

April Stegall  
Wexpro  
PO Box 458  
Rock Springs, WY 82901

Date: May 26, 2017  
Request Number: 36303R  
Date Received: 5/2/17  
Matrix: Soil

### REPORT OF ANALYSIS

Lab Number: R1160

Sample ID: Sugar Loaf State 2 Pit Floor Culvert 5/1/17 1:07pm

	Result	Units	Method	Date Analyzed	Analyst
Nickel	34.7	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Copper	22.9	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Zinc	93.5	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Arsenic	17.3	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Selenium	1.76	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Silver	8.69	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Cadmium	2.72	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Barium	330	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Mercury	0.770	mg/kg	SW846 EPA 3051/6020	5/26/2017	MLE
Lead	21.2	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Total Chromium	51.1	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Chromium (VI)	0.36	mg/kg	EPA 7196A	5/10/2017	CB
Chromium (III)	50.7	mg/kg	Calculated (ttl.Cr-CrVI)	5/25/2017	TB
Soluble, Boron	0.25	mg/L	Hot water ext./6010	5/15/2017	CB
pH	7.21	std. units	USDA 60-2,3/150.1	5/8/2017	CB
Conductivity	1,370	µmhos/cm	USDA 60-2,3/120.1	5/8/2017	CB
Calcium	900	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Magnesium	66.6	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium	108	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium Absorption Ratio	0.94	Ratio	Calculated	5/16/2017	TB

\*Results are the average of 2 runs

BTEX, GRO, DRO & PAH Analyzed by ALS Lab in Fort Collins Colorado. See attached Report.  
ALS Lab Sample ID 170511-1



## 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

April Stegall  
Wexpro  
PO Box 458  
Rock Springs, WY 82901

Date: May 26, 2017  
Request Number: 36303R  
Date Received: 5/2/17  
Matrix: Soil

### **REPORT OF ANALYSIS**

Lab Number: R1161

Sample ID: Sugar Loaf State 2 Pit Sidewall North Culvert 5/1/17 1:12pm

	Result	Units	Method	Date Analyzed	Analyst
Nickel	32.6	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Copper	19.0	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Zinc	85.2	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Arsenic	12.9	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Selenium	2.03	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Silver	4.51	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Cadmium	1.0	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Barium	428	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Mercury	0.950	mg/kg	SW846 EPA 3051/6020	5/26/2017	MLE
Lead	20.1	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Total Chromium	52.5	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Chromium (VI)	0.49	mg/kg	EPA 7196A	5/10/2017	CB
Chromium (III)	52.0	mg/kg	Calculated (ttl.Cr-CrVI)	5/25/2017	TB
Soluble, Boron	0.25	mg/L	Hot water ext./6010	5/15/2017	CB
pH	7.26	std. units	USDA 60-2,3/150.1	5/8/2017	CB
Conductivity	1,420	µmhos/cm	USDA 60-2,3/120.1	5/8/2017	CB
Calcium	953	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Magnesium	142	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium	108	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium Absorption Ratio	0.86	Ratio	Calculated	5/16/2017	TB

\*Results are the average of 2 runs

BTEX, GRO, DRO & PAH Analyzed by ALS Lab in Fort Collins Colorado. See attached Report.  
ALS Lab Sample ID 170511-2



## **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

April Stegall  
Wexpro  
PO Box 458  
Rock Springs, WY 82901

Date: May 26, 2017  
Request Number: 36303R  
Date Received: 5/2/17  
Matrix: Soil

### REPORT OF ANALYSIS

Lab Number: R1162

Sample ID: Sugar Loaf State 2 Pit Sidewall South Culvert 5/1/17 1:30pm

	Result	Units	Method	Date Analyzed	Analyst
Nickel	30.8	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Copper	18.1	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Zinc	75.7	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Arsenic	13.2	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Selenium	1.60	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Silver	6.50	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Cadmium	0.680	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Barium	446	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Mercury	0.807	mg/kg	SW846 EPA 3051/6020	5/26/2017	MLE
Lead	20.1	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Total Chromium	53.4	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Chromium (VI)	0.570	mg/kg	EPA 7196A	5/10/2017	CB
Chromium (III)	52.8	mg/kg	Calculated (ttl.Cr-CrVI)	5/25/2017	TB
Soluble, Boron	0.31	mg/L	Hot water ext./6010	5/15/2017	CB
pH	7.37	std. units	USDA 60-2,3/150.1	5/8/2017	CB
Conductivity	1,140	µmhos/cm	USDA 60-2,3/120.1	5/8/2017	CB
Calcium	852	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Magnesium	118	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium	142	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium Absorption Ratio	1.21	Ratio	Calculated	5/16/2017	TB

\*Results are the average of 2 runs

BTEX, GRO, DRO & PAH Analyzed by ALS Lab in Fort Collins Colorado. See attached Report.  
ALS Lab Sample ID 170511-3



## 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

April Stegall  
Wexpro  
PO Box 458  
Rock Springs, WY 82901

Date: May 26, 2017  
Request Number: 36303R  
Date Received: 5/2/17  
Matrix: Soil

### **REPORT OF ANALYSIS**

Lab Number: R1163

Sample ID: Sugar Loaf State 2 Pit Floor Drain 5/1/17 2:50pm

	Result	Units	Method	Date Analyzed	Analyst
Nickel	25.8	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Copper	29.6	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Zinc	74.1	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Arsenic	18.9	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Selenium	2.02	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Silver	6.12	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Cadmium	1.19	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Barium	261	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Mercury	1.23	mg/kg	SW846 EPA 3051/6020	5/26/2017	MLE
Lead	55.9	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Total Chromium	44.9	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Chromium (VI)	0.46	mg/kg	EPA 7196A	5/10/2017	CB
Chromium (III)	44.4	mg/kg	Calculated (ttl.Cr-CrVI)		TB
Soluble, Boron	0.30	mg/L	Hot water ext./6010	5/15/2017	CB
pH	7.47	std. units	USDA 60-2,3/150.1	5/8/2017	CB
Conductivity	998	µmhos/cm	USDA 60-2,3/120.1	5/8/2017	CB
Calcium	818	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Magnesium	54.4	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium	61.4	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium Absorption Ratio	0.56	Ratio	Calculated	5/16/2017	TB

\*Results are the average of 2 runs

BTEX, GRO, DRO & PAH Analyzed by ALS Lab in Fort Collins Colorado. See attached Report.  
ALS Lab Sample ID 170511-4



## **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

April Stegall  
Wexpro  
PO Box 458  
Rock Springs, WY 82901

Date: May 26, 2017  
Request Number: 36303R  
Date Received: 5/2/17  
Matrix: Soil

### **REPORT OF ANALYSIS**

Lab Number: R1164

Sample ID: Sugar Loaf State 2 Pit Sidewall North Drain 5/1/17 2:37pm

	Result	Units	Method	Date Analyzed	Analyst
Nickel	28.6	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Copper	19.3	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Zinc	71.1	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Arsenic	15.7	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Selenium	2.74	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Silver	11.3	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Cadmium	0.620	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Barium	340	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Mercury	0.850	mg/kg	SW846 EPA 3051/6020	5/26/2017	MLE
Lead	24.1	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Total Chromium	67.1	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Chromium (VI)	0.36	mg/kg	EPA 7196A	5/10/2017	CB
Chromium (III)	66.7	mg/kg	Calculated (ttl.Cr-CrVI)		TB
Soluble, Boron	0.47	mg/L	Hot water ext./6010	5/15/2017	CB
pH	7.49	std. units	USDA 60-2,3/150.1	5/8/2017	CB
Conductivity	3,250	µmhos/cm	USDA 60-2,3/120.1	5/8/2017	CB
Calcium	817*	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Magnesium	351*	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium	2000*	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium Absorption Ratio	14.74	Ratio	Calculated	5/16/2017	TB

\*Results are the average of 2 runs

BTEX, GRO, DRO & PAH Analyzed by ALS Lab in Fort Collins Colorado. See attached Report.  
ALS Lab Sample ID 170511-5



## **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

April Stegall  
Wexpro  
PO Box 458  
Rock Springs, WY 82901

Date: May 26, 2017  
Request Number: 36303R  
Date Received: 5/2/17  
Matrix: Soil

### REPORT OF ANALYSIS

Lab Number: R1165

Sample ID: Sugar Loaf State 2 Pit Sidewall East Drain 5/1/17 2:25pm

	Result	Units	Method	Date Analyzed	Analyst
Nickel	28.2*	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Copper	19.7*	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Zinc	73.2*	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Arsenic	16.1*	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Selenium	1.75*	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Silver	23.2*	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Cadmium	0.615*	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Barium	300*	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Mercury	0.840*	mg/kg	SW846 EPA 3051/6020	5/26/2017	MLE
Lead	20.8*	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Total Chromium	77.7*	mg/kg	SW846 EPA 3051/6020	5/25/2017	MLE
Chromium (VI)	0.49	mg/kg	EPA 7196A	5/10/2017	CB
Chromium (III)	77.2	mg/kg	Calculated (ttl.Cr-CrVI)		TB
Soluble, Boron	0.29*	mg/L	Hot water ext./6010	5/15/2017	CB
pH	7.71	std. units	USDA 60-2,3/150.1	5/8/2017	CB
Conductivity	3,220	µmhos/cm	USDA 60-2,3/120.1	5/8/2017	CB
Calcium	731*	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Magnesium	919*	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium	1420*	mg/L	USDA 60-2,3/6010	5/16/2017	CB
Sodium Absorption Ratio	8.25	Ratio	Calculated	5/16/2017	TB

\*Results are the average of 2 runs

BTEX, GRO, DRO & PAH Analyzed by ALS Lab in Fort Collins Colorado. See attached Report.  
ALS Lab Sample ID 170511-6

End of Report  
MLE/tab



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

April Stegall  
Wexpro  
PO Box 458  
Rock Springs, WY 82901

Date: May 26, 2017  
Request Number: 36303R  
Date Received: 5/2/17  
Matrix: Soil

**QUALITY CONTROL**

	Reference	Expected	Value	% Recovery
Conductivity	ESI QC	500	468	94
pH	iv-6.03 pH QC	6.03	5.99	99
Chromium VI	Hach QC	0.500	0.533	107
Nickel	ERA QC P1488	0.244	0.236	97
Copper	ERA QC P1488	1.56	1.56	100
Zinc	ERA QC P1488	1.65	1.71	104
Arsenic	ERA QC P1488	0.042	0.042	100
Selenium	ERA QC P1488	0.079	0.088	111
Silver	ERA QC P1488	0.027	0.030	111
Cadmium	ERA QC P1488	0.029	0.031	107
Barium	ERA QC P1488	2.04	1.85	91
Mercury	ERA QC	7.84	8.35	107
Lead	ERA QC P1488	0.084	0.082	98
Soluble Boron	ESI QC	1.00	1.05	105
Total Chromium	ERA QC P1488	0.071	0.069	97
Calcium	ESI QC	20.0	21.0	105
Magnesium	ESI QC	50.0	51.0	102
Sodium	ESI QC	50.0	50.7	101

BTEX, GRO, DRO & PAH Analyzed by ALS Lab in Fort Collins Colorado. See attached Report.  
ALS Lab Sample ID 170511-1 thru 6

End of QC Report  
MLE/tab



Laboratory Manager



## WYOMING ANALYTICAL LABORATORIES, INC

1660 Harrison Street  
Laramie, WY 82070

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

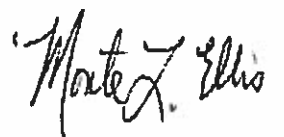
ph: 307-742-7995  
fax: 307-721-8956

April Stegall  
Wexpro  
PO Box 458  
Rock Springs, WY 82901

Date: May 25, 2017  
Request Number: 36303R  
Date Received: 5/2/17  
Matrix: Soil

BTEX, GRO, DRO & PAH 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
R1160	1705111-1	Sugar Loaf State 2 Pit Floor Culvert 5/1/17 1:07pm
R1161	1705111-2	Sugar Loaf State 2 Pit Sidewall North Culvert 5/1/17 1:12pm
R1162	1705111-3	Sugar Loaf State 2 Pit Sidewall South Culvert 5/1/17 1:30pm
R1163	1705111-4	Sugar Loaf State 2 Pit Floor Drain 5/1/17 2:50pm
R1164	1705111-5	Sugar Loaf State 2 Pit Sidewall North Drain 5/1/17 2:37pm
R1165	1705111-6	Sugar Loaf State 2 Pit Sidewall East Drain 5/1/17 2:25pm



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





Friday, May 19, 2017

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

Re: ALS Workorder: 1705111  
Project Name:  
Project Number: 36303R

Dear Mr. Ellis:

Six soil samples and five water samples were received from Wyoming Analytical Laboratories, Inc., on 5/4/2017.  
The samples were scheduled for the following analyses:

GC/MS Semivolatiles

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



## 1705111

### GC/MS Volatiles:

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

All matrix spike and matrix spike duplicate recoveries and RPDs were within acceptance criteria with the following exceptions:

Spiked Compound	QC Sample	Direction
Several Compounds	MS & MSD	Low & RPD

The recoveries of these compounds in the laboratory control sample and laboratory control sample duplicate were within control limits, which suggest the outliers in the matrix spikes may have been due to matrix effects. No further action was taken.

All acceptance criteria were met.

### GC/MS Semivolatiles:

The samples were analyzed using GC/MS following the current revision of SOP 506 based on SW-846 Method 8270D. The samples were analyzed using selective ion monitoring (SIM), in order to achieve lower reporting limits.

All acceptance criteria were met.

### DRO:

The samples were 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.

Date: 19-May-17

Project: 36303R

Work Order: 1705111

Sample ID: R1160

Lab ID: 1705111-1

Legal Location:

Matrix: SOIL

Collection Date: 5/1/2017 13:00

Percent Moisture: 24.6

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>			<b>SW8015M</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: DMS</b>
Diesel Range Organics	260	DMH	6.6	MG/KG	1	5/10/2017 01:30
Surr: O-TERPHENYL	92		49-114	%REC	1	5/10/2017 01:30
<b>GC/MS Semi-volatiles</b>			<b>SW8270SIM</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: LML</b>
NAPHTHALENE	ND		4.4	UG/KG	1	5/9/2017 12:39
2-METHYLNAPHTHALENE	1.9	J	4.4	UG/KG	1	5/9/2017 12:39
1-METHYLNAPHTHALENE	1.4	J	4.4	UG/KG	1	5/9/2017 12:39
ACENAPHTHYLENE	ND		4.4	UG/KG	1	5/9/2017 12:39
ACENAPHTHENE	ND		4.4	UG/KG	1	5/9/2017 12:39
FLUORENE	ND		4.4	UG/KG	1	5/9/2017 12:39
PHENANTHRENE	5		4.4	UG/KG	1	5/9/2017 12:39
ANTHRACENE	4.4		4.4	UG/KG	1	5/9/2017 12:39
FLUORANTHENE	5.8		4.4	UG/KG	1	5/9/2017 12:39
PYRENE	18		4.4	UG/KG	1	5/9/2017 12:39
BENZO(A)ANTHRACENE	2.7	J	4.4	UG/KG	1	5/9/2017 12:39
CHRYSENE	12		4.4	UG/KG	1	5/9/2017 12:39
BENZO(B)FLUORANTHENE	7.9		4.4	UG/KG	1	5/9/2017 12:39
BENZO(K)FLUORANTHENE	ND		4.4	UG/KG	1	5/9/2017 12:39
BENZO(A)PYRENE	ND		4.4	UG/KG	1	5/9/2017 12:39
INDENO(1,2,3-CD)PYRENE	2.4	J	4.4	UG/KG	1	5/9/2017 12:39
DIBENZO(A,H)ANTHRACENE	ND		4.4	UG/KG	1	5/9/2017 12:39
BENZO(G,H,I)PERYLENE	11		4.4	UG/KG	1	5/9/2017 12:39
Surr: NITROBENZENE-D5	78		28-113	%REC	1	5/9/2017 12:39
Surr: 2-FLUOROBIPHENYL	68		41-106	%REC	1	5/9/2017 12:39
Surr: TERPHENYL-D14	73		25-147	%REC	1	5/9/2017 12:39
<b>GC/MS Volatiles</b>			<b>SW8260</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: JXK</b>
BENZENE	ND		6.6	UG/KG	1	5/8/2017 17:09
TOLUENE	ND		6.6	UG/KG	1	5/8/2017 17:09
ETHYLBENZENE	ND		6.6	UG/KG	1	5/8/2017 17:09
M+P-XYLENE	ND		6.6	UG/KG	1	5/8/2017 17:09
O-XYLENE	ND		6.6	UG/KG	1	5/8/2017 17:09
TOTAL XYLENES	ND		5	UG/KG	1	5/8/2017 17:09
Surr: DIBROMOFLUOROMETHANE	108		61-134	%REC	1	5/8/2017 17:09
Surr: TOLUENE-D8	100		57-135	%REC	1	5/8/2017 17:09
Surr: 4-BROMOFLUOROBENZENE	102		52-151	%REC	1	5/8/2017 17:09
GASOLINE RANGE ORGANICS	ND		660	UG/KG	1	5/8/2017 17:09

## ALS -- Fort Collins

## SAMPLE SUMMARY REPORT

Client: Wyoming Analytical Laboratories, Inc.  
 Project: 36303R  
 Sample ID: R1161  
 Legal Location:  
 Collection Date: 5/1/2017 13:12

Date: 19-May-17  
 Work Order: 1705111  
 Lab ID: 1705111-2  
 Matrix: SOIL  
 Percent Moisture: 13.2

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>			<b>SW8015M</b>		Prep Date: 5/8/2017	PrepBy: DMS
Diesel Range Organics	61	DMH	5.7	MG/KG	1	5/10/2017 01:52
Surr: O-TERPHENYL	87		49-114	%REC	1	5/10/2017 01:52
<b>GC/MS Semi-volatiles</b>			<b>SW8270SIM</b>		Prep Date: 5/8/2017	PrepBy: LML
NAPHTHALENE	ND		3.8	UG/KG	1	5/9/2017 12:59
2-METHYLNAPHTHALENE	1.4	J	3.8	UG/KG	1	5/9/2017 12:59
1-METHYLNAPHTHALENE	ND		3.8	UG/KG	1	5/9/2017 12:59
ACENAPHTHYLENE	ND		3.8	UG/KG	1	5/9/2017 12:59
ACENAPHTHENE	ND		3.8	UG/KG	1	5/9/2017 12:59
FLUORENE	ND		3.8	UG/KG	1	5/9/2017 12:59
PHENANTHRENE	2.9	J	3.8	UG/KG	1	5/9/2017 12:59
ANTHRACENE	ND		3.8	UG/KG	1	5/9/2017 12:59
FLUORANTHENE	3.3	J	3.8	UG/KG	1	5/9/2017 12:59
PYRENE	3.2	J	3.8	UG/KG	1	5/9/2017 12:59
BENZO(A)ANTHRACENE	1.6	J	3.8	UG/KG	1	5/9/2017 12:59
CHRYSENE	6.8		3.8	UG/KG	1	5/9/2017 12:59
BENZO(B)FLUORANTHENE	3.4	J	3.8	UG/KG	1	5/9/2017 12:59
BENZO(K)FLUORANTHENE	ND		3.8	UG/KG	1	5/9/2017 12:59
BENZO(A)PYRENE	ND		3.8	UG/KG	1	5/9/2017 12:59
INDENO(1,2,3-CD)PYRENE	ND		3.8	UG/KG	1	5/9/2017 12:59
DIBENZO(A,H)ANTHRACENE	ND		3.8	UG/KG	1	5/9/2017 12:59
BENZO(G,H,I)PERYLENE	8.9		3.8	UG/KG	1	5/9/2017 12:59
Surr: NITROBENZENE-D5	75		28-113	%REC	1	5/9/2017 12:59
Surr: 2-FLUOROBIPHENYL	63		41-106	%REC	1	5/9/2017 12:59
Surr: TERPHENYL-D14	73		25-147	%REC	1	5/9/2017 12:59
<b>GC/MS Volatiles</b>			<b>SW8260</b>		Prep Date: 5/8/2017	PrepBy: JXK
BENZENE	ND		5.7	UG/KG	1	5/8/2017 17:34
TOLUENE	ND		5.7	UG/KG	1	5/8/2017 17:34
ETHYLBENZENE	ND		5.7	UG/KG	1	5/8/2017 17:34
M+P-XYLENE	ND		5.7	UG/KG	1	5/8/2017 17:34
O-XYLENE	ND		5.7	UG/KG	1	5/8/2017 17:34
TOTAL XYLENES	ND		5	UG/KG	1	5/8/2017 17:34
Surr: DIBROMOFLUOROMETHANE	111		61-134	%REC	1	5/8/2017 17:34
Surr: TOLUENE-D8	103		57-135	%REC	1	5/8/2017 17:34
Surr: 4-BROMOFLUOROBENZENE	99		52-151	%REC	1	5/8/2017 17:34
GASOLINE RANGE ORGANICS	ND		570	UG/KG	1	5/8/2017 17:34

## ALS -- Fort Collins

## SAMPLE SUMMARY REPORT

Client: Wyoming Analytical Laboratories, Inc.  
 Project: 36303R  
 Sample ID: R1162  
 Legal Location:  
 Collection Date: 5/1/2017 13:30

Date: 19-May-17  
 Work Order: 1705111  
 Lab ID: 1705111-3  
 Matrix: SOIL  
 Percent Moisture: 17.0

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>			<b>SW8015M</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: DMS</b>
Diesel Range Organics	2900	DMH	60	MG/KG	10	5/10/2017 12:05
Surr: O-TERPHENYL	72		49-114	%REC	10	5/10/2017 12:05
<b>GC/MS Semi-volatiles</b>			<b>SW8270SIM</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: LML</b>
NAPHTHALENE	ND		4	UG/KG	1	5/9/2017 13:19
2-METHYLNAPHTHALENE	ND		4	UG/KG	1	5/9/2017 13:19
1-METHYLNAPHTHALENE	ND		4	UG/KG	1	5/9/2017 13:19
ACENAPHTHYLENE	ND		4	UG/KG	1	5/9/2017 13:19
ACENAPHTHENE	ND		4	UG/KG	1	5/9/2017 13:19
FLUORENE	ND		4	UG/KG	1	5/9/2017 13:19
PHENANTHRENE	4.3		4	UG/KG	1	5/9/2017 13:19
ANTHRACENE	ND		4	UG/KG	1	5/9/2017 13:19
FLUORANTHENE	3.2	J	4	UG/KG	1	5/9/2017 13:19
PYRENE	4.4		4	UG/KG	1	5/9/2017 13:19
BENZO(A)ANTHRACENE	1.3	J	4	UG/KG	1	5/9/2017 13:19
CHRYSENE	7		4	UG/KG	1	5/9/2017 13:19
BENZO(B)FLUORANTHENE	3.5	J	4	UG/KG	1	5/9/2017 13:19
BENZO(K)FLUORANTHENE	ND		4	UG/KG	1	5/9/2017 13:19
BENZO(A)PYRENE	1.9	J	4	UG/KG	1	5/9/2017 13:19
INDENO(1,2,3-CD)PYRENE	2	J	4	UG/KG	1	5/9/2017 13:19
DIBENZO(A,H)ANTHRACENE	2	J	4	UG/KG	1	5/9/2017 13:19
BENZO(G,H,I)PERYLENE	9.1		4	UG/KG	1	5/9/2017 13:19
Surr: NITROBENZENE-D5	79		28-113	%REC	1	5/9/2017 13:19
Surr: 2-FLUOROBIPHENYL	70		41-106	%REC	1	5/9/2017 13:19
Surr: TERPHENYL-D14	78		25-147	%REC	1	5/9/2017 13:19
<b>GC/MS Volatiles</b>			<b>SW8260</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: JXK</b>
BENZENE	ND		5.9	UG/KG	1	5/8/2017 17:56
TOLUENE	ND		5.9	UG/KG	1	5/8/2017 17:56
ETHYLBENZENE	ND		5.9	UG/KG	1	5/8/2017 17:56
M+P-XYLENE	ND		5.9	UG/KG	1	5/8/2017 17:56
O-XYLENE	ND		5.9	UG/KG	1	5/8/2017 17:56
TOTAL XYLENES	ND		5	UG/KG	1	5/8/2017 17:56
Surr: DIBROMOFLUOROMETHANE	111		61-134	%REC	1	5/8/2017 17:56
Surr: TOLUENE-D8	98		57-135	%REC	1	5/8/2017 17:56
Surr: 4-BROMOFLUOROBENZENE	103		52-151	%REC	1	5/8/2017 17:56
GASOLINE RANGE ORGANICS	ND		590	UG/KG	1	5/8/2017 17:56

## ALS -- Fort Collins

## SAMPLE SUMMARY REPORT

Client: Wyoming Analytical Laboratories, Inc.  
 Project: 36303R  
 Sample ID: R1163  
 Legal Location:  
 Collection Date: 5/1/2017 14:50

Date: 19-May-17  
 Work Order: 1705111  
 Lab ID: 1705111-4  
 Matrix: SOIL  
 Percent Moisture: 16.7

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>			<b>SW8015M</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: DMS</b>
Diesel Range Organics	75	DMH	6	MG/KG	1	5/10/2017 11:42
Surr: O-TERPHENYL	79		49-114	%REC	1	5/10/2017 11:42
<b>GC/MS Semi-volatiles</b>			<b>SW8270SIM</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: LML</b>
NAPHTHALENE	16		4	UG/KG	1	5/9/2017 13:39
2-METHYLNAPHTHALENE	27		4	UG/KG	1	5/9/2017 13:39
1-METHYLNAPHTHALENE	20		4	UG/KG	1	5/9/2017 13:39
ACENAPHTHYLENE	ND		4	UG/KG	1	5/9/2017 13:39
ACENAPHTHENE	ND		4	UG/KG	1	5/9/2017 13:39
FLUORENE	ND		4	UG/KG	1	5/9/2017 13:39
PHENANTHRENE	10		4	UG/KG	1	5/9/2017 13:39
ANTHRACENE	ND		4	UG/KG	1	5/9/2017 13:39
FLUORANTHENE	3.1	J	4	UG/KG	1	5/9/2017 13:39
PYRENE	4.9		4	UG/KG	1	5/9/2017 13:39
BENZO(A)ANTHRACENE	1.5	J	4	UG/KG	1	5/9/2017 13:39
CHRYSENE	6.7		4	UG/KG	1	5/9/2017 13:39
BENZO(B)FLUORANTHENE	2.4	J	4	UG/KG	1	5/9/2017 13:39
BENZO(K)FLUORANTHENE	ND		4	UG/KG	1	5/9/2017 13:39
BENZO(A)PYRENE	2.3	J	4	UG/KG	1	5/9/2017 13:39
INDENO(1,2,3-CD)PYRENE	2.6	J	4	UG/KG	1	5/9/2017 13:39
DIBENZO(A,H)ANTHRACENE	ND		4	UG/KG	1	5/9/2017 13:39
BENZO(G,H,I)PERYLENE	7.5		4	UG/KG	1	5/9/2017 13:39
Surr: NITROBENZENE-D5	66		28-113	%REC	1	5/9/2017 13:39
Surr: 2-FLUOROBIPHENYL	58		41-106	%REC	1	5/9/2017 13:39
Surr: TERPHENYL-D14	63		25-147	%REC	1	5/9/2017 13:39
<b>GC/MS Volatiles</b>			<b>SW8260</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: JXX</b>
BENZENE	ND		5.9	UG/KG	1	5/8/2017 18:19
TOLUENE	ND		5.9	UG/KG	1	5/8/2017 18:19
ETHYLBENZENE	ND		5.9	UG/KG	1	5/8/2017 18:19
M+P-XYLENE	ND		5.9	UG/KG	1	5/8/2017 18:19
O-XYLENE	ND		5.9	UG/KG	1	5/8/2017 18:19
TOTAL XYLENES	ND		5	UG/KG	1	5/8/2017 18:19
Surr: DIBROMOFLUOROMETHANE	115		61-134	%REC	1	5/8/2017 18:19
Surr: TOLUENE-D8	96		57-135	%REC	1	5/8/2017 18:19
Surr: 4-BROMOFLUOROBENZENE	101		52-151	%REC	1	5/8/2017 18:19
GASOLINE RANGE ORGANICS	ND		590	UG/KG	1	5/8/2017 18:19

## ALS -- Fort Collins

## SAMPLE SUMMARY REPORT

Client: Wyoming Analytical Laboratories, Inc.  
 Project: 36303R  
 Sample ID: R1164  
 Legal Location:  
 Collection Date: 5/1/2017 14:37

Date: 19-May-17  
 Work Order: 1705111  
 Lab ID: 1705111-5  
 Matrix: SOIL  
 Percent Moisture: 17.1

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>			<b>SW8015M</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: DMS</b>
Diesel Range Organics	30	DMH	5.9	MG/KG	1	5/10/2017 03:02
Surr: O-TERPHENYL	92		49-114	%REC	1	5/10/2017 03:02
<b>GC/MS Semi-volatiles</b>			<b>SW8270SIM</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: LML</b>
NAPHTHALENE	ND		4	UG/KG	1	5/9/2017 14:00
2-METHYLNAPHTHALENE	ND		4	UG/KG	1	5/9/2017 14:00
1-METHYLNAPHTHALENE	ND		4	UG/KG	1	5/9/2017 14:00
ACENAPHTHYLENE	ND		4	UG/KG	1	5/9/2017 14:00
ACENAPHTHENE	ND		4	UG/KG	1	5/9/2017 14:00
FLUORENE	ND		4	UG/KG	1	5/9/2017 14:00
PHENANTHRENE	2.1	J	4	UG/KG	1	5/9/2017 14:00
ANTHRACENE	ND		4	UG/KG	1	5/9/2017 14:00
FLUORANTHENE	ND		4	UG/KG	1	5/9/2017 14:00
PYRENE	ND		4	UG/KG	1	5/9/2017 14:00
BENZO(A)ANTHRACENE	ND		4	UG/KG	1	5/9/2017 14:00
CHRYSENE	2.3	J	4	UG/KG	1	5/9/2017 14:00
BENZO(B)FLUORANTHENE	ND		4	UG/KG	1	5/9/2017 14:00
BENZO(K)FLUORANTHENE	ND		4	UG/KG	1	5/9/2017 14:00
BENZO(A)PYRENE	ND		4	UG/KG	1	5/9/2017 14:00
INDENO(1,2,3-CD)PYRENE	ND		4	UG/KG	1	5/9/2017 14:00
DIBENZO(A,H)ANTHRACENE	ND		4	UG/KG	1	5/9/2017 14:00
BENZO(G,H,I)PERYLENE	3	J	4	UG/KG	1	5/9/2017 14:00
Surr: NITROBENZENE-D5	73		28-113	%REC	1	5/9/2017 14:00
Surr: 2-FLUOROBIPHENYL	68		41-106	%REC	1	5/9/2017 14:00
Surr: TERPHENYL-D14	79		25-147	%REC	1	5/9/2017 14:00
<b>GC/MS Volatiles</b>			<b>SW8260</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: JXX</b>
BENZENE	ND		6	UG/KG	1	5/8/2017 18:41
TOLUENE	ND		6	UG/KG	1	5/8/2017 18:41
ETHYLBENZENE	ND		6	UG/KG	1	5/8/2017 18:41
M+P-XYLENE	ND		6	UG/KG	1	5/8/2017 18:41
O-XYLENE	ND		6	UG/KG	1	5/8/2017 18:41
TOTAL XYLENES	ND		5	UG/KG	1	5/8/2017 18:41
Surr: DIBROMOFLUOROMETHANE	115		61-134	%REC	1	5/8/2017 18:41
Surr: TOLUENE-D8	97		57-135	%REC	1	5/8/2017 18:41
Surr: 4-BROMOFLUOROBENZENE	103		52-151	%REC	1	5/8/2017 18:41
GASOLINE RANGE ORGANICS	ND		600	UG/KG	1	5/8/2017 18:41



## ALS -- Fort Collins

## SAMPLE SUMMARY REPORT

Client: Wyoming Analytical Laboratories, Inc.  
 Project: 36303R  
 Sample ID: R1165  
 Legal Location:  
 Collection Date: 5/1/2017 14:27

Date: 19-May-17  
 Work Order: 1705111  
 Lab ID: 1705111-6  
 Matrix: SOIL  
 Percent Moisture: 15.5

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Diesel Range Organics</b>			<b>SW8015M</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: DMS</b>
Diesel Range Organics	10	DMH	5.8	MG/KG	1	5/10/2017 03:28
Surr: O-TERPHENYL	75		49-114	%REC	1	5/10/2017 03:28
<b>GC/MS Semi-volatiles</b>			<b>SW8270SIM</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: LML</b>
NAPHTHALENE	ND		3.9	UG/KG	1	5/9/2017 14:20
2-METHYLNAPHTHALENE	ND		3.9	UG/KG	1	5/9/2017 14:20
1-METHYLNAPHTHALENE	ND		3.9	UG/KG	1	5/9/2017 14:20
ACENAPHTHYLENE	ND		3.9	UG/KG	1	5/9/2017 14:20
ACENAPHTHENE	ND		3.9	UG/KG	1	5/9/2017 14:20
FLUORENE	ND		3.9	UG/KG	1	5/9/2017 14:20
PHENANTHRENE	2	J	3.9	UG/KG	1	5/9/2017 14:20
ANTHRACENE	ND		3.9	UG/KG	1	5/9/2017 14:20
FLUORANTHENE	ND		3.9	UG/KG	1	5/9/2017 14:20
PYRENE	ND		3.9	UG/KG	1	5/9/2017 14:20
BENZO(A)ANTHRACENE	ND		3.9	UG/KG	1	5/9/2017 14:20
CHRYSENE	3.5	J	3.9	UG/KG	1	5/9/2017 14:20
BENZO(B)FLUORANTHENE	1.5	J	3.9	UG/KG	1	5/9/2017 14:20
BENZO(K)FLUORANTHENE	ND		3.9	UG/KG	1	5/9/2017 14:20
BENZO(A)PYRENE	ND		3.9	UG/KG	1	5/9/2017 14:20
INDENO(1,2,3-CD)PYRENE	ND		3.9	UG/KG	1	5/9/2017 14:20
DIBENZO(A,H)ANTHRACENE	ND		3.9	UG/KG	1	5/9/2017 14:20
BENZO(G,H,I)PERYLENE	4.2		3.9	UG/KG	1	5/9/2017 14:20
Surr: NITROBENZENE-D5	76		28-113	%REC	1	5/9/2017 14:20
Surr: 2-FLUOROBIPHENYL	72		41-106	%REC	1	5/9/2017 14:20
Surr: TERPHENYL-D14	83		25-147	%REC	1	5/9/2017 14:20
<b>GC/MS Volatiles</b>			<b>SW8260</b>		<b>Prep Date: 5/8/2017</b>	<b>PrepBy: JXK</b>
BENZENE	ND		5.9	UG/KG	1	5/8/2017 19:04
TOLUENE	ND		5.9	UG/KG	1	5/8/2017 19:04
ETHYLBENZENE	ND		5.9	UG/KG	1	5/8/2017 19:04
M+P-XYLENE	ND		5.9	UG/KG	1	5/8/2017 19:04
O-XYLENE	ND		5.9	UG/KG	1	5/8/2017 19:04
TOTAL XYLENES	ND		5	UG/KG	1	5/8/2017 19:04
Surr: DIBROMOFLUOROMETHANE	115		61-134	%REC	1	5/8/2017 19:04
Surr: TOLUENE-D8	98		57-135	%REC	1	5/8/2017 19:04
Surr: 4-BROMOFLUOROBENZENE	105		52-151	%REC	1	5/8/2017 19:04
GASOLINE RANGE ORGANICS	ND		590	UG/KG	1	5/8/2017 19:04

Client: Wyoming Analytical Laboratories, Inc.  
 Project: 36303R  
 Sample ID: R1165  
 Legal Location:  
 Collection Date: 5/1/2017 14:27

Date: 19-May-17  
 Work Order: 1705111  
 Lab ID: 1705111-6  
 Matrix: SOIL  
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
----------	--------	------	--------------	-------	-----------------	---------------

### 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

Client: Wyoming Analytical Laboratories, Inc.  
 Work Order: 1705111  
 Project: 36303R

Date: 5/19/2017 11:38

## QC BATCH REPORT

Batch ID: HC170508-88-2 Instrument ID FUELS-1 Method: SW8015M

LCS Sample ID: HC170508-88 Units: MG/KG Analysis Date: 5/9/2017 20:28

Client ID: Run ID: HC170509-8A Prep Date: 5/8/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	67	5	62.5		107	81-129				20	
Surr: O-TERPHENYL	4.99		6.25		80	49-114					

LCSD Sample ID: HC170508-88 Units: MG/KG Analysis Date: 5/9/2017 20:51

Client ID: Run ID: HC170509-8A Prep Date: 5/8/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	61.3	5	62.5		98	81-129		67	9	20	
Surr: O-TERPHENYL	4.8		6.25		74	49-114			8		

MB Sample ID: HC170508-88 Units: MG/KG Analysis Date: 5/9/2017 20:05

Client ID: Run ID: HC170509-8A Prep Date: 5/8/2017 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	4.54		6.25		73	49-114					

The following samples were analyzed in this batch:

1705111-1	1705111-2	1705111-3
1705111-4	1705111-5	1705111-6

Client: Wyoming Analytical Laboratories, Inc.  
 Work Order: 1705111  
 Project: 36303R

## QC BATCH REPORT

Batch ID: EX170508-3-1 Instrument ID HPSV1 Method: SW8270SIM

LCS Sample ID: EX170508-3 Units: UG/KG Analysis Date: 5/9/2017 11:38  
 Client ID: Run ID: SV170509-3 Prep Date: 5/8/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	52.5	3.33	66.7		79	40-107				30	
2-METHYLNAPHTHALENE	49.3	3.33	66.7		74	47-107				30	
1-METHYLNAPHTHALENE	54.6	3.33	66.7		82	34-113				30	
ACENAPHTHYLENE	49	3.33	66.7		73	46-116				30	
ACENAPHTHENE	50.9	3.33	66.7		76	46-108				30	
FLUORENE	48.2	3.33	66.7		72	44-118				30	
PHENANTHRENE	55.2	3.33	66.7		83	44-113				30	
ANTHRACENE	52.6	3.33	66.7		79	45-123				30	
FLUORANTHENE	54	3.33	66.7		81	49-124				30	
PYRENE	57.2	3.33	66.7		86	50-109				30	
BENZO(A)ANTHRACENE	53.3	3.33	66.7		80	47-123				30	
CHRYSENE	58.1	3.33	66.7		87	49-112				30	
BENZO(B)FLUORANTHENE	55.3	3.33	66.7		83	55-108				30	
BENZO(K)FLUORANTHENE	60.2	3.33	66.7		90	50-113				30	
BENZO(A)PYRENE	54.2	3.33	66.7		81	45-122				30	
INDENO(1,2,3-CD)PYRENE	53.3	3.33	66.7		80	40-123				30	
DIBENZO(A,H)ANTHRACENE	53.7	3.33	66.7		81	31-135				30	
BENZO(G,H,I)PERYLENE	52.2	3.33	66.7		78	60-101				30	
Surr: NITROBENZENE-D5	51.6		66.7		77	28-113					
Surr: 2-FLUOROBIPHENYL	50.9		66.7		76	41-106					
Surr: TERPHENYL-D14	63.4		66.7		95	25-147					

**Client:** Wyoming Analytical Laboratories, Inc.  
**Work Order:** 1705111  
**Project:** 36303R

## QC BATCH REPORT

Batch ID: EX170508-3-1      Instrument ID HPSV1      Method: SW8270SIM

**MB**      Sample ID: EX170508-3      Units: UG/KG      Analysis Date: 5/9/2017 11:18  
 Client ID:      Run ID: SV170509-3      Prep Date: 5/8/2017      DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	ND	3.3									
2-METHYLNAPHTHALENE	ND	3.3									
1-METHYLNAPHTHALENE	ND	3.3									
ACENAPHTHYLENE	ND	3.3									
ACENAPHTHENE	ND	3.3									
FLUORENE	ND	3.3									
PHENANTHRENE	ND	3.3									
ANTHRACENE	ND	3.3									
FLUORANTHENE	ND	3.3									
PYRENE	ND	3.3									
BENZO(A)ANTHRACENE	ND	3.3									
CHRYSENE	ND	3.3									
BENZO(B)FLUORANTHENE	ND	3.3									
BENZO(K)FLUORANTHENE	ND	3.3									
BENZO(A)PYRENE	ND	3.3									
INDENO(1,2,3-CD)PYRENE	ND	3.3									
DIBENZO(A,H)ANTHRACENE	ND	3.3									
BENZO(G,H,I)PERYLENE	ND	3.3									
Surr: NITROBENZENE-D5	53.5		66.7		80	28-113					
Surr: 2-FLUOROBIPHENYL	52.3		66.7		78	41-106					
Surr: TERPHENYL-D14	65.3		66.7		98	25-147					

The following samples were analyzed in this batch:

1705111-1	1705111-2	1705111-3
1705111-4	1705111-5	1705111-6

Client: Wyoming Analytical Laboratories, Inc.  
 Work Order: 1705111  
 Project: 36303R

# QC BATCH REPORT

Batch ID: VL170508-2-2 Instrument ID HPV1 Method: SW8260

LCS	Sample ID: VL170508-2	Units: UG/KG			Analysis Date: 5/8/2017 13:47						
Client ID:	Run ID: VL170508-2A	Prep Date: 5/8/2017			DF: 1						
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	39.4	5	40		98	73-126				30	
TOLUENE	32.5	5	40		81	71-127				30	
ETHYLBENZENE	33.4	5	40		83	74-127				30	
M+P-XYLENE	67.8	5	80		85	79-126				30	
O-XYLENE	33	5	40		83	77-125				30	
Surr: DIBROMOFLUOROMETHANE	54.7		50		109	61-134					
Surr: TOLUENE-D8	48.7		50		97	57-135					
Surr: 4-BROMOFLUOROBENZENE	54.2		50		108	52-151					

LCS	Sample ID: VL170508-2	Units: UG/KG			Analysis Date: 5/8/2017 14:09						
Client ID:	Run ID: VL170508-2A	Prep Date: 5/8/2017			DF: 1						
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	41	5	40		103	73-126		39.4	4	30	
TOLUENE	34.4	5	40		88	71-127		32.5	6	30	
ETHYLBENZENE	35.3	5	40		88	74-127		33.4	6	30	
M+P-XYLENE	71.4	5	80		89	79-126		67.8	5	30	
O-XYLENE	38.2	5	40		91	77-125		33	9	30	
Surr: DIBROMOFLUOROMETHANE	53.9		50		108	61-134			2		
Surr: TOLUENE-D8	49.5		50		99	57-135			2		
Surr: 4-BROMOFLUOROBENZENE	54.8		50		109	52-151			1		

MB	Sample ID: VL170508-2	Units: UG/KG			Analysis Date: 5/8/2017 16:00						
Client ID:	Run ID: VL170508-2A	Prep Date: 5/8/2017			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	53.8		50		108	61-134					
Surr: TOLUENE-D8	49.3		50		99	57-135					
Surr: 4-BROMOFLUOROBENZENE	53.8		50		107	52-151					

Client: Wyoming Analytical Laboratories, Inc.  
 Work Order: 1705111  
 Project: 36303R

## QC BATCH REPORT

Batch ID: VL170508-2-2 Instrument ID HPV1 Method: SW8260

MS Sample ID: 1705111-4 Units: UG/KG Analysis Date: 5/8/2017 19:26  
 Client ID: R1163 Run ID: VL170508-2A Prep Date: 5/8/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	44.3	5.93	47.5	5.9	93	73-126				30	
TOLUENE	33.6	5.93	47.5	5.9	71	71-127				30	
ETHYLBENZENE	34	5.93	47.5	5.9	72	74-127				30	*
M+P-XYLENE	66.5	5.93	94.9	5.9	70	79-126				30	*
O-XYLENE	33.8	5.93	47.5	5.9	71	77-125				30	*
Surr: DIBROMOFLUOROMETHANE	69.6		59.3		117	61-134					
Surr: TOLUENE-D8	62		59.3		104	57-135					
Surr: 4-BROMOFLUOROBENZENE	58.9		59.3		99	52-151					

MSD Sample ID: 1705111-4 Units: UG/KG Analysis Date: 5/8/2017 19:49  
 Client ID: R1163 Run ID: VL170508-2A Prep Date: 5/8/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	35.2	5.91	47.3	5.9	75	73-126		44.3	23	30	
TOLUENE	28.5	5.91	47.3	5.9	56	71-127		33.6	24	30	*
ETHYLBENZENE	24	5.91	47.3	5.9	51	74-127		34	34	30	*+
M+P-XYLENE	48.1	5.91	94.5	5.9	51	79-126		66.5	32	30	*+
O-XYLENE	24.2	5.91	47.3	5.9	51	77-125		33.8	33	30	*+
Surr: DIBROMOFLUOROMETHANE	67.6		59.1		114	61-134			3		
Surr: TOLUENE-D8	58.5		59.1		99	57-135			6		
Surr: 4-BROMOFLUOROBENZENE	62.9		59.1		106	52-151			7		

The following samples were analyzed in this batch:

1705111-1	1705111-2	1705111-3
1705111-4	1705111-5	1705111-6

Client: Wyoming Analytical Laboratories, Inc.  
 Work Order: 1705111  
 Project: 36303R

## QC BATCH REPORT

Batch ID: VL170508-2-4 Instrument ID HPV1 Method: SW8260

LCS	Sample ID: VL170508-6			Units: UG/KG			Analysis Date: 5/8/2017 14:53				
Client ID:	Run ID: VL170508-2A						Prep Date: 5/8/2017		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2010	500	2000		101	80-120				20	

LCSD	Sample ID: VL170508-6			Units: UG/KG			Analysis Date: 5/8/2017 15:16				
Client ID:	Run ID: VL170508-2A						Prep Date: 5/8/2017		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2050	500	2000		102	80-120		2010	2	20	

MB	Sample ID: VL170508-2			Units: UG/KG			Analysis Date: 5/8/2017 16:00				
Client ID:	Run ID: VL170508-2A						Prep Date: 5/8/2017		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									

The following samples were analyzed in this batch:

1705111-1	1705111-2	1705111-3
1705111-4	1705111-5	1705111-6