Tuesday, December 03, 2019

 eAnalytics Laboratory
eAnalytics Laboratory
4130 Clydesdale Parkway
Loveland, CO 80538

  Re: ALS Workorder: 1911530
        Project Name: Bradbury B#1 bradenhead sample
      Project Number:

Dear eAnalytics Laboratory:

One water sample was received from eAnalytics Laboratory, on 11/22/2019. The sample was scheduled for the following analysis:

     Dissolved Gasses

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.

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

Sincerely,

ALS Environmental
Katie M. OBrien
Project Manager

ADDRESS 225 Commerce Drive, Fort Collins, Colorado, USA 80524 | PHONE +1 970 490 1511 | FAX +1 970 490 1522
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Environmental

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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

1911530

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.

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Sample Number(s) Cross-Reference Table

OrderNum: 1911530
Client Name: eAnalytics Laboratory
Client Project Name: Bradbury B#1 bradenhead sample
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Bradbury B#1 - bradenhead (1851	1911530-1		WATER	19-Nov-19	

ALS Environmental

Chain-of-Custody

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

Form 2026

WORKORDER # (2115?0

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PROJECT NAME	Bradbury B#1
PROJECT No.	
COMPANY NAME	eAnalytics Laboratory
SEND REPORT TO	See comments
ADDRESS	4130 Clydesdale Pkwy
CITY / STATE / ZIP	Loveland, CO 80538
PHONE	970-667-6975
FAX	970-669-0941
E-MAIL	See comments

SAMPLER: Madalval Sampu

SITE ID

EDD FORMAT

PURCHASE ORDER

BILL TO COMPANY

INVOICE ATTN TO

ADDRESS

CITY / STATE / ZIP

PHONE

FAX

E-MAIL

DATE 11/21/2019 TURNAROUND: Standard

dissolved gases

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC
1	Bradbury B#1-braden-Wad (1851-1)	W	11/19/19		3	1	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.

QC PACKAGE (check below):
- LEVEL II (Standard QC)
- LEVEL III (Std QC + forms)
- LEVEL IV (Std QC + forms + raw data)

Comments:
Please send all reports and invoices to the following:
cdieken@eanalyticslab.com
trhea@eanalyticslab.com
mray@eanalyticslab.com

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

DISPOSAL: By Lab   or   Return to Client

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Morgan Foy	11/22/19	5:00am
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

Client: _e Analytics_ Workorder No: _1auS30_

Project Manager: _KMD_ Initials: _TEM_ Date: _11/22/19_

#	Question				
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? (excluding volatiles)		(N/A)	YES	NO *
12.	Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)		N/A	YES	(NO)
13.	Were the samples shipped on ice?			YES	(NO)
14.	Were cooler temperatures measured at 0.1-6.0°C?	IR gun used*: #3 #5	RAD ONLY	YES	(NO)

Cooler #:	\										
Temperature (°C):	Amb										
# of custody seals on cooler:	0										
External mR/hr reading:	—										
Background mR/hr reading:	u										

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

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

12-) all vials have a notable amount of headspace

_____

_____

_____

_____

_____

_____

_____

_____

Were unpreserved bottles pH checked? YES / (NA)   All client bottle ID's vs ALS lab ID's double-checked by: _TEM_

If applicable, was the client contacted? **YES / NO / NA** Contact: _____ Date/Time: _____

Project Manager Signature / Date: _Kris Am_ 11/22/19

Form 201r29.xls
(10/15/2019)

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

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SAMPLE SUMMARY REPORT

Client:	eAnalytics Laboratory	**Date:**	*03-Dec-19*
Project:	Bradbury B#1 bradenhead sample	**Work Order:**	1911530
Sample ID:	Bradbury B#1 - bradenhead (1851-1)	**Lab ID:**	1911530-1
Legal Location:		**Matrix:**	WATER
Collection Date:	11/19/2019	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
DISSOLVED GASSES			**RSK175**		Prep Date: **11/25/2019**		PrepBy: **LML**
METHANE	16000		1	UG/L	1	1	11/25/2019 14:56
ETHANE	43		2	UG/L	1	2	11/25/2019 14:56
PROPANE	8.5		1	UG/L	1	1	11/25/2019 14:56

Client:	eAnalytics Laboratory		**Date:**	*03-Dec-19*
Project:	Bradbury B#1 bradenhead sample		**Work Order:**	1911530
Sample ID:	Bradbury B#1 - bradenhead (1851-1)		**Lab ID:**	1911530-1
Legal Location:			**Matrix:**	WATER
Collection Date:	11/19/2019		**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	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

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QC BATCH REPORT

Client: eAnalytics Laboratory
Work Order: 1911530
Project: Bradbury B#1 bradenhead sample

Batch ID: **HC191125-91-1**   Instrument ID **MEE-1**   Method: **RSK175**

LCS   Sample ID: **HC191125-91**   Units: **UG/L**   Analysis Date: **11/25/2019 14:41**

Client ID: Run ID: **HC191125-9A**   Prep Date: **11/25/2019**   DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	139	1	142		98	80-120				25	
ETHANE	243	2	267		91	80-120				25	
PROPANE	352	1	391		90	80-120				25	

LCSD   Sample ID: **HC191125-91**   Units: **UG/L**   Analysis Date: **11/25/2019 15:00**

Client ID: Run ID: **HC191125-9A**   Prep Date: **11/25/2019**   DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	144	1	142		101	80-120		139	4	25	
ETHANE	241	2	267		90	80-120		243	1	25	
PROPANE	364	1	391		93	80-120		352	3	25	

MB   Sample ID: **HC191125-91**   Units: **UG/L**   Analysis Date: **11/25/2019 14:44**

Client ID: Run ID: **HC191125-9A**   Prep Date: **11/25/2019**   DF: **1**

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

The following samples were analyzed in this batch: | 1911530-1 |