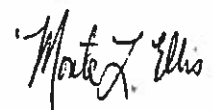


April Stegall
Dominion Energy Wexpro
PO Box 458
Rock Springs, WY 82901

Date: September 5, 2017
Request Number: 36615R
Date Received: 8/18/17
Matrix: Soil

BTEX, GRO, & DRO Analyzed by ALS Lab in Fort Collins Colorado.
The following pages apply to the samples listed below.

WAL Lab Number	ALS Lab Number	Wexpro Sample ID
R1808	1708462-1	State of CO 1 Sample #1 8/17/17 3:00pm



Laboratory Manager



WYOMING ANALYTICAL LABORATORIES, INC

1660 Harrison Street
Laramie, WY 82070

www.wal-lab.com
laramie@wal-lab.com

ph: 307-742-7995
fax: 307-721-8956



Thursday, August 31, 2017

Monte Ellis
Wyoming Analytical Laboratories, Inc.
1660 Harrison St.
Laramie, WY 82070

Re: ALS Workorder: 1708462
Project Name:
Project Number: 36615R

Dear Mr. Ellis:

One soil sample was received from Wyoming Analytical Laboratories, Inc., on 8/22/2017. The sample was scheduled for the following analyses:

GC/MS Volatiles

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.

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

Sincerely,

ALS Environmental
Shiloh J. Summy
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
Connecticut (CT)	PH-0232
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
L-A-B (DoD ELAP/ISO 170250)	L2257
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



1708462

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.

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.

Client: Wyoming Analytical Laboratories, Inc.
Project: 36615R
Sample ID: R1808
Legal Location:
Collection Date: 8/17/2017 15:00

Date: 31-Aug-17
Work Order: 1708462
Lab ID: 1708462-1
Matrix: SOIL
Percent Moisture: 22.0

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M			Prep Date: 8/28/2017 PrepBy: JFN
Diesel Range Organics	70000	DMH	1300	MG/KG	200	8/28/2017 15:50
Surr: O-TERPHENYL		X	49-114	%REC	200	8/28/2017 15:50
GC/MS Volatiles			SW8260			Prep Date: 8/24/2017 PrepBy: JXK
BENZENE	9600		3200	UG/KG	500	8/24/2017 22:05
TOLUENE	26000		3200	UG/KG	500	8/24/2017 22:05
ETHYLBENZENE	7800		3200	UG/KG	500	8/24/2017 22:05
M+P-XYLENE	49000		3200	UG/KG	500	8/24/2017 22:05
O-XYLENE	14000		3200	UG/KG	500	8/24/2017 22:05
TOTAL XYLENES	63000		5	UG/KG	1	8/24/2017 22:05
Surr: DIBROMOFLUOROMETHANE	98		61-134	%REC	500	8/24/2017 22:05
Surr: TOLUENE-D8	93		57-135	%REC	500	8/24/2017 22:05
Surr: 4-BROMOFLUOROBENZENE	111		52-151	%REC	500	8/24/2017 22:05
GASOLINE RANGE ORGANICS	880000		320000	UG/KG	500	8/24/2017 22:05

Client: Wyoming Analytical Laboratories, Inc.
 Project: 36615R
 Sample ID: R1808
 Legal Location:
 Collection Date: 8/17/2017 15:00

Date: 31-Aug-17
 Work Order: 1708462
 Lab ID: 1708462-1
 Matrix: SOIL
 Percent Moisture: 22.0

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

Radiochemistry:

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.
 LT - Result is less than requested MDC but greater than achieved MDC.

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: 8/31/2017 8:33:

Client: Wyoming Analytical Laboratories, Inc.

QC BATCH REPORT

Work Order: 1708462

Project: 36615R

Batch ID: HC170828-100-1 Instrument ID FUELS-1 Method: SW8015M

LCS Sample ID: HC170828-100 Units: MG/KG Analysis Date: 8/28/2017 12:49

Client ID: Run ID: HC170828-8A Prep Date: 8/28/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	185	5	188		99	81-129				20	
Surr: O-TERPHENYL	8.49		12.5		68	49-114					

LCSD Sample ID: HC170828-100 Units: MG/KG Analysis Date: 8/28/2017 18:31

Client ID: Run ID: HC170828-8A Prep Date: 8/28/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	200	5	188		106	81-129		185	8	20	
Surr: O-TERPHENYL	9.55		12.5		76	49-114				12	

MB Sample ID: HC170828-100 Units: MG/KG Analysis Date: 8/28/2017 12:24

Client ID: Run ID: HC170828-8A Prep Date: 8/28/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	ND	5									
Surr: O-TERPHENYL	8.99		12.5		72	49-114					

The following samples were analyzed in this batch:

1708462-1

Client: Wyoming Analytical Laboratories, Inc.
 Work Order: 1708462
 Project: 36615R

QC BATCH REPORT

Batch ID: VL170824-2-1 Instrument ID HPV2 Method: SW8260

LCS Sample ID: VL170824-2 Units: UG/KG Analysis Date: 8/24/2017 10:11

Client ID: Run ID: VL170824-2A Prep Date: 8/24/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	45.3	5	40		113	73-126				30	
TOLUENE	40.8	5	40		102	71-127				30	
ETHYLBENZENE	40.7	5	40		102	74-127				30	
M+P-XYLENE	85.1	5	80		106	79-126				30	
O-XYLENE	42.1	5	40		105	77-125				30	
Surr: DIBROMOFLUOROMETHANE	50.8		50		102	61-134					
Surr: TOLUENE-D8	47.1		50		94	57-135					
Surr: 4-BROMOFLUOROBENZENE	57.2		50		114	52-151					

LCSD Sample ID: VL170824-2 Units: UG/KG Analysis Date: 8/24/2017 10:33

Client ID: Run ID: VL170824-2A Prep Date: 8/24/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	43.7	5	40		109	73-126		45.3	4	30	
TOLUENE	39.8	5	40		99	71-127		40.6	3	30	
ETHYLBENZENE	39.4	5	40		99	74-127		40.7	3	30	
M+P-XYLENE	84.5	5	80		106	79-126		85.1	1	30	
O-XYLENE	41.8	5	40		105	77-125		42.1	1	30	
Surr: DIBROMOFLUOROMETHANE	50.7		50		101	61-134				0	
Surr: TOLUENE-D8	48.1		50		96	57-135				2	
Surr: 4-BROMOFLUOROBENZENE	58.8		50		118	52-151				3	

MB Sample ID: VL170824-2 Units: UG/KG Analysis Date: 8/24/2017 13:37

Client ID: Run ID: VL170824-2A Prep Date: 8/24/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	ND	5									
TOLUENE	ND	5									
ETHYLBENZENE	ND	5									
M+P-XYLENE	ND	5									
O-XYLENE	ND	5									
TOTAL XYLENES	ND	5									
Surr: DIBROMOFLUOROMETHANE	51.2		50		102	61-134					
Surr: TOLUENE-D8	45.6		50		91	57-135					
Surr: 4-BROMOFLUOROBENZENE	57.4		50		115	52-151					

Client: Wyoming Analytical Laboratories, Inc.
Work Order: 1708462
Project: 36615R

QC BATCH REPORT

Batch ID: VL170824-2-1 **Instrument ID:** HPV2 **Method:** SW8260

MB **Sample ID:** VL170824-2M **Units:** UG/KG **Analysis Date:** 8/24/2017 14:00
Client ID: **Run ID:** VL170824-2A **Prep Date:** 8/24/2017 **DF:** 50

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	ND	250									
TOLUENE	ND	250									
ETHYLBENZENE	ND	250									
M+P-XYLENE	ND	250									
O-XYLENE	ND	250									
TOTAL XYLENES	ND	5									
Surr: DIBROMOFLUOROMETHANE	2520		2500		101	61-134					
Surr: TOLUENE-D8	2310		2500		92	57-135					
Surr: 4-BROMOFLUOROBENZENE	2760		2500		111	52-151					

The following samples were analyzed in this batch:

1708462-1

Client: Wyoming Analytical Laboratories, Inc.
Work Order: 1708462
Project: 36615R

QC BATCH REPORT

Batch ID: VL170824-2-4 Instrument ID HPV2 Method: SW8260

LCS	Sample ID: VL170824-5			Units: UG/KG			Analysis Date: 8/24/2017 11:18				
Client ID:	Run ID: VL170824-2A						Prep Date: 8/24/2017		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2100	500	2000		105	80-120				20	

LCSD	Sample ID: VL170824-5			Units: UG/KG			Analysis Date: 8/24/2017 12:52				
Client ID:	Run ID: VL170824-2A						Prep Date: 8/24/2017		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2270	495	1980		115	80-120		2100	8	20	

MB	Sample ID: VL170824-2				Units: UG/KG		Analysis Date: 8/24/2017 13:37				
Client ID:	Run ID: VL170824-2A				Prep Date: 8/24/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS		ND	500								

MB	Sample ID: VL170824-2M			Units: UG/KG			Analysis Date: 8/24/2017 14:00				
Client ID:	Run ID: VL170824-2A						Prep Date: 8/24/2017		DF: 50		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	ND	25000									

The following samples were analyzed in this batch:

1708462-1