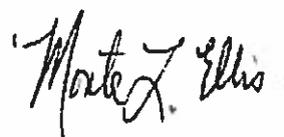


April Stegall
Wexpro
PO Box 458
Rock Springs, WY 82901

Date: August 29, 2017
Request Number: 36591R
Date Received: 8/10/17
Matrix: Soil

BTEX, GRO & DRO analyzed by ALS Environmental in Fort Collins CO . The following pages apply to the sample listed below.

	ALS Lab Number	Wexpro Sample ID
R1766	1708343-1	JC Donnell 5 Sample #1 100634 8/10/17 1:10pm



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 24, 2017

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

Re: ALS Workorder: 1708343
Project Name:
Project Number: 36591R

Dear Mr. Ellis:

One soil sample was received from Wyoming Analytical Laboratories, Inc., on 8/16/2017. 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



1708343

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.

ALS -- Fort Collins

SAMPLE SUMMARY REPORT

Client: Wyoming Analytical Laboratories, Inc.
Project: 36591R
Sample ID: R1766
Legal Location:
Collection Date: 8/10/2017 13:10

Date: 24-Aug-17
Work Order: 1708343
Lab ID: 1708343-1
Matrix: SOIL
Percent Moisture: 13.7

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics						
			SW8015M	Prep Date: 8/22/2017		PrepBy: JFN
Diesel Range Organics	9000	L	230	MG/KG	40	8/23/2017 12:47
Surr: O-TERPHENYL		X	49-114	%REC	40	8/23/2017 12:47
GC/MS Volatiles						
			SW8260	Prep Date: 8/18/2017		PrepBy: JJK
BENZENE	ND		29000	UG/KG	5000	8/18/2017 20:06
TOLUENE	120000		29000	UG/KG	5000	8/18/2017 20:06
ETHYLBENZENE	68000		29000	UG/KG	5000	8/18/2017 20:06
M+P-XYLENE	420000		29000	UG/KG	5000	8/18/2017 20:06
O-XYLENE	130000		29000	UG/KG	5000	8/18/2017 20:06
TOTAL XYLENES	550000		5	UG/KG	1	8/18/2017 20:06
Surr: DIBROMOFLUOROMETHANE	100		61-134	%REC	5000	8/18/2017 20:06
Surr: TOLUENE-D8	95		57-135	%REC	5000	8/18/2017 20:06
Surr: 4-BROMOFLUOROBENZENE	112		52-151	%REC	5000	8/18/2017 20:06
GASOLINE RANGE ORGANICS	1.3E+07	J	2900000	UG/KG	5000	8/18/2017 20:06

ALS -- Fort Collins**SAMPLE SUMMARY REPORT**

Client: Wyoming Analytical Laboratories, Inc.
 Project: 36591R
 Sample ID: R1766
 Legal Location:
 Collection Date: 8/10/2017 13:10

Date: 24-Aug-17
 Work Order: 1708343
 Lab ID: 1708343-1
 Matrix: SOIL
 Percent Moisture: 13.7

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: 8/24/2017 12:35

Client: Wyoming Analytical Laboratories, Inc.
 Work Order: 1708343
 Project: 36591R

QC BATCH REPORT

Batch ID: HC170822-100-1 Instrument ID FUELS-1 Method: SW8015M

LCS		Sample ID: HC170822-100			Units: MG/KG		Analysis Date: 8/22/2017 21:06				
Client ID:		Run ID: HC170822-8A			Prep Date: 8/22/2017		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	130	5	125		104	81-129				20	
Surr: O-TERPHENYL	5.22		6.25		84	49-114					

LCSD		Sample ID: HC170822-100			Units: MG/KG		Analysis Date: 8/22/2017 21:26				
Client ID:		Run ID: HC170822-8A			Prep Date: 8/22/2017		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	126	5	125		101	81-129		130	3	20	
Surr: O-TERPHENYL	4.92		6.25		79	49-114			6		

MB		Sample ID: HC170822-100			Units: MG/KG		Analysis Date: 8/22/2017 14:25				
Client ID:		Run ID: HC170822-8A			Prep Date: 8/22/2017		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	4.64		6.25		74	49-114					

The following samples were analyzed in this batch:

1708343-1

Client: Wyoming Analytical Laboratories, Inc.
 Work Order: 1708343
 Project: 36591R

QC BATCH REPORT

Batch ID: VL170818-2-1 Instrument ID HPV2 Method: SW8260

LCS Sample ID: VL170818-2 Units: UG/KG Analysis Date: 8/18/2017 10:00
 Client ID: Run ID: VL170818-2A Prep Date: 8/18/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	44	5	40		110	73-126				30	
TOLUENE	40.7	5	40		102	71-127				30	
ETHYLBENZENE	40.4	5	40		101	74-127				30	
M+P-XYLENE	88.2	5	80		108	79-126				30	
O-XYLENE	42.4	5	40		106	77-125				30	
Surr: DIBROMOFLUOROMETHANE	52		50		104	61-134					
Surr: TOLUENE-D8	47.8		50		96	57-135					
Surr: 4-BROMOFLUOROBENZENE	59.4		50		119	52-151					

LCSD Sample ID: VL170818-2 Units: UG/KG Analysis Date: 8/18/2017 10:22
 Client ID: Run ID: VL170818-2A Prep Date: 8/18/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	42.3	5	40		106	73-126		44	4	30	
TOLUENE	38.1	5	40		95	71-127		40.7	7	30	
ETHYLBENZENE	37.5	5	40		94	74-127		40.4	8	30	
M+P-XYLENE	80	5	80		100	79-126		88.2	7	30	
O-XYLENE	39.8	5	40		99	77-125		42.4	7	30	
Surr: DIBROMOFLUOROMETHANE	50.8		50		102	61-134			2		
Surr: TOLUENE-D8	47.2		50		94	57-135			2		
Surr: 4-BROMOFLUOROBENZENE	58.7		50		113	52-151			5		

MB Sample ID: VL170818-2 Units: UG/KG Analysis Date: 8/18/2017 12:19
 Client ID: Run ID: VL170818-2A Prep Date: 8/18/2017 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	51.8		50		104	61-134					
Surr: TOLUENE-D8	48.4		50		93	57-135					
Surr: 4-BROMOFLUOROBENZENE	55.8		50		111	52-151					

Client: Wyoming Analytical Laboratories, Inc.
 Work Order: 1708343
 Project: 36591R

QC BATCH REPORT

Batch ID: VL170818-2-1 Instrument ID HPV2 Method: SW8260

MB Sample ID: VL170818-2M Units: UG/KG Analysis Date: 8/18/2017 12:42

Client ID: Run ID: VL170818-2A Prep Date: 8/18/2017 DF: 50

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD Limit	Qual
BENZENE	ND	250								
TOLUENE	ND	250								
ETHYL.BENZENE	ND	250								
M+P-XYLENE	ND	250								
O-XYLENE	ND	250								
TOTAL XYLENES	ND	5								
Surr: DIBROMOFLUOROMETHANE	2550		2500		102	61-134				
Surr: TOLUENE-D8	2410		2500		96	57-135				
Surr: 4-BROMOFLUOROBENZENE	2820		2500		113	52-151				

The following samples were analyzed in this batch:

1708343-1

Client: Wyoming Analytical Laboratories, Inc.
 Work Order: 1708343
 Project: 36591R

QC BATCH REPORT

Batch ID: VL170818-2-3 Instrument ID HPV2 Method: SW8260

LCS Sample ID: VL170818-5 Units: UG/KG Analysis Date: 8/18/2017 11:11

Client ID: Run ID: VL170818-2A Prep Date: 8/18/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2040	500	2000		102	80-120				20	

LCSD Sample ID: VL170818-5 Units: UG/KG Analysis Date: 8/18/2017 11:34

Client ID: Run ID: VL170818-2A Prep Date: 8/18/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1850	500	2000		92	80-120		2040	10	20	

MB Sample ID: VL170818-2 Units: UG/KG Analysis Date: 8/18/2017 12:19

Client ID: Run ID: VL170818-2A Prep Date: 8/18/2017 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: VL170818-2M Units: UG/KG Analysis Date: 8/18/2017 12:42

Client ID: Run ID: VL170818-2A Prep Date: 8/18/2017 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:

1708343-1