Monday, July 13, 2020

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

Re: ALS Workorder: 2006477
Project Name: PDC Bradenhead Sampling
Project Number: 018820045

Dear Mr. Braden:

One water sample was received from LT Environmental, Inc., on 6/24/2020. 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. OBrien
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

2006477

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 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 surrogate recoveries were within acceptance criteria with the following exception:

Surrogate	Sample	Direction
O-terphenyl	-1	Low

The sample was re-analyzed to evaluate whether the original outlier was due to matrix effects or laboratory performance. The re-analysis also had the surrogate outside the control limits, which suggests the presence of matrix effects.

All acceptance criteria were met.

Metals:
The sample were 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:

Analyte	Method	SOP #
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

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2006477
Client Name: LT Environmental, Inc.
Client Project Name: PDC Bradenhead Sampling
Client Project Number: 018820045
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Fern IIV-434	2006477-1		WATER	24-Jun-20	11:40

ALS Environmental

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

WORKORDER # 2006477

PAGE 1 of 1

DISPOSAL: By Lab or Return to Client

PROJECT NAME	PDC Bradenhead Sampling	SAMPLER	Jeff Braden
PROJECT No.	01882045	FACILITY ID	123-44579
	Fern	EDD FORMAT	COGCC EDD, LTE
COMPANY NAME	LT Environmental, Inc.	PURCHASE ORDER	N/A
SEND REPORT TO	Jenifer Hakkarinen, Jeff Braden	BILL TO COMPANY	PDC Energy
ADDRESS	4600 W 60th Ave	INVOICE ATTN TO	Jenifer Hakkarinen
CITY / STATE / ZIP	Arvada, CO 80003	ADDRESS	1775 Sherman Street, Suite 3000
PHONE	303-433-9788	CITY / STATE / ZIP	Denver, Colorado
FAX	303-433-1432	PHONE	303.860.5815
E-MAIL	jenifer.hakkarinen@pdce.com; jbraden @ltenv.com; kwhite@ltenv.com	FAX	
		E-MAIL	Jenifer.Hakkarinen@pdce.com

DATE: 6/24/20

TURNAROUND: Standard

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	Dissolved Methane, Ethane, Propane RSK 175	BTEX & TPH GRO SW8260_25	TPH DRO SW8015M	Alkalinity, Carbonate, Bicarbonate, Total SM2320B	Total Cations - see comments EPA200.7/200.8	Total Anions - see comments EPA 300.0	Total Dissolved Solids SM2540C
1	Fern 11U-434	W	6/24/20	1140	11	12	-	X	X	X	X	X	X	X

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

5.5°C

Comments: Cations/Anions:

Calcium, Chloride, Magnesium, Potassium, Sodium, Sulfate

Samples analyzed per COGCC Bradenhead Sampling Program

QC PACKAGE (check below)

- [ ] LEVEL II (Standard QC)
- [ ] LEVEL III (Std QC + forms)
- [ ] LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Jeff Braden	6/24/20	1445
RECEIVED BY		Tyler Mosser	6/24/20	1445
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: LTE Workorder No: 2006477

Project Manager: KMO Initials: TM Date: 6/25/20

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

Cooler #: 1

Temperature (°C): 5.5

# 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.

13.) all vials 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: 6/26/20

Form 201r30.xls
(06/04/2020)

+IR Gun #3, VWR SN 170647571
+IR Gun #5, VWR SN 192272629

Client: LT Environmental, Inc. **Date:** *13-Jul-20*
Project: 018820045 PDC Bradenhead Sampling **Work Order:** 2006477
Sample ID: Fern IIV-434 **Lab ID:** 2006477-1
Legal Location: **Matrix:** WATER
Collection Date: 6/24/2020 11:40 **Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity as Calcium Carbonate			**SM2320B**		Prep Date: **7/6/2020**	PrepBy: **KJS**
TOTAL ALKALINITY AS CaCO3	**2400**		**50**	**MG/L**	1	7/6/2020
BICARBONATE AS CaCO3	**570**		**50**	**MG/L**	1	7/6/2020
CARBONATE AS CaCO3	**1800**		**50**	**MG/L**	1	7/6/2020
Diesel Range Organics			**SW8015M**		Prep Date: **6/29/2020**	PrepBy: **JRS**
Diesel Range Organics	**29**		**1**	**MG/L**	1	6/30/2020 14:19
Surr: O-TERPHENYL	*58*	*	*69-120*	*%REC*	1	6/30/2020 14:19
Dissolved Gasses			**RSK175**		Prep Date: **7/1/2020**	PrepBy: **DMS**
METHANE	**20000**		**6**	**UG/L**	6	7/1/2020 13:55
ETHANE	**5800**		**12**	**UG/L**	6	7/1/2020 13:55
PROPANE	**1900**		**6**	**UG/L**	6	7/1/2020 13:55
GC/MS Volatiles			**SW8260_25**		Prep Date: **7/8/2020**	PrepBy: **C1A**
BENZENE	**280**		**25**	**UG/L**	25	7/8/2020 19:00
TOLUENE	**660**		**25**	**UG/L**	25	7/8/2020 19:00
ETHYLBENZENE	**41**		**25**	**UG/L**	25	7/8/2020 19:00
M+P-XYLENE	**520**		**25**	**UG/L**	25	7/8/2020 19:00
O-XYLENE	**130**		**25**	**UG/L**	25	7/8/2020 19:00
TOTAL XYLENES	**650**		**1**	**UG/L**	1	7/8/2020 19:00
Surr: 4-BROMOFLUOROBENZENE	*100*		*80-120*	*%REC*	25	7/8/2020 19:00
Surr: DIBROMOFLUOROMETHANE	*103*		*80-120*	*%REC*	25	7/8/2020 19:00
Surr: TOLUENE-D8	*100*		*80-120*	*%REC*	25	7/8/2020 19:00
GASOLINE RANGE ORGANICS	**7700**		**2500**	**UG/L**	25	7/8/2020 19:00
Ion Chromatography			**EPA300.0**		Prep Date: **7/1/2020**	PrepBy: **KJS**
CHLORIDE	**2400**		**40**	**MG/L**	200	7/2/2020 12:46
SULFATE	ND		5	MG/L	5	7/2/2020 12:32
Total Recoverable Metals by 200.8			**EPA200.8**		Prep Date: **6/30/2020**	PrepBy: **JML**
CALCIUM	**4.1**		**1**	**MG/L**	10	7/7/2020 15:58
MAGNESIUM	**0.18**		**0.1**	**MG/L**	10	7/7/2020 15:58
POTASSIUM	**60**		**1**	**MG/L**	10	7/7/2020 15:58
SODIUM	**2500**		**1**	**MG/L**	10	7/7/2020 15:58
Total Dissolved Solids			**SM2540C**		Prep Date: **6/30/2020**	PrepBy: **LMC**
TOTAL DISSOLVED SOLIDS	**6800**		**200**	**MG/L**	1	7/1/2020

Client:	LT Environmental, Inc.	**Date:**	*13-Jul-20*
Project:	018820045 PDC Bradenhead Sampling	**Work Order:**	2006477
Sample ID:	Fern IIV-434	**Lab ID:**	2006477-1
Legal Location:		**Matrix:**	WATER
Collection Date:	6/24/2020 11:40	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

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

Batch ID: **HC200629-82-1** Instrument ID **FUELS-1** Method: **SW8015M**

LCS Sample ID: **HC200629-82** Units: **MG/L** Analysis Date: **6/30/2020 18:55**

Client ID: Run ID: **HC200629-81A** Prep Date: **6/29/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	7.95	1.07	8.33		95	53-120				20	
Surr: O-TERPHENYL	1.75		1.67		105	69-120					

LCSD Sample ID: **HC200629-82** Units: **MG/L** Analysis Date: **6/30/2020 19:17**

Client ID: Run ID: **HC200629-81A** Prep Date: **6/29/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	8.02	1.07	8.33		96	53-120		7.95	1	20	
Surr: O-TERPHENYL	1.77		1.67		107	69-120			1		

MB Sample ID: **HC200629-82** Units: **MG/L** Analysis Date: **6/30/2020 13:15**

Client ID: Run ID: **HC200629-81A** Prep Date: **6/29/2020** DF: **1**

Analyte	Result	ReportLimit	%REC	Control Limit	Qual
Diesel Range Organics	ND	1.1			
Surr: O-TERPHENYL	1.52		91	69-120	

The following samples were analyzed in this batch: 2006477-1

QC BATCH REPORT

Batch ID: **HC200701-91-1** Instrument ID **MEE-1** Method: **RSK175**

DUP Sample ID: **2006477-1** Units: **UG/L** Analysis Date: **7/1/2020 13:58**
Client ID: **Fern IIV-434** Run ID: **HC200701-91A** Prep Date: **7/1/2020** DF: **6**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	17000	6						20000	16	25	
ETHANE	5030	12						5800	14	25	
PROPANE	1680	6						1900	10	25	

LCS Sample ID: **HC200701-91** Units: **UG/L** Analysis Date: **7/1/2020 13:26**
Client ID: Run ID: **HC200701-91A** Prep Date: **7/1/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	134	1	142		94	76-125				25	
ETHANE	255	2	267		96	70-120				25	
PROPANE	372	1	391		95	72-120				25	

LCSD Sample ID: **HC200701-91** Units: **UG/L** Analysis Date: **7/1/2020 14:26**
Client ID: Run ID: **HC200701-91A** Prep Date: **7/1/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	123	1	142		86	76-125		134	9	25	
ETHANE	236	2	267		88	70-120		255	8	25	
PROPANE	345	1	391		88	72-120		372	8	25	

MB Sample ID: **HC200701-91** Units: **UG/L** Analysis Date: **7/1/2020 13:31**
Client ID: Run ID: **HC200701-91A** Prep Date: **7/1/2020** DF: **1**

Analyte	Result	ReportLimit	Qual
METHANE	ND	1	
ETHANE	ND	2	
PROPANE	ND	1	

The following samples were analyzed in this batch: 2006477-1

QC BATCH REPORT

Batch ID: **IP200630-2-6** Instrument ID **ICPMS2** Method: **EPA200.8**

LCS Sample ID: **IM200630-2** Units: **MG/L** Analysis Date: **7/7/2020 15:40**
Client ID: Run ID: **IM200707-10A11** Prep Date: **6/30/2020** DF: **10**

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				20	
MAGNESIUM	10.3	0.1	10		103	85-115				20	
POTASSIUM	4.92	1	5		98	85-115				20	
SODIUM	9.89	1	10		99	85-115				20	

LCSD Sample ID: **IM200630-2** Units: **MG/L** Analysis Date: **7/7/2020 15:43**
Client ID: Run ID: **IM200707-10A11** Prep Date: **6/30/2020** DF: **10**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CALCIUM	10.8	1	10		108	85-115		10.9	1	20	
MAGNESIUM	10.3	0.1	10		103	85-115		10.3	0	20	
POTASSIUM	4.85	1	5		97	85-115		4.92	1	20	
SODIUM	9.77	1	10		98	85-115		9.89	1	20	

MB Sample ID: **IP200630-2** Units: **MG/L** Analysis Date: **7/7/2020 15:37**
Client ID: Run ID: **IM200707-10A11** Prep Date: **6/30/2020** DF: **10**

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: 2006477-1

Batch ID: **VL200708-3-6** Instrument ID **HPV3** Method: **SW8260_25**

LCS Sample ID: **VL200708-3** Units: **%REC** Analysis Date: **7/8/2020 11:59**

Client ID: Run ID: **VL200708-3A** Prep Date: **7/8/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.1		25		100	80-120					
Surr: DIBROMOFLUOROMETHANE	25.1		25		100	80-120					
Surr: TOLUENE-D8	25		25		100	80-120					
BENZENE	10.9	1	10		109	80-120				20	
TOLUENE	10.6	1	10		106	80-120				20	
ETHYLBENZENE	10.6	1	10		106	80-120				20	
M+P-XYLENE	21.8	1	20		109	80-120				20	
O-XYLENE	10.7	1	10		107	80-120				20	

LCSD Sample ID: **VL200708-3** Units: **%REC** Analysis Date: **7/8/2020 12:19**

Client ID: Run ID: **VL200708-3A** Prep Date: **7/8/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.7		25		99	80-120			1		
Surr: DIBROMOFLUOROMETHANE	25.3		25		101	80-120			1		
Surr: TOLUENE-D8	25.1		25		100	80-120			0		
BENZENE	10.6	1	10		106	80-120		10.9	3	20	
TOLUENE	10.3	1	10		103	80-120		10.6	3	20	
ETHYLBENZENE	10.3	1	10		103	80-120		10.6	4	20	
M+P-XYLENE	21.1	1	20		106	80-120		21.8	3	20	
O-XYLENE	10.5	1	10		105	80-120		10.7	2	20	

MB Sample ID: **VL200708-3** Units: **%REC** Analysis Date: **7/8/2020 13:42**

Client ID: Run ID: **VL200708-3A** Prep Date: **7/8/2020** DF: **1**

Analyte	Result	ReportLimit	%REC	Control Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.6		102	80-120	
Surr: DIBROMOFLUOROMETHANE	25.1		101	80-120	
Surr: TOLUENE-D8	25		100	80-120	
BENZENE	ND	1			
TOLUENE	ND	1			
ETHYLBENZENE	ND	1			
M+P-XYLENE	ND	1			
O-XYLENE	ND	1			
TOTAL XYLENES	ND	1			

The following samples were analyzed in this batch: 2006477-1

QC BATCH REPORT

Batch ID: **AK200706-1-1** Instrument ID **NONE** Method: **SM2320B**

LCS Sample ID: **AK200706-1** Units: **MG/L** Analysis Date: **7/6/2020**
Client ID: Run ID: **AK200706-1a1** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	98.5	5	100		98	85-115				15	

LCSD Sample ID: **AK200706-1** Units: **MG/L** Analysis Date: **7/6/2020**
Client ID: Run ID: **AK200706-1a1** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	100	5	100		100	85-115		98.5	2	15	

MB Sample ID: **AK200706-1** Units: **MG/L** Analysis Date: **7/6/2020**
Client ID: Run ID: **AK200706-1a1** Prep Date: **7/6/2020** DF: **1**

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: 2006477-1

QC BATCH REPORT

Batch ID: **IC200701-1-1** Instrument ID **IC3** Method: **EPA300.0**

LCS Sample ID: **IC200701-1** Units: **MG/L** Analysis Date: **7/1/2020 08:31**
Client ID: Run ID: **IC200701-1a1** Prep Date: **7/1/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	10.3	0.2	10		103	90-110				15	
SULFATE	51	1	50		102	90-110				15	

LCSD Sample ID: **IC200701-1** Units: **MG/L** Analysis Date: **7/1/2020 11:09**
Client ID: Run ID: **IC200701-1a1** Prep Date: **7/1/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	10.3	0.2	10		103	90-110		10.3	0	15	
SULFATE	51	1	50		102	90-110		51	0	15	

MB Sample ID: **IC200701-1** Units: **MG/L** Analysis Date: **7/1/2020 08:44**
Client ID: Run ID: **IC200701-1a1** Prep Date: **7/1/2020** DF: **1**

Analyte	Result	ReportLimit	Qual
CHLORIDE	ND	0.2	
SULFATE	ND	1	

The following samples were analyzed in this batch: 2006477-1

QC BATCH REPORT

Batch ID: **TD200630-1-2** Instrument ID **Balance** Method: **SM2540C**

DUP Sample ID: **2006477-1** Units: **MG/L** Analysis Date: **7/1/2020**
Client ID: **Fern IIV-434** Run ID: **TD200701-1A1** Prep Date: **6/30/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	6900	200						6800	2	14	

LCS Sample ID: **TD200630-1** Units: **MG/L** Analysis Date: **7/1/2020**
Client ID: Run ID: **TD200701-1A1** Prep Date: **6/30/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	413	20	400		103	85-115				14	

MB Sample ID: **TD200630-1** Units: **MG/L** Analysis Date: **7/1/2020**
Client ID: Run ID: **TD200701-1A1** Prep Date: **6/30/2020** DF: **1**

Analyte	Result	ReportLimit	Qual
TOTAL DISSOLVED SOLIDS	ND	20	

The following samples were analyzed in this batch: 2006477-1