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## Remediation Work Plan

Barr None Federal #001  
API# 30-025-32221  
Lea County, New Mexico  
1RP-2958, 1RP-4574

## Prepared For:

Judah Oil, LLC  
PO Box 568  
Artesia, NM 88211

## Prepared By:

TALON/LPE  
408 W. Texas Avenue  
Artesia, NM 88210

**March 9, 2020**

Mr. Mike Bratcher  
**NMOCD District 2**  
811 South First Street  
Artesia, New Mexico 88210

Mr. Jim Amos  
**Bureau of Land Management**  
600 E. Greene Street  
Carlsbad, NM 88220

Subject: **Remediation Work Plan**  
Barr None Federal #001  
API# 30-025-32221  
Lea County, New Mexico  
1RP-2958, 1RP-4574

Dear Mr. Bratcher,

Talon/LPE (Talon) has been retained to provide Judah Oil, LLC, with a remediation work plan in order to close out the above referenced historical remediation orders. Enclosed please find the results of our site assessment/characterization, soil sampling results and remediation work plan.

#### **Site Information**

The Barr None Federal #001 is located approximately thirty (30) miles west of Eunice, New Mexico. The legal location for this release is Unit Letter E, Section 10, Township 22 South and Range 32 East in Lea County, New Mexico. More specifically the latitude and longitude for the facility is 32.407936 North and -103.668888 West. Facility location maps are presented in [Appendix I](#).

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Simona-Upton association which consists of gravely fine sand underlain by fine sandy loam with 0 to 3 percent slopes. The soil survey is presented in [Appendix II](#).

#### **Groundwater and Site Characterization**

The New Mexico Office of the State Engineer indicates that the nearest reported depth to groundwater in the area is 360-feet below ground surface (bgs). Drainage courses in this area are well-drained. Additionally, the facility is located in a low potential Karst area. See [Appendix II](#) for copies of the referenced data. Karst and FEMA Flood maps are also presented.

**Approximate Depth to Groundwater** **360 Feet/BGS**

- ☐ Yes ☒ No Within 300 feet of any continuously flowing watercourse or any other significant watercourse
- ☐ Yes ☒ No Within 200 feet of any lakebed, sinkhole or a playa lake
- ☐ Yes ☒ No Within 300 feet from an occupied permanent residence, school, hospital, institution or church
- ☐ Yes ☒ No Within 500 feet of a spring or a private, domestic freshwater well used by less than five households for domestic or stock watering purposes
- ☐ Yes ☒ No Within 1000 feet of any freshwater well or spring
- ☐ Yes ☒ No Within incorporated municipal boundaries or within a defined municipal freshwater well field covered under a municipal ordinance adopted pursuant to Section 3-2703 NMSA 1978
- ☐ Yes ☒ No Within 300 feet of a wetland
- ☐ Yes ☒ No Within the area overlying a subsurface mine
- ☐ Yes ☒ No Within an unstable area
- ☐ Yes ☒ No Within a 100-year floodplain

Based on the site characterization data, the releases did not occur in any of these areas and the depth to groundwater exceeds 100-feet bgs. However this remediation plan addresses impacts that are off the well pad consisting of pasture lands. As such, the upper 4-feet of the area southwest of the location will be restored to the following closure criteria levels as if it was less than 50-feet to groundwater.

Table I Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Method	Limit
< 50 feet	Total Chlorides	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

## Incident Descriptions

On July 21, 2013, a hole in a metal flow line southwest of the tank battery released 11 barrels (bbls) of crude oil and 18 bbls of produced water. No fluids were recovered. Remediation activities were conducted by TNT Backhoe Services and Souder Miller Associates completed confirmation sampling and closure reporting for this incident (**1RP-2958**). Closure of this incident was requested at that time. However this remediation order is still open. A copy of the initial C-141 and reports submitted by both of these companies are attached. (**Appendix III**).

On November 8, 2016, a flow line failure resulted in 12 bbls of crude oil and 30 bbls of produce water to release onto the well pad and flow northward into the reserve drilling pit (**1RP-4574**). Remediation activities on the well pad were supervised by Souder Miller Associates. Approximately 110 cubic yards of impacted material were excavated and disposed of. A closure report was subsequently submitted. BLM approved the closure but the NMOCD did not citing the flow path onto the center of the drilling pit was not addressed; specifically sample location L-7 was not vertically delineated. A copy of the referenced closure report and regulatory correspondence is appended hereto for review (**Appendix III**).

## Site Assessment Activities

On July 9, 2019, Talon personnel mobilized to begin site assessment and sampling activities for the construction of a work plan. Grab soil samples were collected with a hand auger until depths at which refusal was encountered. Results from our initial sampling event are presented on the following data table and the complete laboratory report can be found in **Appendix V**.

On July 31, 2019, Talon personnel returned to the site to continue vertical delineation sampling utilizing a Geoprobe rig (direct push technology). Grab soil samples were collected with the Geoprobe until depths at which hard rock refusal was encountered. Results from this sampling event are presented on the following data table. All sample point locations are illustrated on the attached site plan (**Appendix I**) and the complete laboratory report is presented in **Appendix V**.

On October 8, 2019, an air rotary drilling rig was mobilized to the project location in order to fully delineate the vertical chloride impacts in the reserve drilling pit (samples L-7, S-5 and S-6) and at sample location S-10 immediately south of the tank battery at the locations shown on the site plan (samples collected with the drill rig are notated with an A on the data table and lab report).

Sample ID	Depth (ft.)	Sample Date	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg	CL Field Titrations
Closure Criteria 19.15.29.12 NMAC			50 mg/kg	10 mg/kg				100 mg/kg	600 mg/kg	
L-7	0	7/9/2019	ND	ND	ND	ND	ND	ND	19400	
	1	7/9/2019	NT	NT	NT	NT	NT	NT	18000	
	2	7/9/2019	NT	NT	NT	NT	NT	NT	21400	
	3R	7/9/2019	NT	NT	NT	NT	NT	NT	22200	
	4	7/31/2019	NT	NT	NT	NT	NT	NT	14000	
	8	7/31/2019	NT	NT	NT	NT	NT	NT	NT	4379
	12	7/31/2019	NT	NT	NT	NT	NT	NT	NT	4283
	14	7/31/2019	NT	NT	NT	NT	NT	NT	8400	
	16R	7/31/2019	NT	NT	NT	NT	NT	NT	4300	4144.8
L-7A	20	10/8/2019	NT	NT	NT	NT	NT	NT	1100	1283.6
	25	10/8/2019	NT	NT	NT	NT	NT	NT	180	241.1
S-1	0	7/31/2019	NT	NT	NT	NT	NT	NT	100	
S-2	0	7/31/2019	NT	NT	NT	NT	NT	NT	ND	
S-3	0	7/31/2019	NT	NT	NT	NT	NT	NT	ND	
S-4	0	7/31/2019	NT	NT	NT	NT	NT	NT	ND	
S-5	11R	7/31/2019	NT	NT	NT	NT	NT	NT	6400	
S-5A	15	10/8/2019	NT	NT	NT	NT	NT	NT	NT	4949
	20	10/8/2019	NT	NT	NT	NT	NT	NT	1900	2609.1
	25	10/8/2019	NT	NT	NT	NT	NT	NT	400	453.8
	30	10/8/2019	NT	NT	NT	NT	NT	NT	NT	482.1
S-6	14	7/31/2019	NT	NT	NT	NT	NT	NT	2200	
	16R	7/31/2019	NT	NT	NT	NT	NT	NT	5300	
S-6A	20	10/8/2019	NT	NT	NT	NT	NT	NT	NT	1680.3
	25	10/8/2019	NT	NT	NT	NT	NT	NT	NT	1935.6
	30	10/8/2019	NT	NT	NT	NT	NT	NT	2100	1695
	35	10/8/2019	NT	NT	NT	NT	NT	NT	280	425.4
	40	10/8/2019	NT	NT	NT	NT	NT	NT	71	99.3
S-7	0-1	7/31/2019	NT	NT	NT	NT	NT	NT	ND	
S-8	0-1	7/31/2019	NT	NT	NT	NT	NT	NT	ND	
S-9	0-1	7/31/2019	NT	NT	NT	NT	NT	NT	ND	
S-10	5	7/31/2019	NT	NT	NT	NT	NT	NT	1400	
	6R	7/31/2019	NT	NT	NT	NT	NT	NT	830	

Sample ID	Depth (ft.)	Sample Date	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg	CL Field Titrations
Closure Criteria 19.15.29.12 NMAC			50 mg/kg	10 mg/kg				100 mg/kg	600 mg/kg	
S-10A	8	10/8/2019	NT	NT	NT	NT	NT	NT	NT	1566.9
	10	10/8/2019	NT	NT	NT	NT	NT	NT	510	510.5
	15	10/8/2019	NT	NT	NT	NT	NT	NT	180	
	20	10/8/2019	NT	NT	NT	NT	NT	NT	240	
S-11	0-1	7/31/2019	NT	NT	NT	NT	NT	NT	560	
	3	7/31/2019	NT	NT	NT	NT	NT	NT	620	580.3
	4	7/31/2019	NT	NT	NT	NT	NT	NT	330	158.9
S-12	0-1		NT	NT	NT	NT	NT	NT	380	379.9

R = refusal encountered

ND = analyte not detected

NT = analyte not tested

## Proposed Remedial Actions

### 1RP-2958

- The area immediately south of the tank battery (sample location S-10) will be excavated to a depth of 4-feet bgs. Field titration testing for chlorides will be used to guide the horizontal extent of the excavation. Upon completion, 5-point composite samples will be collected from each side wall and sent to a certified laboratory for total chloride analysis per EPA Test Method 300.0.
- Upon receipt of total chloride results of 600 mg/kg or less from each side wall, the excavation will be backfilled with like material obtained from a local material pit.
- The backfilled area will be contoured to match the surrounding terrain and seeded with BLM #1 and #2 seed mix utilizing a Culti-Pack seed drill.
- One foot of topsoil will be hauled in from a local material pit to cover the additional non-vegetated areas southwest of the well pad. The area will be contoured and seeded as referenced above to encourage vegetative regrowth.

## Proposed Remedial Actions

1RP-4574

- The reserve drilling pit has been horizontally and vertically delineated as requested by the MNOCD. The vertical extent of chloride impacts within the pit extends to 25-feet bgs at sample locations L-7 and S-5; and to 35-feet deep at sample location S-6. The nearest depth to groundwater is reported at 360-feet bgs.
- The entire reserve drilling pit will be excavated to a depth of 1-foot deep. The excavated material will be disposed of at a MNOCD approved solid waste disposal facility.
- The drilling pit will be encapsulated with a 20-mil liner to prevent downward leaching of chlorides due to precipitation events. The liner will be keyed in to a depth of 2-feet deep at the edges of the drilling pit to prevent any future movement of the liner.
- Two feet of locally obtained topsoil will be brought in and placed on top of the liner to facilitate regrowth of vegetation. The topsoil will be contoured to match the surrounding terrain and seeded with BLM #1 and #2 seed mix utilizing a Culti-Pack seed drill.
- Erosion control features will be constructed such as upgradient berms and water bars to prevent rainfall sheeting from eroding the newly reclaimed areas
- Photo documentation of all remedial actions will be completed and presented in the closure report along with a Final C-141 for both referenced incidents.

## Closure

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-746-8768.

Respectfully submitted,

TALON/LPE



David J. Adkins  
District Manager

### Attachments:

- Appendix I Site Maps
- Appendix II Groundwater Data, Soil Survey & FEMA Flood Map
- Appendix III Site Photographs
- Appendix IV C-141 Forms
- Appendix V Background, previous reports by others
- Appendix VI Laboratory Data

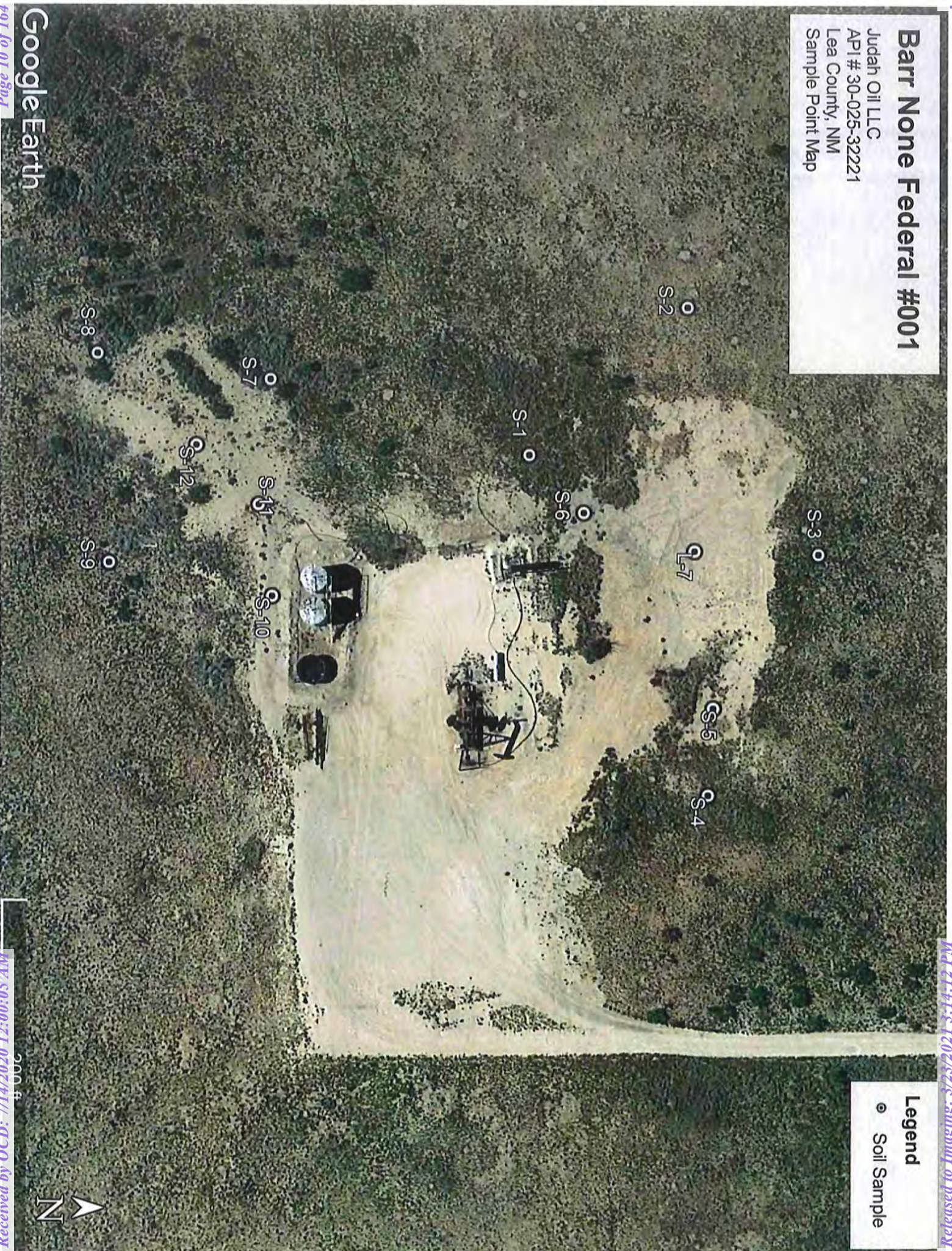
## APPENDIX I

### SITE MAPS

Judah Oil LLC  
API # 30-025-32221  
Lea County, NM  
Sample Point Map

**Legend**

⊙ Soil Sample



# Barr None Federal #001

Judah Oil, LLC  
API # 30-025-32221  
Lea County, NM  
Location Map

Hobbs Hwy 176

621

W Carlsbad Hwy

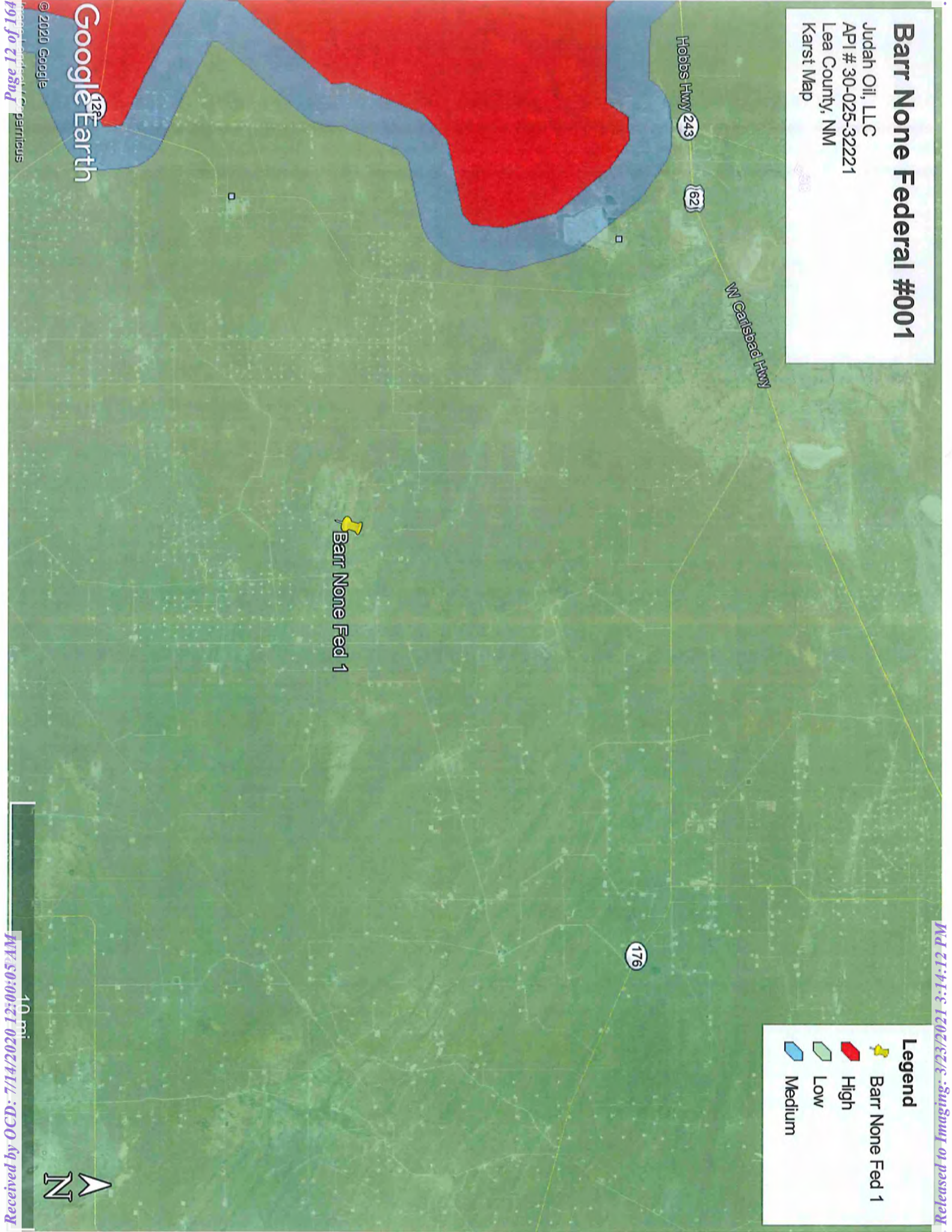
Barr None Fed 1

Google Earth

# Barr None Federal #001

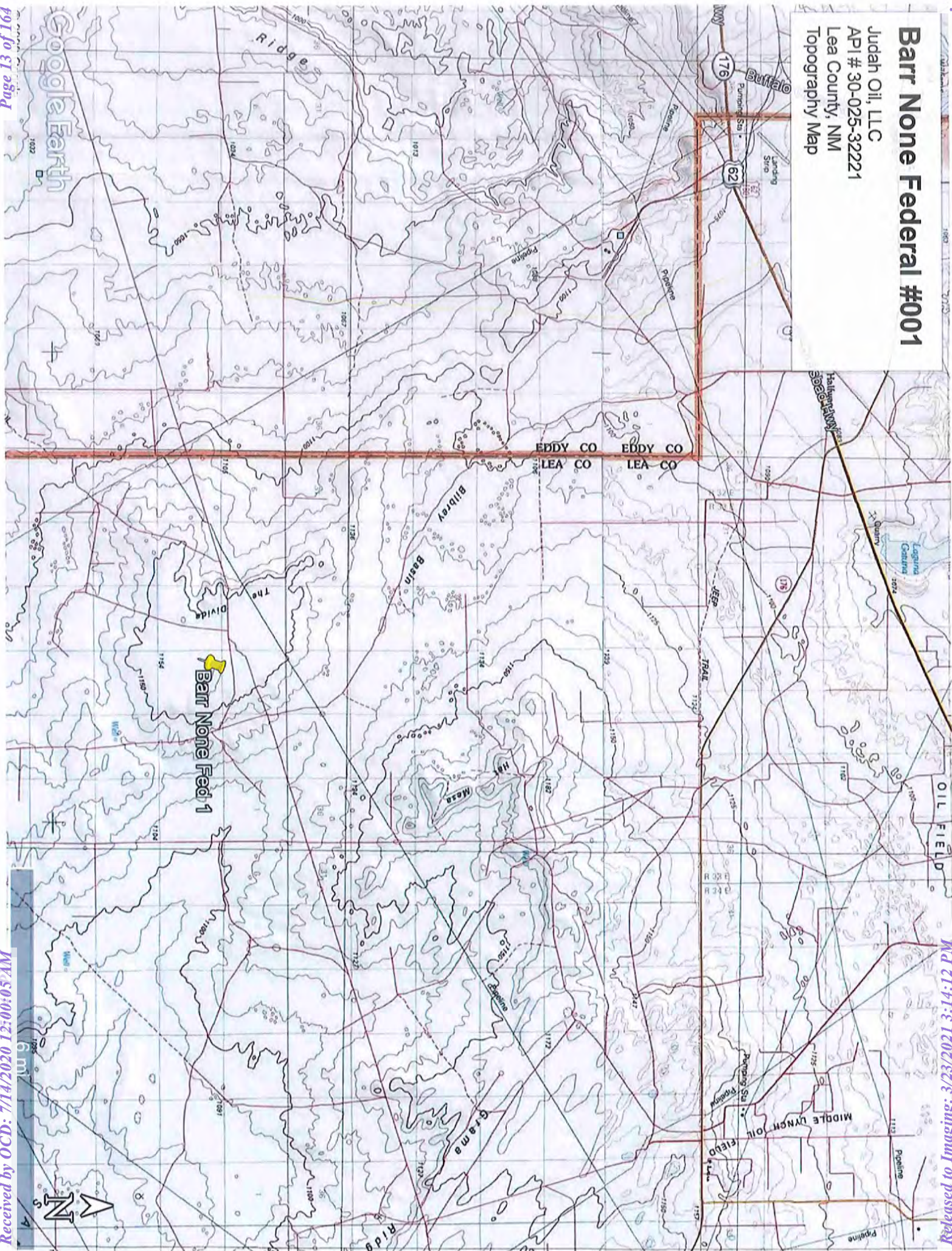
Judah Oil, LLC  
API # 30-025-32221  
Lea County, NM  
Karst Map

- Legend**
-  Barr None Fed 1
  -  High
  -  Low
  -  Medium



Judah Oil, LLC  
API # 30-025-32221  
Lea County, NM  
Topography Map

Judah Oil, LLC  
API # 30-025-32221  
Lea County, NM  
Topography Map



**APPENDIX II**

**GROUNDWATER DATA**

**SOIL SURVEY**

**FEMA FLOOD MAP**



## New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW#### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,

C=(the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q	Q	Q	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">C 03717 POD1</a>	C	LE	4	4	1	09	22S	32E		624094	3586365	1139	650		
<a href="#">C 02096</a>	CUB	ED	2	3	14	22S	32E			627204	3584464*	2652	435	360	75
<a href="#">C 02821</a>	C	LE	2	2	3	14	22S	32E		627303	3584563*	2664	540	340	200

Average Depth to Water: 350 feet

Minimum Depth: 340 feet

Maximum Depth: 360 feet

Record Count:3

UTMNAD83 Radius Search (in meters):

Easting (X): 625225.116

Northing (Y): 3586231

Radius: 3000

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/9/20 5:53 PM

WATER COLUMN/ AVERAGE DEPTH TO  
WATER

## Lea County, New Mexico

### SR—Simona-Upton association

#### Map Unit Setting

*National map unit symbol:* dmr3

*Elevation:* 3,000 to 4,400 feet

*Mean annual precipitation:* 10 to 16 inches

*Mean annual air temperature:* 58 to 62 degrees F

*Frost-free period:* 190 to 205 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Simona and similar soils:* 50 percent

*Upton and similar soils:* 35 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Simona

##### Setting

*Landform:* Ridges

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Calcareous eolian deposits derived from sedimentary rock

##### Typical profile

*A - 0 to 8 inches:* gravelly fine sandy loam

*Bk - 8 to 16 inches:* fine sandy loam

*Bkm - 16 to 26 inches:* cemented material

##### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* 7 to 20 inches to petrocalcic

*Natural drainage class:* Well drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum in profile:* 50 percent

*Gypsum, maximum in profile:* 1 percent

*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum in profile:* 2.0

*Available water storage in profile:* Very low (about 1.9 inches)

**Interpretive groups***Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 7s*Hydrologic Soil Group:* D*Ecological site:* Shallow Sandy (R042XC002NM)*Hydric soil rating:* No**Description of Upton****Setting***Landform:* Ridges*Landform position (two-dimensional):* Shoulder*Landform position (three-dimensional):* Rise*Down-slope shape:* Convex*Across-slope shape:* Linear*Parent material:* Calcareous eolian deposits derived from sedimentary rock**Typical profile***A - 0 to 8 inches:* gravelly loam*Bkm - 8 to 18 inches:* cemented material*BCK - 18 to 60 inches:* very gravelly loam**Properties and qualities***Slope:* 0 to 3 percent*Depth to restrictive feature:* 7 to 20 inches to petrocalcic*Natural drainage class:* Well drained*Runoff class:* Medium*Capacity of the most limiting layer to transmit water (Ksat):* Low to moderately high (0.01 to 0.60 in/hr)*Depth to water table:* More than 80 inches*Frequency of flooding:* None*Frequency of ponding:* None*Calcium carbonate, maximum in profile:* 75 percent*Gypsum, maximum in profile:* 1 percent*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)*Sodium adsorption ratio, maximum in profile:* 2.0*Available water storage in profile:* Very low (about 0.9 inches)**Interpretive groups***Land capability classification (irrigated):* 6e*Land capability classification (nonirrigated):* 7s*Hydrologic Soil Group:* D*Ecological site:* Shallow (R042XC025NM)*Hydric soil rating:* No**Minor Components****Kimbrough***Percent of map unit:* 6 percent*Ecological site:* Very Shallow 16-21" PZ (R077CY037TX)*Hydric soil rating:* No

Map Unit Description: Simona-Upton association---Lea County, New Mexico

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**Stegall**

*Percent of map unit:* 5 percent

*Ecological site:* Limy Upland 16-21" PZ (R077CY028TX)

*Hydric soil rating:* No

**Slaughter**

*Percent of map unit:* 4 percent

*Ecological site:* Limy Upland 16-21" PZ (R077CY028TX)

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Lea County, New Mexico

Survey Area Data: Version 15, Sep 12, 2018

# National Flood Hazard Layer FIRMette

32°24'44.03"N



MD 21:41:31 2020/02/03 :gingimg to Imaging Released by

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**

Without Base Flood Elevation (BFE)  
Zone A, V, AE9  
With BFE or Depth Zone AE, AO, AH, VE, AR  
Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**

0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile (Zone X)

Future Conditions 1% Annual Chance Flood Hazard Zone X

Area with Reduced Flood Risk due to Levee, See Notes, Zone X

Area with Flood Risk due to Levee Zone D

**OTHER AREAS**

Area of Minimal Flood Hazard Zone X

Effective LOMRS

Area of Undetermined Flood Hazard Zone

**GENERAL STRUCTURES**

Channel, Culvert, or Storm Sewer

Levee, Dike, or Floodwall

**OTHER FEATURES**

Cross Sections with 1% Annual Chance Water Surface Elevation

Coastal Transect

Base Flood Elevation Line (BFE)

Limit of Study

Jurisdiction Boundary

Coastal Transect Baseline

Profile Baseline

Hydrographic Feature

**MAP PANELS**

Digital Data Available

No Digital Data Available

Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/12/2019 at 9:47:23 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and undetermined areas cannot be used for

USGS The National Map: Orthoimagery: Data refreshed April 2019.

500 1,000 1,500 2,000 Feet

32°24'13.66"N

**APPENDIX III**  
**SITE PHOTOGRAPHS**

Barr None Fed 001  
PHOTO DOCUMENTATION

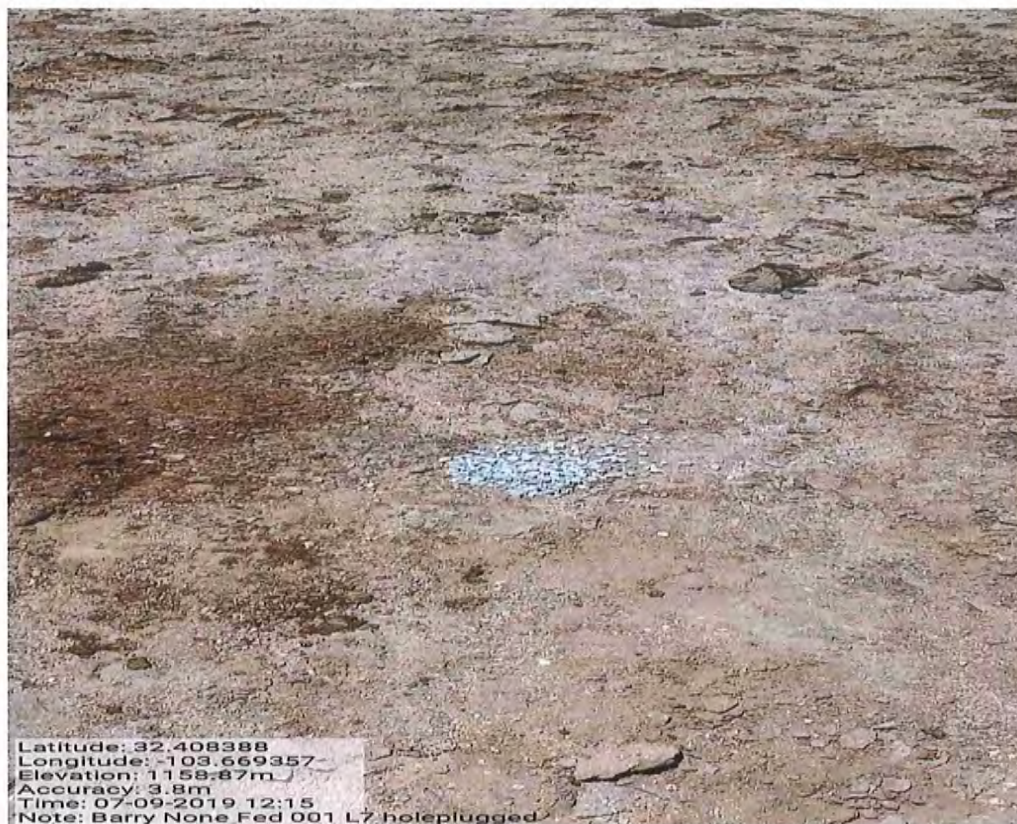


Location Signage



View of Location from the North

## Barr None Fed 001



Sample Location L7



Overview Sample Location L7

## **APPENDIX IV**

### **NMOCD C-141's**

State of New Mexico  
Oil Conservation Division

Incident ID	NOY1703457016
District RP	1RP-2958, 1RP-4574
Facility ID	
Application ID	

## Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	360 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

**Characterization Report Checklist:** *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico  
Oil Conservation Division

Incident ID	NOY1703457016
District RP	1RP-2958, 1RP-4574
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: David J. Adkins

Title: District Manager, Talon/LPE

Signature:



Date: 3/18/20

email: dadkins@talonlpe.com

Telephone: 407.746.8768

**OCD Only**

Received by: Cristina Eads

Date: 03/23/2021

Incident ID	NOY1703457016
District RP	1RP-2958, 1RP-4574
Facility ID	
Application ID	

## Remediation Plan

**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)


**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: David J. Adkins

Title: District Manager, Talon/LPE

Signature: 

Date: 3/18/20

email: dadkins@talonlpe.com

Telephone: 575.746.8768

**OCD Only**

Received by: Cristina Eads Date: 03/23/2021

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: 

Date: 03/23/2021

**APPENDIX V**

**LABORATORY REPORTS**



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 11, 2019

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: BARR NONE FED #1

Enclosed are the results of analyses for samples received by the laboratory on 07/10/19 13:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

TALON LPE  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	07/10/2019	Sampling Date:	07/09/2019
Reported:	07/11/2019	Sampling Type:	Soil
Project Name:	BARR NONE FED #1	Sampling Condition:	Cool & Intact
Project Number:	701484.009.01	Sample Received By:	Tamara Oldaker
Project Location:	JUDAH OIL - LEA CO NM		

**Sample ID: L- 7 0' (H902358-01)**

BTEX 8021B			mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/11/2019	ND	2.09	105	2.00	0.678		
Toluene*	<0.050	0.050	07/11/2019	ND	2.09	104	2.00	2.09		
Ethylbenzene*	<0.050	0.050	07/11/2019	ND	1.98	98.9	2.00	0.643		
Total Xylenes*	<0.150	0.150	07/11/2019	ND	5.96	99.3	6.00	0.617		
Total BTEX	<0.300	0.300	07/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	19400	16.0	07/11/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	07/10/2019	ND	202	101	200	7.22		
DRO >C10-C28*	<10.0	10.0	07/10/2019	ND	202	101	200	5.24		
EXT DRO >C28-C36	<10.0	10.0	07/10/2019	ND						

Surrogate: 1-Chlorooctane 115 % 41-142

Surrogate: 1-Chlorooctadecane 118 % 37.6-147

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

TALON LPE  
DAVID ADKINS  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received:	07/10/2019	Sampling Date:	07/09/2019
Reported:	07/11/2019	Sampling Type:	Soil
Project Name:	BARR NONE FED #1	Sampling Condition:	Cool & Intact
Project Number:	701484.009.01	Sample Received By:	Tamara Oldaker
Project Location:	JUDAH OIL - LEA CO NM		

**Sample ID: L- 7 1' (H902358-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	18000	16.0	07/11/2019	ND	416	104	400	0.00	QM-07

**Sample ID: L- 7 2' (H902358-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	21400	16.0	07/11/2019	ND	416	104	400	0.00	

**Sample ID: L- 7 3' R (H902358-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	22200	16.0	07/11/2019	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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*Ceiley D. Keene*

Ceiley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

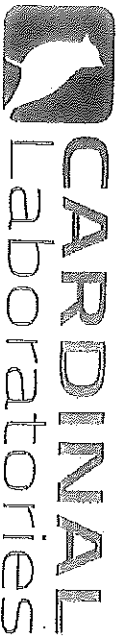
Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Maryland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: TALON LPE  
Project Manager: DAVID ADKINS  
Address: 408 W. TEXAS  
City: ALBUQUERQUE State: NM Zip: 87102  
Phone #: 575-441-4835 Fax #: 575-441-4835  
Project #: 101484.009.01 Project Owner: JUDAH OIL  
Project Name: BARRERAS FLD  
Project Location: LEA COUNTY  
Sampler Name: MICHAEL COLLIER  
FOR LAB USE ONLY

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS REQUEST					
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:			ICE/COOL	OTHER:	BTEX	TPH	TOTAL CHLORIDES	
H902358	L-7 0'		1								7-9-19	12:00pm						
	L-7 1'		2									12:05pm						
	L-7 2'		3									12:10pm						
	L-7 3' R		4									12:15pm						

PLEASE NOTE: Liability and Ownership remains solely and entirely with the client for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other causes whatsoever shall be deemed waived unless made in writing and received by Cardinal within 90 days after completion of the applicable analysis. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors and/or its related to the performance of any test hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Michael Collins Date: 7-9-19 Time: 12:35  
Received By: David Adams  
Relinquished By: Michael Collins Date: 7-9-19 Time: 12:35  
Received By: David Adams

Delivered By: (Circle One) 2.3 c #47  
Sampler - UPS - Bus - Other: 2.3 c #47  
Sample Condition: Cool ☐ Intact ☐ Yes ☐ No ☐  
Checked By: DC

REMARKS: RUSH

\* Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

August 13, 2019

David Adkins  
Talon Artesia  
408 West Texas Ave  
Artesia, NM 88210  
TEL:  
FAX:

RE: BARR NONE FED 1

OrderNo.: 1908235

Dear David Adkins:

Hall Environmental Analysis Laboratory received 18 sample(s) on 8/6/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report  
Lab Order: 1908235  
Date Reported: 8/13/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia  
Project: BARR NONE FED 1

Lab Order: 1908235

Lab ID: 1908235-001

Collection Date: 7/31/2019 10:30:00 AM

Client Sample ID: L-7 4'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: CJS	
Chloride	14000	600		mg/Kg	200	8/9/2019 11:46:50 PM	46667

Lab ID: 1908235-002

Collection Date: 7/31/2019 11:00:00 AM

Client Sample ID: L-7 14'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: CJS	
Chloride	8400	300		mg/Kg	100	8/9/2019 11:59:14 PM	46667

Lab ID: 1908235-003

Collection Date: 7/31/2019 1:00:00 PM

Client Sample ID: S-6 14'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: CAS	
Chloride	2200	60		mg/Kg	20	8/8/2019 1:47:35 PM	46669

Lab ID: 1908235-004

Collection Date: 7/31/2019 1:30:00 PM

Client Sample ID: S-6 16'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: CJS	
Chloride	5300	150		mg/Kg	50	8/10/2019 12:11:39 AM	46669

Lab ID: 1908235-005

Collection Date: 8/1/2019 8:30:00 AM

Client Sample ID: S-5 11'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: CJS	
Chloride	6400	300		mg/Kg	100	8/10/2019 12:24:03 AM	46673

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

CLIENT: Talon Artesia		Lab Order: 1908235	
Project: BARR NONE FED 1			
Lab ID: 1908235-006		Collection Date: 8/1/2019 9:00:00 AM	
Client Sample ID: S-4 0'		Matrix: SOIL	
Analyses	Result	RL Qual Units	DF Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS		Analyst: CAS	
Chloride	ND	60 mg/Kg	20 8/8/2019 6:32:37 PM 46673
Lab ID: 1908235-007		Collection Date: 8/1/2019 9:10:00 AM	
Client Sample ID: S-3 0'		Matrix: SOIL	
Analyses	Result	RL Qual Units	DF Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS		Analyst: CAS	
Chloride	ND	60 mg/Kg	20 8/8/2019 6:45:02 PM 46673
Lab ID: 1908235-008		Collection Date: 8/1/2019 9:20:00 AM	
Client Sample ID: S-2 0'		Matrix: SOIL	
Analyses	Result	RL Qual Units	DF Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS		Analyst: CAS	
Chloride	ND	60 mg/Kg	20 8/8/2019 6:57:27 PM 46673
Lab ID: 1908235-009		Collection Date: 8/1/2019 9:30:00 AM	
Client Sample ID: S-1 0'		Matrix: SOIL	
Analyses	Result	RL Qual Units	DF Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS		Analyst: CAS	
Chloride	100	60 mg/Kg	20 8/8/2019 7:34:40 PM 46673
Lab ID: 1908235-010		Collection Date: 7/31/2019 11:10:00 AM	
Client Sample ID: L-7 16' R		Matrix: SOIL	
Analyses	Result	RL Qual Units	DF Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS		Analyst: CJS	
Chloride	4300	150 mg/Kg	50 8/10/2019 12:36:28 AM 46673

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	II	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report  
Lab Order: 1908235  
Date Reported: 8/13/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia  
Project: BARR NONE FED 1

Lab Order: 1908235

Lab ID: 1908235-011 Collection Date: 8/1/2019 10:00:00 AM

Client Sample ID: S-10 5' Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: CAS	
Chloride	1400	60		mg/Kg	20	8/8/2019 7:59:29 PM	46673

Lab ID: 1908235-012 Collection Date: 8/1/2019 10:10:00 AM

Client Sample ID: S-10 6' Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: CAS	
Chloride	830	60		mg/Kg	20	8/8/2019 8:36:42 PM	46673

Lab ID: 1908235-013 Collection Date: 8/1/2019 10:35:00 AM

Client Sample ID: S-11 3' Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: CAS	
Chloride	620	60		mg/Kg	20	8/8/2019 8:49:07 PM	46673

Lab ID: 1908235-014 Collection Date: 8/1/2019 10:45:00 AM

Client Sample ID: S-11 4' Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: CAS	
Chloride	330	60		mg/Kg	20	8/8/2019 9:01:32 PM	46673

Lab ID: 1908235-015 Collection Date: 8/1/2019 11:00:00 AM

Client Sample ID: S-12 0'-1' Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: CAS	
Chloride	380	59		mg/Kg	20	8/8/2019 9:13:56 PM	46673

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not in Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

## Analytical Report

Lab Order: 1908235

Date Reported: 8/13/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia  
Project: BARR NONE FED 1

Lab Order: 1908235

Lab ID: 1908235-016

Collection Date: 8/1/2019 11:30:00 AM

Client Sample ID: S-7 0'-1'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	ND	60		mg/Kg	20	8/8/2019 9:26:21 PM	46673

Analyst: CAS

Lab ID: 1908235-017

Collection Date: 8/1/2019 12:00:00 PM

Client Sample ID: S-8 0'-1'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	ND	60		mg/Kg	20	8/8/2019 9:38:45 PM	46673

Analyst: CAS

Lab ID: 1908235-018

Collection Date: 8/1/2019 12:30:00 PM

Client Sample ID: S-9 0'-1'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	ND	60		mg/Kg	20	8/8/2019 9:51:10 PM	46673

Analyst: CAS

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 5

## QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1908235

13-Aug-19

Client: Talon Artesia  
Project: BARR NONE FED 1

Sample ID: MB-46667	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 46667	RunNo: 61996								
Prep Date: 8/8/2019	Analysis Date: 8/8/2019	SeqNo: 2103915 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-46667	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 46667	RunNo: 61996								
Prep Date: 8/8/2019	Analysis Date: 8/8/2019	SeqNo: 2103916 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Sample ID: MB-46673	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 46673	RunNo: 61996								
Prep Date: 8/8/2019	Analysis Date: 8/8/2019	SeqNo: 2103945 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-46673	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 46673	RunNo: 61996								
Prep Date: 8/8/2019	Analysis Date: 8/8/2019	SeqNo: 2103946 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.1	90	110			

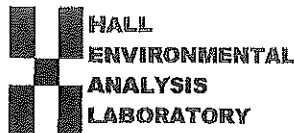
Sample ID: MB-46669	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 46669	RunNo: 61993								
Prep Date: 8/8/2019	Analysis Date: 8/8/2019	SeqNo: 2104085 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-46669	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 46669	RunNo: 61993								
Prep Date: 8/8/2019	Analysis Date: 8/8/2019	SeqNo: 2104086 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 5



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: TALON ARTESIA

Work Order Number: 1908235

RcptNo: 1

Received By: Desiree Dominguez 8/6/2019 9:00:00 AM

Completed By: Michelle Garcia 8/6/2019 11:10:40 AM

Reviewed By: LB

8/6/19

*DD*

*Michelle Garcia*

### Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

### Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved bottles checked for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: *DM 8/6/19*

### Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

16. Additional remarks:

### 17. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	4.5	Good	Yes			

## Chain-of-Custody Record

Client: TALON LLCTurn-Around Time: 5 day  
☒ Standard ☐ Rush  
Project Name:Mailing Address: 400 W. TEXAS AVE.ARRESIA NM 88310Phone #: 575-744-8768

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other☐ EDD (Type)

D. ADKINS

Sampler: MICHAEL COLLIEROn Ice: ☒ Yes ☐ No 41.3-0.3-4.5

Sample Temperature:

Container Type and #

Preservative Type

HEAL No.

1908235

001

002

003

004

005

006

007

008

009

010

011

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# Chain-of-Custody Record

Client:

TRACON LLC

Mailing Address:

400 W. TEXAS AVE.

Address: NM 88310

Phone #: 575-744-8763

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 days

☒ Standard ☐ Rush

Project Name:

BRAE NONE FEB 1

Project #:

701484.009.01

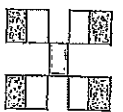
Project Manager:

D. ADAMS

Sampler: MICHAEL COLLIER

On/Off: ☒ Yes ☐ No

Sample Temperature: 46-54.5



HALL ENVIRONMENTAL  
ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	
8270 (Semi-VOA)	
TOTAL CHLORIDES	

Air Bubbles (Y or N)

Date Time Matrix Sample Request ID

Container Type and #

Preservative Type

HEAL No.

01/19 10:00am Seru S-10 5'

CLASS 1

ICE/COOL

011

10:10am S-10 4'

10:35am S-11 3'

10:45am S-11 4'

11:00am S-12 0'-1'

11:30am S-7 0'-1'

12:00pm S-8 0'-1'

12:30pm S-9 0'-1'

CLASS 1

ICE/COOL

012

013

014

015

016

017

018

REMARKS:

Date Time Relinquished by:

8/5/19 0900 MHL/ELL

Date Time Received by:

8/5/19 0900 MHL/ELL

Date Time Relinquished by:

8/6/19 9:00 MHL/TH

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

August 20, 2019

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: BARR NONE FED #1

Enclosed are the results of analyses for samples received by the laboratory on 08/19/19 13:38.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

TALON LPE  
DAVID ADKINS  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received:	08/19/2019	Sampling Date:	08/01/2019
Reported:	08/20/2019	Sampling Type:	Soil
Project Name:	BARR NONE FED #1	Sampling Condition:	Cool & Intact
Project Number:	701484.009.01	Sample Received By:	Tamara Oldaker
Project Location:	JUDAH OIL - LEA CO NM		

**Sample ID: S-11 0'-1' (H902837-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	08/20/2019	ND	400	100	400	0.00		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

### Notes and Definitions

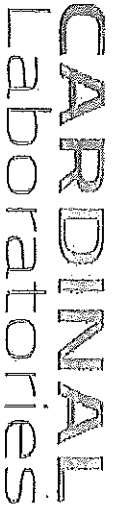
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

TAION LPE

† Cardinal cannot accept verbal changes. Please refer written changes to (575) 393-2326



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 23, 2019

David Adkins  
Talon Artesia  
408 West Texas Ave  
Artesia, NM 88210  
TEL:  
FAX

RE: Barr None Federal 001

OrderNo.: 1910694

Dear David Adkins:

Hall Environmental Analysis Laboratory received 11 sample(s) on 10/11/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued October 18, 2019.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report  
Lab Order: 1910694  
Date Reported: 10/23/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia  
Project: Barr None Federal 001

Lab Order: 1910694

Lab ID: 1910694-001  
Client Sample ID: S-5A 20'

Collection Date: 10/8/2019 1:00:00 PM

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	1900	60		mg/Kg	20	10/17/2019 12:27:37 AM	48202

Lab ID: 1910694-002  
Client Sample ID: S-5A 25'

Collection Date: 10/8/2019 1:20:00 PM

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	400	60		mg/Kg	20	10/17/2019 12:40:01 AM	48202

Lab ID: 1910694-004  
Client Sample ID: S-6A 30'

Collection Date: 10/8/2019 10:30:00 AM

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	2100	60		mg/Kg	20	10/17/2019 1:04:50 AM	48202

Lab ID: 1910694-005  
Client Sample ID: S-6A 35'

Collection Date: 10/8/2019 10:50:00 AM

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	280	60		mg/Kg	20	10/17/2019 1:42:03 AM	48202

Lab ID: 1910694-006  
Client Sample ID: S-6A 40'

Collection Date: 10/8/2019 11:05:00 AM

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	71	60		mg/Kg	20	10/17/2019 2:59:04 PM	48223

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Analytical Report  
Lab Order: 1910694  
Date Reported: 10/23/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia  
Project: Barr None Federal 001  
Lab Order: 1910694

Lab ID: 1910694-007  
Client Sample ID: L-7A 20'  
Collection Date: 10/8/2019 11:30:00 AM  
Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	1100	60		mg/Kg	20	10/17/2019 4:01:08 PM	48223

Lab ID: 1910694-008  
Client Sample ID: L-7A 25'  
Collection Date: 10/8/2019 11:50:00 AM  
Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	180	60		mg/Kg	20	10/17/2019 4:13:32 PM	48223

Lab ID: 1910694-009  
Client Sample ID: S-10A 10'  
Collection Date: 10/8/2019 3:10:00 PM  
Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	510	60		mg/Kg	20	10/17/2019 4:25:58 PM	48223

Lab ID: 1910694-010  
Client Sample ID: S-10A 15'  
Collection Date: 10/8/2019 3:30:00 PM  
Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	180	60		mg/Kg	20	10/17/2019 4:38:22 PM	48223

Lab ID: 1910694-011  
Client Sample ID: S-10A 20'  
Collection Date: 10/8/2019 3:50:00 PM  
Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	240	60		mg/Kg	20	10/17/2019 4:50:46 PM	48223

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL	Practical Quantitative Limit	RL Reporting Limit
S	% Recovery outside of range due to dilution or matrix	

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1910694

23-Oct-19

Client: Talon Artesia  
Project: Barr None Federal 001

Sample ID: MB-48202	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 48202	RunNo: 63729								
Prep Date: 10/16/2019	Analysis Date: 10/16/2019	SeqNo: 2178963 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-48202	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 48202	RunNo: 63729								
Prep Date: 10/16/2019	Analysis Date: 10/16/2019	SeqNo: 2178964 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.2	90	110			

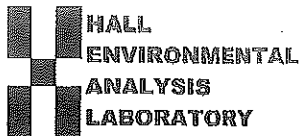
Sample ID: MB-48223	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 48223	RunNo: 63756								
Prep Date: 10/17/2019	Analysis Date: 10/17/2019	SeqNo: 2180412 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-48223	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 48223	RunNo: 63756								
Prep Date: 10/17/2019	Analysis Date: 10/17/2019	SeqNo: 2180413 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                  |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits      |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                          |
| PQL Practical Quantitative Limit                        | RL Reporting Limit                                |
| S % Recovery outside of range due to dilution or matrix |   |

Page 3 of 3



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: TALON ARTESIA

Work Order Number: 1910694

RcptNo: 1

Received By: *JR 10/11/19*

10/11/2019 9:20:00 AM

Completed By: Anne Thorne

10/11/2019 10:59:42 AM

Reviewed By: *IO*

*10/11/19*

*Anne Thorne*

### Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

### Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved bottles checked for pH: ( $<2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: DAD 10/11/19

### Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

16. Additional remarks:

### 17. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	0.1	Good	Yes			



**APPENDIX VI**

**BACKGROUND, PREVIOUS REPORTS**

1RP-2958

Page 54 of 164  
Received by OCD: 7/14/2020 12:00:05 AM  
Released to Imaging: 3/23/2021 3:14:12 PM

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

HOBBS OCD  
State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505  
JUL 25 2013  
RECEIVED

Form C-141  
Revised August 8, 2011  
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR X Initial Report ☐ Final Report

Name of Company	Judah Oil, LLC	Contact	James B Campanella
Address	P.O. Box 568	Telephone No.	575-7486-1280
Facility Name	Barr None Federal #1	Facility Type	Oil Well

Surface Owner	BLM	Mineral Owner	BLM	API No.	30-025-32221
---------------	-----	---------------	-----	---------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	10	22S	32E	1980'	North	660'	West	Lea

Latitude Longitude

NATURE OF RELEASE

Type of Release	oil and produced water	Volume of Release	11 oil 18 wtr	Volume Recovered	0
Source of Release	flow line	Date and Hour of Occurrence	7-21-2013 12:00 pm	Date and Hour of Discovery	7-22-2013 1:30 pm
Was Immediate Notice Given?	X Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Maxey Brown NMOCD Dist I (Left message)			
By Whom?	James B Campanella	Date and Hour 7-22-2013 2:20 pm			
Was a Watercourse Reached?	<input type="checkbox"/> Yes X No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully  
*Staffrey Yekim*  
Environmental Specialist 9/9/13 GW @ 310'

Describe Cause of Problem and Remedial Action Taken.\*  
Hole in metal 2" flow line. Replaced with 2" poly line.

Describe Area Affected and Cleanup Action Taken.\*  
50'x50' area off south side of location Fluid traveled down trails. Fluid soaked into ground, none was recovered. Had TNT Backhoe make one call to excavated contaminated soil and run soil samples

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>[Signature]</i>		OIL CONSERVATION DIVISION	
Printed Name: James B Campanella		Approved by Environmental Specialist <i>Staffrey Yekim</i> Environmental Specialist	
Title: Member/Manager		Approval Date: 9/18/13	Expiration Date: 9/23/13
E-mail Address: jbc@judahoil.com		Conditions of Approval: DELINEATE & REMEDIATE PER OCD GUIDELINES SUBMIT FINAL C-141 BY	
Date: 7-22-2013	Phone: 575-746-1280	Attached <input type="checkbox"/> IRP-9-13-2958 ✓	

\* Attach Additional Sheets If Necessary

SEP 23 2013 h

Date Saved:  
10/31/2018

Revisions  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
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Detailed Site and Sample Map  
Barr None Federal #1 IRP 9-13-2958  
UL: E S: 10 T22S R32E Lea County, New Mexico

Drawn \_\_\_\_\_  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_  
Lucas Middleton



201 South Hildagren Street  
Corbond, New Mexico 88221  
(575) 689-7040  
www.soudermiller.com  
Serving the Southeast of Rocky Mountains

Figure 3



Table 3:  
Summary of Sample Results

Judah Oil LLC  
Barr None Federal #1 (RP1-9-13-2958)

Sample ID	Sample Date	Depth (feet bgs)	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria			50	10	1000			2500	20,000
CSW1	10/9/2018	0.5	<0.219	<0.024	<4.9	<10	<50	<64.9	99
CSW2	10/9/2018	0.5	<0.213	<0.024	<4.7	<9.6	<48	<62.3	<30
CSW3	10/9/2018	0.5	<0.220	<0.024	<4.9	<9.7	<48	<62.6	<30
CSW4	10/9/2018	0.5	<0.224	<0.025	<5.0	11	<49	11	<30
CBH1	10/9/2018	0.5	<0.210	<0.023	<4.7	<9.6	<48	<62.3	<30
CBH2	10/9/2018	0.5	<0.216	<0.024	<4.8	<9.8	<49	<63.6	130
CBH3	10/9/2018	0.5	<0.210	<0.023	<4.7	<9.7	<48	<62.4	<30

"-" = Not Analyzed



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the  
POD suffix indicates the  
POD has been replaced  
& no longer serves a  
water right file.)

(R=POD has  
been replaced,  
O=orphaned,  
C=the file is  
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 03717 POD1	C	LE		4	4	1	09	22S	32E	624094	3586365	1069	650		
C 02096	CUB	ED		2	3	14	22S	32E	627204	3584464*		2843	435	360	75
C 02821	C	LE		2	2	3	14	22S	32E	627303	3584563*	2849	540	340	200

Average Depth to Water: 350 feet

Minimum Depth: 340 feet

Maximum Depth: 360 feet

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 625160.84

Northing (Y): 3586441.4

Radius: 3200

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

10/31/18 9:59 AM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER




USGS Home  
Contact USGS  
Search USGS

## National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:	Geographic Area:	
Groundwater	United States	GO

Click to hideNews Bulletins

- [Please see news on new formats](#)
- **Tuesday, October 30, approximately 7.5 percent of USGS streamgages are still not transmitting due to an issue with the telemetry system that records and transmits streamgage data. The USGS continues to work on bringing the streamgages back online as quickly as possible. The data on the streamgages is being preserved for download and has not been lost. Read [more](#)**
- [Full News](#) 

Groundwater levels for the Nation

### Search Results -- 1 sites found

site\_no list =

- 322314103384301

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

### USGS 322314103384301 22S.32E.14.32322

Available data for this site 

Groundwater:	Field measurements	GO
--------------	--------------------	----

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°23'23", Longitude 103°38'53" NAD27

Land-surface elevation 3,717.00 feet above NGVD29

The depth of the well is 435 feet below land surface.

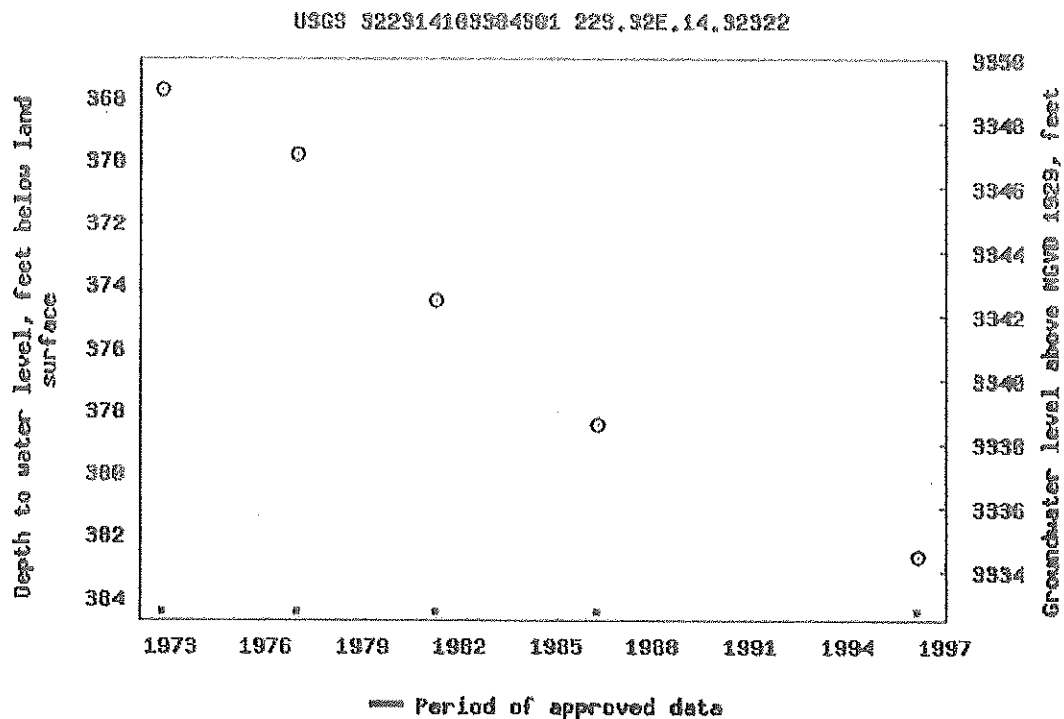
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

#### Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>

Graph of data

Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.

[Download a presentation-quality graph](#)

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

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**Title: Groundwater for USA: Water Levels**

**URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>**



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2018-10-31 12:20:26 EDT

1.06 0.93 nadww01

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

HOBBS OCD  
State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505  
JUL 25 2013  
RECEIVED

Form C-141  
Revised August 8, 2011  
Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR X Initial Report ☐ Final Report

Name of Company	Judah Oil, LLC	Contact	James B Campanella
Address	P.O. Box 568	Telephone No.	575-7486-1280
Facility Name	Barr None Federal #1	Facility Type	Oil Well

Surface Owner	BLM	Mineral Owner	BLM	API No.	30-025-32221
---------------	-----	---------------	-----	---------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	10	22S	32E	1980'	North	660'	West	Lea

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

NATURE OF RELEASE

Type of Release	oil and produced water	Volume of Release	11 oil 18 wtr	Volume Recovered	0
Source of Release	flow line	Date and Hour of Occurrence	7-21-2013 12:00 pm	Date and Hour of Discovery	7-22-2013 1:30 pm
Was Immediate Notice Given?	X Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Maxey Brown NMOCD Dist I (Left message)			
By Whom?	James B Campanella	Date and Hour 7-22-2013 2:20 pm			
Was a Watercourse Reached?	<input type="checkbox"/> Yes X No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully  
*Staffrey Sekim*  
Environmental Specialist 9/19/13 GW 310'

Describe Cause of Problem and Remedial Action Taken.\*  
Hole in metal 2" flow line. Replaced with 2" poly line.

Describe Area Affected and Cleanup Action Taken.\*  
50'x50' area off south side of location Fluid traveled down trails. Fluid soaked into ground, none was recovered. Had TNT Backhoe make one call to excavated contaminated soil and run soil samples

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>[Signature]</i>		OIL CONSERVATION DIVISION	
Printed Name: James B Campanella		Approved by Environmental Specialist <i>Staffrey Sekim</i> Environmental Specialist	
Title: Member/Manager		Approval Date: 9/10/13	Expiration Date: 9/23/13
E-mail Address: jbc@judahoil.com		Conditions of Approval: DELINQUENT & REMEDIATE PER OCD GUIDELINES SUBMIT FINAL C-141 BY	
Date: 7-22-2013 Phone: 575-746-1280		Attached <input type="checkbox"/> IRP-9-13-2958 ✓	

\* Attach Additional Sheets If Necessary

SEP 23 2013

TNT BACKHOE SERVICE  
1701 North 1st  
ARTESIA, NM 88210  
575-746-6063  
575-365-7827

575-746-0807 FAX

**8-16-2013**

**Carlsbad Field Office**  
Bureau of Land Management  
620 E. Greene St.  
Carlsbad, NM 88220

Jennifer VanCuren

[Jvancuren@blm.gov](mailto:Jvancuren@blm.gov)

On 8-15-2013 Judah Oil, LLC contact TNT Backhoe service (TNT) concerning a spill at the Barr None Federal #1 – Rural LEA, Township: 22s Range: 32e Section 10, 1980'FNL & 660'FWL, API #30-025-32221.

On 7-21-2013 at 12:00pm a crude oil release was discovered at the Barr None Federal #1 Tank Battery, the leak resulted from a crack in a flow line going into the tank which subsequently has been repaired.

The surface owner, US Bureau of Land Management (BLM) was informed, and subsequently a C-141 was filed with the New Mexico Oil & Division (NMOCD). The estimated quantity of release was reported as eleven barrels oil & thirteen barrels of water, of which none was immediately recovered.

Jennifer VanCuren "BLM" requested that a scope of work be done in writing and that, Geoffrey R Leking:

TNT BACKHOE SERVICE  
1701 North 1st  
ARTESIA, NM 88210  
575-746-6063  
575-365-7827

575-746-0807 FAX

Environmental Engineer, (NMOCD) in Hobbs is informed as well; the location is in Lea County.

If approved; TNT Backhoe Service will set up the time and date the job will began. Mr. Leking and Miss/Mrs. VanCuren will be given the information in case they wish to be present when the work begins.

RE: Remediation of the Judah Oil LLC, Barr Bone Federal #1 pipe line release.

On behalf of Judah Oil LLC, (TNT) is seeking permission to start remediation services at the Barr None Federal #1. The spill came from a broken flow line behind one of the tanks; running through a weak spot on the berm at the south/west corner of the location, "see map and pictures for visual."

The estimated spill is 75'x 176' running south/west, fingering out in different directions. The flow paths average between 3' to 20' in width. (TNT) would like to use a backhoe to remove the majority of the spill to be trucked to Sundance Services, Inc, near Eunice.

Once the majority of the spill is removed, (TNT) would begin to run preliminary sampling to determine how deep

TNT BACKHOE SERVICE  
1701 North 1st  
ARTESIA, NM 88210  
575-746-6063  
575-365-7827

575-746-0807 FAX

& wide the spill traveled. Field samples will be taken at various spots to determine the chloride count using "Chloride strips," anything lower than 500 ppm will be sent to Cardinal Laboratories in Hobbs for the final analysis, which will include BTEX, GRO/DRO, and the chloride count. Included background samples taken around the spill.

Once it's determine how deep the spill is, (TNT) Submits two scenarios. The first would depend on the depth of the spill, if it is less than five to six feet, remove all contaminate to this point.

Calichie will be trucked in and used to backfill within a foot of ground level. Native soil will be used to finish bringing the excavated areas to ground level, contoured back into the surrounding area in a way as to promote re-vegetation, drainage and stop soil erosion.

Native seed approved by (BLM) will be seeded, by "hand broad casting"& raked into the soil. If deemed too late to seed at this time (TNT) would seed the following summer.

The second scenario would be in case the spill goes deeper than six feet, once its determine how deep seepage went, permission to take contaminate down four feet, cover with

**TNT BACKHOE SERVICE**

**1701 North 1st  
ARTESIA, NM 88210  
575-746-6063  
575-365-7827**

**575-746-0807 FAX**

a 20mil liner, backfill within a foot of ground level. Native soil will be used to finish bringing the excavated areas to ground level, contoured back into the surrounding area in a way as to promote re-vegetation, drainage and to discourage soil erosion.

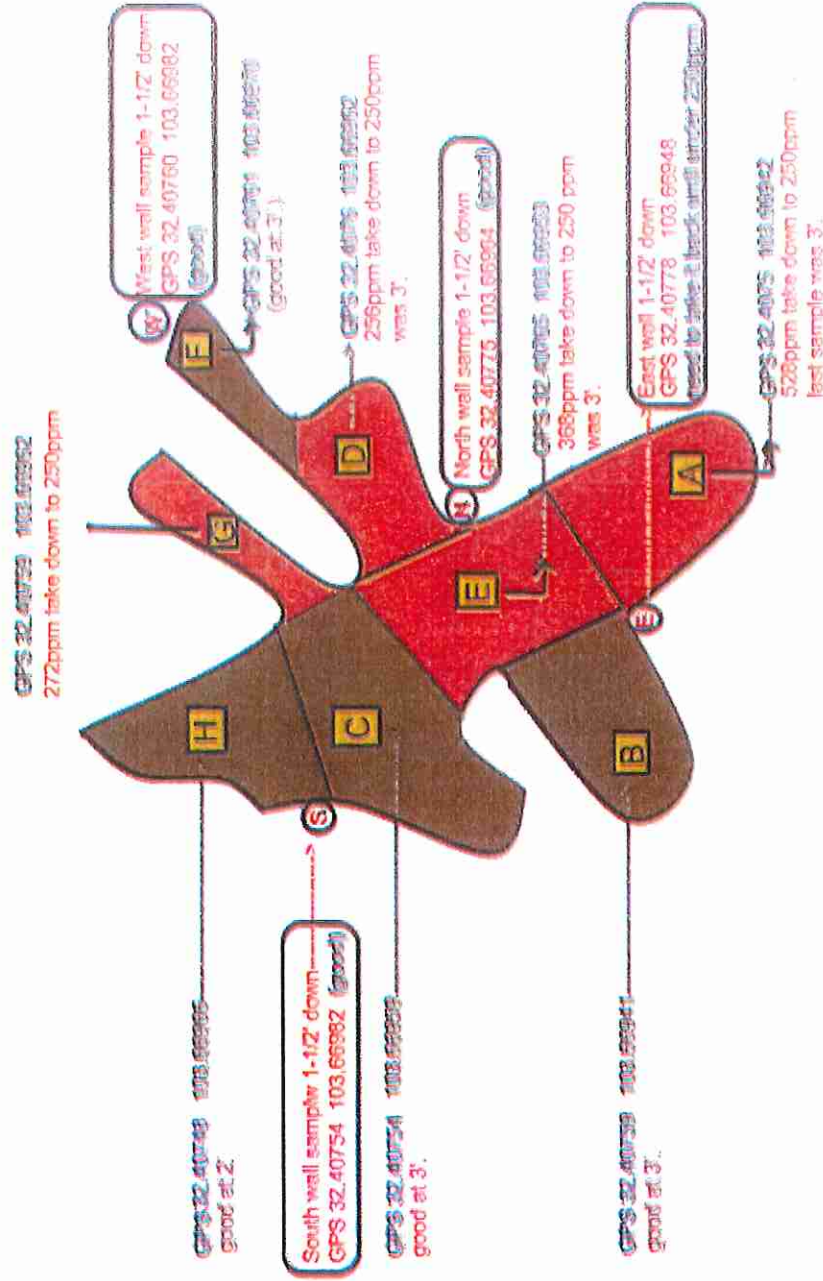
Native seed approved by (BLM) will be seeded, using the "hand broad cast system" then raked into the soil. If it's deemed too late to seed at this time (TNT) would seed the following summer. If you have any question please feel contact Ray Martin at 575-365-7827.

Respectfully Submitted

Gary Smith  
TNT Backhoe Service  
Office 575-746-6063  
E-mail [tntbackhoeservice@pvttn.net](mailto:tntbackhoeservice@pvttn.net)

Judah Oil LLC  
Barr None Federal #1  
1980FNL 660FWL  
Sec 10 T 22s R32e - Eddy County

W  
S + N  
E





September 24, 2013

GARY SMITH

TNT Backhoe Service

P.O. Box 133

Artesia, NM 88211

RE: BARR NONE FEDERAL #1

Enclosed are the results of analyses for samples received by the laboratory on 09/18/13 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Coley D. Keene". The signature is written in a cursive style with a large, stylized "C" and "K".

Celey D. Keene

Lab Director/Quality Manager

Page 67 of 164  
Received by OGD: 7/14/2020 12:00:05 AM  
Released to Imaging: 3/23/2021 3:14:12 PM



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

TNT Backhoe Service  
GARY SMITH  
P.O. Box 133  
Artesia NM, 88211  
Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: A-3' DEEP (H302276-01)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	09/19/2013	ND	416	104	400	3.77	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TNT Backhoe Service  
GARY SMITH  
P.O. Box 133  
Artesia NM, 88211  
Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: B-3' DEEP (H302276-02)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 108 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/19/2013	ND	416	104	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TNT Backhoe Service  
GARY SMITH  
P.O. Box 133  
Artesia NM, 88211  
Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: C-3' DEEP (H302276-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTEX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PII) 108 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/19/2013	ND	416	104	400	3.77	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager


**Analytical Results For:**

TNT Backhoe Service  
 GARY SMITH  
 P.O. Box 133  
 Artesia NM, 88211  
 Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: D-3' DEEP (H302276-04)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	09/19/2013	ND	416	104	400	3.77	

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TNT Backhoe Service  
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Artesia NM, 88211  
Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: E-3' DEEP (H302276-05)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	09/19/2013	ND	416	104	400	3.77	

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager


**Analytical Results For:**

TNT Backhoe Service  
GARY SMITH  
P.O. Box 133  
Artesia NM, 88211  
Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: F-3' DEEP (H302276-06)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTEX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/19/2013	ND	416	104	400	3.77	

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**Analytical Results For:**

TNT Backhoe Service  
GARY SMITH  
P.O. Box 133  
Artesia NM, 88211  
Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: G-3' DEEP (H302276-07)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	09/19/2013	ND	416	104	400	3.77	

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PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

TNT Backhoe Service  
GARY SMITH  
P.O. Box 133  
Artesia NM, 88211  
Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: H-2' DEEP (H302276-08)**

BTX 8021B		mg/kg							
		Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 109 % 89.4-126

Chloride, SM4500CI-B		mg/kg							
		Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	09/19/2013	ND	416	104	400	3.77	

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Ashley D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TNT Backhoe Service  
GARY SMITH  
P.O. Box 133  
Artesia NM, 88211  
Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: NORTH WALL-1 1/2 DEEP (H302276-09)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTEX	<0.300	0.300	09/20/2013	ND					

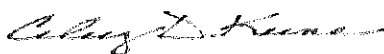
Surrogate: 4-Bromofluorobenzene (PIE) 108 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/19/2013	ND	416	104	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TNT Backhoe Service  
 GARY SMITH  
 P.O. Box 133  
 Artesia NM, 88211  
 Fax To: (505) 746-1885

Received: 09/18/2013  
 Reported: 09/24/2013  
 Project Name: BARR NONE FEDERAL #1  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

Sampling Date: 09/18/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SOUTH WALL 1 1/2 DEEP (H302276-10)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTEX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PII) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2013	ND	432	108	400	0.00	

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**Analytical Results For:**

TNT Backhoe Service  
GARY SMITH  
P.O. Box 133  
Artesia NM, 88211  
Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: EAST WALL - 1 1/2 DEEP (H302276-11)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 110 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	09/23/2013	ND	432	108	400	0.00	

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**Analytical Results For:**

TNT Backhoe Service  
GARY SMITH  
P.O. Box 133  
Artesia NM, 88211  
Fax To: (505) 746-1885

Received:	09/18/2013	Sampling Date:	09/18/2013
Reported:	09/24/2013	Sampling Type:	Soil
Project Name:	BARR NONE FEDERAL #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: WEST WALL - 1 1/2 DEEP (H302276-12)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2013	ND	2.11	105	2.00	5.45	
Toluene*	<0.050	0.050	09/20/2013	ND	1.97	98.7	2.00	5.19	
Ethylbenzene*	<0.050	0.050	09/20/2013	ND	1.98	99.2	2.00	4.79	
Total Xylenes*	<0.150	0.150	09/20/2013	ND	6.02	100	6.00	4.72	
Total BTX	<0.300	0.300	09/20/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 110 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/23/2013	ND	432	108	400	0.00	

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\*=Accredited Analyte

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### Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <b>TAIT Gachbar Service</b>				P.O. #:				ANALYSIS REQUEST			
Project Manager: <b>Gary Smith</b>				Company: <b>Judak Oil</b>							
Address: <b>1201 North 1st</b>				Attn: <b>Blaise Canjocelle</b>							
City: <b>Artesia</b> State: <b>NM</b> Zip: <b>88210</b>				Address:							
Phone #: <b>505-746-9442</b> Fax #: <b>1-505-746-0807</b>				City: <b>Artesia</b>							
Project #: <b>525-746-6663</b> Project Owner: <b>Judak Oil</b>				State: <b>NM</b> Zip: <b>88210</b>							
Project Name: <b>Barry's Federal #11</b>				Phone #:							
Project Location: <b>Lea County</b>				Fax #:							
Sampler Name: <b>Gary Smith</b>				PRESERV				SAMPLING			
FOR LAB USE ONLY											

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BT EX	Chloride
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :				
H3021716	A-3' deep									9:13-13	9:14		
1	B-3' deep									10:13	10:13		
2	C-3' deep									11:42	11:42		
3	D-3' deep									10:38	10:38		
4	E-3' deep									9:16	9:16		
5	F-3' deep									10:42	10:42		
6	G-3' deep									11:44	11:44		
7	H-2' deep									12:14	12:14		
8	I-2' deep									12:44	12:44		
9	North Wall - 17 1/2' deep									12:38	12:38		
10	South Wall - 1 1/2' deep												

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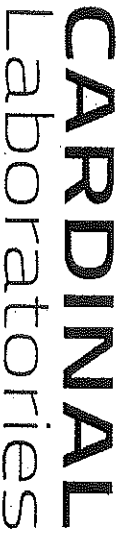
Relinquished By: Gary Smith Date: 9/18/13 Time: 3:00 Received By: Blaise Canjocelle

Delivered By: (Circle One) UPS 3.40 Sample Condition: ☒ Cool ☐ Intact ☐ Yes ☐ No ☐ Yes ☐ No CHECKED BY: [Signature]

Sampler - UPS - Bus - Other: 3.40

REMARKS: E-mail please  
first backhoe service inputs. Not

Phone Result: ☐ Yes ☐ No ☐ Add'l Phone #:  
Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #: 505-746-0807



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

**(575) 393-2326 FAX (575) 393-2476**

Company Name: <b>TOT Backhoe Service</b>		P.O. #:	
Project Manager: <b>Gary Smith</b>		Company: <b>Lueth oil</b>	
Address: <b>1701 ASHTHIST</b>		Attn: <b>Shelia Campanella</b>	
City: <b>Artesia</b> State: <b>NM</b> Zip: <b>88210</b>		Address:	
Phone #: <b>505-746-6603</b> Fax #: <b>505-746-0807</b>		City: <b>Artesia</b>	
Project #: _____ Project Owner: _____		State: <b>NM</b> Zip: <b>88210</b>	
Project Name: <b>Barn Above Federal #1</b>		Phone #: _____	
Project Location: <b>Lea County</b>		Fax #: _____	
Sampler Name: <b>Gary Smith</b>			

FOR LAB USE ONLY		MATRIX		PRESERV	SAMPLING
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS		
H302710	11 Eastball- 1 1/2 deep 12 Westball- 1 1/2 deep	GROUNDWATER			
		WASTEWATER			
		SOIL			
		OIL			
		SLUDGE			
		OTHER :			
		ACID/BASE:			
		ICE / COOL			
		OTHER :			
		DATE	TIME		

Requisitioned By: <b>Gary Smith</b>	Received By: <b>Shelia Campanella</b>
Relinquished By: _____	Received By: _____
Date: <b>4/18/13</b>	Date: <b>4/18/13</b>
Time: <b>3:00</b>	Time: <b>12:42</b>

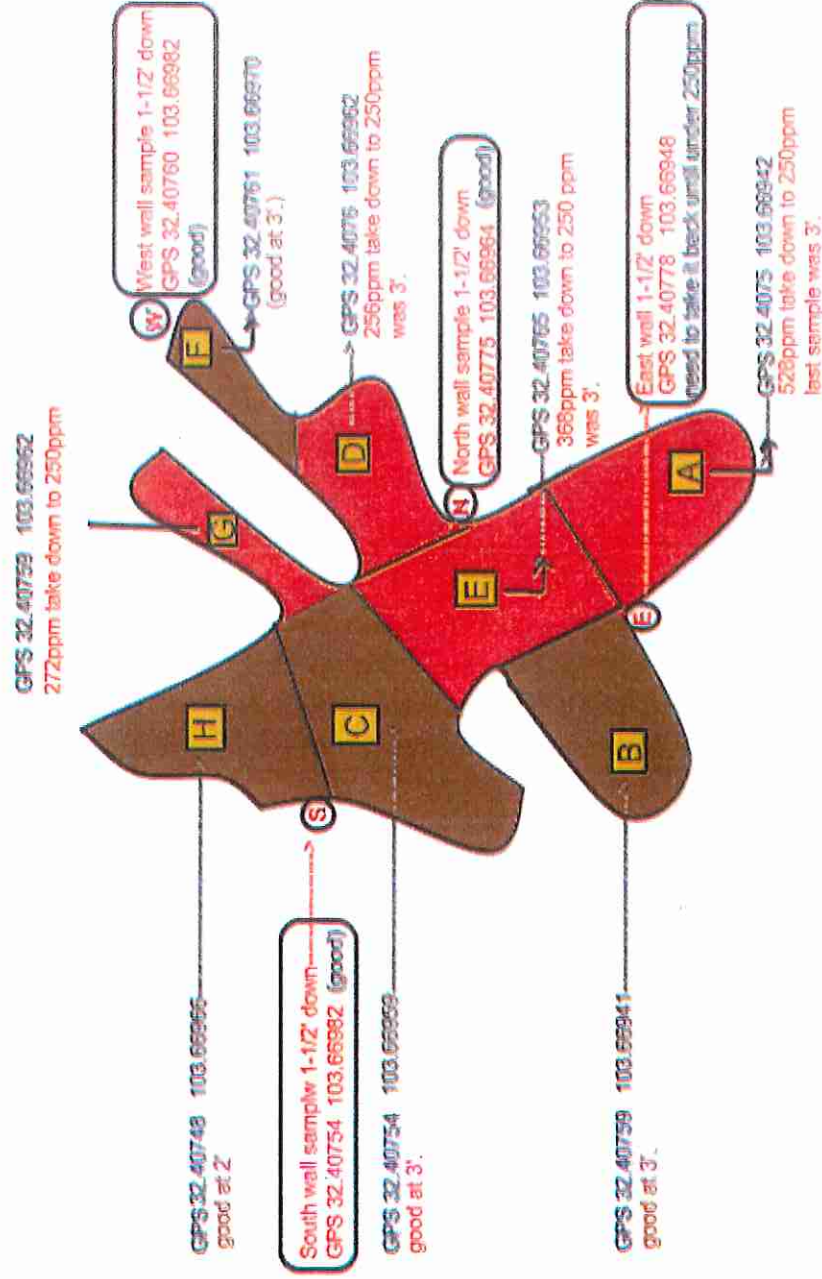
Delivered By: (Circle One)	Sample Condition	CHECKED BY:
Sampler - UPS - Bus - Other:	Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/>	<b>Shelia Campanella</b>
	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
REMARKS: <b>Email also TOT Backhoe parts. Not TOT Backhoe parts.</b>	

Judah Oil LLC  
 Barr None Federal #1  
 1980FNL 660FWL  
 Sec 10 T 22s R32e - Eddy County

W  
 S + N  
 E





Souder, Miller & Associates • 201 S. Halagueno St. • Carlsbad, NM 88220  
(575) 689-8801

November 1, 2018

#5E26837-BG4

NMOCD District 1  
Ms. Christina Hernandez  
1625 N. French Drive  
Hobbs, New Mexico 88240

SUBJECT: Remediation Closure Report for the Barr None Federal #1 Release (1RP—9-13-2958), Lea County, New Mexico

Dear Ms. Hernandez:

On behalf of Judah Oil, LLC (Judah), Souder, Miller & Associates (SMA) has prepared this Remediation Closure Report that describes release documentation and confirmation sampling of a release of liquids related to oil and gas production activities at the Barr None Federal #1 site. The site is in Unit E, Section 10, Township 22S, Range 32E, Lea County, New Mexico, on Federal land. Figure 1 illustrates the vicinity and site location on an USGS 7.5 minute quadrangle map.

Table 1 summarizes release information and Closure Criteria.

Table 1: Release Information and Closure Criteria			
Name	Barr None Federal #1	Company	Judah Oil LLC
API Number	30-025-2221	Location	32.4080124 -103.6690445
Incident Number	1RP-9-13-2958		
Estimated Date of Release	July 21, 2013	Date Reported to NMOCD	July 22, 2013
Land Owner	Federal	Reported To	NMOCD District 1
Source of Release	Flowline		
Released Volume	29 bbl	Released Material	11 bbl oil, 18 bbl produce water
Recovered Volume	0 bbl	Net Release	29 bbl
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	October 9, 2018		

## **1.0 Background**

On July 21, 2013, a release was discovered at the Barr None Federal #1 site due to a hole in a metal 2-inch flowline. Figure 1 illustrates the vicinity and site location, Figures 2 and 3 illustrate the release location. The C-141 form is included in Appendix A.

## **2.0 Site Information and Closure Criteria**

The Barr None Federal #1 is located approximately 32 miles east of Carlsbad, New Mexico on Federal (BLM) land at an elevation of approximately 3,804 feet above mean sea level (amsl).

Based upon NMOSE and USGS data (Appendix B), depth to groundwater in the area is estimated to be 437 feet below grade surface (bgs). There are zero (0) known water sources within ½-mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) online water well database ([https://gis.ose.state.nm.us/gisapps/ose\\_pod\\_locations/](https://gis.ose.state.nm.us/gisapps/ose_pod_locations/); accessed 10/31/2018). The nearest significant watercourse is an unnamed playa, located approximately 885 feet to the southwest. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of greater than 100 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC.

Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

## **3.0 Release Characterization Activities and Findings**

In the workplan dated August 16, 2013, TNT Backhoe Service (TNT) proposed excavating and removing contaminated soil in the impacted area. On September 9, 2013, NMOCD received the workplan. On September 18, 2013, TNT conducted confirmation sampling of the walls and base of the excavation. Sample depths ranged from 1.5 to 3 feet bgs. NMOCD received a copy the Cardinal Laboratories report on September 26, 2013 (included in Appendix C). SMA has not found or received any further documentation regarding this release.

At the request of Judah, SMA collected confirmation samples from the apparent release and excavation area. On October 9, 2018, SMA conducted confirmation sampling of the area of impact. Confirmation samples were comprised of five-point composites.

A total of seven (7) sample locations (composite sidewall samples CSW1-CSW4, composite bottom-hole samples CBH1-CBH3) were collected using a hand-auger, to depths of six (6) inches bgs. A total of seven (7) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Locations for all samples are depicted on Figure 3.

Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico (Appendix C).

Figure 3 shows the apparent extent of the excavation and sample locations. Laboratory results are summarized in Table 3. Laboratory reports are included in Appendix C.

SMA recommends no further action for the Barr None Federal release (1RP-9-13-2958).

#### **4.0 Scope and Limitations**

The scope of our services included: assessment sampling; verifying release stabilization; regulatory liaison; remediation; and preparing this closure report. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

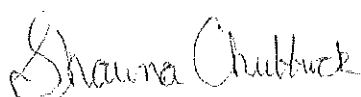
If there are any questions regarding this report, please contact either Austin Weyant at 575-689-8801 or Shawna Chubbuck at 505-325-7535.

Submitted by:  
SOUDER, MILLER & ASSOCIATES

Reviewed by:



Lucas C. Middleton  
Staff Scientist



Shawna Chubbuck  
Senior Scientist

#### **ATTACHMENTS:**

##### **Figures:**

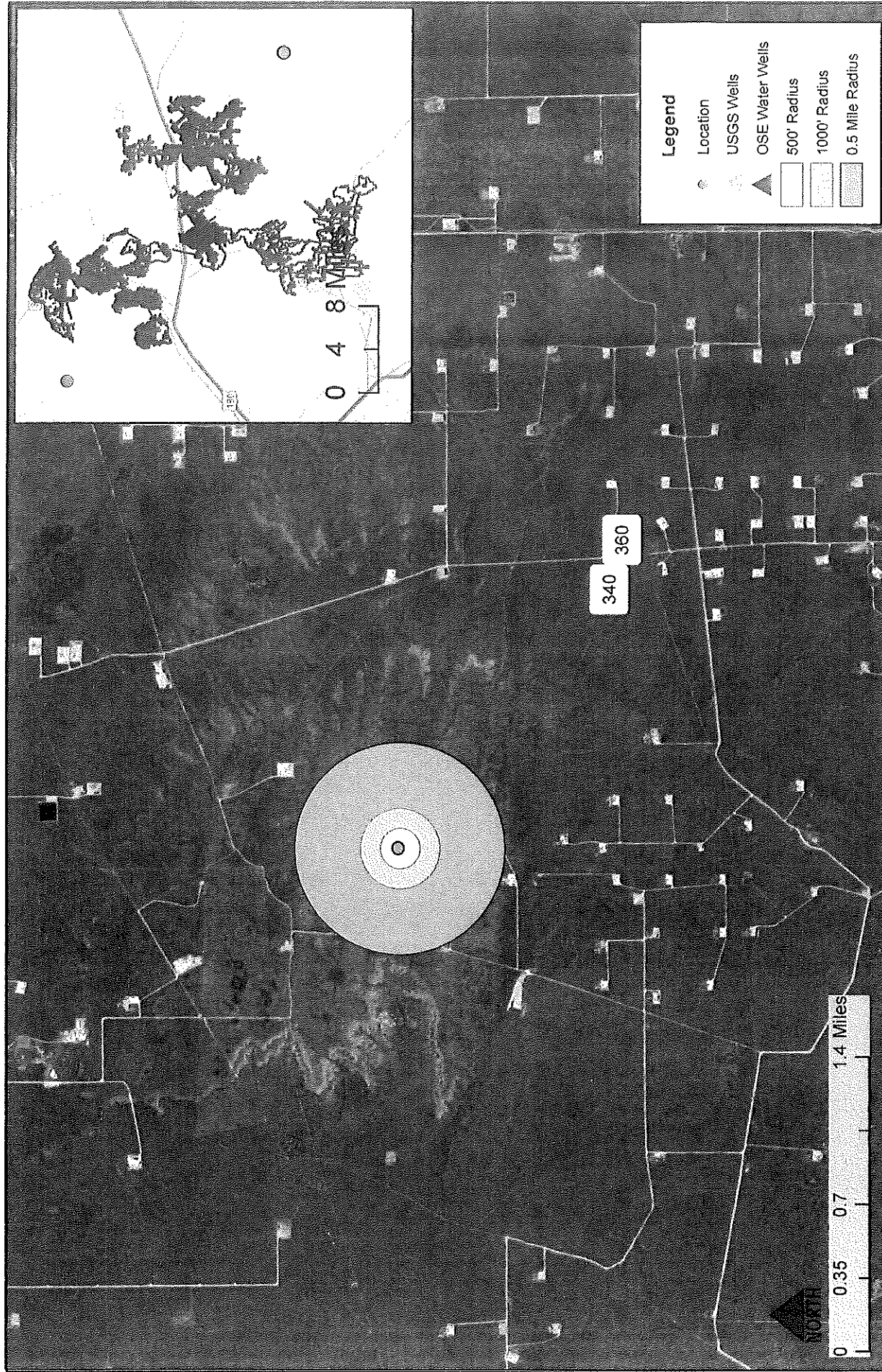
- Figure 1: Vicinity and Well Head Protection Map
- Figure 2: Surface Water Radius Map
- Figure 3: Site and Sample Location Map

##### **Tables:**

- Table 2: NMOCD Closure Criteria Justification
- Table 3: Summary of Sample Results

##### **Appendices:**


- Appendix A: Form C141
- Appendix B: NMOSE Wells Report
- Appendix C: Laboratory Analytical Reports

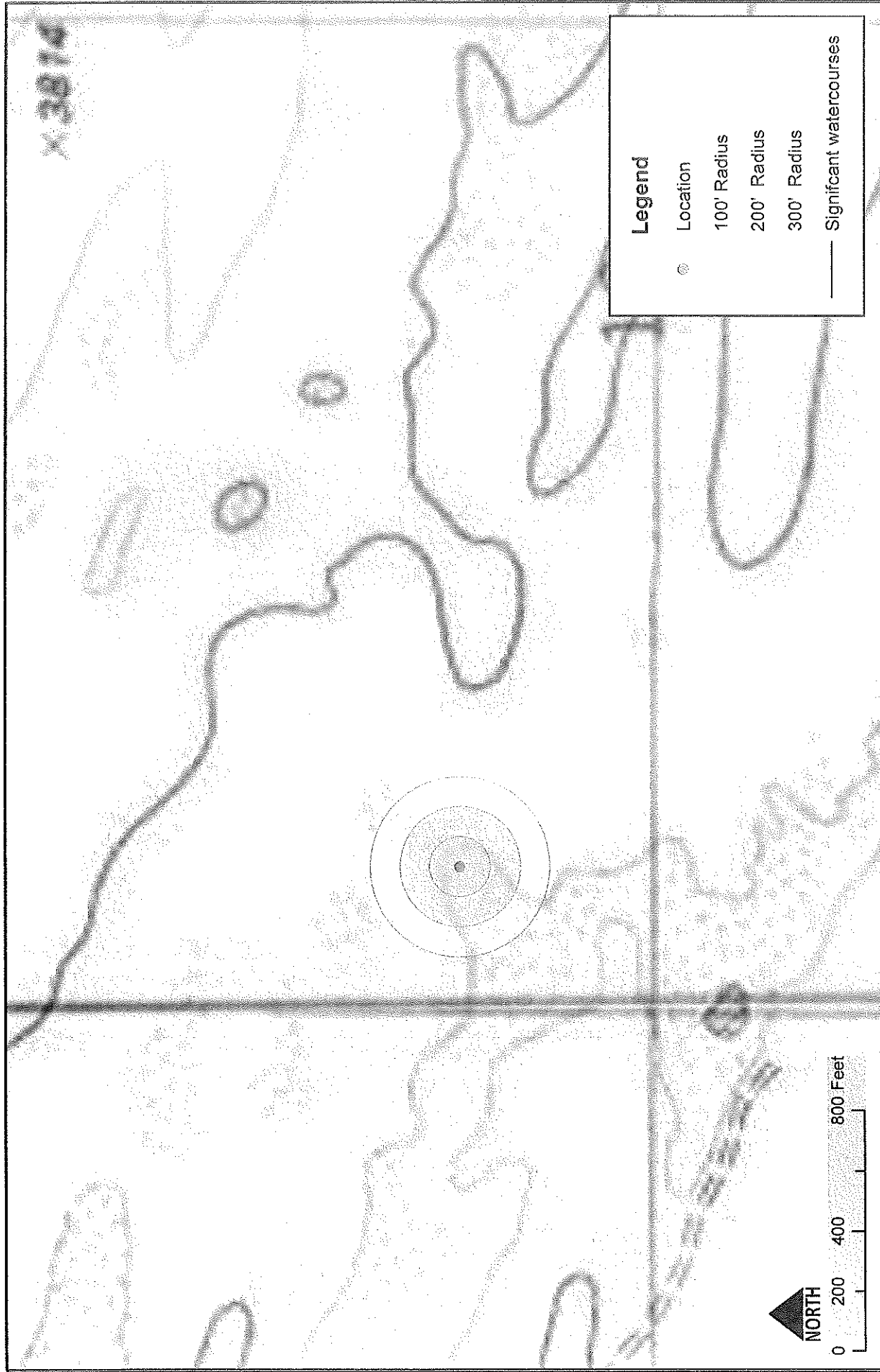


Document: C:\Users\lcm\Documents\GIS DATA\MAPS\Barr None - Figure 1.mxd

Regional Vicinity & Wellhead Protection Map  
Barr None Federal #1 IRP 9-13-2958  
UL: E S: 10 T22S R32E Lea County, New Mexico

Figure 1

Date Saved: 10/31/2018	Revisions		Drawn Checked Approved	Lucas Middleton		201 South Hialeghua Street Corridon, New Mexico 88221 (575) 689-7040 www.southernmiller.com Serving the Southwest & Rocky Mountains
	By:	Descr:				
	By:	Descr:				
Copyright 2015 Souder, Miller & Associates - All Rights Reserved						



Surface Water Map				Figure 2	
Barr None Federal #1 IRP 9-13-2958					
UL: E S: 10 T22S R32E Lea County, New Mexico					
Date Saved: 10/31/2018		Revisions		Drawn	
By:	Date:	Descr:		Lucas Middleton	
By:	Date:	Descr:		Checked	
Copyright 2015 Souder, Miller & Associates - All Rights Reserved				Approved	
Document: C:\Users\cm\Documents\GIS DATA\AP\Barr None-Figure 2.mxd			SMA		
			201 South Hologena Street Carlsbad, New Mexico 88221 (575) 689-7040 www.soudermiller.com Setting the Southern & Rocky Mountains		

Date Saved:  
10/31/2018

By: \_\_\_\_\_ Date: \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_  
Copyright 2015 Soudier, Miller & Associates - All Rights Reserved

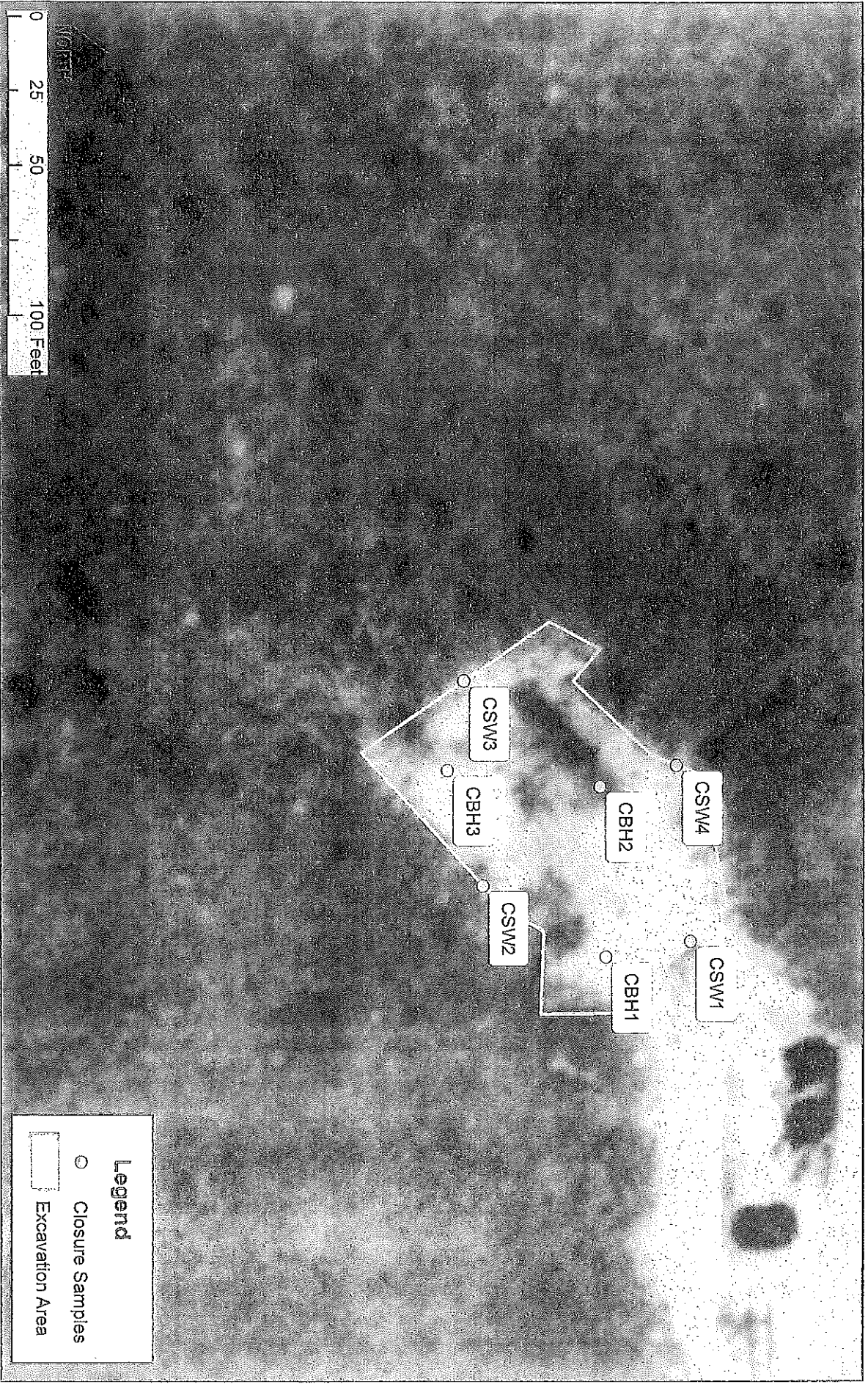
*Detailed Site and Sample Map*  
Barn None Federal #1 IRP 9-13-2958  
UL: E S: 10 T22S R32E Lea County, New Mexico

Drawn \_\_\_\_\_  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_  
Lucas Middleton



201 South Hologrens Street  
Olathe, New Mexico 88221  
(575) 689-7040  
www.soudiermiller.com  
Serving the Southwest & Rocky Mountains

Figure 3



# TABLES

Table 2:  
NMOCD Closure Criteria

Judah Oil LLC  
Barri None Federal #1 (RP1-9-13-2958)

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	437	NMOSE, USGS
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)	885	NMOSE, USGS
Horizontal Distance to Nearest Significant Watercourse (ft)	885	USGS 7.5 Minute Quadrangle Map

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		Closure Criteria (units in mg/kg)				
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
< 50' BGS		600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'	X	20000	2500	1000	50	10
Surface Water	yes or no	if yes, then				
<300' from continuously flowing watercourse or other significant watercourse?	No	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	No					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	No					
<1000' from fresh water well or spring?	No					
Human and Other Areas						
<300' from an occupied permanent residence, school, hospital, institution or church?	No					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	No					
<100' from wetland?	No					
within area overlying a subsurface mine	No					
within an unstable area?	No					
within a 100-year floodplain?	No					

Table 3:  
Summary of Sample Results

Judah Oil LLC  
Barr None Federal #1 (RP1-9-13-2958)

Sample ID	Sample Date	Depth (feet bgs)	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria			50	10	1000			2500	20,000
CSW1	10/9/2018	0.5	<0.219	<0.024	<4.9	<10	<50	<64.9	99
CSW2	10/9/2018	0.5	<0.213	<0.024	<4.7	<9.6	<48	<62.3	<30
CSW3	10/9/2018	0.5	<0.220	<0.024	<4.9	<9.7	<48	<62.6	<30
CSW4	10/9/2018	0.5	<0.224	<0.025	<5.0	11	<49	11	<30
CBH1	10/9/2018	0.5	<0.210	<0.023	<4.7	<9.6	<48	<62.3	<30
CBH2	10/9/2018	0.5	<0.216	<0.024	<4.8	<9.8	<49	<63.6	130
CBH3	10/9/2018	0.5	<0.210	<0.023	<4.7	<9.7	<48	<62.4	<30

"--" = Not Analyzed



November 1, 2018

#5E26837-BG4

NMOCD District 1  
Ms. Christina Hernandez  
1625 N. French Drive  
Hobbs, New Mexico 88240

SUBJECT: Remediation Closure Report for the Barr None Federal #1 Release (1RP—9-13-2958), Lea County, New Mexico

Dear Ms. Hernandez:

On behalf of Judah Oil, LLC (Judah), Souder, Miller & Associates (SMA) has prepared this Remediation Closure Report that describes release documentation and confirmation sampling of a release of liquids related to oil and gas production activities at the Barr None Federal #1 site. The site is in Unit E, Section 10, Township 22S, Range 32E, Lea County, New Mexico, on Federal land. Figure 1 illustrates the vicinity and site location on an USGS 7.5 minute quadrangle map.

Table 1 summarizes release information and Closure Criteria.

Table 1: Release Information and Closure Criteria			
Name	Barr None Federal #1	Company	Judah Oil LLC
API Number	30-025-2221	Location	32.4080124 -103.6690445
Incident Number	1RP-9-13-2958		
Estimated Date of Release	July 21, 2013	Date Reported to NMOCD	July 22, 2013
Land Owner	Federal	Reported To	NMOCD District 1
Source of Release	Flowline		
Released Volume	29 bbl	Released Material	11 bbl oil, 18 bbl produce water
Recovered Volume	0 bbl	Net Release	29 bbl
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	October 9, 2018		

Timeline2		IRP-2958	Explanation (IRP-2958)
API Number		300253221	
Spill date		7/21/2013	
Judah Requesting Approval for Remediation		8/16/2013	Per TNT Backhoe Service
		9/9/2013	
Order Date by OCD		9/18/2013	Received by Hobbs OCD
C141 - Initial Submitted			
C141- Initial Resubmitted			
Work Plan Submitted		7/25/2013	Received by Hobbs OCD
Closure report submitted		NA	
Correspondance dates			
Correspondance dates			
		9/26/2013	NMOCD recieves Cardinal Lab Reporots
		10/6/2018	Middleton emailed OCD (10/8/18) 48 hour notification (closure samples) w/ request to "get an update on closure for other RP on this site. IRP-4574
		11/1/2018	Closure Report to Christina Hernandez
		11/4/2018	Email response from Yu to Engallina's 10-30-2018; IRP-2958; does not have closure approval from NMOCD or BLM. NMOCD states that the area needs reevaluated for closure.
		11/6/2018	Yu emailed Middleton to advise the release would need to be evaluated by Jim Griswold (Griswold not copied on Yu's email)
		11/20/2018	Middleton emailed Judah (James Campanella) & Wes @ energy Resources with Closure Reports to re-submit to brad billings at NMOCD.
		12/4/2018	Middleton emailed closure report to Pike Energy

# APPENDIX B NMOSE & USGS WELLS REPORT



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the  
POD suffix indicates the  
POD has been replaced  
& no longer serves a  
water right file.)

(R=POD has  
been replaced,  
O=orphaned,  
C=the file is  
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-	Code	basin	County	Q	Q	Q	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 03717 POD1	C	LE	4	4	1	09	22S	32E			624094	3586365	1069	650		
C 02096	CUB	ED	2	3	14	22S	32E				627204	3584464*	2843	435	360	75
C 02821	C	LE	2	2	3	14	22S	32E			627303	3584563*	2849	540	340	200

Average Depth to Water: 350 feet

Minimum Depth: 340 feet

Maximum Depth: 360 feet

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 625160.84

Northing (Y): 3586441.4

Radius: 3200

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

10/31/18 9:59 AM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER




[USGS Home](#)  
[Contact USGS](#)  
[Search USGS](#)

## National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:	Geographic Area:	
Groundwater	United States	GO

Click to hideNews Bulletins

- [Please see news on new formats](#)
- Tuesday, October 30, approximately 7.5 percent of USGS streamgages are still not transmitting due to an issue with the telemetry system that records and transmits streamgage data. The USGS continues to work on bringing the streamgages back online as quickly as possible. The data on the streamgages is being preserved for download and has not been lost. Read [more](#)
- [Full News](#) 

Groundwater levels for the Nation

### Search Results -- 1 sites found

site\_no list =

- 322314103384301

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

### USGS 322314103384301 22S.32E.14.32322

Available data for this site

Groundwater: Field measurements	GO
---------------------------------	----

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°23'23", Longitude 103°38'53" NAD27

Land-surface elevation 3,717.00 feet above NGVD29

The depth of the well is 435 feet below land surface.

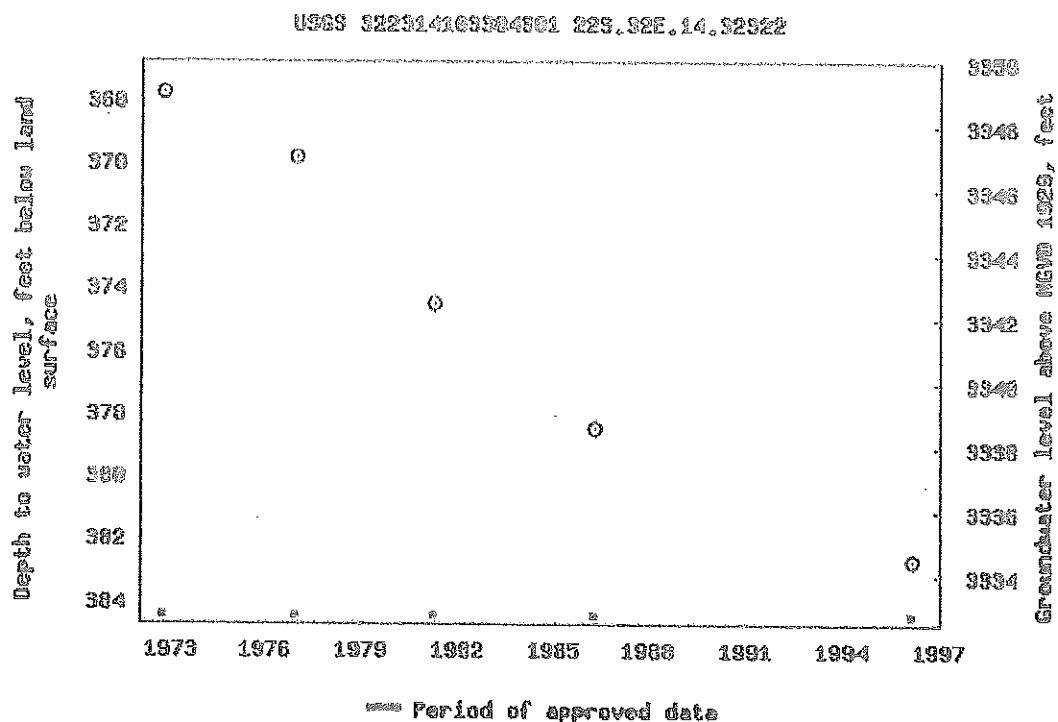
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

#### Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>

Graph of data

Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.

[Download a presentation-quality graph](#)

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[Plug-Ins](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior | U.S. Geological Survey](#)

**Title: Groundwater for USA: Water Levels**

**URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>**



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2018-10-31 12:20:26 EDT

1.06 0.93 nadww01

# APPENDIX C

## LABORATORY ANALYTICAL REPORTS



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 18, 2018

Austin Weyant  
Souder, Miller & Associates  
201 S Halagueno  
Carlsbad, NM 88221  
TEL: (575) 689-7040  
FAX

RE: Bar None

OrderNo.: 1810662

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 7 sample(s) on 10/11/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1810662

Date Reported: 10/18/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: CSW 1

Project: Bar None

Collection Date: 10/9/2018 10:00:00 AM

Lab ID: 1810662-001

Matrix: SOIL

Received Date: 10/11/2018 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: smb
Chloride	99	30		mg/Kg	20	10/16/2018 12:15:50 PM	41028
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: lrm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/12/2018 2:27:09 PM	40959
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/12/2018 2:27:09 PM	40959
Surr: DNOP	74.6	50.6-138		%Rec	1	10/12/2018 2:27:09 PM	40959
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/12/2018 5:45:22 PM	40955
Surr: BFB	88.9	15-316		%Rec	1	10/12/2018 5:45:22 PM	40955
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/12/2018 5:45:22 PM	40955
Toluene	ND	0.049		mg/Kg	1	10/12/2018 5:45:22 PM	40955
Ethylbenzene	ND	0.049		mg/Kg	1	10/12/2018 5:45:22 PM	40955
Xylenes, Total	ND	0.097		mg/Kg	1	10/12/2018 5:45:22 PM	40955
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	10/12/2018 5:45:22 PM	40955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Page 1 of 12

Analytical Report  
Lab Order 1810662  
Date Reported: 10/18/2018

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: CSW 2

Project: Bar None

Collection Date: 10/9/2018 10:05:00 AM

Lab ID: 1810662-002

Matrix: SOIL

Received Date: 10/11/2018 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	30		mg/Kg	20	10/16/2018 12:53:05 PM	41028
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: lrm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/12/2018 3:56:00 PM	40959
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/12/2018 3:56:00 PM	40959
Surr: DNOP	61.3	50.6-138		%Rec	1	10/12/2018 3:56:00 PM	40959
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2018 6:53:11 PM	40955
Surr: BFB	93.8	15-316		%Rec	1	10/12/2018 6:53:11 PM	40955
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/12/2018 6:53:11 PM	40955
Toluene	ND	0.047		mg/Kg	1	10/12/2018 6:53:11 PM	40955
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2018 6:53:11 PM	40955
Xylenes, Total	ND	0.095		mg/Kg	1	10/12/2018 6:53:11 PM	40955
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	10/12/2018 6:53:11 PM	40955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Page 2 of 12

## Analytical Report

Lab Order 1810662

Date Reported: 10/18/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: CSW 3

Project: Bar None

Collection Date: 10/9/2018 11:01:00 AM

Lab ID: 1810662-003

Matrix: SOIL

Received Date: 10/11/2018 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: smb
Chloride	ND	30		mg/Kg	20	10/16/2018 1:05:30 PM	41028
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: lrm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/12/2018 4:18:08 PM	40959
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/12/2018 4:18:08 PM	40959
Surr: DNOP	67.2	50.6-138		%Rec	1	10/12/2018 4:18:08 PM	40959
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/12/2018 8:01:04 PM	40955
Surr: BFB	90.3	15-316		%Rec	1	10/12/2018 8:01:04 PM	40955
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	10/12/2018 8:01:04 PM	40955
Toluene	ND	0.049		mg/Kg	1	10/12/2018 8:01:04 PM	40955
Ethylbenzene	ND	0.049		mg/Kg	1	10/12/2018 8:01:04 PM	40955
Xylenes, Total	ND	0.098		mg/Kg	1	10/12/2018 8:01:04 PM	40955
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	10/12/2018 8:01:04 PM	40955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Page 3 of 12

## Analytical Report

Lab Order 1810662

Date Reported: 10/18/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: CSW 4

Project: Bar None

Collection Date: 10/9/2018 10:15:00 AM

Lab ID: 1810662-004

Matrix: SOIL

Received Date: 10/11/2018 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: smb
Chloride	ND	30		mg/Kg	20	10/16/2018 1:17:54 PM	41028
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: lrm
Diesel Range Organics (DRO)	11	9.9		mg/Kg	1	10/12/2018 4:40:13 PM	40959
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/12/2018 4:40:13 PM	40959
Surr: DNOP	74.5	50.6-138		%Rec	1	10/12/2018 4:40:13 PM	40959
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/12/2018 8:23:45 PM	40955
Surr: BFB	90.9	15-316		%Rec	1	10/12/2018 8:23:45 PM	40955
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	10/12/2018 8:23:45 PM	40955
Toluene	ND	0.050		mg/Kg	1	10/12/2018 8:23:45 PM	40955
Ethylbenzene	ND	0.050		mg/Kg	1	10/12/2018 8:23:45 PM	40955
Xylenes, Total	ND	0.099		mg/Kg	1	10/12/2018 8:23:45 PM	40955
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	10/12/2018 8:23:45 PM	40955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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## Analytical Report

Lab Order 1810662

Date Reported: 10/18/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: CBH 1

Project: Bar None

Collection Date: 10/9/2018 10:30:00 AM

Lab ID: 1810662-005

Matrix: SOIL

Received Date: 10/11/2018 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: smb
Chloride	ND	30		mg/Kg	20	10/16/2018 1:30:18 PM	41028
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: lrm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/12/2018 5:02:06 PM	40959
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/12/2018 5:02:06 PM	40959
Surr: DNOP	83.6	50.6-138		%Rec	1	10/12/2018 5:02:06 PM	40959
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2018 8:46:23 PM	40955
Surr: BFB	90.7	15-316		%Rec	1	10/12/2018 8:46:23 PM	40955
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	10/12/2018 8:46:23 PM	40955
Toluene	ND	0.047		mg/Kg	1	10/12/2018 8:46:23 PM	40955
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2018 8:46:23 PM	40955
Xylenes, Total	ND	0.093		mg/Kg	1	10/12/2018 8:46:23 PM	40955
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	10/12/2018 8:46:23 PM	40955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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## QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1810662

18-Oct-18

Client: Souder, Miller &amp; Associates

Project: Bar None

Sample ID	LCS-40959	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics						
Client ID:	LCSS	Batch ID:	40959	RunNo:	54831						
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1822521	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	42	10	50.00	0	83.7	70	130				
Surr: DNOP	4.6		5.000		91.7	50.6	138				

Sample ID	MB-40959	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics						
Client ID:	PBS	Batch ID:	40959	RunNo:	54831						
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1822522	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	8.9		10.00		89.0	50.6	138				

Sample ID	1810662-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics						
Client ID:	CSW 1	Batch ID:	40959	RunNo:	54831						
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1822526	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	48	9.5	47.53	0	100	53.5	126				
Surr: DNOP	4.2		4.753		87.7	50.6	138				

Sample ID	1810662-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics						
Client ID:	CSW 1	Batch ID:	40959	RunNo:	54831						
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1822527	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	46	9.4	47.13	0	96.7	53.5	126	4.17	21.7		
Surr: DNOP	3.3		4.713		70.0	50.6	138	0	0		

Sample ID	LCS-41021	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics						
Client ID:	LCSS	Batch ID:	41021	RunNo:	54899						
Prep Date:	10/16/2018	Analysis Date:	10/16/2018	SeqNo:	1824731	Units:	%Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	3.2		5.000		64.4	50.6	138				

Sample ID	MB-41021	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics						
Client ID:	PBS	Batch ID:	41021	RunNo:	54899						
Prep Date:	10/16/2018	Analysis Date:	10/16/2018	SeqNo:	1824732	Units:	%Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| PQL Practical Quantitative Limit                        | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

## QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1810662

18-Oct-18

Client: Souder, Miller &amp; Associates

Project: Bar None

Sample ID	MB-41021	SampType:	MBLK			TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	41021			RunNo:	54899				
Prep Date:	10/16/2018	Analysis Date:	10/16/2018			SeqNo:	1824732	Units:	%Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	7.2		10.00		72.4	50.6	138				

## Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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## QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1810662

18-Oct-18

Client: Souder, Miller &amp; Associates

Project: Bar None

Sample ID	1810662-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	CSW 1	Batch ID:	40955	RunNo:	54829					
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1823257	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.9	24.68	0	104	77.8	128			
Surr: BFB	1100		987.2		114	15	316			

Sample ID	1810662-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	CSW 1	Batch ID:	40955	RunNo:	54829					
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1823258	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.41	0	99.5	77.8	128	5.75	20	
Surr: BFB	1100		976.6		110	15	316	0	0	

Sample ID	LCS-40955	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	40955	RunNo:	54829					
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1823271	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.4	75.9	131			
Surr: BFB	1100		1000		105	15	316			

Sample ID	MB-40955	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	40955	RunNo:	54829					
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1823272	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		92.7	15	316			

## Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1810662

18-Oct-18

Client: Souder, Miller &amp; Associates

Project: Bar None

Sample ID	1810662-002AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	CSW 2	Batch ID:	40955	RunNo:	54829					
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1823401	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.024	0.9407	0.004290	118	68.5	133			
Toluene	1.1	0.047	0.9407	0.003362	121	75	130			
Ethylbenzene	1.1	0.047	0.9407	0	119	79.4	128			
Xylenes, Total	3.3	0.094	2.822	0	117	77.3	131			
Surr: 4-Bromofluorobenzene	1.0		0.9407		108	80	120			

Sample ID	1810662-002AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	CSW 2	Batch ID:	40955	RunNo:	54829					
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1823402	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.024	0.9443	0.004290	118	68.5	133	0.0833	20	
Toluene	1.1	0.047	0.9443	0.003362	121	75	130	0.304	20	
Ethylbenzene	1.1	0.047	0.9443	0	118	79.4	128	0.924	20	
Xylenes, Total	3.3	0.094	2.833	0	117	77.3	131	0.774	20	
Surr: 4-Bromofluorobenzene	1.0		0.9443		107	80	120	0	0	

Sample ID	LCS-40955	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	40955	RunNo:	54829					
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1823414	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	108	77.3	128			
Toluene	1.1	0.050	1.000	0	110	79.2	125			
Ethylbenzene	1.1	0.050	1.000	0	106	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	104	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	MB-40955	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	40955	RunNo:	54829					
Prep Date:	10/11/2018	Analysis Date:	10/12/2018	SeqNo:	1823415	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1810862

ReptNo: 1

Received By: Victoria Zellar 10/11/2018 8:50:00 AM

Completed By: Erin Melendrez 10/11/2018 10:12:46 AM

Reviewed By:

LB: IO 10/11/18

## Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐  
2. How was the sample delivered? Courier

## Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐  
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐  
5. Sample(s) in proper container(s)? Yes ☒ No ☐  
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐  
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐  
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐  
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒  
10. Were any sample containers received broken? Yes ☐ No ☒  
11. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐  
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐  
13. Is it clear what analyses were requested? Yes ☒ No ☐  
14. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved bottles checked for pH: IO 10/11/18  
( $<2$  or  $>12$  unless noted)  
Adjusted? ☐  
Checked by: [Signature]

## Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Austin Weyant Date: 10/11/18  
By Whom: Ashley Gallegos Via: ☒ eMail ☐ Phone ☐ Fax ☐ In Person  
Regarding: Collection date on jars read 10/09/18, CDC reads 10/09/18  
Client Instructions: Samples were collected 10/09/18

16. Additional remarks:

## 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Yes			



1RP-4574

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Juhad Oil, LLC	Contact James Campanella
Address P.O. Box 568	Telephone No. 575-748-1280
Facility Name Barr None Federal #1	Facility Type Oil Well
Surface Owner BLM	Mineral Owner BLM
API No. 30-025-32221	

#### LOCATION OF RELEASE

Unit Letter E	Section 10	Township 22S	Range 32E	Feet from the 1980'	North/South Line North	Feet from the 660'	East/West Line West	County Lea
------------------	---------------	-----------------	--------------	------------------------	---------------------------	-----------------------	------------------------	---------------

Latitude 32.407936° Longitude -103.668888°

#### NATURE OF RELEASE

Type of Release Crude oil and Produced water	Volume of Release 12 bbl oil, 30 bbl produced water	Volume Recovered 0 bbl oil, 0 bbl produced water
Source of Release Broken Flowline	Date and Hour of Occurrence 11-8-16, 11:00 am	Date and Hour of Discovery 11-8-16, 9:00 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Division 1	
By Whom? James B Campanella	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

**RECEIVED**

By Olivia Yu at 3:48 pm, Feb 03, 2017

If a Watercourse was Impacted, Describe Fully.\*

No

Describe Cause of Problem and Remedial Action Taken.\*

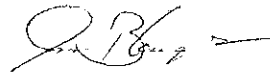
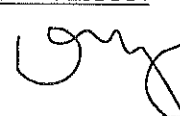
A flow line boke causing fluids to leak on pad and over old drill pit.

Describe Area Affected and Cleanup Action Taken.\*

The affected area was to be 220 feet long by 35 feet wide. Samples will be taken and work plan submitted for clean up.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

#### OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist: 	
Printed Name: James B Campanella		
Title: Member/ Manager	Approval Date: 2/3/2017	Expiration Date:
E-mail Address: jbc@judahoil.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>
Date: re submitted 1/23/17	Phone:	

\* Attach Additional Sheets If Necessary

1RP-4574

pOY1703457251

nOY1703457016

**From:** Tucker, Shelly  
**To:** [Yu, Olivia, EMNRD](#)  
**Cc:** [Lucas Middleton](#); [jbc@judahoil.com](mailto:jbc@judahoil.com); [Oberding, Tomas, EMNRD](#)  
**Subject:** Re: Closure approval request BARR NONE FEDERAL #1, 1RP-4574  
**Date:** Monday, March 13, 2017 1:08:29 PM  
**Attachments:** image001.png

---

Lucas,

BLM accepts your closure request as written and will close this release in our system.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

*Shelly J Tucker*

Environmental Protection Specialist  
O&G Spill/Release Coordinator

Bureau of Land Management  
620 E. Greene St  
Carlsbad, NM 88220

575.234.5905 - Direct  
575.361.0084 - Cellular  
575.234.6235 - Emergency Spill Number

[stucker@blm.gov](mailto:stucker@blm.gov)

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

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On Tue, Mar 7, 2017 at 3:37 PM, Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)> wrote:

Dear Mr. Middleton:

NMOCD requests that a complete delineation occur at L7, which is in a drill pit. Therefore, this incident 1RP-4574 remains open. NMOCD's position is that any spill, which occurred

**From:** Yu, Olivia, EMNRD  
**To:** "Lucas Middleton"; "jbc@judahoil.com"  
**Cc:** Oberding, Tomas, EMNRD; "Tucker, Shelly"  
**Subject:** RE: Closure approval request BARR NONE FEDERAL #1, 1RP-4574  
**Date:** Tuesday, March 7, 2017 3:37:00 PM  
**Attachments:** image001.png

Dear Mr. Middleton:

NMOCD requests that a complete delineation occur at L7, which is in a drill pit. Therefore, this incident 1RP-4574 remains open. NMOCD's position is that any spill, which occurred over an existing pit, must be delineated and remediated.

Olivia Yu  
 Environmental Specialist  
 NMOCD, District I  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)  
 575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

**From:** Yu, Olivia, EMNRD  
**Sent:** Monday, March 6, 2017 11:13 AM  
**To:** 'Lucas Middleton' <lucas.middleton@soudermiller.com>; 'jbc@judahoil.com' <jbc@judahoil.com>  
**Cc:** Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>; Tucker, Shelly <stucker@blm.gov>  
**Subject:** RE: Closure approval request BARR NONE FEDERAL #1, 1RP-4574

Dear Mr. Middleton:

I have reviewed the closure report for 1RP-4574 although the delineation workplan was not approved beforehand. The report indicated that bottom and sidewall confirmation samples were taken before backfilling. Were the samples sent to a laboratory for analyses? Of particular concern is L7. Please inspect the liner. The Responsible Party needs to provide NMOCD with a concise report of the inspection with affirmation the liner has and will continue to contain liquids.

Thanks,

Olivia Yu  
 Environmental Specialist  
 NMOCD, District I

[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)

575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

**From:** Lucas Middleton [<mailto:lucas.middleton@soudermiller.com>]

**Sent:** Tuesday, February 14, 2017 9:15 AM

**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>

**Cc:** Oberding, Tomas, EMNRD <[Tomas.Oberding@state.nm.us](mailto:Tomas.Oberding@state.nm.us)>; Tucker, Shelly <[stucker@blm.gov](mailto:stucker@blm.gov)>

**Subject:** Closure approval request BARR NONE FEDERAL #1, 1RP-4574

Olivia Yu,

I have attached a closure report for approval on a Judah Oil, LLC location named the BARR NONE FEDERAL #1 , 1RP-4574, API# 30-025-32221, LEA COUNTY, NEW MEXICO .

Call or Email with any question or comments.

Thank you and have a great day

Lucas Middleton

Staff Scientist

(575) 689-5351 (mobile)



Souder, Miller & Associates

Engineering Environmental Surveying

201 S. Halagueno

Carlsbad, NM 88220

[www.soudermiller.com](http://www.soudermiller.com)

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Document: C:\Users\lrm.CBO\Documents\GIS DATA\MAPS\Barr none Figure 2.mxd



Detailed Site and Sample Map  
Barr None Federal #1- Judah Oil  
Loving, New Mexico

Date Saved: 2/7/2017		Revisions		Drawn <u>Lucas Middleton</u>	
By: _____	Date: _____	Descr: _____		Checked _____	
By: _____	Date: _____	Descr: _____		Approved _____	
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Table 2: Summary of Chloride Field Screening Results

Barr None Federal #1  
 Sample Event  
 12/13/2016

FIELD SCREENING RESULTS SUMMARY					
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	Chlorides Results	Lab Sample Collected Y/N
12/13/2016	10:00	L1	Surface	256	Y
12/13/2016	10:00	L2	Surface	244	Y
12/13/2016	10:00	L3	Surface	632	Y
12/13/2016	10:00	L5	Surface	575	Y
12/13/2016	10:00	L7	Surface	2870	Y
12/12/2016	10:00	D2-3	3 Feet	301	Y
12/12/2016	10:00	D2-2	2 Feet	313	Y
12/13/2016	10:00	L4	Surface	667	Y
12/13/2016	10:00	L6	Surface	530	Y



SMA Project #5B24624 BG21

**Table 3: Summary of Laboratory Analyses**

Analytical Report- 1612A79	Sample Number on Figure 1 Map	Sample Date	Depth	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	Cl- mg/Kg
1612B63-001	L1	12/13/2016	Surface	N/A	N/A	N/A	N/A	170
1612B63-002	L2	12/13/2016	Surface	N/A	N/A	N/A	N/A	210
1612B63-003	L3	12/13/2016	Surface	NA	N/A	N/A	N/A	290
1612B63-004	L5	12/13/2016	Surface	N/A	N/A	N/A	N/A	72
1612B63-005	L7	12/13/2016	Surface	N/A	N/A	N/A	N/A	4,500
1612B63-006	D2-3	12/13/2016	3 Feet	<0.055	<0.024	<4.9	<9.2	420
1612B63-007	D2-2	12/13/2016	2 Feet	N/A	N/A	N/A	N/A	230
1612B63-008	L4	12/13/2016	Surface	N/A	N/A	N/A	N/A	35
1612B63-009	L6	12/13/2016	Surface	N/A	N/A	N/A	N/A	600

Analytical Report  
 Lab Order 1612B53  
 Date Reported: 1/6/2017

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Souder, Miller & Associates **Client Sample ID:** L7  
**Project:** Barr None **Collection Date:** 12/13/2016 10:00:00 AM  
**Lab ID:** 1612B53-005 **Matrix:** SOIL **Received Date:** 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: MRA
Chloride	4500	150		mg/Kg	100	1/3/2017 1:32:17 PM	29432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# INFORMATION ONLY



Photo 1: Location Sign

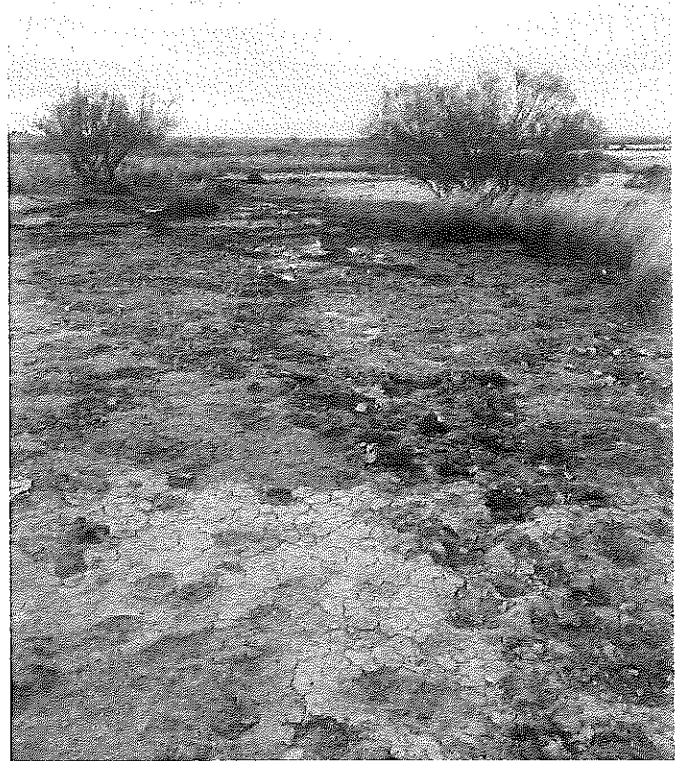


Photo 2: Release Area over pit

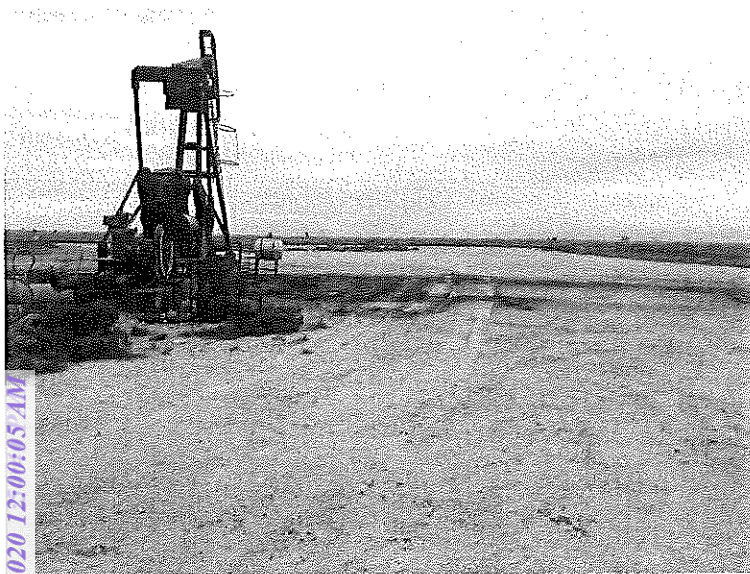


Photo 3: Release Area on pad



Photo 4: Spill Pile



Photo 5: Release Area over pit

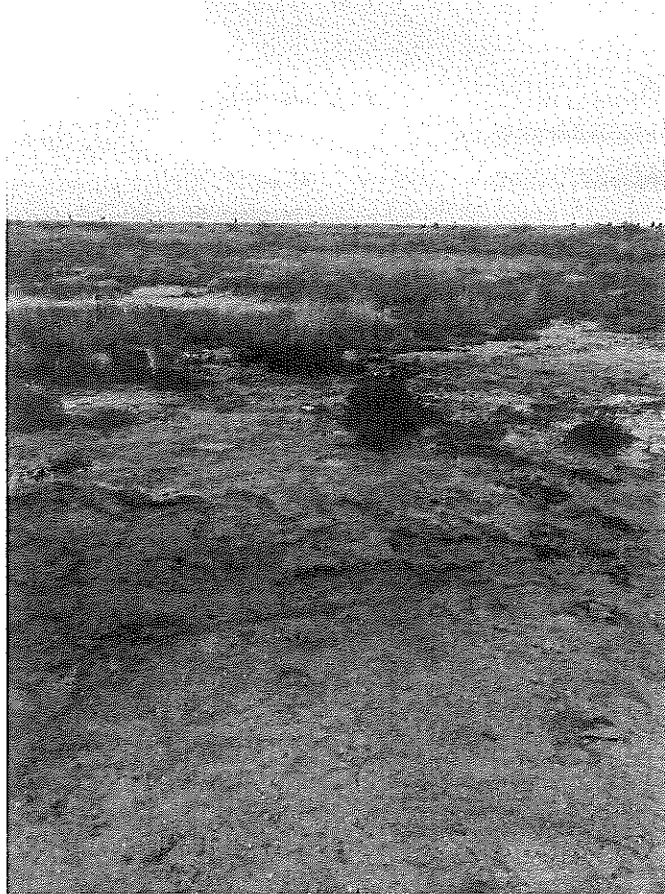


Photo 6: Release Area over pit



Photo 7: Excavation Activity's



Photo 8: Liner Spot 1



Photo 9: Liner Spot 2



Souder, Miller & Associates ♦ 201 S. Halagueno ♦ Carlsbad, NM 88221  
(575) 689-7040

February 7, 2017

#5B25501-BG4

NMOCD District I  
Olivia Yu  
1625 N. French Dr.  
Hobbs, NM 88240

SUBJECT: FINAL CLOSURE REPORT FOR INCIDENT, BARR NONE FEDERAL #1  
UNIT E SECTION 10-T22S-R32E NMPM, API# 30-025-32221, LEA COUNTY, NEW MEXICO

Dear Olivia Yu:

On behalf Judah Oil, LLC, Souder Miller & Associates (SMA) is pleased to submit Final Closure Report summarizing the remediation of the release site located at the Barr None Federal #1 in Lea County, New Mexico. The purpose of this Final Closure is to obtain closure from the New Mexico Oil Conservation Division (NMOCD) for the remediation of the release that occurred on Bureau of Land Management land.

SMA responded on December 3, 2016 at the request of Judah Oil, to assess and delineate the release of production fluids associated with the Barr None Federal #1 well location. The release was initially reported to NMOCD by Judah Oil. The table below summarizes information regarding the release. Results of the assessment and delineation are described in the following Soil Remediation Workplan.

Table 1: Release information and Site Ranking					
Name	Barr None Federal #1				
Location	Incident Number	API Number	Section, Township, Range		
	1RP-4574	30-025-32221	SW/NE (Unit )	Section 10	T22 S, R 32E NMPM
Estimated Date of Release	January 8, 2016				
Date Reported to NMOCD	January 23, 2017				
Reported by	James Campanella				
Land Owner	Bureau of Land Management				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Flowline break				
Released Material	Produced Water and Crude Oil				
Released Volume	30 bbls Produced Water and 12 bbls Crude Oil				
Recovered Volume	0 bbls Produced Water and 0 bbls Crude Oil				



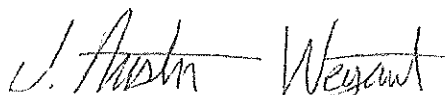
Net Release	30 bbls Produced Water and 12 bbls Crude Oil
Nearest Waterway	18.8 miles west of the location
Depth to Groundwater	Estimated to be 300 feet
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	0
SMA Response Dates	Initial: Mitigation Activities:
Subcontractors	MMX
Disposal Facility	TBD
Estimated Yd <sup>3</sup> Contaminated Soil Excavated and Disposed	110

Attached is a copy of the C-141 initial located in Appendix B. For questions or comments pertaining to the release or the attached work plan please feel free to contact either of us.

Submitted by:

Reviewed by:

SOUDER, MILLER & ASSOCIATES



Austin Weyant  
Project Scientist

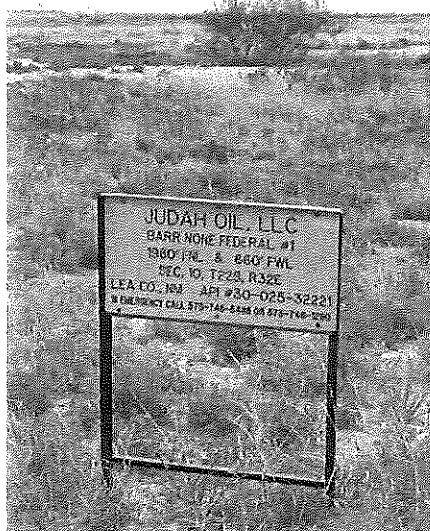


Shawna Chubbuck  
Senior Scientist

# SOIL REMEDIATION FINAL CLOSURE REPORT FOR INCIDENT 1RP-TBD

JUDAH OIL, LLC

BARR NONE FEDERAL #1  
UL E, SECTION 10, T22S R32E, NMPM  
API #30-025-32221  
LEA COUNTY, NM



Prepared for:  
Judah Oil, LLC  
611 West Mahone Drive # D  
Artesia, NM 88210  
Phone: (575) 746-1280

Prepared by:  
Souder, Miller & Associates  
201 S. Halagueno  
Carlsbad, NM 88221  
575-689-7040

February 7, 2017  
SMA Reference  
5B25501-BG4

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2.0 Site Ranking and Land Jurisdiction ..... 3

3.0 Assessment and Initial Results ..... 3

4.0 Soil Remediation Summary ..... 3

5.0 Conclusions and Recommendations..... Error! Bookmark not defined.

6.0 Closure and Limitations ..... 4

**Figures:**

- Figure 1: Vicinity Map
- Figure 2: Detailed Site and Sample Map

**Tables:**

- Table 1: Release Information and Site Ranking
- Table 2: Summary Chloride Field Screening Results
- Table 3: Summary of Laboratory Analyses

**Appendices:**

- Appendix A: Laboratory Analytical Reports
- Appendix B: Form C141 Final

## **1.0 Introduction**

On behalf of Judah Oil, LLC, Souder, Miller & Associates (SMA) has prepared this report that describes the assessment, initial delineation and remediation actions for a release associated with the Barr None Federal #1 location API# 30-025-32221. The site is located in Section 10, Township 22S, Range 32E NMPM, Lea County, New Mexico, on Bureau of Land Management property. Figure 1 illustrates the vicinity and location of the site.

## **2.0 Site Ranking and Land Jurisdiction**

The release site is located approximately 11.5 miles east of Pecos River, with an elevation of approximately 3,805 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be 350 feet below ground surface (bgs).

SMA searched the New Mexico State Engineer's Office online water well database for water wells in the vicinity of the release. Zero wells are located within a one-mile radius of the site. Figure 1 depicts the site vicinity and Figure 2 shows the site itself. The physical location of this release is within the jurisdiction of NMOCD.

Based on the NMOCD Guidelines Ranking Criteria, this release location has been assigned a NMOCD ranking of 0 which requires a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 5000 ppm total petroleum hydrocarbons (TPH). Table 1 illustrates site ranking rationale.

## **3.0 Assessment and Initial Results**

On November 9, 2016 after receiving 811 clearance, SMA field personnel assessed the release area with soil samples collected using a gas powered auger. Samples were screened for hydrocarbons using a calibrated Photo Ionization Detector (PID), and for chlorides using a mobile chlorides titration kit (EPA method 9045D) meter. Field screening results are included in Table 2. The potentially affected area was determined to be approximately 140 feet long and 20 feet wide. The site delineation samples were taken to depths of 1.5 feet bgs. In the north area of the spill over the old pit a plastic liner was found at 8 inches bgs. Samples indicate the impacted soil does not appear to extend past one foot bgs. Specific sample locations for all samples are depicted on Figure 2 (Sample Location Map). All samples were collected and processed according to NMOCD soil sampling procedures. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analyses of BTEX (EPA Method 8021B), TPH (EPA Method 8015) and/or total chlorides (EPA Method 300.0).

Soil contaminant concentrations found during the initial delineation are included in Table 3. Laboratory reports are included in Appendix A. Photo documentation is available by request.

## **4.0 Soil Remediation Summary**

Judah and its subcontractors excavated the affected soils, with approval from area utilities owners via 811. SMA continuously guide the excavation activities by collecting composite soil samples for field screening with a mobile titration unit (NRCS1:1) and a calibrated PID. Excavation occur to depths to sufficient to delineate the plume, which was estimated to be 1 feet bgs. Excavation on

the pad was done to remove all the affected soils to 1 foot bgs. Excavation occurred in the north area over the old drill pit no more than 6" bgs to protect the underlying liner for the pit. Closure samples were collected at the final depth of excavation and sidewalls. Approximately 110 cubic yards of contaminated soil was removed and replaced with clean backfill material sufficient to return the contours to surface gradient. The contaminated soil was transported for proper disposal at an NMOCD permitted facility.

## **5.0 Conclusions and Recommendations**

NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 0: 10 ppm (mg/kg) Benzene, 50 ppm total BTEX, and 5000 ppm TPH.

Laboratory analytical results for the closure sample collected was below NMOCD closure standards for benzene, BTEX, and TPH. Chlorides ranged from below detection limits (30 mg/Kg) to 3,500 mg/Kg. No further remedial activities are recommended. Soil sample locations are illustrated in Figure 2. A summary of laboratory analytical results is included in Table 3. Laboratory reports are included in Appendix A.

## **6.0 Limitations**

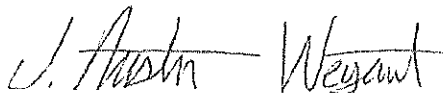
The scope of our services consisted of the performance of initial spill assessment sampling, verification of release stabilization, regulatory liaison, and preparation of this Closure Document. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact either Austin Weyant at 575-689-7040 or Cindy Gray at 505-325-7535.


Submitted by:

Reviewed by:

SOUDER, MILLER & ASSOCIATES



Austin Weyant  
Project Scientist



Shawna Chubbuck  
Senior Scientist

Barr None Federal #1 Closure  
SMA Ref #5B24624-BG16  
2/7/17

**Figures:**

Figure 1: Vicinity Map

Figure 2: Detailed Site and Sample Map

**Tables:**

Table 1: Release Information and Site Ranking

Table 2: Summary of Chloride Field Screening Results

Table 3: Summary of Laboratory Analyses

**Appendices:**

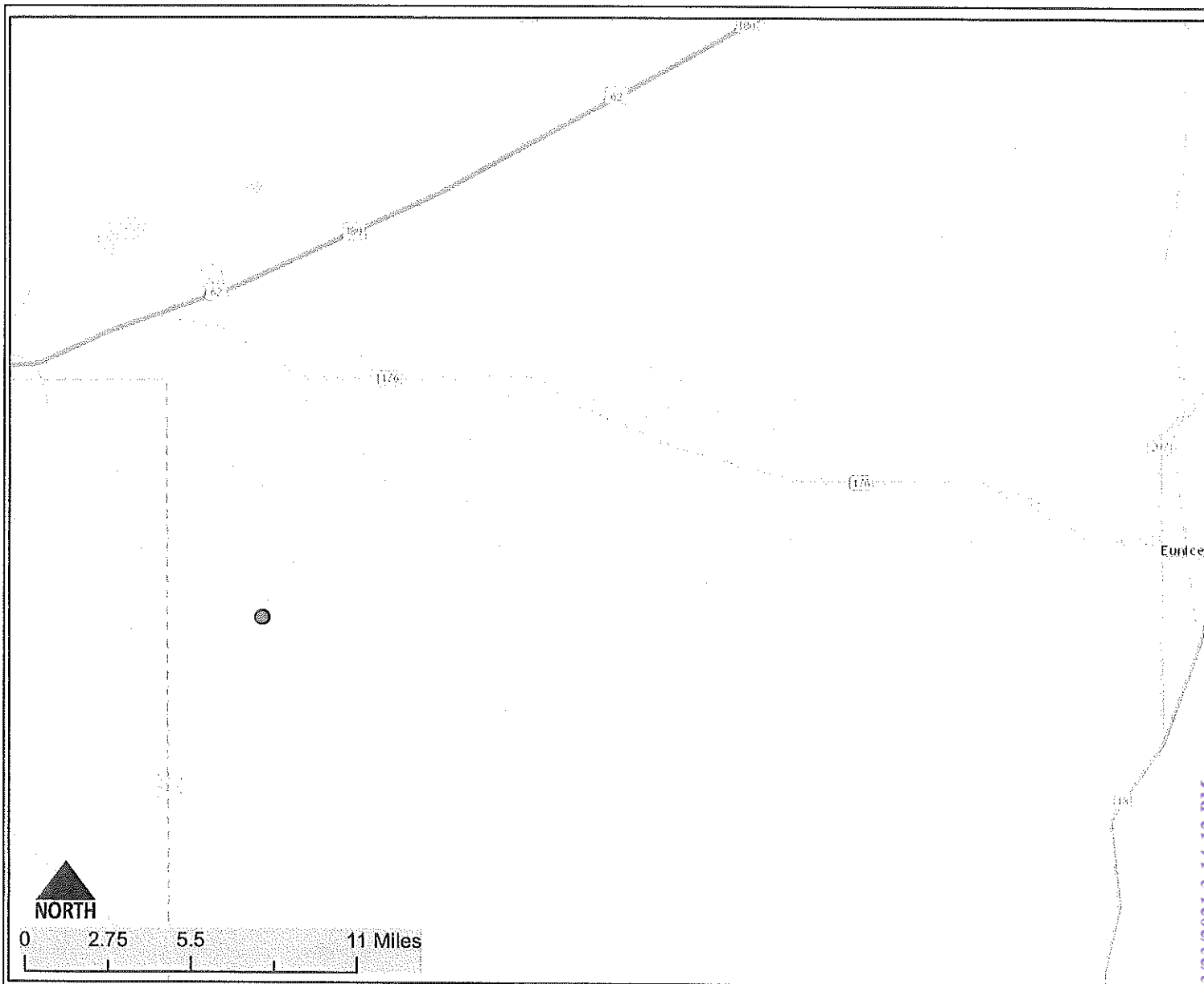
Appendix A: Laboratory Analytical Reports

Appendix B: Form C141 Final

Barr None Federal #1 Closure  
SMA Ref #5B24624-BG16  
2/7/17

# FIGURE 1 VICINITY MAP

Document: C:\Users\slcm.CBO\Documents\GIS DATA\MAPS\Barr None Figure1.mxd



Vicinity Map  
Barr None Federal #1- Judah Oil  
Eunice, New Mexico

Revisions		
By: _____	Date: _____	Descr: _____
By: _____	Date: _____	Descr: _____

Drawn	Lucas Middleton
Checked	_____
Approved	_____



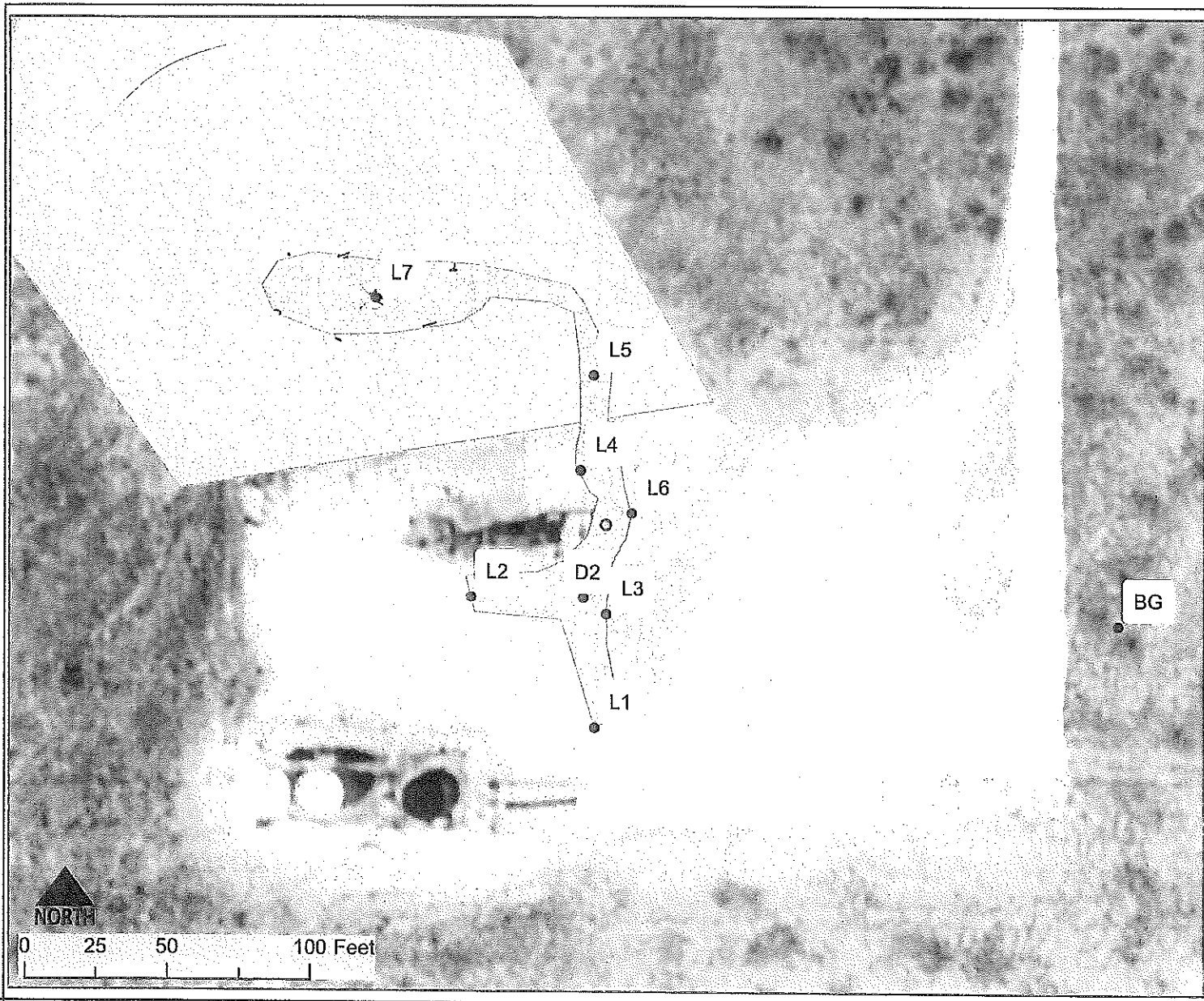
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Barr None Federal #1 Closure  
SMA Ref #5B24624-BG16  
2/7/17

## FIGURE 2

# DETAILED SITE AND SAMPLE MAP



Detailed Site and Sample Map  
Barr None Federal #1- Judah Oil  
Loving, New Mexico

Revisions			Drawn <u>Lucas Middleton</u> Checked _____ Approved _____		20 Ca Serving th
By: _____	Date: _____	Descr: _____			
By: _____	Date: _____	Descr: _____			
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# TABLE 1

## RELEASE INFORMATION AND SITE RANKING

Table 1: Release information and Site Ranking					
Name	Barr None Federal #1				
Location	Incident Number	API Number	Section, Township, Range		
	1RP-4574	30-025-32221	SW/NE (Unit )	Section 10	T22 S, R 32E NMPM
Estimated Date of Release	January 8, 2016				
Date Reported to NMOCD	January 23, 2017				
Reported by	James Campanella				
Land Owner	Bureau of Land Management				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Flowline break				
Released Material	Produced Water and Crude Oil				
Released Volume	30 bbls Produced Water and 12 bbls Crude Oil				
Recovered Volume	0 bbls Produced Water and 0 bbls Crude Oil				
Net Release	30 bbls Produced Water and 12 bbls Crude Oil				
Nearest Waterway	18.8 miles west of the location				
Depth to Groundwater	Estimated to be 300 feet				
Nearest Domestic Water Source	Greater than 1,000 feet				
NMOCD Ranking	0				
SMA Response Dates	Initial: Mitigation Activities:				
Subcontractors	MMX				
Disposal Facility	TBD				
Estimated Yd <sup>3</sup> Contaminated Soil Excavated and Disposed	110				

## TABLE 2

# SUMMARY OF CHLORIDE FIELD SCREENING RESULTS

Table 2: Summary of Chloride Field Screening Results

Barr None Federal #1  
Sample Event  
12/13/2016

FIELD SCREENING RESULTS SUMMARY					
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	Chlorides Results	Lab Sample Collected Y/N
12/13/2016	10:00	L1	Surface	256	Y
12/13/2016	10:00	L2	Surface	244	Y
12/13/2016	10:00	L3	Surface	632	Y
12/13/2016	10:00	L5	Surface	575	Y
12/13/2016	10:00	L7	Surface	2870	Y
12/12/2016	10:00	D2-3	3 Feet	301	Y
12/12/2016	10:00	D2-2	2 Feet	313	Y
12/13/2016	10:00	L4	Surface	667	Y
12/13/2016	10:00	L6	Surface	530	Y



Barr None Federal #1 Closure  
SMA Ref #5B24624-BG16  
2/7/17

## TABLE 3

# SUMMARY OF LABORATORY ANALYSES

**Table 3: Summary of Laboratory Analyses**

Analytical Report- 1612A79	Sample Number on Figure 1 Map	Sample Date	Depth	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	Cl- mg/Kg
1612B63-001	L1	12/13/2016	Surface	N/A	N/A	N/A	N/A	170
1612B63-002	L2	12/13/2016	Surface	N/A	N/A	N/A	N/A	210
1612B63-003	L3	12/13/2016	Surface	NA	N/A	N/A	N/A	290
1612B63-004	L5	12/13/2016	Surface	N/A	N/A	N/A	N/A	72
1612B63-005	L7	12/13/2016	Surface	N/A	N/A	N/A	N/A	4,500
1612B63-006	D2-3	12/13/2016	3 Feet	<0.055	<0.024	<4.9	<9.2	420
1612B63-007	D2-2	12/13/2016	2 Feet	N/A	N/A	N/A	N/A	230
1612B63-008	L4	12/13/2016	Surface	N/A	N/A	N/A	N/A	35
1612B63-009	L6	12/13/2016	Surface	N/A	N/A	N/A	N/A	600

Barr None Federal #1 Closure  
SMA Ref #5B24624-BG16  
2/7/17

# APPENDIX A LABORATORY ANALYTICAL REPORTS



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

January 06, 2017

Austin Weyant  
Souder, Miller & Associates  
201 S Halagueno  
Carlsbad, NM 88221  
TEL: (575) 689-7040  
FAX

RE: Barr None

OrderNo.: 1612B53

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 9 sample(s) on 12/20/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report  
 Lab Order 1612B53  
 Date Reported: 1/6/2017

# Hall Environmental Analysis Laboratory, Inc.

<b>CLIENT:</b> Souder, Miller & Associates		<b>Client Sample ID:</b> L1
<b>Project:</b> Barr None		<b>Collection Date:</b> 12/13/2016 10:00:00 AM
<b>Lab ID:</b> 1612B53-001	<b>Matrix:</b> SOIL	<b>Received Date:</b> 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	170	30		mg/Kg	20	12/28/2016 4:11:45 PM	29432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report  
 Lab Order 1612B53  
 Date Reported: 1/6/2017

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L2

Project: Barr None

Collection Date: 12/13/2016 10:00:00 AM

Lab ID: 1612B53-002

Matrix: SOIL

Received Date: 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	210	30		mg/Kg	20	12/28/2016 4:48:59 PM	29432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report  
 Lab Order 1612B53  
 Date Reported: 1/6/2017

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Souder, Miller & Associates **Client Sample ID:** L3  
**Project:** Barr None **Collection Date:** 12/13/2016 10:00:00 AM  
**Lab ID:** 1612B53-003 **Matrix:** SOIL **Received Date:** 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	290	30		mg/Kg	20	12/28/2016 5:01:23 PM	29432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report  
 Lab Order 1612B53  
 Date Reported: 1/6/2017

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Souder, Miller & Associates **Client Sample ID:** L5  
**Project:** Barr None **Collection Date:** 12/13/2016 10:00:00 AM  
**Lab ID:** 1612B53-004 **Matrix:** SOIL **Received Date:** 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	72	30		mg/Kg	20	12/28/2016 5:13:48 PM	29432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Analytical Report

Lab Order 1612B53

Date Reported: 1/6/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: D2-3

Project: Barr None

Collection Date: 12/13/2016 10:00:00 AM

Lab ID: 1612B53-006

Matrix: SOIL

Received Date: 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	420	30		mg/Kg	20	12/28/2016 5:38:38 PM	29432
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	12/28/2016 1:01:51 PM	29384
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/28/2016 1:01:51 PM	29384
Surr: DNOP	93.8	70-130		%Rec	1	12/28/2016 1:01:51 PM	29384
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/27/2016 10:25:59 AM	29391
Surr: BFB	96.3	68.3-144		%Rec	1	12/27/2016 10:25:59 AM	29391
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	12/27/2016 10:25:59 AM	29391
Toluene	ND	0.049		mg/Kg	1	12/27/2016 10:25:59 AM	29391
Ethylbenzene	ND	0.049		mg/Kg	1	12/27/2016 10:25:59 AM	29391
Xylenes, Total	ND	0.098		mg/Kg	1	12/27/2016 10:25:59 AM	29391
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	12/27/2016 10:25:59 AM	29391

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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## Analytical Report

Lab Order 1612B53

Date Reported: 1/6/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: D2-2

Project: Barr None

Collection Date: 12/13/2016 10:00:00 AM

Lab ID: 1612B53-007

Matrix: SOIL

Received Date: 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	230	30		mg/Kg	20	12/28/2016 9:35:05 PM	29448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report  
 Lab Order 1612B53  
 Date Reported: 1/6/2017

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Souder, Miller & Associates **Client Sample ID:** L4  
**Project:** Barr None **Collection Date:** 12/13/2016 10:00:00 AM  
**Lab ID:** 1612B53-008 **Matrix:** SOIL **Received Date:** 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	35	30		mg/Kg	20	12/28/2016 10:12:18 PM	29448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report  
 Lab Order 1612B53  
 Date Reported: 1/6/2017

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Souder, Miller & Associates **Client Sample ID:** L6  
**Project:** Barr None **Collection Date:** 12/13/2016 10:00:00 AM  
**Lab ID:** 1612B53-009 **Matrix:** SOIL **Received Date:** 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	600		30	mg/Kg	20	12/28/2016 10:24:42 PM	29448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B53  
06-Jan-17

Client: Souder, Miller & Associates  
Project: Barr None

Sample ID	MB-29448	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	29448	RunNo:	39709					
Prep Date:	12/28/2016	Analysis Date:	12/28/2016	SeqNo:	1244207	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29448	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	29448	RunNo:	39709					
Prep Date:	12/28/2016	Analysis Date:	12/28/2016	SeqNo:	1244208	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.0	90	110			

Sample ID	MB-29432	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	29432	RunNo:	39711					
Prep Date:	12/28/2016	Analysis Date:	12/28/2016	SeqNo:	1244304	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29432	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	29432	RunNo:	39711					
Prep Date:	12/28/2016	Analysis Date:	12/28/2016	SeqNo:	1244305	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.5	90	110			

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B53  
06-Jan-17

Client: Souder, Miller & Associates  
Project: Barr None

Sample ID	LCS-29384	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	29384	RunNo:	39672					
Prep Date:	12/23/2016	Analysis Date:	12/28/2016	SeqNo:	1243438	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.2	63.8	116			
Surr: DNOP	4.1		5.000		82.6	70	130			

Sample ID	MB-29384	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	29384	RunNo:	39672					
Prep Date:	12/23/2016	Analysis Date:	12/28/2016	SeqNo:	1243440	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		86.6	70	130			

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B53

06-Jan-17

Client: Souder, Miller & Associates

Project: Barr None

Sample ID	MB-29391	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	29391	RunNo:	39665					
Prep Date:	12/23/2016	Analysis Date:	12/27/2016	SeqNo:	1242742	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		94.8	68.3	144			

Sample ID	LCS-29391	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	29391	RunNo:	39665					
Prep Date:	12/23/2016	Analysis Date:	12/27/2016	SeqNo:	1242743	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	74.6	123			
Surr: BFB	1000		1000		99.6	68.3	144			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

## QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B53

06-Jan-17

Client: Souder, Miller &amp; Associates

Project: Barr None

Sample ID	MB-29391		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	29391		RunNo:	39665			
Prep Date:	12/23/2016		Analysis Date:	12/27/2016		SeqNo:	1242788		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID	LCS-29391		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	29391		RunNo:	39665			
Prep Date:	12/23/2016		Analysis Date:	12/27/2016		SeqNo:	1242789		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	75.2	115			
Toluene	0.96	0.050	1.000	0	96.4	80.7	112			
Ethylbenzene	0.94	0.050	1.000	0	93.6	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	94.4	79.2	115			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	1612B53-006AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	D2-3		Batch ID:	29391		RunNo:	39665			
Prep Date:	12/23/2016		Analysis Date:	12/27/2016		SeqNo:	1242792		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.023	0.9183	0	104	61.5	138			
Toluene	0.88	0.046	0.9183	0	96.2	71.4	127			
Ethylbenzene	0.85	0.046	0.9183	0	92.0	70.9	132			
Xylenes, Total	2.5	0.092	2.755	0	92.1	76.2	123			
Surr: 4-Bromofluorobenzene	1.1		0.9183		115	80	120			

Sample ID	1612B53-006AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	D2-3		Batch ID:	29391		RunNo:	39665			
Prep Date:	12/23/2016		Analysis Date:	12/27/2016		SeqNo:	1242793		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.023	0.9217	0	91.8	61.5	138	11.7	20	
Toluene	0.84	0.046	0.9217	0	90.8	71.4	127	5.43	20	
Ethylbenzene	0.83	0.046	0.9217	0	90.2	70.9	132	1.64	20	
Xylenes, Total	2.5	0.092	2.765	0	91.0	76.2	123	0.851	20	
Surr: 4-Bromofluorobenzene	1.1		0.9217		116	80	120	0	0	

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

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Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1612B53

RcptNo: 1

Received by/date: AJ 12/20/16

Logged By: Lindsey Concha 12/20/2016 9:40:00 AM

Completed By: Lindsey Concha 12/21/16

Reviewed By: [Signature] 12/22/16

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved bottles checked for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

## Chain-of-Custody Record

Client: SMA - Caledon

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Project #:

Project Manager:

Sampler: LongOn Ice ☒ Yes ☐ NoSample Temperature: 11.0 CHALL ENVIRONMENTAL  
ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOC)	8270 (Semi-VOC)	Air Bubbles (Y or N)
12-13-16	10:00	Soil	L1	402		-001								X				
			L2			-002								X				
			L3			-003								X				
			L5			-004								X				
			L7			-005								X				
			D2-3			-006	X	X						X				
			D2-2			-007	X	X						X				
			L4			-008								X				
			L6			-009								X				

Date: Time: Relinquished by:

Received by:

Date Time

Remarks:

Date: Time: Relinquished by:

Received by:

Date Time

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Barr None Federal #1 Closure  
SMA Ref #5B24624-BG16  
2/7/17

# APPENDIX B

## FORM C141 FINAL

Analytical Report  
 Lab Order 1612B53  
 Date Reported: 1/6/2017

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates      Client Sample ID: L6  
 Project: Barr None      Collection Date: 12/13/2016 10:00:00 AM  
 Lab ID: 1612B53-009      Matrix: SOIL      Received Date: 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	600	30		mg/Kg	20	12/28/2016 10:24:42 PM	29448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B53

06-Jan-17

Client: Souder, Miller &amp; Associates

Project: Barr None

Sample ID	MB-29448	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	29448	RunNo:	39709					
Prep Date:	12/28/2016	Analysis Date:	12/28/2016	SeqNo:	1244207	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29448	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	29448	RunNo:	39709					
Prep Date:	12/28/2016	Analysis Date:	12/28/2016	SeqNo:	1244208	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.0	90	110			

Sample ID	MB-29432	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	29432	RunNo:	39711					
Prep Date:	12/28/2016	Analysis Date:	12/28/2016	SeqNo:	1244304	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29432	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	29432	RunNo:	39711					
Prep Date:	12/28/2016	Analysis Date:	12/28/2016	SeqNo:	1244305	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.5	90	110			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

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# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B53

06-Jan-17

Client: Souder, Miller & Associates

Project: Barr None

Sample ID: <b>LCS-29384</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>29384</b>	RunNo: <b>39672</b>								
Prep Date: <b>12/23/2016</b>	Analysis Date: <b>12/28/2016</b>	SeqNo: <b>1243438</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.2	63.8	116			
Surr: DNOP	4.1		5.000		82.6	70	130			

Sample ID: <b>MB-29384</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>29384</b>	RunNo: <b>39672</b>								
Prep Date: <b>12/23/2016</b>	Analysis Date: <b>12/28/2016</b>	SeqNo: <b>1243440</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		86.6	70	130			

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

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QC SUMMARY REPORT  
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B53  
06-Jan-17

Client: Souder, Miller & Associates  
Project: Barr None

Sample ID	MB-29391	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	29391	RunNo:	39665					
Prep Date:	12/23/2016	Analysis Date:	12/27/2016	SeqNo:	1242742	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		94.8	68.3	144			

Sample ID	LCS-29391	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	29391	RunNo:	39665					
Prep Date:	12/23/2016	Analysis Date:	12/27/2016	SeqNo:	1242743	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	74.6	123			
Surr: BFB	1000		1000		99.6	68.3	144			

Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

## QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B53

06-Jan-17

Client: Souder, Miller &amp; Associates

Project: Barr None

Sample ID	MB-29391	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	29391	RunNo:	39665					
Prep Date:	12/23/2016	Analysis Date:	12/27/2016	SeqNo:	1242788	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID	LCS-29391	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	29391	RunNo:	39665					
Prep Date:	12/23/2016	Analysis Date:	12/27/2016	SeqNo:	1242789	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	75.2	115			
Toluene	0.96	0.050	1.000	0	96.4	80.7	112			
Ethylbenzene	0.94	0.050	1.000	0	93.6	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	94.4	79.2	115			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	1612B53-006AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	D2-3	Batch ID:	29391	RunNo:	39665					
Prep Date:	12/23/2016	Analysis Date:	12/27/2016	SeqNo:	1242792	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.023	0.9183	0	104	61.5	138			
Toluene	0.88	0.046	0.9183	0	96.2	71.4	127			
Ethylbenzene	0.85	0.046	0.9183	0	92.0	70.9	132			
Xylenes, Total	2.5	0.092	2.755	0	92.1	76.2	123			
Surr: 4-Bromofluorobenzene	1.1		0.9183		115	80	120			

Sample ID	1612B53-006AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	D2-3	Batch ID:	29391	RunNo:	39665					
Prep Date:	12/23/2016	Analysis Date:	12/27/2016	SeqNo:	1242793	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.023	0.9217	0	91.8	61.5	138	11.7	20	
Toluene	0.84	0.046	0.9217	0	90.8	71.4	127	5.43	20	
Ethylbenzene	0.83	0.046	0.9217	0	90.2	70.9	132	1.64	20	
Xylenes, Total	2.5	0.092	2.765	0	91.0	76.2	123	0.851	20	
Surr: 4-Bromofluorobenzene	1.1		0.9217		116	80	120	0	0	

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

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Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1612B53

RcptNo: 1

Received by/date: AJ 12/20/16

Logged By: Lindsey Concha 12/20/2016 9:40:00 AM

Completed By: Lindsey Concha 12/21/16

Reviewed By: AJ 12/22/16

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

## Chain-of-Custody Record

Client: SMA - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Project #:

Project Manager:

Sampler:

On Ice: ☒ Yes ☐ NoSample Temperature: 11.0°CHALL ENVIRONMENTAL  
ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
12-13-16	11:00	Soil	L1	402		-001								X				
			L2			-002								X				
			L3			-003								X				
			L5			-004								X				
			L7			-005								X				
			D2-3			-006	X	X						X				
			D2-2			-007	X	X						X				
			L4			-008								X				
			L6			-009								X				

Date: Time: Relinquished by: Received by: Date Time Remarks:

Date: Time: Relinquished by: Received by: Date Time

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 9188

**CONDITIONS OF APPROVAL**

Operator:				OGRID:		Action Number:	Action Type:
	TALON LPE	408 W Texas	Artesia, NM88210		329944	9188	C-141

OCD Reviewer	Condition
ceads	Unless data can be provided from previous sampling events that hydrocarbons are not a contaminant of concern, the responsible party will be required to sample for BTEX and TPH, along with Chlorides during confirmation sampling.
ceads	Additional samples will need to be collected from the release areas to test for BTEX and TPH at a minimum depth of 4' below ground surface. Should the responsible party find BTEX or TPH impact that exceeds Table I Closure Criteria, additional vertical delineation and remediation will be required with respect to BTEX and TPH.
ceads	The nearest well to this site is 3707 POD 1 registered with the NMOSE approximately .65 miles west of the incidents site. The well logs indicate depth to first encountered groundwater is 55'. Unless the responsible party chooses to drill a borehole to confirm depth to water at the incidents site, Table I Closure Criteria for incidents where depth to water is between 51' and 100' will need to be followed.
ceads	The remediation of the pit area will need to meet Table I Closure Criteria. Unless the pit is still active or used for production activities, 19.15.29.13 NMAC reclamation requirements will need to be followed.