

**State of Colorado
Oil and Gas Conservation Commission**



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

**Project: 9189
Facility: 262557
Document #: 2225314
DATE: 10/28/2016**

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:

Spill Complaint
 Inspection NOAV

Tracking No: _____

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

OGCC Operator Number: <u>95960</u> Name of Operator: <u>Wexpro Company</u> Address: <u>PO Box 458</u> City: <u>Rock Springs</u> State: <u>WY</u> Zip: <u>82901</u>	Contact Name and Telephone: <u>April Stegall</u> No: <u>307.352.7561</u> Fax: <u>307.352.7583</u>
API Number: <u>05-081-05553</u> County: <u>Moffat County</u> Facility Name: <u>F Wilson 7 Pit</u> Facility Number: <u>262557</u> Well Name: <u>F Wilson</u> Well Number: <u>7</u> Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWNW-23-12N-97W</u> Latitude: <u>40.988636</u> Longitude: <u>-108.607317</u>	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Produced Water

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Rangeland, Non-cropland, Oil and Gas

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Boltus-Beamton Complex

Potential receptors (water wells within 1/4 mi, surface waters, etc.): 1005' from natural drainage, 606' from nearest water well

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>Minimal</u>	<u>Soil Analysis</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

REMEDIALTION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Reference REM #9189. A Visual inspection has been performed, looking for signs of stained soil and potential leeching of pit components that may have impacted surface water or ground water. It is believed that most, if not all, pits in the Hiawatha area were lined with bentonite liners. These liners would have been broken up during the process of "stirring and airing" that occurs in all Wexpro pits prior to sampling.

Describe how source is to be removed:

72 hour notice was given to BLM and COGCC prior to sampling. Depth of samples were determined by visual observations during sampling, as best to obtain samples of native soil. All samples were sent to a lab and tested per Table 910-1. Please see attached Google Earth map showing GPS coordinates and sample depths.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

During final reclamation of the well site, pits will be backfilled and recontoured with the well pad. Berm dirt will be knocked into the pit area and compacted. If less than 3' of backfill material is required, soils used for production pit berms will include a confirmation soil sample to demonstrate soil is below Table 910-1 standards. Additional material, if needed, will be argonomic topsoil, brought in from a commercial source.



Tracking Number: _____ Name of Operator: _____ OGCC Operator No: _____ Received Date: _____ Well Name & No: _____ Facility Name & No: _____

REMEDIATION WORKPLAN (Cont.)

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Not necessary, no groundwater was impacted.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

Surface reclamation will be compliant with COGCC 1000 series rules. Wexpro Company understands that approval of a Form 27 does not imply approval of a reclamation plan submitted prior to final reclamation of the well pad. All reclamation on Federal Surface will comply with the BLM, or other implementing agency specifications. The well has been previously plugged and abandoned and final reclamation will take place after approval to close the pit.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? Y N If yes, describe:

Discreet samples of the pit sidewall and pit bottom were taken in 2015, please see attached soil analysis. Pit side wall didn't not meet requirements for GRO/DRO and SAR in 2015.

Pit wall was resampled in 2016 and meets GRO/DRO requirements, please see the attached soil analysis.

Wexpro Company is requesting Closure of the facility and NFA.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

NA, not necessary.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 2013 Date Site Investigation Completed: 2016 Date Remediation Plan Submitted: _____ Remediation Start Date: NA Anticipated Completion Date: 2016 Actual Completion Date: TBD

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: April Stegall Signed: [Signature]

Title: Reclamation Agent Date: 10/18/2016

OGCC Approved: _____ Title: _____ Date: _____



Wexpro Company
2221 Westgate Dr.
P.O. Box 458
Rock Springs, WY 82902
Tel (307) 352-7500
Fax (307) 352-7575

Jimmy L. Druce
General Manager
Direct: (307)352-7555
Jimmy.Druce@questar.com

5/19/2016

Kris Neidel
COGCC
1120 Lincoln St., Suite 801
Denver, CO 80203

Pit Maintenance and History in Wexpro Company Hiawatha/Powder Wash fields

Dear Mr. Neidel:

I worked as an Operator/Chief Operator in Colorado's Powder Wash and Hiawatha fields for Wexpro Company between the years of 1984 and 2002. Upon my hiring, Carl Foster, who also worked for Wexpro, taught myself and the other operators procedures for production/water drain pit cleaning/maintenance.

The procedures were as follows; For several years pit with visible oil in them were either burned or soaked with hot water and skimmed. Burning of the pits was standard until regulations prohibited the practice.

When soaking and skimming would occur, hot water would be added to the pits. After the addition of hot water to the pits, the pits were allowed to "soak" for a minimum of 3 hours allowing the oil to separate from the water and come to the surface. After the oil and water separated, the oil would be skimmed off via tanker truck and the pits drained of water. Oil skimmed from the pits would be added to the condensate tanks, and the water would be added to the water tanks or hauled for disposal at a commercial source. This process was repeated continuously until there was no more visible oil in the pits.

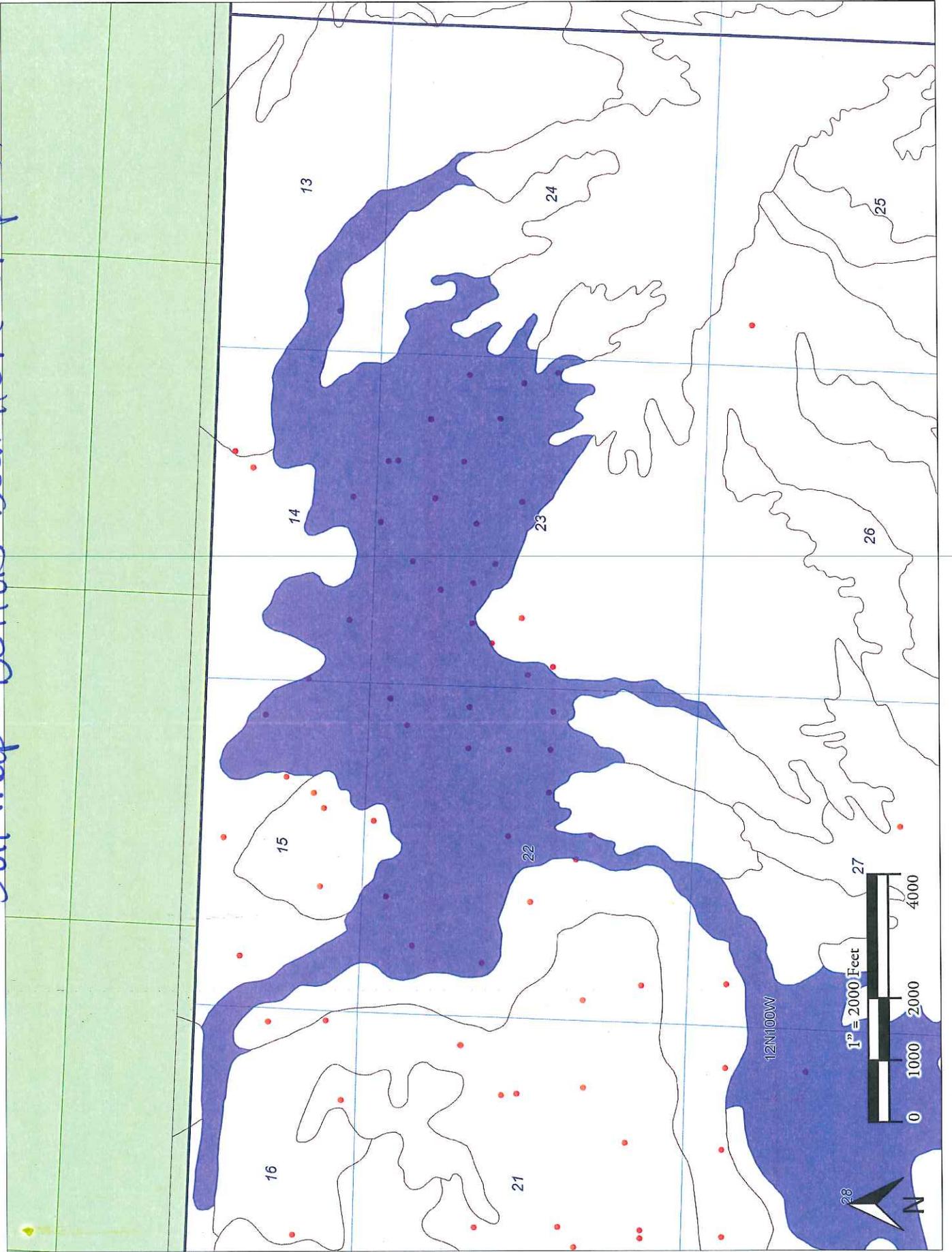
This procedure was passed along during and after my departure from the Hiawatha and Powder Wash fields, and continues to be used today.

Kind regards,

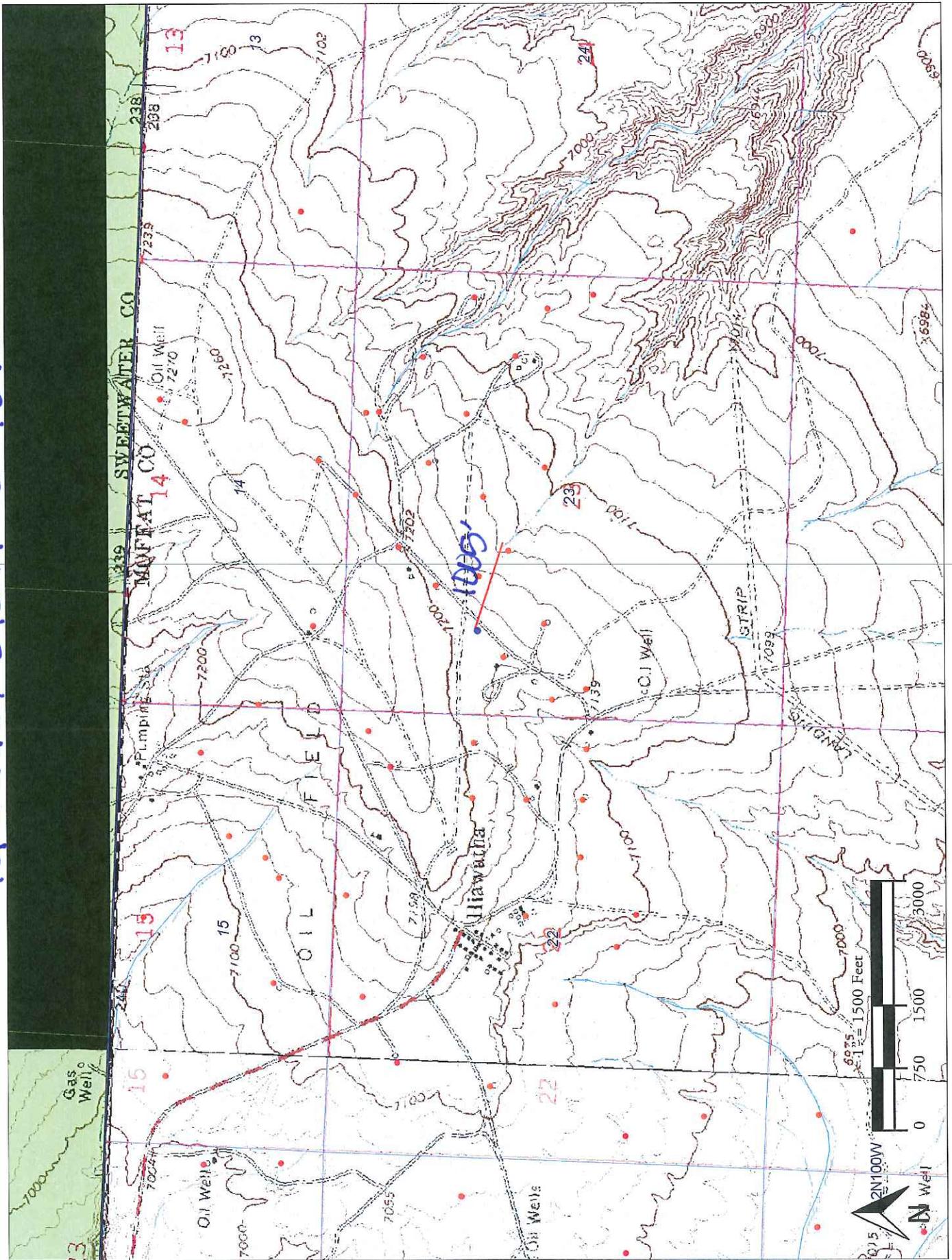
Jimmy Druce
General Manager

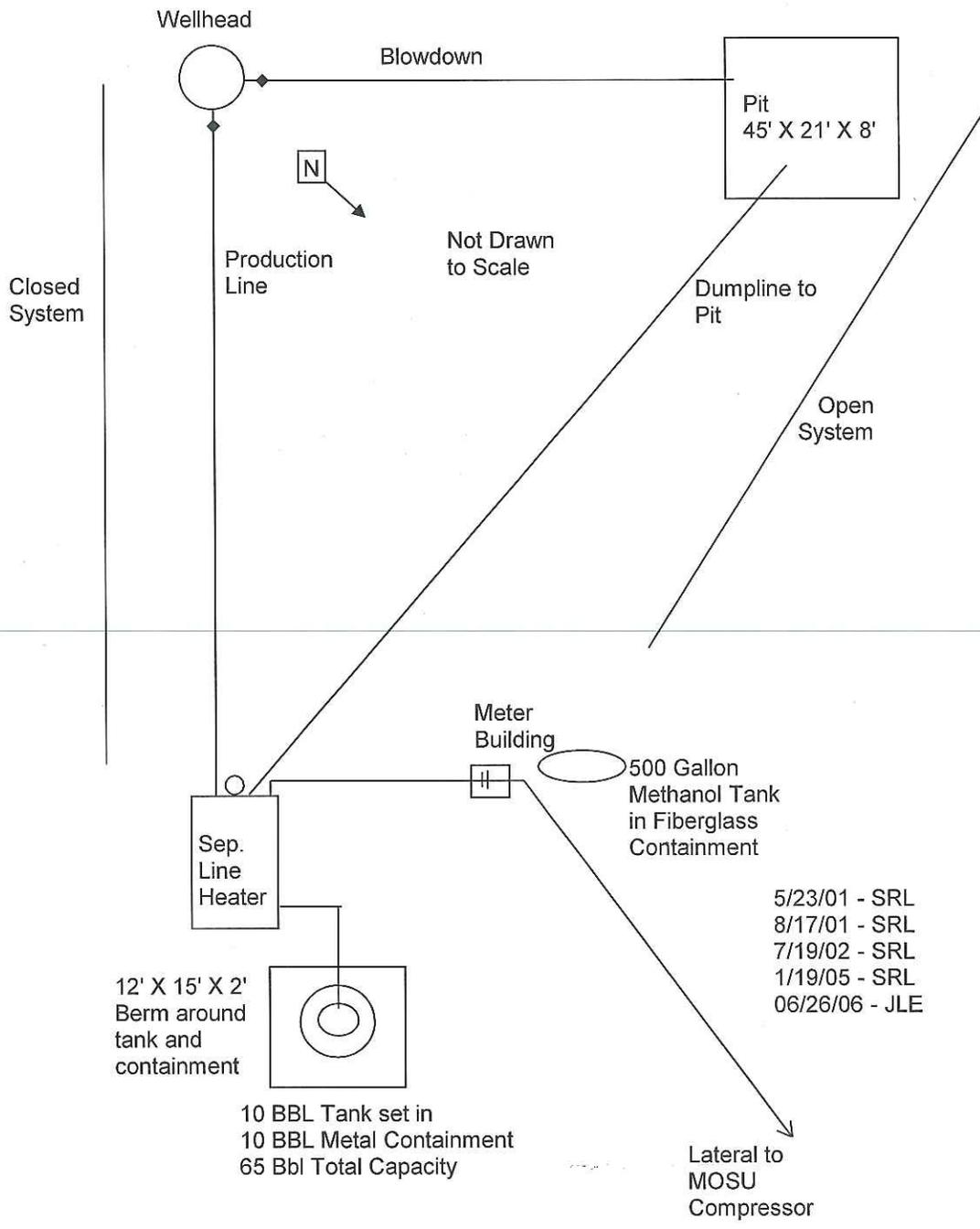
For questions, please call April Stegall at 307-352-7561 or 307-371-3610.

Sb11 map: Boltus Beampton complex



TPO MAP / DISTANCE TO WATER

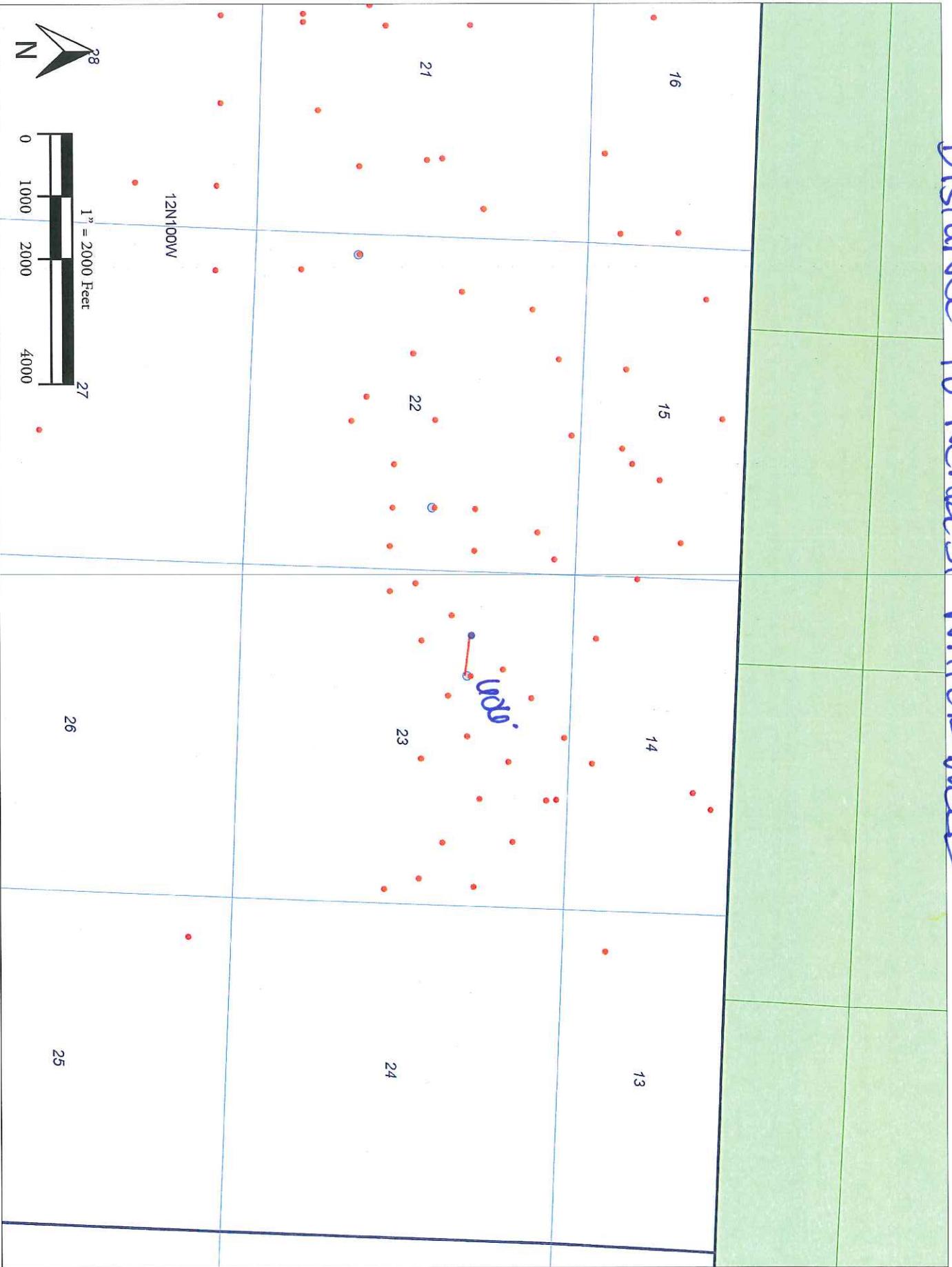




- ▶— Choke
- ||— Meter
- ◆— Valve
- Plug
- Relief

F. Wilson Well No. 7
 SW NW 23-12N-100W
 Lease #D-033164-a
 Moffat County, Colorado
 Wexpro Company

DISTANCE TO NEAREST WATER WELL



WAE DP

COLORADO DIVISION OF WATER RESOURCES

1313 Sherman Street - Room 818
Denver, Colorado 80203

RECEIVED

DEC 19 '89

THIS FORM MUST BE SUBMITTED
WITHIN 60 DAYS OF COMPLETION
OF THE WORK DESCRIBED HERE-
ON. TYPE OR PRINT IN BLACK
INK.

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER 23434-F

F. WILSON ENGINEER
WATER RESOURCES
STANDARD
COLO.

WELL OWNER Wexpro Company SE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Sec. 23

ADDRESS P. O. Box 458, Rock Springs, WY 82902 T. 12 N. R. 100 W. 6th P.M.

DATE COMPLETED 10-13, 1988

HOLE DIAMETER

13-3/4 in. from 0 to 270 ft.

8-5/8 in. from 263 to 2547 ft.

_____ in. from _____ to _____ ft.

DRILLING METHOD _____

CASING RECORD: Plain Casing

Size 12-1/4 & kind 45 & 50# from 0 to 263 ft.

Size 8-5/8 & kind 34# from 0 to 2396 ft.

Size _____ & kind _____ from _____ to _____ ft.

Perforated Casing

Size 8-5/8 & kind 34# from 1784 to 1850 ft.

Size _____ & kind _____ from _____ to _____ ft.

Size _____ & kind _____ from _____ to _____ ft.

GROUTING RECORD

Material 200 Sacks Monolith Cement

Intervals 2396' - 509'

Placement Method Pumped

GRAVEL PACK: Size _____

Interval _____

TEST DATA

Date Tested 10-13, 1988

Static Water Level Prior to Test Unknown ft.

Type of Test Pump ESP

Length of Test 24

Sustained Yield (Metered) 865 BWPD

Final Pumping Water Level Unknown

WELL LOG

From	To	Type and Color of Material	Water Loc.
0	2547	Wasatch	

TOTAL DEPTH _____

Use additional pages necessary to complete log.

PUMP INSTALLATION REPORT

Pump Make TRW - Reda

Type Electric Submersible

Powered by Electric Motor HP 25

Pump Serial No. Unknown

Motor Serial No. Unknown

Date Installed 11-12-89

Pump Intake Depth 1745.16' KBM

Remarks _____

WELL TEST DATA WITH PERMANENT PUMP

Date Tested 10-13-89

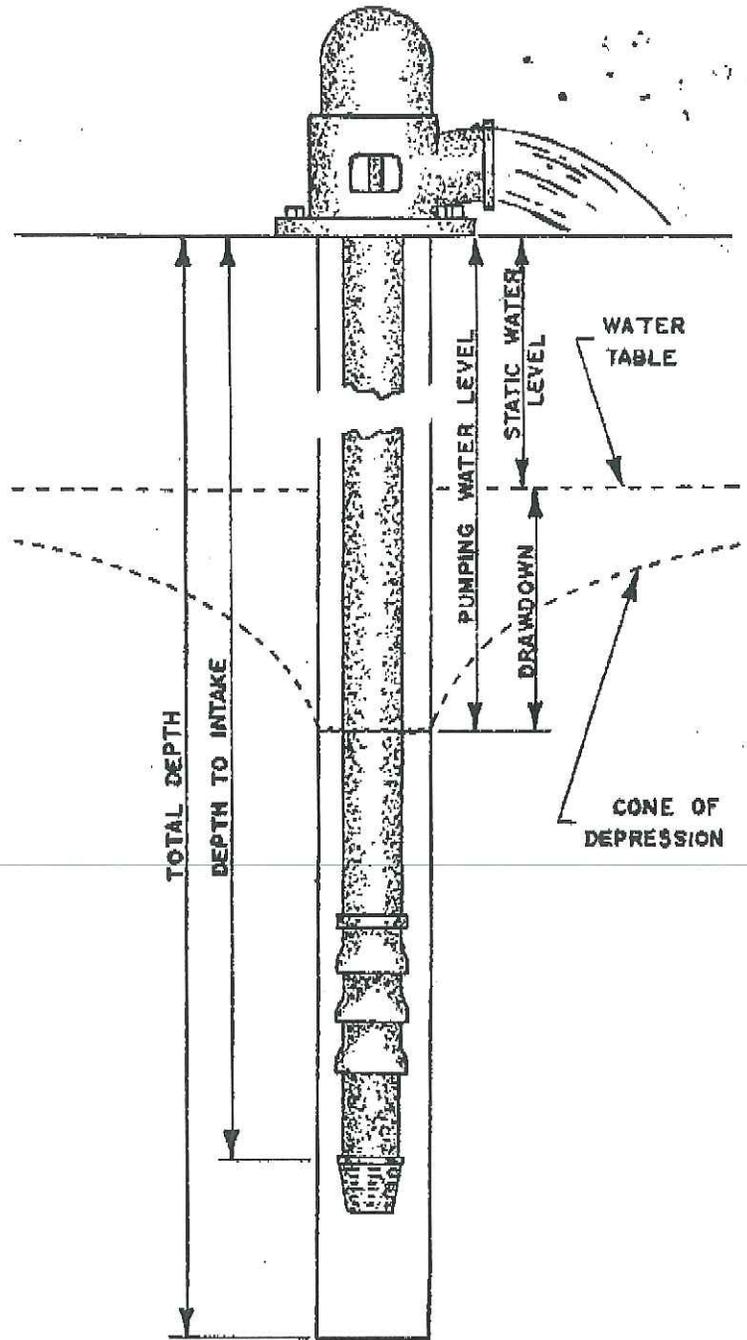
Static Water Level Prior to Test Unknown

Length of Test 24 Hours

Sustained yield (Metered) 25.2 GPM

Pumping Water Level Unknown

Remarks Pump was designed for 1000 BPD
(29.2 GPM)



CONTRACTORS STATEMENT

The undersigned, being duly sworn upon oath, deposes and says that he is the contractor of the well or pump installation described hereon; that he has read the statement made hereon; knows the content thereof, and that the same is true of his own knowledge.

Signature _____ License No. _____

State of Colorado, County of _____ SS

Subscribed and sworn to before me this _____ day of _____, 19____.

My Commission expires: _____, 19____.

Notary Public _____

FORM TO BE MADE OUT IN QUADRUPPLICATE: WHITE FORM must be an original copy on both sides and signed. WHITE AND GREEN copies must be filed with the State Engineer. PINK COPY is for the Owner and YELLOW COPY is for the Driller.

SPREAD

7.61/50 ~ 10

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman
Denver, Colorado 80203

RECEIVED

TYPE OR
PRINT IN BLACK INK
COPY OF ACCEPTED
STATEMENT MAILED
ON REQUEST.

STATE OF COLORADO
COUNTY OF Moffat

SS. APR 18 '90 AFFIDAVIT

WATER RESOURCES
STATE ENGINEER
COLO.

RECEIVED

DEC 19 '89

WATER RESOURCES
STATE ENGINEER
COLO.

RECEIVED

MAR 17 1989

WATER RESOURCES
STATE ENGINEER
COLO.

X STATEMENT OF BENEFICIAL USE OF GROUND WATER
 AMENDMENT OF EXISTING RECORD
 LATE REGISTRATION

PERMIT NO. [REDACTED]

LOCATION OF WELL

THE AFFIANT(S) Wexpro Company County Moffat
whose mailing address is P. O. Box 458 SE 1/4 of the NW 1/4, Section 23
City Rock Springs, Wyoming 82902 Twp. 12 N, Rng. 100 W, 6th P.M.
(STATE) (ZIP) (N OR S) (E OR W)

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of 1650 feet from the North section line and 1650 feet from the West section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 13th day of October, 19 88;

the maximum sustained pumping rate of the well is 30 gallons per minute, the pumping rate claimed hereby is 30 gallons per minute; the total depth of the well is 2047 feet; the average annual amount of water to be diverted is 47 acre-feet; for which claim is hereby made for East Hiawatha

Waterflood purpose(s); the legal description of the land on which the water from this well is used is BLM Lease C-9001 (831.87 Acres) of which

0 acres are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature(s) [Signature]
Subscribed and sworn to before me on this 13th day of March, 19 89

My Commission expires: 7/23/92
[Signature]
NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO
PURSUANT TO THE FOLLOWING CONDITIONS:

THAT THOSE CONDITIONS OF APPROVAL AS STATED ON THE PERMIT ARE COMPLIED WITH.

5-10-90

FOR OFFICE USE ONLY

Court Case No. _____

Prior: _____ Mo. _____ Day _____ Yr. _____

Div. 6 City 41

Sec. _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ _____

Well Use _____

Dist. 56 Basin _____ Man. Dis. _____

DEC 07 1990

DATE

[Signature]
STATE ENGINEER

[Signature]
BY

2016-discreet sample

pit wall sample-approximately 3' in depth from surface grade

Legend
📍 offsite

📍 2016 pit wall sample (40.9885805, -108.607275)

100 ft



April Stegall
Wexpro
2221 West Gate Dr
Rock Springs, WY 82901

Date: October 6, 2016
Request Number: 35729R
Date Received: 9/12/16
Matrix: Soil

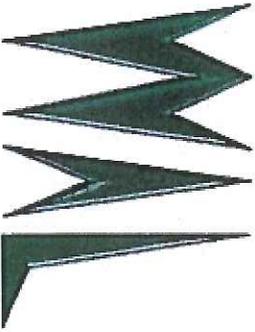
REPORT OF ANALYSIS

Lab Number	Sample ID	Diesel Range Organics	Units	Method	Date Extracted	Date Analyzed	Analyst
P9829	F. Wilson #7 Pit Side Wall 9/12/16 1000	17.1	mg/kg	EPA 8015C	09/22/16	10/03/16	MLE

GRO Analyzed by ALS Lab in Fort Collins Colorado. See attached Report.
ALS Lab Sample ID 1609234-1

End of Report
MLE/lab

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
2221 West Gate Dr
Rock Springs, WY 82901

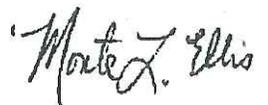
Date: October 6, 2016
Request Number: 35723R
Date Received: 9/12/16/16
Matrix: Soil

QUALITY CONTROL

	Reference Material	Expected	Measured	% Recovery
Diesel Range Organics	Control Sample	332	237	71

GRO Analyzed by ALS Lab in Fort Collins Colorado. See attached Report.
ALS Lab Sample ID 1609234-1

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

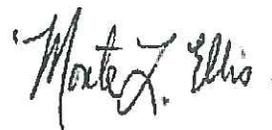
ph: 307-742-7995
fax: 307-721-8956

April Stegall
Wexpro
2221 West Gate Dr
Rock Springs, WY 82901

Date: October 6, 2016
Request Number: 35723R
Date Received: 9/12/16/16
Matrix: Soil

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

WAL Lab Number	ALS Lab Number	Customer Sample ID
P9829	1609234-1	F. Wilson #7 Pit Side Wall 9/12/16 1000



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, September 23, 2016

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

Re: ALS Workorder: 1609234
Project Name:
Project Number: 35723R

Dear Mr. Ellis:

One soil sample was received from Wyoming Analytical Laboratories, Inc., on 9/15/2016. The sample was scheduled for the following analysis:

Total Volatile Petroleum Hydrocarbons (Gasoline)

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
Amy R. Wolf
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

ALS -- Fort Collins**SAMPLE SUMMARY REPORT****Client:** Wyoming Analytical Laboratories, Inc.**Date:** 23-Sep-16**Project:** 35723R**Work Order:** 1609234**Sample ID:** P9829**Lab ID:** 1609234-1**Legal Location:****Matrix:** SOIL**Collection Date:** 9/12/2016 10:00**Percent Moisture:** 7.0

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics			SW8015		Prep Date: 9/20/2016	PrepBy: JFN
GASOLINE RANGE ORGANICS	ND		0.52	MG/KG	1	9/20/2016 10:11
<i>Surr: 2,3,4-TRIFLUOROTOLUENE</i>	94		76-126	%REC	1	9/20/2016 10:11

Client: Wyoming Analytical Laboratories, Inc.
 Project: 35723R
 Sample ID: P9829
 Legal Location:
 Collection Date: 9/12/2016 10:00

Date: 23-Sep-16
 Work Order: 1609234
 Lab ID: 1609234-1
 Matrix: SOIL
 Percent Moisture: 7.0

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

Date: 9/23/2016 10:47

Client: Wyoming Analytical Laboratories, Inc.
 Work Order: 1609234
 Project: 35723R

QC BATCH REPORT

Batch ID: HC160920-81-1 Instrument ID: FUELS-1 Method: SW8015

LCS		Sample ID: HC160920-61			Units: MG/KG		Analysis Date: 9/20/2016 08:59				
Client ID:		Run ID: HC160920-61			Prep Date: 9/20/2016		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2.3	0.5	2.5		92	79-118				20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.487		0.5		97	76-126					

LCSD		Sample ID: HC160920-61			Units: MG/KG		Analysis Date: 9/20/2016 15:49				
Client ID:		Run ID: HC160920-61			Prep Date: 9/20/2016		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2.45	0.5	2.5		98	79-118		2.3	6	20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.522		0.5		104	76-126			7		

MB		Sample ID: HC160920-61			Units: MG/KG		Analysis Date: 9/20/2016 09:21				
Client ID:		Run ID: HC160920-61			Prep Date: 9/20/2016		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	0.5									
Surr: 2,3,4-TRIFLUOROTOLUENE	0.423		0.5		85	76-126					

MB		Sample ID: HC160920-61M			Units: MG/KG		Analysis Date: 9/20/2016 12:45				
Client ID:		Run ID: HC160920-61			Prep Date: 9/20/2016		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	5									
Surr: 2,3,4-TRIFLUOROTOLUENE	4.89		5		98	76-126					

MS		Sample ID: 1609234-1			Units: MG/KG		Analysis Date: 9/20/2016 16:11				
Client ID: P9829		Run ID: HC160920-61			Prep Date: 9/20/2016		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	3.06	0.527	5.27	0.52	58	79-118				40	*
Surr: 2,3,4-TRIFLUOROTOLUENE	0.58		0.527		106	76-126					

MSD		Sample ID: 1609234-1			Units: MG/KG		Analysis Date: 9/20/2016 16:32				
Client ID: P9829		Run ID: HC160920-61			Prep Date: 9/20/2016		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	3.41	0.517	5.17	0.52	66	79-118		3.06	11	40	*
Surr: 2,3,4-TRIFLUOROTOLUENE	0.552		0.517		107	76-126			1		

2015-discreet samples

- pit wall sample-approximately 3' in depth from surface grade
- pit floor sample- approximately 1' below pit floor (approximately 9' below well pad surface grade)

Legend
📍 offsite

📍 pit wall sample (40.98861, -108.60726)

📍 pit floor sample (40.98863, -108.60727)

📍 offsite #2 (40.98845, -108.607420)

📍 offsite #1 (40.98847, -108.60744)

📍 offsite #3 (40.98841, -108.60741)

100 ft



Tammy Fredrickson
Wexpro
PO Box 458
Rock Springs, WY 82901

Date: September 22, 2015
Request Number: 34602R
Date Received: 8/28/15
Matrix: Soil

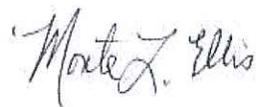
REPORT OF ANALYSIS

Lab Number: P6945
Sample ID: F. Wilson #7 Pit Floor 8/27/15 7:35am

	Result	Units	Method	Date Analyzed	Analyst
Nickel	23.8	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Copper	129	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Zinc	172	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Arsenic	18.3	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Selenium	< 0.001	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Silver	0.04	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Cadmium	0.17	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Barium	624	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Mercury	0.125	mg/kg	SW846 EPA 3050/6020	9/17/2015	SL
Lead	21.1	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Total Chromium	49.0	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Chromium (VI)	1.0*	mg/kg	EPA 7196A	9/8/2015	CB
Chromium (III)	48.0	mg/kg	Calculated (ttl.Cr-CrVI)	9/22/2015	TB
Soluble, Boron	0.532*	mg/L	Hot water ext./6020	9/8/2015	LG
pH	7.98	std. units	USDA 60-2,3/150.1	9/3/2015	CB
Conductivity	1,308	umhos/cm	USDA 60-2,3/120.1	9/3/2015	CB
Calcium	651*	mg/L	USDA 60-2,3/6010	9/4/2015	CB
Magnesium	36.4*	mg/L	USDA 60-2,3/6010	9/4/2015	CB
Sodium	121*	mg/L	USDA 60-2,3/6010	9/4/2015	CB
Sodium Absorption Ratio	1.25	Ratio	Calculated	9/15/2015	TB
Diesel Range Organics	< 2.0	mg/kg	EPA 8015C	9/10/2015	LG

*Results are the average of 2 runs

End of Report
MLE/tab



Laboratory Manager



WYOMING ANALYTICAL LABORATORIES, INC.

1660 Harrison St.
Laramie, WY 82070

Wallaramie@wal-lab.com

(307) 742-7995
Fax: (307) 721-8956

Tammy Fredrickson
 Wexpro
 PO Box 458
 Rock Springs, WY 82901

Date: September 22, 2015
 Request Number: 34602R
 Date Received: 8/28/15
 Matrix: Soil

REPORT OF ANALYSIS

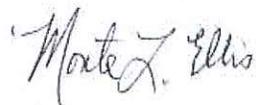
Lab Number: P6946

Sample ID: F. Wilson #7 Side Wall 8/27/15 7:18am

	Result	Units	Method	Date Analyzed	Analyst
Nickel	21.3	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Copper	54.9	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Zinc	68.0	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Arsenic	38.8	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Selenium	< 0.001	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Silver	< 0.001	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Cadmium	0.335	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Barium	210	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Mercury	< 0.001	mg/kg	SW846 EPA 3050/6020	9/17/2015	SL
Lead	13.3	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Total Chromium	40.7	mg/kg	SW846 EPA 3050/6020	9/16/2015	LG
Chromium (VI)	< 1.0*	mg/kg	EPA 7196A	9/8/2015	CB
Chromium (III)	40.7	mg/kg	Calculated (ttl.Cr-CrVI)	9/22/2015	TB
Soluble, Boron	< 0.001*	mg/L	Hot water ext./6020	9/8/2015	LG
pH	8.27	std. units	USDA 60-2,3/150.1	9/3/2015	CB
Conductivity	6,830	umhos/cm	USDA 60-2,3/120.1	9/3/2015	CB
Calcium	522*	mg/L	USDA 60-2,3/6010	9/4/2015	CB
Magnesium	1,950*	mg/L	USDA 60-2,3/6010	9/4/2015	CB
Sodium	5,500*	mg/L	USDA 60-2,3/6010	9/4/2015	CB
Sodium Absorption Ratio	24.8	Ratio	Calculated	9/15/2015	TB
Diesel Range Organics	< 2.0	mg/kg	EPA 8015C	9/10/2015	LG

*Results are the average of 2 runs

End of Report
 MLE/tab



Laboratory Manager



WYOMING ANALYTICAL LABORATORIES, INC.

1660 Harrison St.
 Laramie, WY 82070

Wallaramie@wal-lab.com

(307) 742-7995
 Fax: (307) 721-8956

Tammy Fredrickson
 Wexpro
 PO Box 458
 Rock Springs, WY 82901

Date: September 22, 2015
 Request Number: 34602R
 Date Received: 8/28/15
 Matrix: Soil

QUALITY CONTROL

	Lab Number	Result, mg/kg	Duplicate, mg/kg	RPD	RPD limit	Reference	% Recovery
Soluble Boron	P6945	0.493	0.571	14.7	50	ESI QC	75

	Standard	Expected	Value	% Recovery
Conductivity	QCI-027-12	756	683	90
pH	QC WAL	9.18	8.94	97
Chromium VI	RTC QC	56.0	44.0	78

	ESI QC % Recovery	Range
Nickel	100	70-130
Copper	99	70-130
Zinc	101	70-130
Arsenic	101	70-130
Selenium	110	70-130
Silver	107	70-130
Cadmium	112	70-130
Barium	83	70-130
Mercury	114	70-130
Lead	120	70-130
Total Chromium	93	70-130
Calcium	105	70-130
Magnesium	105	70-130
Sodium	104	70-130

DRO

Reference	Expected	Analyzed	% Recovery
5625 ppm check standard	5625	6585	117

RPD: Relative % difference.

Monte Z. Ellis

End of QC Report
 MLE/tab

Laboratory Manager



WYOMING ANALYTICAL LABORATORIES, INC.

1660 Harrison St.
 Laramie, WY 82070

Wallaramie@wal-lab.com

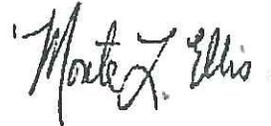
(307) 742-7995
 Fax: (307) 721-8956

Tammy Fredrickson
Wexpro
PO Box 458
Rock Springs, WY 82901

Date: September 22, 2015
Request Number: 34602R
Date Received: 8/28/15
Matrix: Soil

BTEX,GRO & PAH analyzed by TestAmerica Labs in Nashville TN. The following pages apply to the samples listed below. Complete TestAmerica report is available upon request.

WAL Lab Number	Test America Lab Number	Customer Sample ID
P6945	490-86341-1	F. Wilson #7 Pit Floor 8/27/15 7:35am
P6946	490-86341-2	F. Wilson #7 Side Wall 8/27/15 7:18am



Laboratory Manager



WYOMING ANALYTICAL LABORATORIES, INC.

1660 Harrison St.
Laramie, WY 82070

Wallaramie@wal-lab.com

(307) 742-7995

Fax: (307) 721-8956

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-86341-1
Client Project/Site: 34602R

For:
Wyoming Analytical Laboratories Inc
1660 Harrison St
Laramie, Wyoming 82070

Attn: Monte Ellis

Roxanne L Connor

Authorized for release by:
9/11/2015 9:59:18 AM

Roxanne Connor, Senior Project Manager
(615)301-5761
roxanne.connor@testamericainc.com

LINKS

Review your project
results through
Total Access

Have a Question?

**Ask
The
Expert**

Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Definitions/Glossary

Client: Wyoming Analytical Laboratories Inc
Project/Site: 34602R

TestAmerica Job ID: 490-86341-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits

5

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
±	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Wyoming Analytical Laboratories Inc
Project/Site: 34602R

TestAmerica Job ID: 490-86341-1

Client Sample ID: P6945

Lab Sample ID: 490-86341-1

Date Collected: 08/27/15 07:35

Matrix: Solid

Date Received: 09/01/15 09:30

6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0883		mg/Kg		09/02/15 14:36	09/05/15 20:11	1
Ethylbenzene	ND		0.0883		mg/Kg		09/02/15 14:36	09/05/15 20:11	1
Toluene	ND		0.0883		mg/Kg		09/02/15 14:36	09/05/15 20:11	1
Xylenes, Total	ND		0.133		mg/Kg		09/02/15 14:36	09/05/15 20:11	1
GRO (C6-C10)	ND		17.7		mg/Kg		09/02/15 14:36	09/05/15 20:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	09/02/15 14:36	09/05/15 20:11	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 130	09/02/15 14:36	09/05/15 20:11	1
Toluene-d8 (Surr)	100		70 - 130	09/02/15 14:36	09/05/15 20:11	1
Dibromofluoromethane (Surr)	99		70 - 130	09/02/15 14:36	09/05/15 20:11	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Acenaphthylene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Anthracene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Benzo[a]anthracene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Benzo[a]pyrene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Benzo[b]fluoranthene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Benzo[g,h,i]perylene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Benzo[k]fluoranthene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Chrysene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Dibenz[a,h]anthracene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Fluoranthene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Fluorene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Indeno[1,2,3-cd]pyrene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Naphthalene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Phenanthrene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
Pyrene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
1-Methylnaphthalene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1
2-Methylnaphthalene	ND		0.0665		mg/Kg		09/05/15 12:00	09/07/15 00:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	76		27 - 120	09/05/15 12:00	09/07/15 00:20	1
Terphenyl-d14 (Surr)	86		13 - 120	09/05/15 12:00	09/07/15 00:20	1
2-Fluorobiphenyl (Surr)	80		29 - 120	09/05/15 12:00	09/07/15 00:20	1

TestAmerica Nashville

9/11/2015

Client Sample Results

Client: Wyoming Analytical Laboratories Inc
Project/Site: 34602R

TestAmerica Job ID: 490-86341-1

Client Sample ID: P6946

Lab Sample ID: 490-86341-2

Date Collected: 08/27/15 07:18

Matrix: Solid

Date Received: 09/01/15 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00248		0.00167		mg/Kg		09/02/15 14:37	09/05/15 18:49	1
Ethylbenzene	0.0114		0.00167		mg/Kg		09/02/15 14:37	09/05/15 18:49	1
Toluene	0.0175		0.00167		mg/Kg		09/02/15 14:37	09/05/15 18:49	1
Xylenes, Total	ND		0.00417		mg/Kg		09/02/15 14:37	09/05/15 18:49	1
GRO (C6-C10)	0.470		0.334		mg/Kg		09/02/15 14:37	09/05/15 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	X*	70 - 130	09/02/15 14:37	09/05/15 18:49	1
Dibromofluoromethane (Surr)	96		70 - 130	09/02/15 14:37	09/05/15 18:49	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 130	09/02/15 14:37	09/05/15 18:49	1
Toluene-d8 (Surr)	117		70 - 130	09/02/15 14:37	09/05/15 18:49	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Acenaphthylene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Anthracene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Benzo[a]anthracene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Benzo[a]pyrene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Benzo[b]fluoranthene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Benzo[g,h,i]perylene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Benzo[k]fluoranthene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Chrysene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Dibenz(a,h)anthracene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Fluoranthene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Fluorene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Indeno[1,2,3-cd]pyrene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Naphthalene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Phenanthrene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
Pyrene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
1-Methylnaphthalene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1
2-Methylnaphthalene	ND		0.0660		mg/Kg		09/05/15 12:00	09/07/15 01:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	53		27 - 120	09/05/15 12:00	09/07/15 01:17	1
Terphenyl-d14 (Surr)	66		13 - 120	09/05/15 12:00	09/07/15 01:17	1
2-Fluorobiphenyl (Surr)	55		29 - 120	09/05/15 12:00	09/07/15 01:17	1

6

Certification Summary

Client: Wyoming Analytical Laboratories Inc
Project/Site: 34602R

TestAmerica Job ID: 490-86341-1

Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	A2LA		NA: NELAP & A2LA	12-31-15
A2LA	ISO/IEC 17025		0453.07	12-31-15
Alaska (UST)	State Program	10	UST-087	07-24-16
Arizona	State Program	9	AZ0473	05-05-16
Arkansas DEQ	State Program	6	88-0737	04-25-16
California	State Program	9	2938	10-31-16
Connecticut	State Program	1	PH-0220	12-31-15
Florida	NELAP	4	E87358	06-30-16
Georgia	State Program	4	N/A	06-30-16
Illinois	NELAP	5	200010	12-09-15
Iowa	State Program	7	131	04-01-16
Kansas	NELAP	7	E-10229	10-31-15
Kentucky (UST)	State Program	4	19	06-30-16
Kentucky (WW)	State Program	4	90038	12-31-15
Louisiana	NELAP	6	30613	06-30-16
Maryland	State Program	3	316	03-31-16
Massachusetts	State Program	1	M-TN032	06-30-16
Minnesota	NELAP	5	047-999-345	12-31-15
Mississippi	State Program	4	N/A	06-30-16
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-16
New Hampshire	NELAP	1	2963	10-09-15
New Jersey	NELAP	2	TN965	09-30-15
New York	NELAP	2	11342	03-31-16
North Carolina (WW/SW)	State Program	4	367	12-31-15
North Dakota	State Program	8	R-146	06-30-15 *
Ohio VAP	State Program	5	CL0033	07-10-17
Oklahoma	State Program	6	9412	08-31-16
Oregon	NELAP	10	TN200001	04-27-16
Pennsylvania	NELAP	3	68-00585	06-30-16
Rhode Island	State Program	1	LAO00268	12-30-15
South Carolina	State Program	4	84009 (001)	02-28-16
South Carolina (Do Not Use - DW)	State Program	4	84009 (002)	12-16-17
Tennessee	State Program	4	2008	02-23-17
Texas	NELAP	6	T104704077	08-31-16
USDA	Federal		S-48469	10-30-16
Utah	NELAP	8	TN00032	07-31-16
Virginia	NELAP	3	460152	06-14-16
Washington	State Program	10	C789	07-19-16
West Virginia DEP	State Program	3	219	02-28-16
Wisconsin	State Program	5	998020430	08-31-16
Wyoming (UST)	A2LA	8	453.07	12-31-15

* Certification renewal pending - certification considered valid.

TestAmerica Nashville

9/11/2015