0.00300	1	06/28/2017 18:35	WG993715
Methyl tert-butyl ether	ND		0.00100	1	06/28/2017 18:35	WG993715
(S) Toluene-d8	107		80.0-120		06/28/2017 18:35	WG993715
(S) Dibromofluoromethane	92.7		76.0-123		06/28/2017 18:35	WG993715
(S) 4-Bromofluorobenzene	97.6		80.0-120		06/28/2017 18:35	WG993715



## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	517		10.0	1	06/27/2017 18:29	WG993145

1 Cp

2 Tc

## Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	328		20.0	1	06/28/2017 18:29	WG993343
Alkalinity,Bicarbonate	328		20.0	1	06/28/2017 18:29	WG993343
Alkalinity,Carbonate	ND		20.0	1	06/28/2017 18:29	WG993343

3 Ss

4 Cn

5 Sr

## 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	06/27/2017 13:05	WG993001

6 Gl

7 Al

## 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	06/22/2017 15:58	WG991876

8 Sc

## Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.60	T8	1	06/24/2017 15:58	WG991791

## Sample Narrative:

9040C L917718-04 WG991791: 7.60 at 10.7c

## Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	841		1	06/23/2017 11:34	WG991870

## Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/22/2017 14:24	WG991886
Chloride	6.28		1.00	1	06/22/2017 14:24	WG991886
Fluoride	0.763		0.100	1	06/22/2017 14:24	WG991886
Nitrate as (N)	0.237		0.100	1	06/22/2017 14:24	WG991886
Nitrite as (N)	ND		0.100	1	06/22/2017 14:24	WG991886
Sulfate	136		25.0	5	06/28/2017 23:52	WG993488

## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	06/28/2017 10:40	WG993211
Barium,Dissolved	0.0456		0.00500	1	06/28/2017 10:40	WG993211
Cadmium,Dissolved	ND		0.00200	1	06/28/2017 10:40	WG993211
Calcium,Dissolved	53.9		1.00	1	06/28/2017 10:40	WG993211
Chromium,Dissolved	ND		0.0100	1	06/28/2017 10:40	WG993211
Copper,Dissolved	ND		0.0100	1	06/28/2017 10:40	WG993211
Iron,Dissolved	ND		0.100	1	06/28/2017 10:40	WG993211



## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/28/2017 10:40	WG993211
Magnesium,Dissolved	46.3		1.00	1	06/28/2017 10:40	WG993211
Manganese,Dissolved	ND		0.0100	1	06/28/2017 10:40	WG993211
Potassium,Dissolved	2.36	B	1.00	1	06/28/2017 10:40	WG993211
Selenium,Dissolved	ND		0.0100	1	06/28/2017 10:40	WG993211
Silver,Dissolved	ND		0.00500	1	06/28/2017 10:40	WG993211
Sodium,Dissolved	68.0		1.00	1	06/28/2017 10:40	WG993211

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	06/23/2017 12:11	WG992015
Ethane	ND		0.0130	1	06/23/2017 12:11	WG992015
Ethene	ND		0.0130	1	06/23/2017 12:11	WG992015

## 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	06/28/2017 18:52	WG993715
Toluene	ND		0.00100	1	06/28/2017 18:52	WG993715
Ethylbenzene	ND		0.00100	1	06/28/2017 18:52	WG993715
Total Xylenes	ND		0.00300	1	06/28/2017 18:52	WG993715
Methyl tert-butyl ether	ND		0.00100	1	06/28/2017 18:52	WG993715
(S) Toluene-d8	106		80.0-120		06/28/2017 18:52	WG993715
(S) Dibromofluoromethane	94.1		76.0-123		06/28/2017 18:52	WG993715
(S) 4-Bromofluorobenzene	98.4		80.0-120		06/28/2017 18:52	WG993715



## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	339		10.0	1	06/27/2017 18:29	WG993145

1 Cp

2 Tc

## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	311		20.0	1	06/28/2017 19:01	WG993343
Alkalinity,Bicarbonate	307		20.0	1	06/28/2017 19:01	WG993343
Alkalinity,Carbonate	ND		20.0	1	06/28/2017 19:01	WG993343

3 Ss

4 Cn

5 Sr

## Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	06/27/2017 13:07	WG993001

6 Gl

7 Al

## Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	06/22/2017 15:58	WG991876

8 Sc

## Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.95	T8	1	06/24/2017 15:58	WG991791

## Sample Narrative:

9040C L917718-05 WG991791: 7.95 at 11.6c

## Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	721		1	06/23/2017 11:34	WG991870

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/22/2017 15:23	WG991886
Chloride	5.10		1.00	1	06/22/2017 15:23	WG991886
Fluoride	0.778		0.100	1	06/22/2017 15:23	WG991886
Nitrate as (N)	0.427		0.100	1	06/22/2017 15:23	WG991886
Nitrite as (N)	ND		0.100	1	06/22/2017 15:23	WG991886
Sulfate	88.3		5.00	1	06/22/2017 15:23	WG991886

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	06/28/2017 10:42	WG993211
Barium,Dissolved	0.0542		0.00500	1	06/28/2017 10:42	WG993211
Cadmium,Dissolved	ND		0.00200	1	06/28/2017 10:42	WG993211
Calcium,Dissolved	48.9		1.00	1	06/28/2017 10:42	WG993211
Chromium,Dissolved	ND		0.0100	1	06/28/2017 10:42	WG993211
Copper,Dissolved	ND		0.0100	1	06/28/2017 10:42	WG993211
Iron,Dissolved	ND		0.100	1	06/28/2017 10:42	WG993211



## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/28/2017 10:42	WG993211
Magnesium,Dissolved	39.1		1.00	1	06/28/2017 10:42	WG993211
Manganese,Dissolved	ND		0.0100	1	06/28/2017 10:42	WG993211
Potassium,Dissolved	2.87	B	1.00	1	06/28/2017 10:42	WG993211
Selenium,Dissolved	ND		0.0100	1	06/28/2017 10:42	WG993211
Silver,Dissolved	ND		0.00500	1	06/28/2017 10:42	WG993211
Sodium,Dissolved	55.8		1.00	1	06/28/2017 10:42	WG993211

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	06/23/2017 12:13	WG992015
Ethane	ND		0.0130	1	06/23/2017 12:13	WG992015
Ethene	ND		0.0130	1	06/23/2017 12:13	WG992015

## 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	06/28/2017 19:08	WG993715
Toluene	ND		0.00100	1	06/28/2017 19:08	WG993715
Ethylbenzene	ND		0.00100	1	06/28/2017 19:08	WG993715
Total Xylenes	ND		0.00300	1	06/28/2017 19:08	WG993715
Methyl tert-butyl ether	ND		0.00100	1	06/28/2017 19:08	WG993715
(S) Toluene-d8	107		80.0-120		06/28/2017 19:08	WG993715
(S) Dibromofluoromethane	96.4		76.0-123		06/28/2017 19:08	WG993715
(S) 4-Bromofluorobenzene	97.8		80.0-120		06/28/2017 19:08	WG993715



## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	712		10.0	1	06/28/2017 16:22	WG993425

1 Cp

2 Tc

## Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	390		20.0	1	06/28/2017 19:08	WG993343
Alkalinity,Bicarbonate	390		20.0	1	06/28/2017 19:08	WG993343
Alkalinity,Carbonate	ND		20.0	1	06/28/2017 19:08	WG993343

3 Ss

4 Cn

5 Sr

## 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	06/27/2017 13:08	WG993001

6 Gl

7 Al

## 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	06/22/2017 15:58	WG991876

8 Sc

## Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.12	T8	1	06/24/2017 15:58	WG991791

## Sample Narrative:

9040C L917718-06 WG991791: 7.12 at 10.5c

## Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1160		1	06/23/2017 11:34	WG991870

## Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	06/22/2017 15:38	WG991886
Chloride	27.7		1.00	1	06/22/2017 15:38	WG991886
Fluoride	0.725		0.100	1	06/22/2017 15:38	WG991886
Nitrate as (N)	4.65		0.100	1	06/22/2017 15:38	WG991886
Nitrite as (N)	ND		0.100	1	06/22/2017 15:38	WG991886
Sulfate	209		50.0	10	06/22/2017 15:53	WG991886

## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	06/28/2017 10:45	WG993211
Barium,Dissolved	0.113		0.00500	1	06/28/2017 10:45	WG993211
Cadmium,Dissolved	ND		0.00200	1	06/28/2017 10:45	WG993211
Calcium,Dissolved	95.5		1.00	1	06/28/2017 10:45	WG993211
Chromium,Dissolved	ND		0.0100	1	06/28/2017 10:45	WG993211
Copper,Dissolved	ND		0.0100	1	06/28/2017 10:45	WG993211
Iron,Dissolved	ND		0.100	1	06/28/2017 10:45	WG993211





## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/28/2017 10:45	WG993211
Magnesium,Dissolved	62.6		1.00	1	06/28/2017 10:45	WG993211
Manganese,Dissolved	ND		0.0100	1	06/28/2017 10:45	WG993211
Potassium,Dissolved	3.39	B	1.00	1	06/28/2017 10:45	WG993211
Selenium,Dissolved	ND		0.0100	1	06/28/2017 10:45	WG993211
Silver,Dissolved	ND		0.00500	1	06/28/2017 10:45	WG993211
Sodium,Dissolved	80.3		1.00	1	06/28/2017 10:45	WG993211

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	06/23/2017 12:15	WG992015
Ethane	ND		0.0130	1	06/23/2017 12:15	WG992015
Ethene	ND		0.0130	1	06/23/2017 12:15	WG992015

## 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	06/28/2017 19:25	WG993715
Toluene	ND		0.00100	1	06/28/2017 19:25	WG993715
Ethylbenzene	ND		0.00100	1	06/28/2017 19:25	WG993715
Total Xylenes	ND		0.00300	1	06/28/2017 19:25	WG993715
Methyl tert-butyl ether	ND		0.00100	1	06/28/2017 19:25	WG993715
(S) Toluene-d8	107		80.0-120		06/28/2017 19:25	WG993715
(S) Dibromofluoromethane	93.6		76.0-123		06/28/2017 19:25	WG993715
(S) 4-Bromofluorobenzene	97.5		80.0-120		06/28/2017 19:25	WG993715



## Abbreviations and Definitions

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

Qualifier	Description
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B	The same analyte is found in the associated blank.
T8	Sample(s) received past/too close to holding time expiration.

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

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

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
Conneticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	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 <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	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		

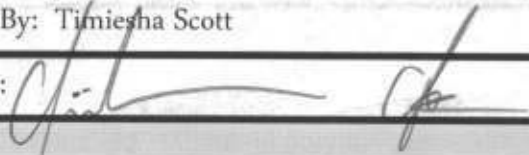
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA-Crypto	IN00003		

## Our Locations

A map of the United States showing state abbreviations. Purple pins are placed in various states, with the pin in Tennessee highlighted in orange. The states with pins are: WA, OR, ID, NV, CA, AZ, NM, CO, UT, MT, WY, ND, SD, NE, KS, MN, IA, MO, IL, IN, OH, MI, NY, PA, WV, VA, KY, TN, AR, MS, AL, GA, SC, NC, and FL. The pin in TN is orange, while all other pins are purple.

[illegible]

## ESC LAB SCIENCES Cooler Receipt Form

Client:	ENCANACO	SDG#	917718	
Cooler Received/Opened On:	06/22/2017	Temperature:	2.4	
Received By:	Timiesha Scott			
Signature:				
<b>Receipt Check List</b>				
	NP	Yes	No	
COC Seal Present / Intact?	✓			
COC Signed / Accurate?		✓		
Bottles arrive intact?		✓		
Correct bottles used?		✓		
Sufficient volume sent?		✓		
If Applicable				
VOA Zero headspace?		✓		
Preservation Correct / Checked?		✓		