



Monday, November 23, 2020

Jeff Braden  
LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada, CO 80003

Re: ALS Workorder: 2010601  
Project Name: PDC Bradenhead Sampling  
Project Number: 018820075

Dear Mr. Braden:

One water sample was received from LT Environmental, Inc., on 10/27/2020. The sample was scheduled for the following analyses:

- Dissolved Gasses
- GC/MS Volatiles
- Inorganics
- Metals
- Total Extractable Petroleum Hydrocarbons (Diesel)

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental  
Katie M. O'Brien  
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



## 2010601

### GC/MS Volatiles:

The sample was analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C. The sample was also analyzed for Gasoline Range Organics (GRO).

All surrogate recoveries were within acceptance criteria with the following exception:

Surrogate	Sample	Direction
Dibromofluoromethane	-1	Low

The low surrogate is likely due to the low pH of the sample. No further action was taken.

All remaining acceptance criteria were met.

### Dissolved Gasses:

The sample was prepared and analyzed according to method RSK-175 procedures and the current revision of SOP 449.

All acceptance criteria were met.

### DRO:

The sample was analyzed following the current revision of SOP 406 generally based on SW-846 Methods 8000C and 8015D. TEPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C10 to C28.

All acceptance criteria were met.

### Metals:

The sample was analyzed following Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures. Analysis by ICPMS followed method 200.8 and the current revision of SOP 827.

All acceptance criteria were met.

### Inorganics:

The sample was analyzed following EMSL and Standard Method procedures for the current revisions of the following SOPs and methods:



<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
Alkalinity	SM2320B	1106
Bicarbonate	SM2320B	1106
Carbonate	SM2320B	1106
TDS	SM2540C	1101
Chloride	300.0 Revision 2.1	1113
Sulfate	300.0 Revision 2.1	1113

A matrix spike (MS) was prepared and analyzed with the anion batch. All guidance criteria for precision and accuracy were met with the following exception:

<u>Analyte</u>	<u>Sample ID</u>
Chloride	2010601-1MS

The native sample result is flagged for chloride. The laboratory control samples indicate that the procedure was in control.

All remaining acceptance criteria were met.

# ALS -- Fort Collins

## Sample Number(s) Cross-Reference Table

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**OrderNum:** 2010601

**Client Name:** LT Environmental, Inc.

**Client Project Name:** PDC Bradenhead Sampling

**Client Project Number:** 018820075

**Client PO Number:**

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Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Ward W-20-19HC bh	2010601-1		WATER	27-Oct-20	14:10





**ALS Environmental - Fort Collins**  
**CONDITION OF SAMPLE UPON RECEIPT FORM**

Client Name/ID:

LTE

Workorder No:

2010601

Project Manager:

KMO

Initials:

TM

Date:

10/28/20

1. Are airbills / shipping documents present and/or removable?	<input checked="" type="checkbox"/> Drop Off	<input type="checkbox"/> YES	<input type="checkbox"/> NO
2. Are custody seals on <b>shipping</b> containers intact?	<input checked="" type="checkbox"/> NONE	<input type="checkbox"/> YES	<input type="checkbox"/> NO*
3. Are custody seals on <b>sample</b> containers intact?	<input checked="" type="checkbox"/> NONE	<input type="checkbox"/> YES	<input type="checkbox"/> NO*
4. Is there a COC (chain-of-custody) present?	<input checked="" type="checkbox"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO*
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO*
6. Are short-hold samples present?	<input type="checkbox"/>	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
7. Are all samples within holding times for the requested analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO*
8. Were all sample containers received intact? (not broken or leaking)	<input checked="" type="checkbox"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO*
9. Is there sufficient sample for the requested analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO*
10. Are samples in proper containers for requested analyses? (form 250, Sample Handling Guidelines)	<input checked="" type="checkbox"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO*
11. Are all aqueous samples preserved correctly, if required?	<input type="checkbox"/> N/A	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO*
12. Were unpreserved samples pH checked, if required?	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	<input type="checkbox"/> N/A	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
14. Were the samples shipped on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
15. Were cooler temperatures measured at 0.1 - 6.0°C?	IR gun used: <input type="checkbox"/> #3 <input checked="" type="checkbox"/> #5 <input type="checkbox"/> Rad Only	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO

Cooler #: 1

Temperature (°C): 3.8

# of custody seals on cooler: 0

External mR/hr reading: -

Background mR/hr reading: 11

Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? (If no, see Form 008)

N/A  YES  NO

\* Please provide details below for 'NO' responses in gray boxes above - for 2 thru 5 & 7 thru 12, notify PM & continue w/ login.

11.) 601-1-2 read initial pH of 11: added 0.5mL HNO3 (lot# 234822) for final pH of 11

13.) 601-1-6,7,8,9,10,11 have notable headspace

All client bottle ID's vs ALS lab ID's double-checked by: TM

If applicable, was the client contacted?  YES  N/A Contact Name

Date:

Project Manager Signature / Date:

*[Signature]* 10/28/20

Client: LT Environmental, Inc.  
 Project: 018820075 PDC Bradenhead Sampling  
 Sample ID: Ward W-20-19HC bh  
 Legal Location:  
 Collection Date: 10/27/2020 14:10

Date: 23-Nov-20  
 Work Order: 2010601  
 Lab ID: 2010601-1  
 Matrix: WATER  
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Alkalinity as Calcium Carbonate</b>						
TOTAL ALKALINITY AS CaCO3	5000		100	MG/L	1	10/31/2020
BICARBONATE AS CaCO3	ND		100	MG/L	1	10/31/2020
CARBONATE AS CaCO3	720		100	MG/L	1	10/31/2020
<b>Diesel Range Organics</b>						
Diesel Range Organics	6.9		1	MG/L	1	11/18/2020 05:32
Surr: O-TERPHENYL	92		69-120	%REC	1	11/18/2020 05:32
<b>Dissolved Gasses</b>						
METHANE	8400		3	UG/L	3	11/5/2020 11:11
ETHANE	1700		6	UG/L	3	11/5/2020 11:11
PROPANE	370		3	UG/L	3	11/5/2020 11:11
<b>GC/MS Volatiles</b>						
BENZENE	40		1	UG/L	1	11/6/2020 23:00
TOLUENE	53		1	UG/L	1	11/6/2020 23:00
ETHYLBENZENE	8.2		1	UG/L	1	11/6/2020 23:00
M+P-XYLENE	35		1	UG/L	1	11/6/2020 23:00
O-XYLENE	19		1	UG/L	1	11/6/2020 23:00
TOTAL XYLENES	54		1	UG/L	1	11/6/2020 23:00
Surr: 4-BROMOFLUOROBENZENE	109		80-120	%REC	1	11/6/2020 23:00
Surr: DIBROMOFLUOROMETHANE	19	*	80-120	%REC	1	11/6/2020 23:00
Surr: TOLUENE-D8	98		80-120	%REC	1	11/6/2020 23:00
GASOLINE RANGE ORGANICS	3300		100	UG/L	1	11/6/2020 23:00
<b>Ion Chromatography</b>						
CHLORIDE	7700	N	100	MG/L	500	10/31/2020 17:08
SULFATE	210		5	MG/L	5	11/3/2020 11:47
<b>Total Recoverable Metals by 200.8</b>						
CALCIUM	630		1	MG/L	10	11/5/2020 02:37
MAGNESIUM	8		0.1	MG/L	10	11/5/2020 02:37
POTASSIUM	5200		10	MG/L	100	11/5/2020 16:06
SODIUM	2600		1	MG/L	10	11/5/2020 02:37
<b>Total Dissolved Solids</b>						
TOTAL DISSOLVED SOLIDS	10000		1000	MG/L	1	11/3/2020

**Client:** LT Environmental, Inc.  
**Project:** 018820075 PDC Bradenhead Sampling  
**Sample ID:** Ward W-20-19HC bh  
**Legal Location:**  
**Collection Date:** 10/27/2020 14:10

**Date:** 23-Nov-20  
**Work Order:** 2010601  
**Lab ID:** 2010601-1  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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**Explanation of Qualifiers**

**Radiochemistry:**

- "Report Limit" is the MDC
- U or ND - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
- Y2 - Chemical Yield outside default limits.
- W - DER is greater than Warning Limit of 1.42
- \* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
- # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
- G - Sample density differs by more than 15% of LCS density.
- D - DER is greater than Control Limit
- M - Requested MDC not met.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS, Matrix Spike Recovery within control limits.
- N - Matrix Spike Recovery outside control limits
- NC - Not Calculated for duplicate results less than 5 times MDC
- B - Analyte concentration greater than MDC.
- B3 - Analyte concentration greater than MDC but less than Requested MDC.

**Inorganics:**

- B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
- U or ND - Indicates that the compound was analyzed for but not detected.
- E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
- M - Duplicate injection precision was not met.
- N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
- Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
- \* - Duplicate analysis (relative percent difference) not within control limits.
- S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

**Organics:**

- U or ND - Indicates that the compound was analyzed for but not detected.
- B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
- E - Analyte concentration exceeds the upper level of the calibration range.
- J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
- A - A tentatively identified compound is a suspected aldol-condensation product.
- X - The analyte was diluted below an accurate quantitation level.
- \* - The spike recovery is equal to or outside the control criteria used.
- + - The relative percent difference (RPD) equals or exceeds the control criteria.
- G - A pattern resembling gasoline was detected in this sample.
- D - A pattern resembling diesel was detected in this sample.
- M - A pattern resembling motor oil was detected in this sample.
- C - A pattern resembling crude oil was detected in this sample.
- 4 - A pattern resembling JP-4 was detected in this sample.
- 5 - A pattern resembling JP-5 was detected in this sample.
- H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
  - gasoline
  - JP-8
  - diesel
  - mineral spirits
  - motor oil
  - Stoddard solvent
  - bunker C

ALS -- Fort Collins

Date: 11/23/2020 8:52

Client: LT Environmental, Inc.

QC BATCH REPORT

Work Order: 2010601

Project: 018820075 PDC Bradenhead Sampling

Batch ID: **HC201105-82-2**

Instrument ID **FUELS-1**

Method: **SW8015M**

LCS		Sample ID: <b>HC201105-82</b>			Units: <b>MG/L</b>		Analysis Date: <b>11/18/2020 03:46</b>				
Client ID:		Run ID: <b>HC201116-81B</b>			Prep Date: <b>11/5/2020</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	6.98	1.07	8.33		84	53-120				20	
Surr: O-TERPHENYL	1.58		1.67		95	69-120					

LCSD		Sample ID: <b>HC201105-82</b>			Units: <b>MG/L</b>		Analysis Date: <b>11/18/2020 04:07</b>				
Client ID:		Run ID: <b>HC201116-81B</b>			Prep Date: <b>11/5/2020</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	6.87	1.07	8.33		82	53-120		6.98	2	20	
Surr: O-TERPHENYL	1.56		1.67		94	69-120			1		

MB		Sample ID: <b>HC201105-82</b>			Units: <b>MG/L</b>		Analysis Date: <b>11/18/2020 03:25</b>					
Client ID:		Run ID: <b>HC201116-81B</b>			Prep Date: <b>11/5/2020</b>		DF: <b>1</b>					
Analyte	Result	ReportLimit										Qual
Diesel Range Organics	ND	1.1										
Surr: O-TERPHENYL	1.56				93	69-120						

The following samples were analyzed in this batch:

Client: LT Environmental, Inc.  
 Work Order: 2010601  
 Project: 018820075 PDC Bradenhead Sampling

# QC BATCH REPORT

Batch ID: **HC201105-91-2** Instrument ID **MEE-1** Method: **RSK175**

LCS		Sample ID: <b>HC201105-91</b>			Units: <b>UG/L</b>		Analysis Date: <b>11/5/2020 10:30</b>				
Client ID:		Run ID: <b>HC201105-91A</b>			Prep Date: <b>11/5/2020</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	155	1	142		109	76-125				25	
ETHANE	288	2	267		108	70-120				25	
PROPANE	420	1	391		107	72-120				25	

LCSD		Sample ID: <b>HC201105-91</b>			Units: <b>UG/L</b>		Analysis Date: <b>11/5/2020 11:30</b>				
Client ID:		Run ID: <b>HC201105-91A</b>			Prep Date: <b>11/5/2020</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	152	1	142		107	76-125		155	2	25	
ETHANE	282	2	267		106	70-120		288	2	25	
PROPANE	412	1	391		105	72-120		420	2	25	

MB		Sample ID: <b>HC201105-91</b>			Units: <b>UG/L</b>		Analysis Date: <b>11/5/2020 10:33</b>					
Client ID:		Run ID: <b>HC201105-91A</b>			Prep Date: <b>11/5/2020</b>		DF: <b>1</b>					
Analyte	Result	ReportLimit										Qual
METHANE	ND	1										
ETHANE	ND	2										
PROPANE	ND	1										

The following samples were analyzed in this batch:

Client: LT Environmental, Inc.  
 Work Order: 2010601  
 Project: 018820075 PDC Bradenhead Sampling

# QC BATCH REPORT

Batch ID: **IP201103-1-5** Instrument ID **ICPMS2** Method: **EPA200.8**

LCS		Sample ID: <b>IM201103-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>11/5/2020 02:11</b>				
Client ID:		Run ID: <b>IM201104-10A19</b>			Prep Date: <b>11/3/2020</b>		DF: <b>10</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CALCIUM	11	1	10		110	85-115				20	
MAGNESIUM	10.4	0.1	10		104	85-115				20	
POTASSIUM	5.69	1	5		114	85-115				20	
SODIUM	10.8	1	10		108	85-115				20	

LCSD		Sample ID: <b>IM201103-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>11/5/2020 02:17</b>				
Client ID:		Run ID: <b>IM201104-10A19</b>			Prep Date: <b>11/3/2020</b>		DF: <b>10</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CALCIUM	10.9	1	10		109	85-115		11	1	20	
MAGNESIUM	9.99	0.1	10		100	85-115		10.4	4	20	
POTASSIUM	5.47	1	5		109	85-115		5.69	4	20	
SODIUM	10.6	1	10		106	85-115		10.8	2	20	

MB		Sample ID: <b>IP201103-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>11/5/2020 02:08</b>					
Client ID:		Run ID: <b>IM201104-10A19</b>			Prep Date: <b>11/3/2020</b>		DF: <b>10</b>					
Analyte	Result	ReportLimit										Qual
CALCIUM	ND	1										
MAGNESIUM	ND	0.1										
POTASSIUM	ND	1										
SODIUM	ND	1										

The following samples were analyzed in this batch:

Client: LT Environmental, Inc.  
 Work Order: 2010601  
 Project: 018820075 PDC Bradenhead Sampling

# QC BATCH REPORT

Batch ID: VL201106-3-4 Instrument ID: HPV3 Method: SW8260\_25

LCS		Sample ID: VL201106-3			Units: %REC		Analysis Date: 11/6/2020 17:56				
Client ID:		Run ID: VL201106-3A			Prep Date: 11/6/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	27.2		25		109	80-120					
Surr: DIBROMOFLUOROMETHANE	25.1		25		100	80-120					
Surr: TOLUENE-D8	23.7		25		95	80-120					
BENZENE	41.3	1	40		103	80-120				20	
TOLUENE	38.3	1	40		96	80-120				20	
ETHYLBENZENE	40.1	1	40		100	80-120				20	
M+P-XYLENE	79.1	1	80		99	80-120				20	
O-XYLENE	38.9	1	40		97	80-120				20	

LCSD		Sample ID: VL201106-3			Units: %REC		Analysis Date: 11/6/2020 18:37				
Client ID:		Run ID: VL201106-3A			Prep Date: 11/6/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	26.7		25		107	80-120			2		
Surr: DIBROMOFLUOROMETHANE	24.9		25		100	80-120			1		
Surr: TOLUENE-D8	24.1		25		96	80-120			2		
BENZENE	42.4	1	40		106	80-120		41.3	3	20	
TOLUENE	40.1	1	40		100	80-120		38.3	5	20	
ETHYLBENZENE	41.6	1	40		104	80-120		40.1	4	20	
M+P-XYLENE	83.1	1	80		104	80-120		79.1	5	20	
O-XYLENE	41.9	1	40		105	80-120		38.9	7	20	

MB		Sample ID: VL201106-3			Units: %REC		Analysis Date: 11/6/2020 19:58				
Client ID:		Run ID: VL201106-3A			Prep Date: 11/6/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	26.1		25		104	80-120					
Surr: DIBROMOFLUOROMETHANE	25		25		100	80-120					
Surr: TOLUENE-D8	24.6		25		98	80-120					
BENZENE	ND	1	40								
TOLUENE	ND	1	40								
ETHYLBENZENE	ND	1	40								
M+P-XYLENE	ND	1	80								
O-XYLENE	ND	1	40								
TOTAL XYLENES	ND	1	40								

The following samples were analyzed in this batch:

**Client:** LT Environmental, Inc.  
**Work Order:** 2010601  
**Project:** 018820075 PDC Bradenhead Sampling

## QC BATCH REPORT

Batch ID: **VL201106-3-5**      Instrument ID **HPV3**      Method: **SW8260\_25**

**LCS**      Sample ID: **VL201106-33**      Units: **UG/L**      Analysis Date: **11/6/2020 18:17**  
 Client ID:      Run ID: **VL201106-3A**      Prep Date: **11/6/2020**      DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1100	100	1000		10	75-121				20	

**LCSD**      Sample ID: **VL201106-33**      Units: **UG/L**      Analysis Date: **11/6/2020 19:17**  
 Client ID:      Run ID: **VL201106-3A**      Prep Date: **11/6/2020**      DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	999	100	1000		100	75-121		1100	9	20	

**MB**      Sample ID: **VL201106-3**      Units: **UG/L**      Analysis Date: **11/6/2020 19:58**  
 Client ID:      Run ID: **VL201106-3A**      Prep Date: **11/6/2020**      DF: **1**

Analyte	Result	ReportLimit										Qual
GASOLINE RANGE ORGANICS	ND	100										

**The following samples were analyzed in this batch:**

**Client:** LT Environmental, Inc.  
**Work Order:** 2010601  
**Project:** 018820075 PDC Bradenhead Sampling

## QC BATCH REPORT

Batch ID: **AK201031-2-1**      Instrument ID **NONE**      Method: **SM2320B**

LCS		Sample ID: <b>AK201031-2</b>			Units: <b>MG/L</b>		Analysis Date: <b>10/31/2020</b>				
Client ID:		Run ID: <b>AK201031-1a1</b>			Prep Date: <b>10/31/2020</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	99.3	5	100		99	85-115				15	

LCSD		Sample ID: <b>AK201031-2</b>			Units: <b>MG/L</b>		Analysis Date: <b>10/31/2020</b>				
Client ID:		Run ID: <b>AK201031-1a1</b>			Prep Date: <b>10/31/2020</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	101	5	100		101	85-115		99.3	1	15	

MB		Sample ID: <b>AK201031-2</b>			Units: <b>MG/L</b>		Analysis Date: <b>10/31/2020</b>					
Client ID:		Run ID: <b>AK201031-1a1</b>			Prep Date: <b>10/31/2020</b>		DF: <b>1</b>					
Analyte	Result	ReportLimit										Qual
TOTAL ALKALINITY AS CaCO3	ND	5										
BICARBONATE AS CaCO3	ND	5										
CARBONATE AS CaCO3	ND	5										

**The following samples were analyzed in this batch:**      2010601-1

Client: LT Environmental, Inc.  
 Work Order: 2010601  
 Project: 018820075 PDC Bradenhead Sampling

# QC BATCH REPORT

Batch ID: **IC201031-2-1** Instrument ID **IC3** Method: **EPA300.0**

LCS		Sample ID: <b>IC201031-2</b>			Units: <b>MG/L</b>		Analysis Date: <b>10/31/2020 16:15</b>				
Client ID:		Run ID: <b>IC201031-2a1</b>			Prep Date: <b>10/31/2020</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	9.82	0.2	10		98	90-110				15	
SULFATE	49	1	50		98	90-110				15	

LCSD		Sample ID: <b>IC201031-2</b>			Units: <b>MG/L</b>		Analysis Date: <b>10/31/2020 18:53</b>				
Client ID:		Run ID: <b>IC201031-2a1</b>			Prep Date: <b>10/31/2020</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	9.83	0.2	10		98	90-110		9.82	0	15	
SULFATE	49	1	50		98	90-110		49	0	15	

MB		Sample ID: <b>IC201031-2</b>			Units: <b>MG/L</b>		Analysis Date: <b>10/31/2020 16:28</b>				
Client ID:		Run ID: <b>IC201031-2a1</b>			Prep Date: <b>10/31/2020</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	Qual								
CHLORIDE	ND	0.2									
SULFATE	ND	1									

MS		Sample ID: <b>2010601-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>10/31/2020 17:21</b>				
Client ID: <b>Ward W-20-19HC bh</b>		Run ID: <b>IC201031-2a1</b>			Prep Date: <b>10/31/2020</b>		DF: <b>500</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	10600	100	2500	7700	118	85-115				15	N

The following samples were analyzed in this batch:

**Client:** LT Environmental, Inc.  
**Work Order:** 2010601  
**Project:** 018820075 PDC Bradenhead Sampling

# QC BATCH REPORT

Batch ID: **IC201031-2-1** Instrument ID **IC3** Method: **EPA300.0**

**MS** Sample ID: **2010601-1** Units: **MG/L** Analysis Date: **11/3/2020 12:00**  
Client ID: **Ward W-20-19HC bh** Run ID: **IC201103-1a1** Prep Date: **10/31/2020** DF: **5**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SULFATE	313	5	100	210	99	85-115				15	

The following samples were analyzed in this batch:

2010601-1

**Client:** LT Environmental, Inc.  
**Work Order:** 2010601  
**Project:** 018820075 PDC Bradenhead Sampling

## QC BATCH REPORT

Batch ID: **TD201103-1-2**      Instrument ID **Balance**      Method: **SM2540C**

LCS	Sample ID: <b>TD201103-1</b>					Units: <b>MG/L</b>	Analysis Date: <b>11/3/2020</b>				
Client ID:		Run ID: <b>TD201103-1A1</b>					Prep Date: <b>11/3/2020</b>		DF: <b>1</b>		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	416	20	400		104	85-115				14	

LCSD	Sample ID: <b>TD201103-1</b>					Units: <b>MG/L</b>	Analysis Date: <b>11/3/2020</b>				
Client ID:		Run ID: <b>TD201103-1A1</b>					Prep Date: <b>11/3/2020</b>		DF: <b>1</b>		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	411	20	400		103	85-115		416	1	14	

MB	Sample ID: <b>TD201103-1</b>					Units: <b>MG/L</b>	Analysis Date: <b>11/3/2020</b>				
Client ID:		Run ID: <b>TD201103-1A1</b>					Prep Date: <b>11/3/2020</b>		DF: <b>1</b>		
Analyte	Result	ReportLimit									Qual
TOTAL DISSOLVED SOLIDS	ND	20									

**The following samples were analyzed in this batch:**