talonlpe.com • 866.742.0742

TALON LPE

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	Clorides 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	Clorides 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 horizonal extent of the excavation. Upon completion, 5-point composite samples will be collected from each side wall and 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-feet deep. The excavated material will be disposed of at a NMOCD 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

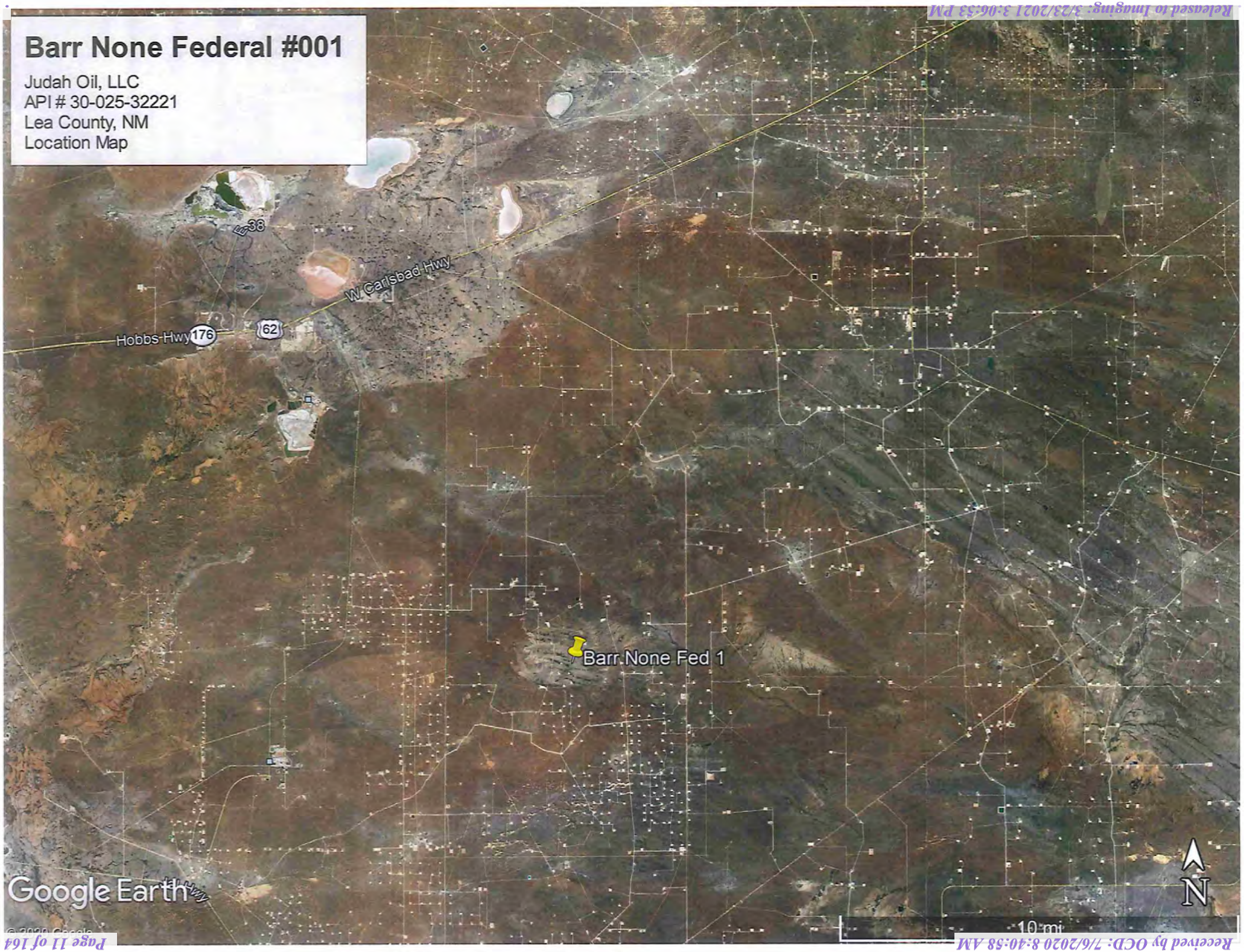
Attachments:
Appendix I Site Maps
Appendix II Groundwater Data, Soil Survey & FEMA Flood Map
Appendix III Site Photographs
Appendix IV C-141 Forms
Appendix V Background, previous reports by others
Appendix VI Laboratory Data

APPENDIX I

SITE MAPS

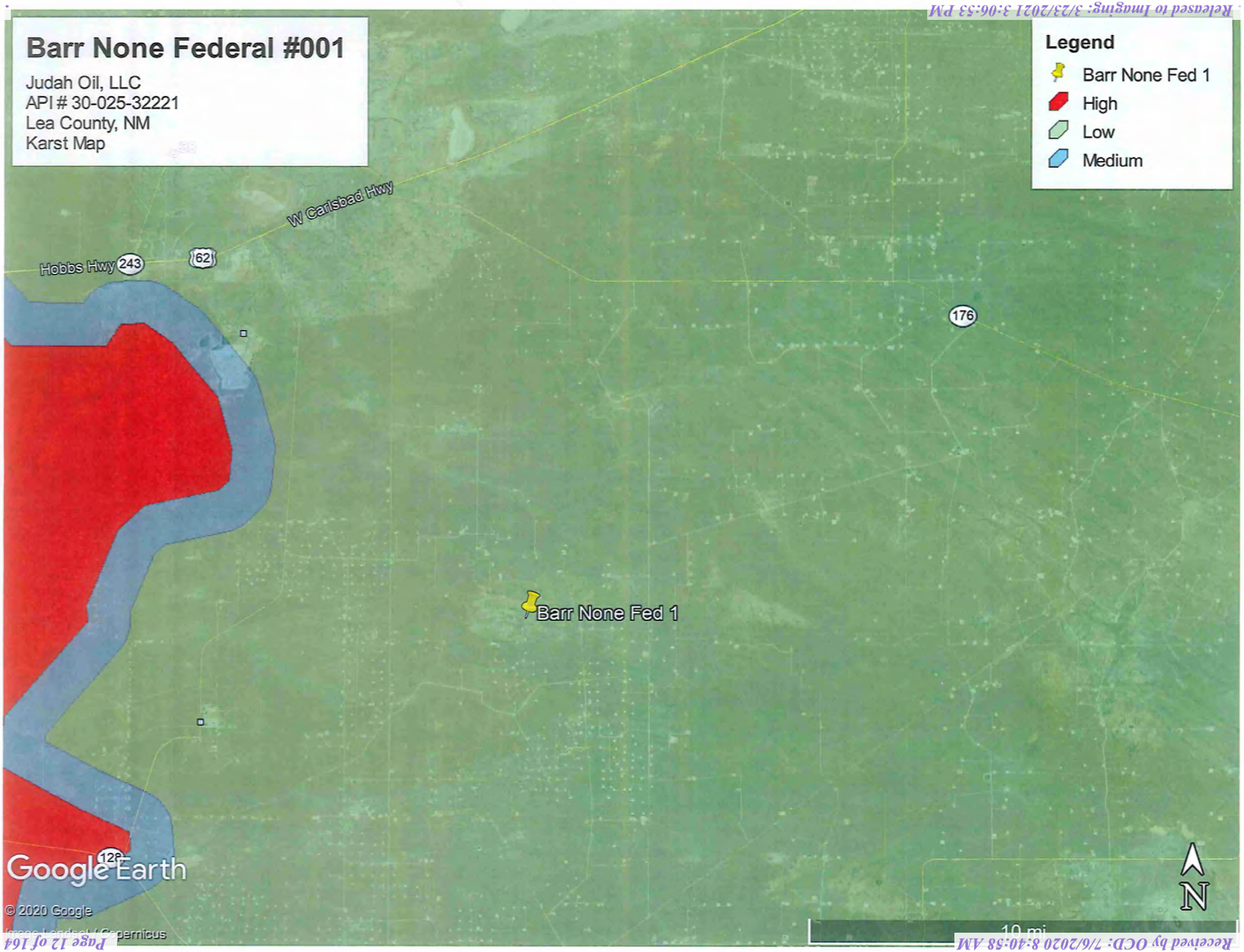
Barr None Federal #001

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



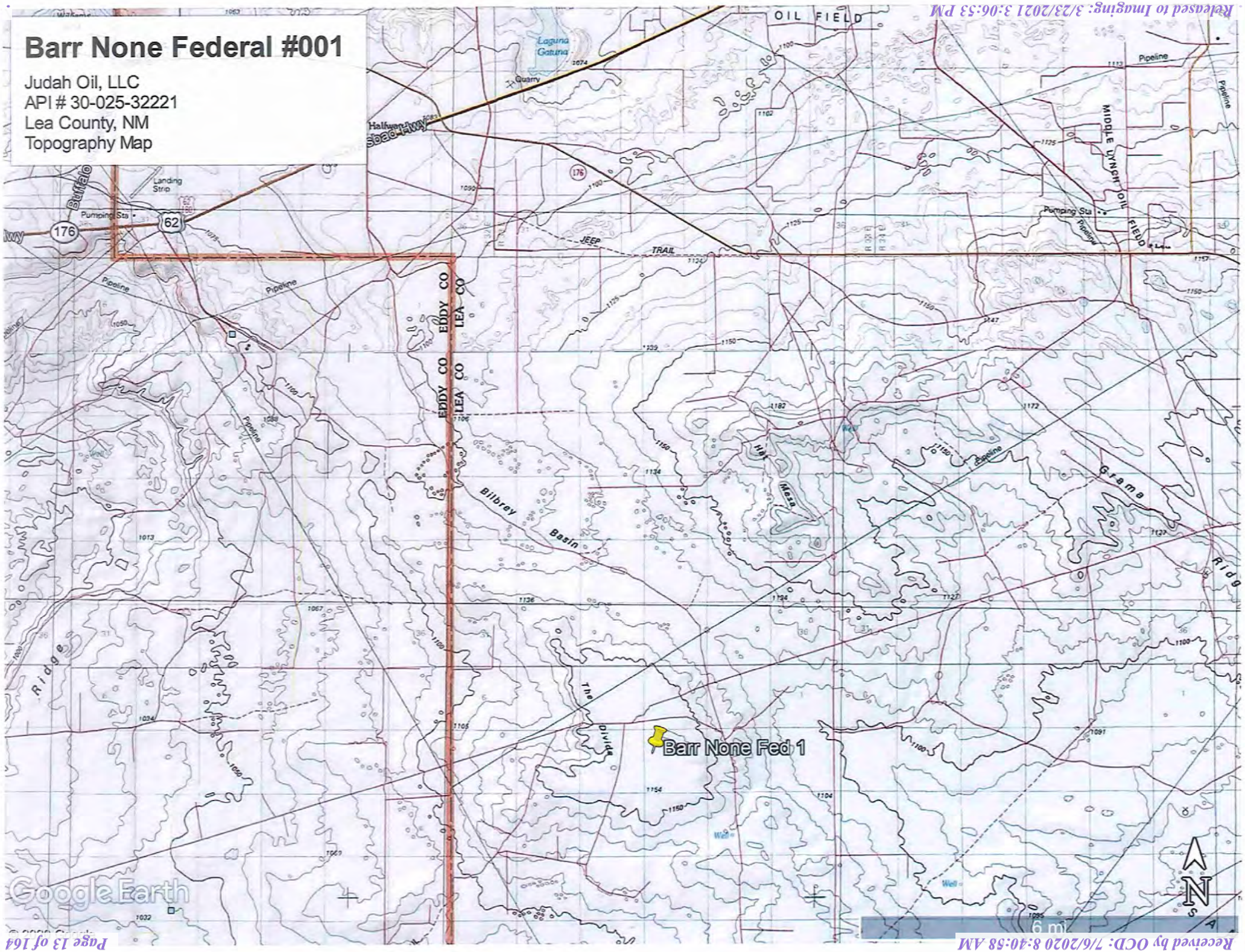
Barr None Federal #001

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



Barr None Federal #001

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 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	1139	650		
C 02096		CUB	ED		2	3	14	22S	32E	627204	3584464*	2652	435	360	75
C 02821		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

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

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

FEMA

Legend

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, A99*
- 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 drainag areas of less than one square mile *Zone*
- 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
- NO SCREEN 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
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 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

N

The pin displayed on the map is an approximate point selected by the user and does not represe 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 unmodernized areas cannot be used for regulat

APPENDIX III

SITE PHOTOGRAPHS

Barr None Fed 001

PHOTO DOCUMENTATION

Location Signage

View of Location from the North

Sample Location L7

Overview Sample Location L7

APPENDIX IV

NMOCD C-141's

State of New Mexico
Oil Conservation Division

Incident ID	NSAD1326254300
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?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NSAD1326254300
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

State of New Mexico
Oil Conservation Division

Incident ID	NSAD1326254300
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

CARDINAL Laboratories

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.

Cardinal Laboratories is accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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 (PID *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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: TALON LPE	BILL TO
Project Manager: DAVID ADKINS	P.O. #: 701484.009.01
Address: 408 W. TEXAS	Company: TALON
City: ARTESIA State: NM Zip: 88210	Attn: D. ADKINS
Phone #: 575-441-4835 Fax #:	Address:
Project #: 701484.009.01 Project Owner: JUDAH OIL	City:
Project Name: BARRE NONE FED 1	State: Zip:
Project Location: LEA COUNTY	Phone #:
Sampler Name: MICHAEL POLLIER	Fax #:

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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. 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 arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

Relinquished By:	Date: 7.10.19	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 13:35	Brandi Adkins	Fax Result: ☑ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: RUSH
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other: 2.3°C #97	Sample Condition Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia **Lab Order:** 1908235
Project: BARR NONE FED 1

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.	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

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.

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia **Lab Order:** 1908235
Project: BARR NONE FED 1

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.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia **Lab Order:** 1908235
Project: BARR NONE FED 1

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						Analyst: CAS	
Chloride	ND	60		mg/Kg	20	8/8/2019 9:26:21 PM	46673

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						Analyst: CAS	
Chloride	ND	60		mg/Kg	20	8/8/2019 9:38:45 PM	46673

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						Analyst: CAS	
Chloride	ND	60		mg/Kg	20	8/8/2019 9:51:10 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.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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

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 Quanitative 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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 Michelle Garcia

Reviewed By: LB 8/6/19

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° C to 6.0°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: ☐ eMail ☐ Phone ☐ Fax ☐ 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 LPE

Mailing Address: 408 W. TEXAS AVE.
ARTESIA NM 88210

Phone #: 575-746-8768

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 day
☒ Standard ☐ Rush

Project Name: BARE NONE FED 1

Project #: 701484.009.01

Project Manager: D. ADKINS

Sampler: MICHAEL COLLIER

On Ice: ☒ Yes ☐ No 4.8-0.3=4.5°

Sample Temperature:

HALL 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. 1908235	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_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	TOTAL CHLORIDES				Air Bubbles (Y or N)
7/31/19	10:30am	SOIL	L-7 4'	GLASS 1	ICE/COOL	001												✓				
"	11:00am		L-7 14'			002																
	1:00pm		S-6 14'			003																
7/31/19	1:30pm		S-6 16'			004																
8/1/19	8:30am		S-5 11'			005																
	9:00am		S-4 0'			006																
	9:10am		S-3 0'			007																
	9:20am		S-2 0'			008																
8/1/19	9:30am		S-1 0'	GLASS 1	ICE/COOL	009												✓				
7/31/19	11:10am		L-7 16' R			010												✓				

Date: 8/5/19 Time: 0900 Relinquished by: [signature]
Received by: [signature] Date: 8/5/19 Time: 0900

Date: 8-5-19 Time: 1100 Relinquished by: [signature]
Received by: courier Date: 8/6/19 Time: 9:00

Remarks:
R= REFUSAL

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.

Chain-of-Custody Record

Client: TALON LPE

Mailing Address: 408 W. TEXAS AVE.
ARTESIA NM 88210

Phone #: 575-746-8768

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other ______

☐ EDD (Type) ______

Turn-Around Time: 5 day
☒ Standard ☐ Rush

Project Name: BARE NONE FED 1

Project #: 701484.009.01

Project Manager: D. ADKINS

Sampler: MICHAEL COLLIER

On Ice: ☒ Yes ☐ No 4.8-0.3=4.5°

Sample Temperature:

HALL 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. 1908235	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_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	TOTAL CHLORIDES				Air Bubbles (Y or N)
8/1/19	10:00am	SOIL	S-10 5'	GLASS 1	ICE/COOL	011												✓				
	10:10am		S-10 6'			012																
	10:35am		S-11 3'			013																
	10:45am		S-11 4'			014																
	11:00am		S-12 0'-1'			015																
	11:30am		S-7 0'-1'			016																
	12:00pm		S-8 0'-1'			017																
	12:30pm		S-9 0'-1'	GLASS 1	ICE/COOL	018												✓				

Date	Time	Relinquished by	Received by	Date	Time
8/5/19	0900	[signature]	[signature]	8/5/19	0900
8-5-19	1200	[signature]	[signature] courier	8/6/19	9:00

Remarks:

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.

[signature]

CARDINAL Laboratories

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.

Cardinal Laboratories is accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: TALON LPE	BILL TO		
Project Manager: D. ADKINS	P.O. #: ~~TBD~~ 701484.009.01		
Address: 408 W. TEXAS AVE.	Company: TALON LPE		
City: ARTESIA State: NM Zip: 88210	Attn: D. ADKINS		
Phone #: 575-441-4835 Fax #:	Address:		
Project #: 701484.009.01 Project Owner: JUDAH OIL	City:		
Project Name: BARR NONE FED 1	State: Zip:		
Project Location: LEA COUNTY	Phone #:		
Sampler Name: MICHAEL COLLIER	Fax #:		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	TOTAL CHLORIDES
H902837															
1	S-11 0'-1'	G	1			✓					✓		8/1/19	10:31	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. 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 arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Michael Collier	Date: 8.19.19 Time: 1:38	Received By: Brandi Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By: Brandi Oldaker	Date: 1:38 Time: 8.19.19	Received By: Jamaan Oldaker	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	1.9°C #97 Corrected 2.3°C	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials) TO

REMARKS:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

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

Lab ID: 1910694-001 **Collection Date:** 10/8/2019 1:00:00 PM
Client Sample ID: S-5A 20' **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 **Collection Date:** 10/8/2019 1:20:00 PM
Client Sample ID: S-5A 25' **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 **Collection Date:** 10/8/2019 10:30:00 AM
Client Sample ID: S-6A 30' **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 **Collection Date:** 10/8/2019 10:50:00 AM
Client Sample ID: S-6A 35' **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 **Collection Date:** 10/8/2019 11:05:00 AM
Client Sample ID: S-6A 40' **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 Quanitative 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

Hall Environmental Analysis Laboratory, Inc.

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

Lab ID: 1910694-007 **Collection Date:** 10/8/2019 11:30:00 AM
Client Sample ID: L-7A 20' **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 **Collection Date:** 10/8/2019 11:50:00 AM
Client Sample ID: L-7A 25' **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 **Collection Date:** 10/8/2019 3:10:00 PM
Client Sample ID: S-10A 10' **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 **Collection Date:** 10/8/2019 3:30:00 PM
Client Sample ID: S-10A 15' **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 **Collection Date:** 10/8/2019 3:50:00 PM
Client Sample ID: S-10A 20' **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.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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 Anne Thorne

Reviewed By: JG 10/11/19

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° C to 6.0°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: ☐ eMail ☐ Phone ☐ Fax ☐ 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			

Chain-of-Custody Record

Client: Talon LPE

Mailing Address: 408 W Texas Ave

Phone #: 575-746-8768

email or Fax#: dadkins@talonlpe.com

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5day turn
☑ Standard ☐ Rush

Project Name: Barr None Federal #001

Project #: 701484.009.01

Project Manager: David Adkins

Sampler: Brandon Sinclair

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 0.4 (-0.5) = 0.1 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1910194	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Total Chlorides
10/9/19	13:00	soil	S-5A 20'	4oz jar	ice	001											✓
	13:20		S-5A 25'			002											
	13:50		S-5A 30'			003											
	10:30		S-6A 30'			004											
	10:50		S-6A 35'			005											
	11:05		S-6A 40'			006											
	11:30		L-7A 20'			007											
	11:50		L-7A 25'			008											
	15:10		S-10A 10'			009											
	15:30		S-10A 15'			010											
	15:50		S-10A 20'			011											

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10/10	1100	Brandon Sinclair	Chad Sessions		10/10	1200
10/10	1900	Chad Sessions		carrier	10/11/19	9:20

Remarks:

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.

APPENDIX VI

BACKGROUND, PREVIOUS REPORTS

1RP-2958

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
JUL 25 2013
RECEIVED

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

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 ☐ No ☐ 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? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.* [signature] 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.*

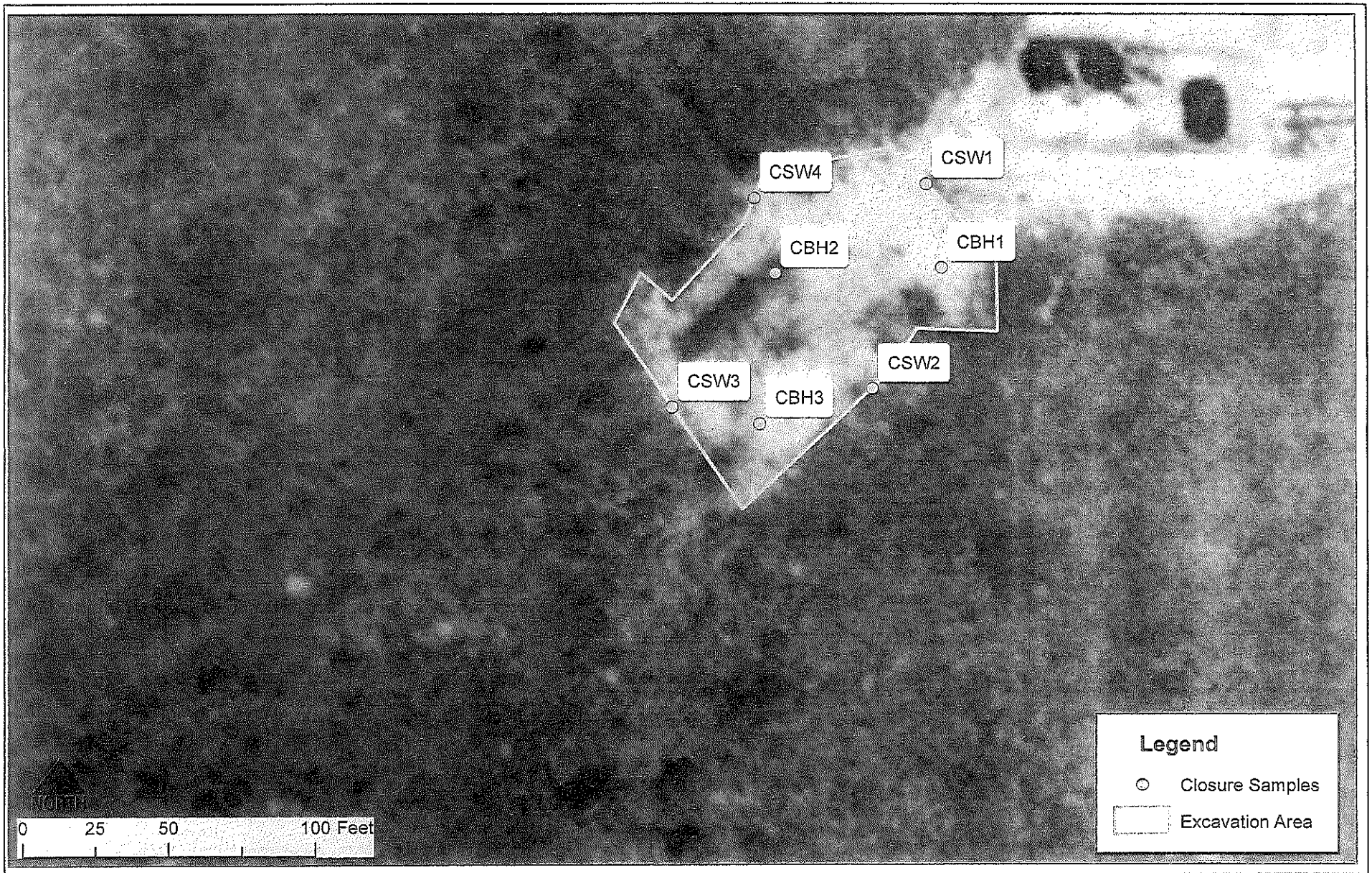
50'x50' area off south side of location Fluid traveled down trails. Fluid soaked into ground, none was recovered. Had TNT Backhoe make one call to excavated contaminated soil and run soil samples

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: [signature]	OIL CONSERVATION DIVISION	
Printed Name: James B Campanella	Approved by Environmental Specialist: [signature] 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	Attached ☐
Date: 7-22-2013 Phone: 575-746-1280		1RP-9-13-2958 ✓

* Attach Additional Sheets If Necessary

SEP 23 2013



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

Figure 3

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

Date Saved: 10/31/2018

Drawn Lucas Middleton
Checked
Approved

SMA
201 South Halagueno Street
Carlsbad, New Mexico 88221
(575) 689-7040
www.soudermiller.com
Serving the Southwest & Rocky Mountains

Document: C:\Users\tom\Documents\GIS DATA\MAPS\barn none Figure 3.mxd

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-basin Code	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**

National Water Information System: Web Interface

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

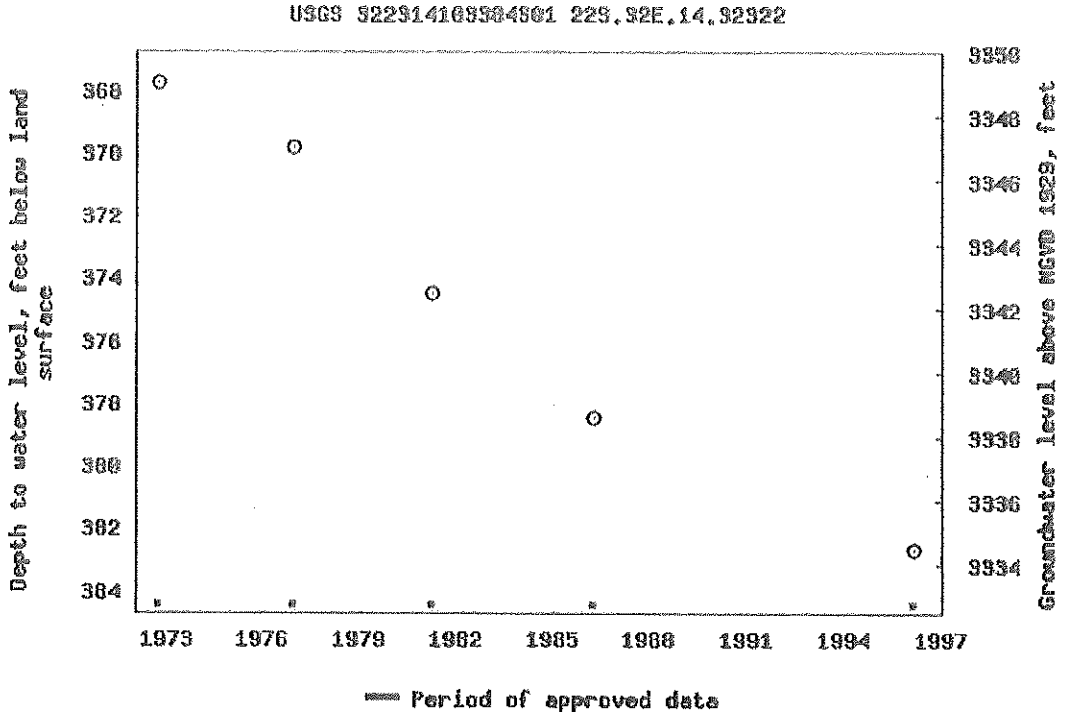
Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°23'23", Longitude 103°38'53" NAD27
Land-surface elevation 3,717.00 feet above NGVD29
The depth of the well is 435 feet below land surface.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

Table of data
Tab-separated data

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

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
JUL 2 5 2013
RECEIVED

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

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 ☐ No ☐ 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? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.* Jeffrey Leking 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: [signature]	OIL CONSERVATION DIVISION
Printed Name: James B Campanella	Approved by Environmental Specialist: Jeffrey Leking 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 Attached ☐
Date: 7-22-2013 Phone: 575-746-1280	1RP-9-13-2958 ✓

* Attach Additional Sheets If Necessary

SEP 2 3 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

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.

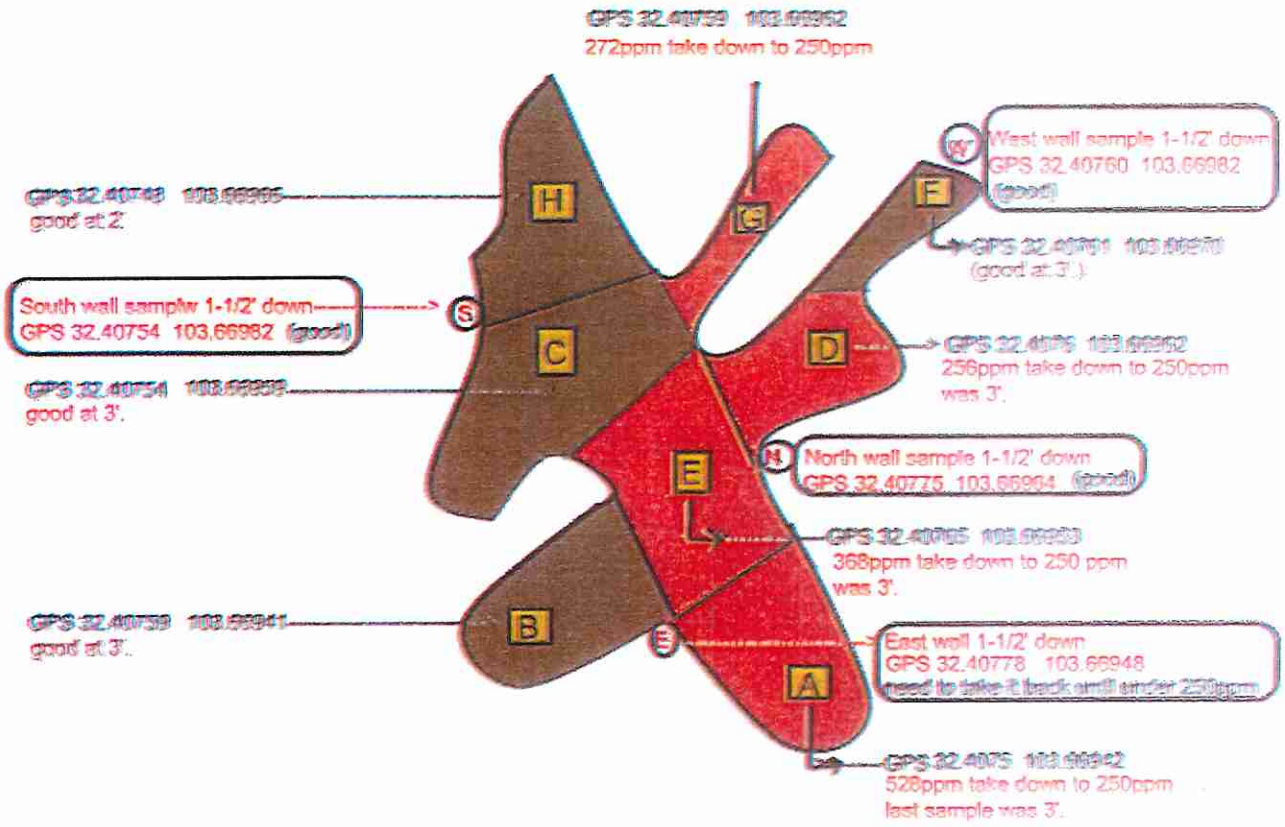
Native seed approved by (BLM) will be seeded, using the "hand broad cast system" then raked into the soil. If it's deemed too late to seed at this time (TNT) would seed the following summer. If you have any question please feel contact Ray Martin at 575-365-7827.

Respectfully Submitted

Gary Smith
TNT Backhoe Service
Office 575-746-6063
E-mail tntbackhoeservice@pvtn.net

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

W
S + N
E



CARDINAL Laboratories

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

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.

Cardinal Laboratories is accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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)

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 (PIL *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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: B-3' DEEP (H302276-02)

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 (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	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: 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 (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	**64.0**	16.0	09/19/2013	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: D-3' DEEP (H302276-04)

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 (PIL *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	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: E-3' DEEP (H302276-05)

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 (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	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: 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 (PIL *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	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: G-3' DEEP (H302276-07)

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 (PIL *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	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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)

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 (PIL *109 %* *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	**224**	16.0	09/19/2013	ND	416	104	400	3.77	

rdinal Laboratories

*=Accredited Analyte

SE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, ling, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

eley D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: 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 (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	**240**	16.0	09/19/2013	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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: 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 (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	<16.0	16.0	09/23/2013	ND	432	108	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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 (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	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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 (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	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	T&T Backhoe Service	BILL TO	
Project Manager:	Gary Smith	P.O. #:	
Address:	1201 North 1st	Company:	Judah Oil
City:	Artesia State: NM Zip: 88210	Attn:	Blaise Campanella
Phone #:	~~575-703-9046~~ Fax #: 1-575-746-0807	Address:	
~~Project #:~~	525 746-0063 Project Owner: Judah Oil	City:	Artesia
Project Name:	Barr NSWD Federal #10	State: NM Zip:	88210
Project Location:	Lea County	Phone #:	
Sampler Name:	Gary Smith	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	Chlorides
H30274																
1	A - 3' Deep					✓					✓		9-13-13	9:46	✓	✓
2	B - 3' Deep					✓					✓			10:13	✓	✓
3	C - 3' Deep					✓					✓			11:42	✓	✓
4	D - 3' Deep					✓					✓			10:28	✓	✓
5	E - 3' Deep					✓					✓			9:16	✓	✓
6	F - 3' Deep					✓					✓			10:42	✓	✓
7	G - 3' Deep					✓					✓			11:48	✓	✓
8	H - 2' Deep					✓					✓			12:14	✓	✓
9	North Wall - 1½ Deep					✓					✓			12:48	✓	✓
10	South Wall - 1½ Deep					✓					✓			12:38	✓	✓

Relinquished By:	Date: 9/18/13	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Gary Smith	Time: 3:00	Jodi Henson	Fax Result: ☑ Yes ☐ No Add'l Fax #: 575-746-0807
Relinquished By:	Date:	Received By:	REMARKS: E-mail please tstbackhoeservice@yahoo.net
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 3.4°C	Sample Condition Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	TNT Backhoe Service
Project Manager:	Gary Smith
Address:	1701 North 1st
City:	Artesia
State:	NM
Zip:	88210
Phone #:	575-746-6063
Fax #:	575-746-0807
Project #:	
Project Owner:	
Project Name:	Barr Nose Federal #1
Project Location:	Lea County
Sampler Name:	Gary Smith

BILL TO

P.O. #:	
Company:	Judah oil
Attn:	Blaise Campanella
Address:	
City:	Artesia
State:	NM
Zip:	88210
Phone #:	
Fax #:	

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	Chloride
H302276																
11	East Wall - 1½ deep					✓							9-18-13	12:56	✓	✓
12	West Wall - 1½ deep					✓							9-18-13	12:42	✓	✓

(MATRIX: GROUNDWATER–OTHER; PRESERV.: ACID/BASE–OTHER; SAMPLING: DATE, TIME; ANALYSIS REQUEST: BTEX, Chloride)

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Gary Smith — Date: 9/18/13 — Time: 3:00 — Received By: Jodi Henson

Relinquished By: — Date: — Time: — Received By:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 3.4°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

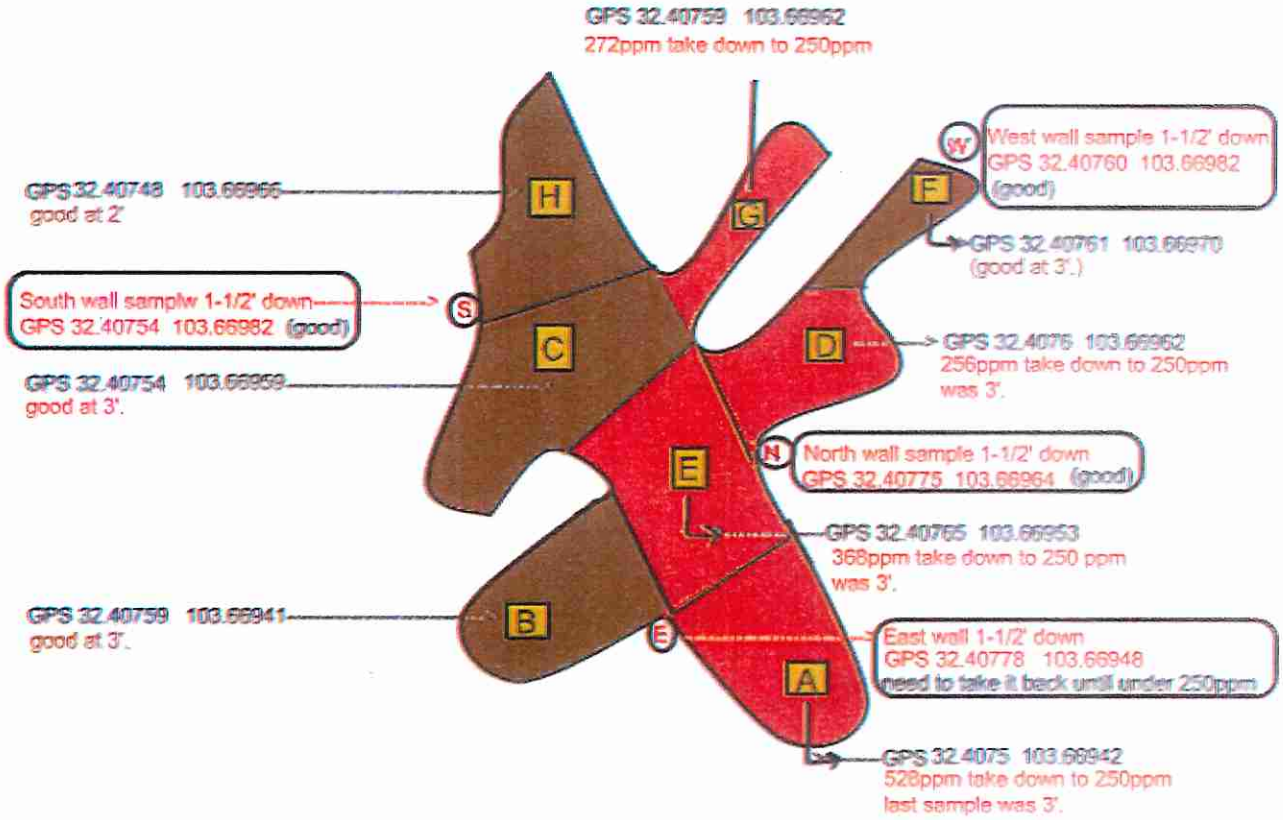
Phone Result: ☐ Yes ☐ No — Add'l Phone #:
Fax Result: ☑ Yes ☐ No — Add'l Fax #: 575-746-0807

REMARKS:
Email also
~~TNTbackhoe@pvtnet~~
TNTBackhoe@pvtn.net

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

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/; 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 samplesCSW1-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:

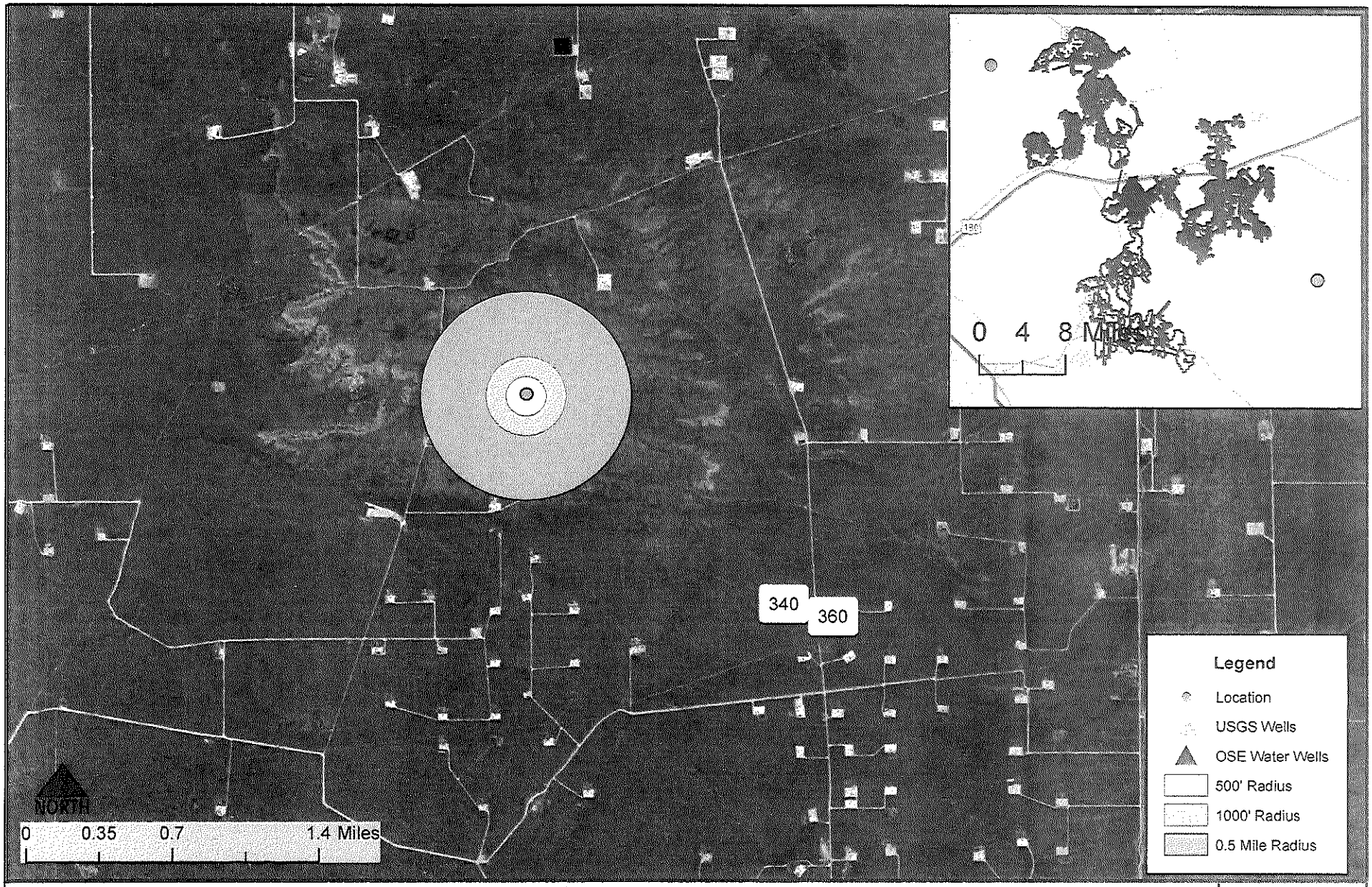
Figure 1: Vicinity and Well Head Protection Map
Figure 2: Surface Water Radius Map
Figure 3: Site and Sample Location Map

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



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

Figure 1

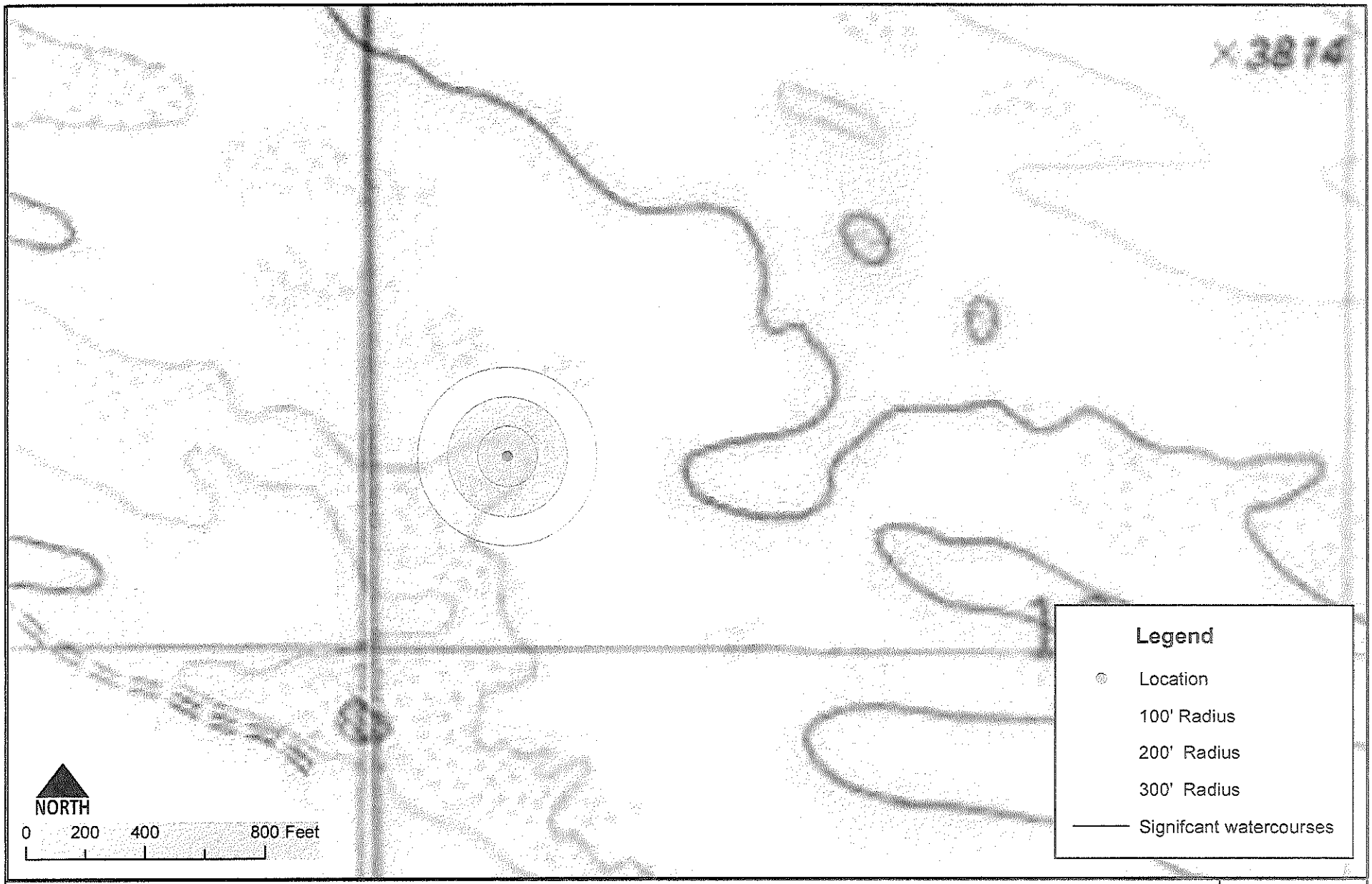
Document: C:\Users\lcm\Documents\GIS DATA\MAPS\Barr None - Figure 1.mxd

Date Saved: 10/31/2018

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

Drawn Lucas Middleton
Checked
Approved

SMA
201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689-7040
www.soudermiller.com
Serving the Southwest & Rocky Mountains



Surface Water Map
Barr None Federal #1 1RP 9-13-2958
UL: E S: 10 T22S R32E Lea County, New Mexico

Figure 2

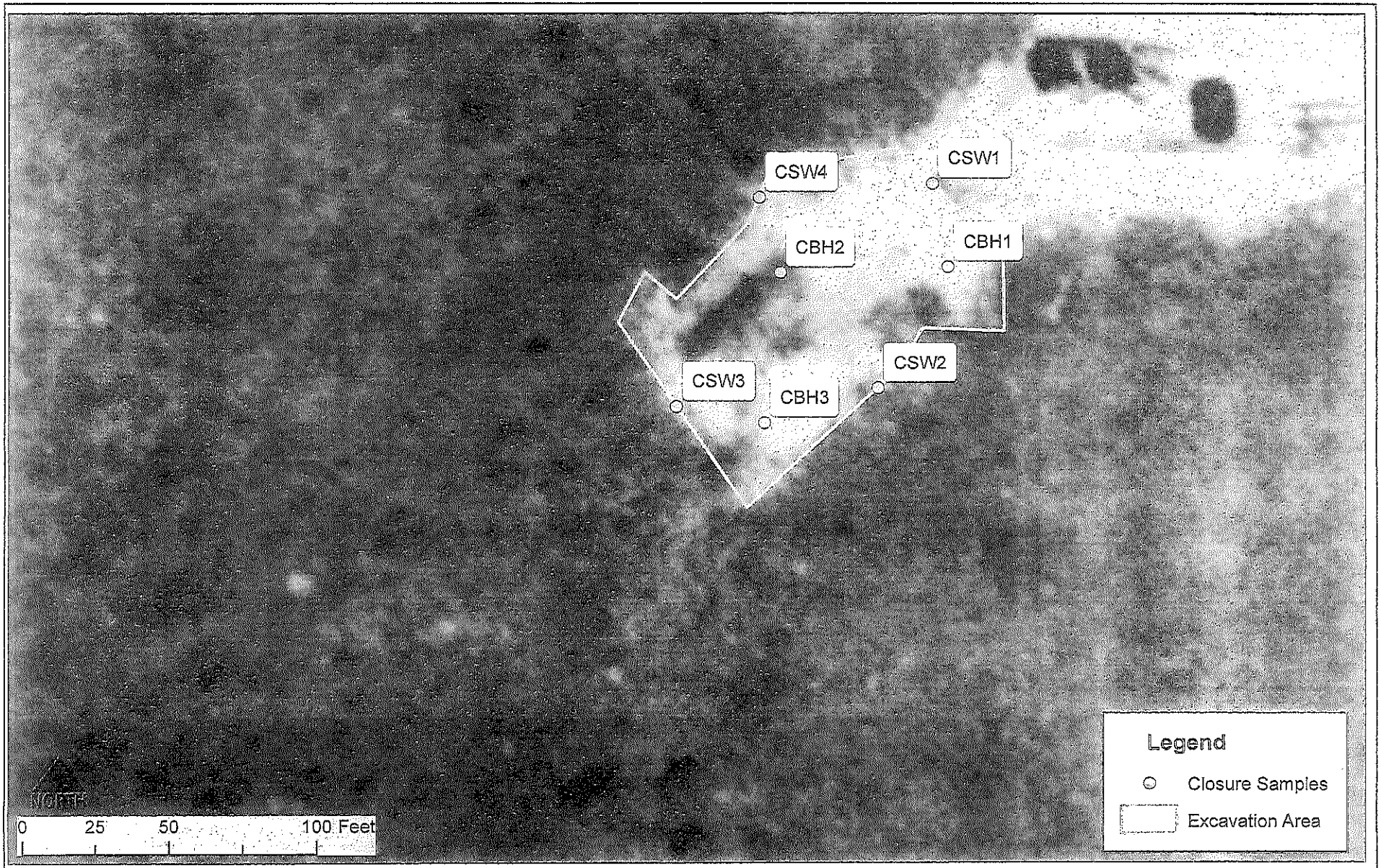
Document: C:\Users\tcm\Documents\GIS DATA\MAPS\Barr None- Figure 2.mxd

Date Saved: 10/31/2018

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

Drawn Lucas Middleton
Checked
Approved

SMA
201 South Halagueno Street
Carlsbad, New Mexico 88221
(575) 689-7040
www.soudermiller.com
Serving the Southwest & Rocky Mountains



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

Figure 3

Document: C:\Users\tem\Documents\GIS DATA\MAPS\barn none Figure 3.mxd

Date Saved: 10/31/2018

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

Drawn Lucas Middleton
Checked
Approved

SMA
201 South Halagueña Street
Carlsbad, New Mexico 88221
(575) 689-7040
www.soudermiller.com
Serving the Southwest & Rocky Mountains

TABLES

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	437	NMOSE, USGS
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	885	NMOSE, USGS
Hortizontal 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					

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

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		

Timeline2	1RP-2958	Explanation (1RP-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		
	7/25/2013	Received by Hobbs OCD
Work Plan Submitted	NA	
Closure report submitted		
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. 1RP-4574
	11/1/2018	Closure Report to Christina Hernandez
	11/4/2018	Email response from Yu to Engallina's 10-30-2018; 1RP-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-basin	County	Q 64	Q 16	Q 4	Sec	Twp	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**

National Water Information System: Web Interface

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

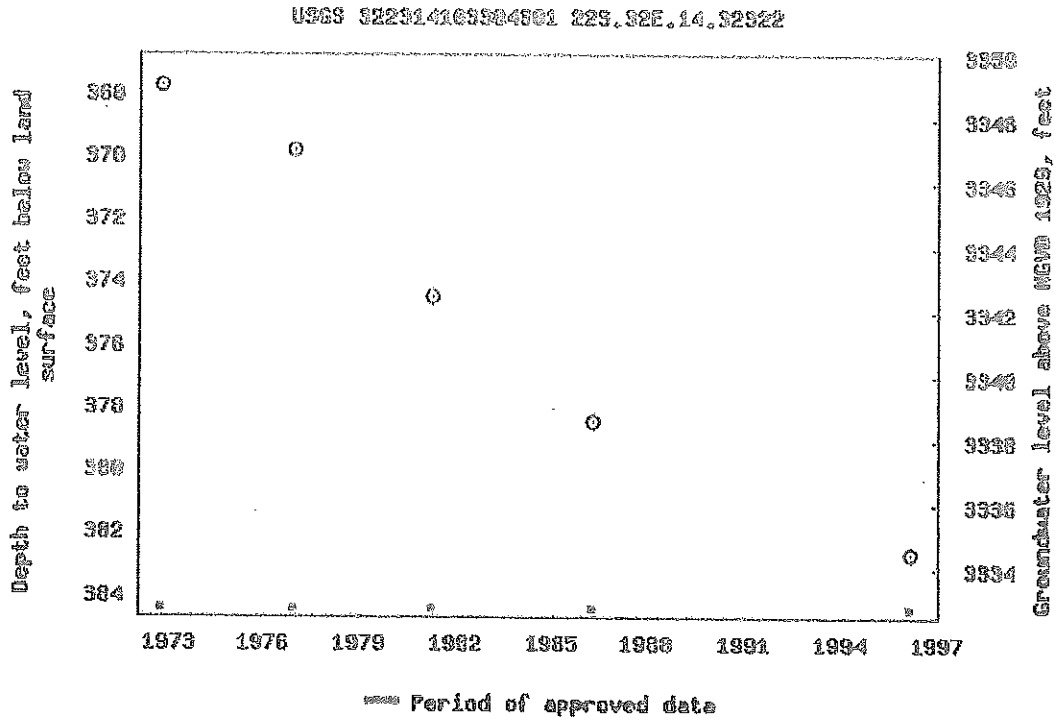
Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°23'23", Longitude 103°38'53" NAD27
Land-surface elevation 3,717.00 feet above NGVD29
The depth of the well is 435 feet below land surface.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

Table of data
Tab-separated data

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

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Bar None
Lab ID: 1810662-001 **Matrix:** SOIL

Client Sample ID: CSW 1
Collection Date: 10/9/2018 10:00:00 AM
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	99	30		mg/Kg	20	10/16/2018 12:15:50 PM	41028
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						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
EPA METHOD 8015D: GASOLINE RANGE						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
EPA METHOD 8021B: VOLATILES						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 Quanitative 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Bar None
Lab ID: 1810662-002 **Matrix:** SOIL

Client Sample ID: CSW 2
Collection Date: 10/9/2018 10:05:00 AM
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 Quanitative 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Bar None
Lab ID: 1810662-003 **Matrix:** SOIL

Client Sample ID: CSW 3
Collection Date: 10/9/2018 11:01:00 AM
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 1:05:30 PM	41028
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						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
EPA METHOD 8015D: GASOLINE RANGE						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
EPA METHOD 8021B: VOLATILES						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 Quanitative 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Bar None
Lab ID: 1810662-004 **Matrix:** SOIL

Client Sample ID: CSW 4
Collection Date: 10/9/2018 10:15:00 AM
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 1:17:54 PM	41028
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						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
EPA METHOD 8015D: GASOLINE RANGE						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
EPA METHOD 8021B: VOLATILES						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 Quanitative 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Bar None
Lab ID: 1810662-005 **Matrix:** SOIL

Client Sample ID: CBH 1
Collection Date: 10/9/2018 10:30:00 AM
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 1:30:18 PM	41028
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							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
EPA METHOD 8015D: GASOLINE RANGE							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
EPA METHOD 8021B: VOLATILES							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 Quanitative 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 & 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 Quanitative 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 & 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 Quanitative 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 & 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 Quanitative 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 & 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.	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 Quanitative 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1810562 RcptNo: 1

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

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

Reviewed By: 10/11/18

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° C to 6.0°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 ☐

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

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, COC read 10/09/18
Client Instructions: Samples were collected 10/09/18

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	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 5 day

Project Name: Bar None

Project #:

Project Manager: Austin Weyant

Sampler: LM

On Ice: ☑ Yes ☐ No

Sample Temperature: 5.6-(0.1)=4.6

HALL 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. 1810662	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_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
10/9/18	1000	Soil	CSW 1	402		-001	X		X					X				
	1005		CSW 2			-002												
	1010		CSW 3			-003												
	1015		CSW 4			-004												
	1030		CBH 1			-005												
	1035		CBH 2			-006												
	1041		CBH 3			-007												

Date: 10/9/18 Time: ~~1041~~ 1041 Relinquished by:

Received by: Date: 10/10/18 Time: 0800

Date: 10/9/18 Time: 1940 Relinquished by:

Received by: Date: 10/10/18 Time: 0850

Remarks: Judy

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.

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	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 32.407936° **Longitude** -103.668888°

NATURE OF RELEASE

Type of Release Crude oil and Produced water	Volume of Release 12 bbl oil, 30 bbl producted water	Volume Recovered 0 bbl oil, 0 bbl producted 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? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Division 1	
By Whom? James B Campanella	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

No

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

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.

Signature:

Printed Name: James B Campanella

Title: Member/ Manager

E-mail Address: jbc@judahoil.com

Date: re submitted 1/23/17 Phone:

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 2/3/2017 Expiration Date:

Conditions of Approval:
see attached directive

Attached ☒

* Attach Additional Sheets If Necessary

1RP-4574 pOY1703457251 nOY1703457016

From: Tucker, Shelly
To: Yu, Olivia, EMNRD
Cc: Lucas Middleton; 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

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.

On Tue, Mar 7, 2017 at 3:37 PM, Yu, Olivia, EMNRD <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
575-393-6161 x113

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
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>
Cc: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>; Tucker, Shelly <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

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

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

Date Saved: 2/7/2017

Drawn Lucas Middleton
Checked
Approved

SMA

Document: C:\Users\tcm.CBO\Documents\GIS DATA\MAPS\barn none Figure 2.mxd

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

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
Project: Barr None
Lab ID: 1612B53-005 **Matrix:** SOIL

Client Sample ID: L7
Collection Date: 12/13/2016 10:00:00 AM
Received Date: 12/20/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						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.

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

INFORMATION ONLY

Photo 1: Location Sign

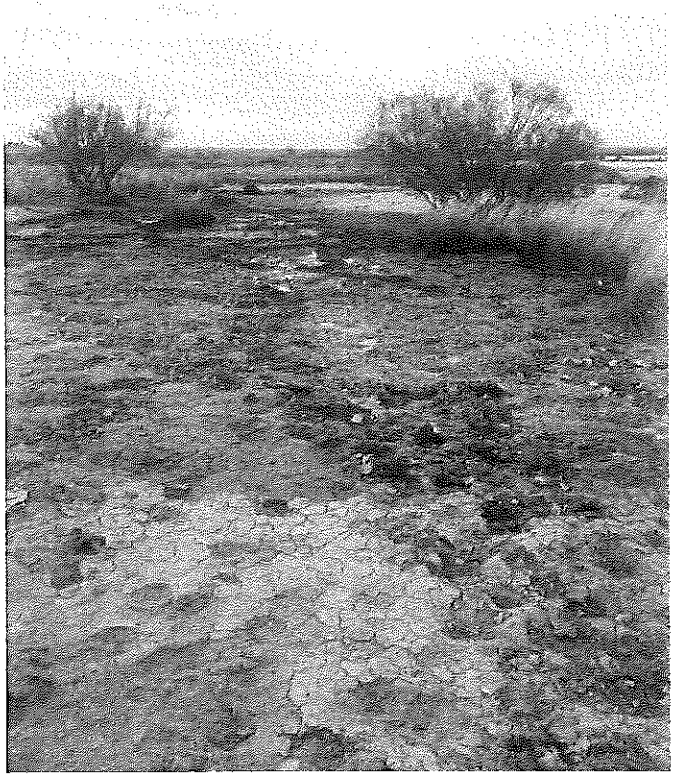


Photo 2: Release Area over pit

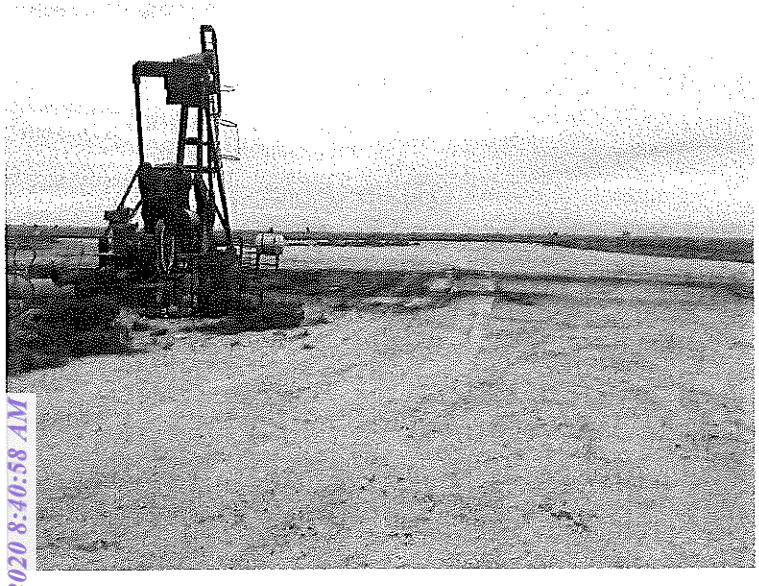


Photo 3: Release Area on pad

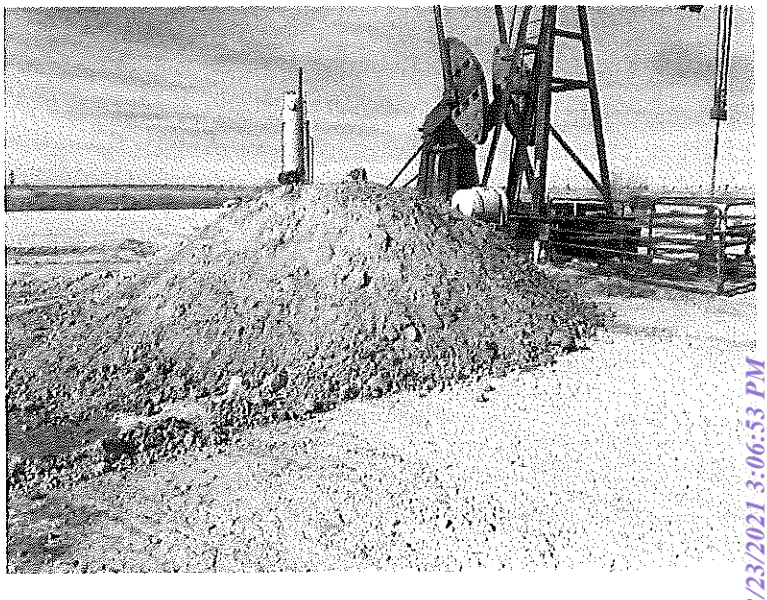


Photo 4: Spill Pile

Photo 5: Release Area over pit

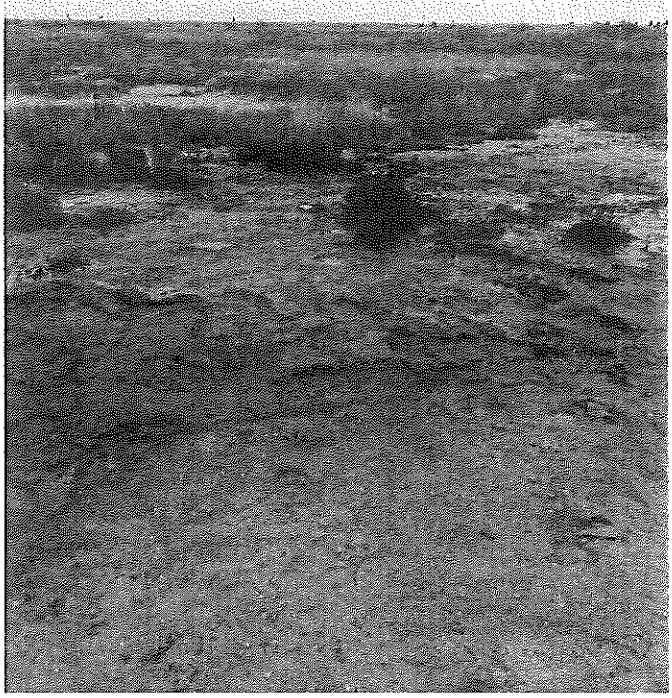


Photo 6: Release Area over pit

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	Producted 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^3 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:

SOUDER, MILLER & ASSOCIATES

J. Austin Weyant

Austin Weyant
Project Scientist

Reviewed by:

Shawna Chubbuck

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

Table of Contents

Figures:

Tables:

Appendices:

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 81. 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:

SOUDER, MILLER & ASSOCIATES

J. Austin Weyant

Austin Weyant
Project Scientist

Reviewed by:

Shawna Chubbuck

Shawna Chubbuck
Senior Scientist

Figures:

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

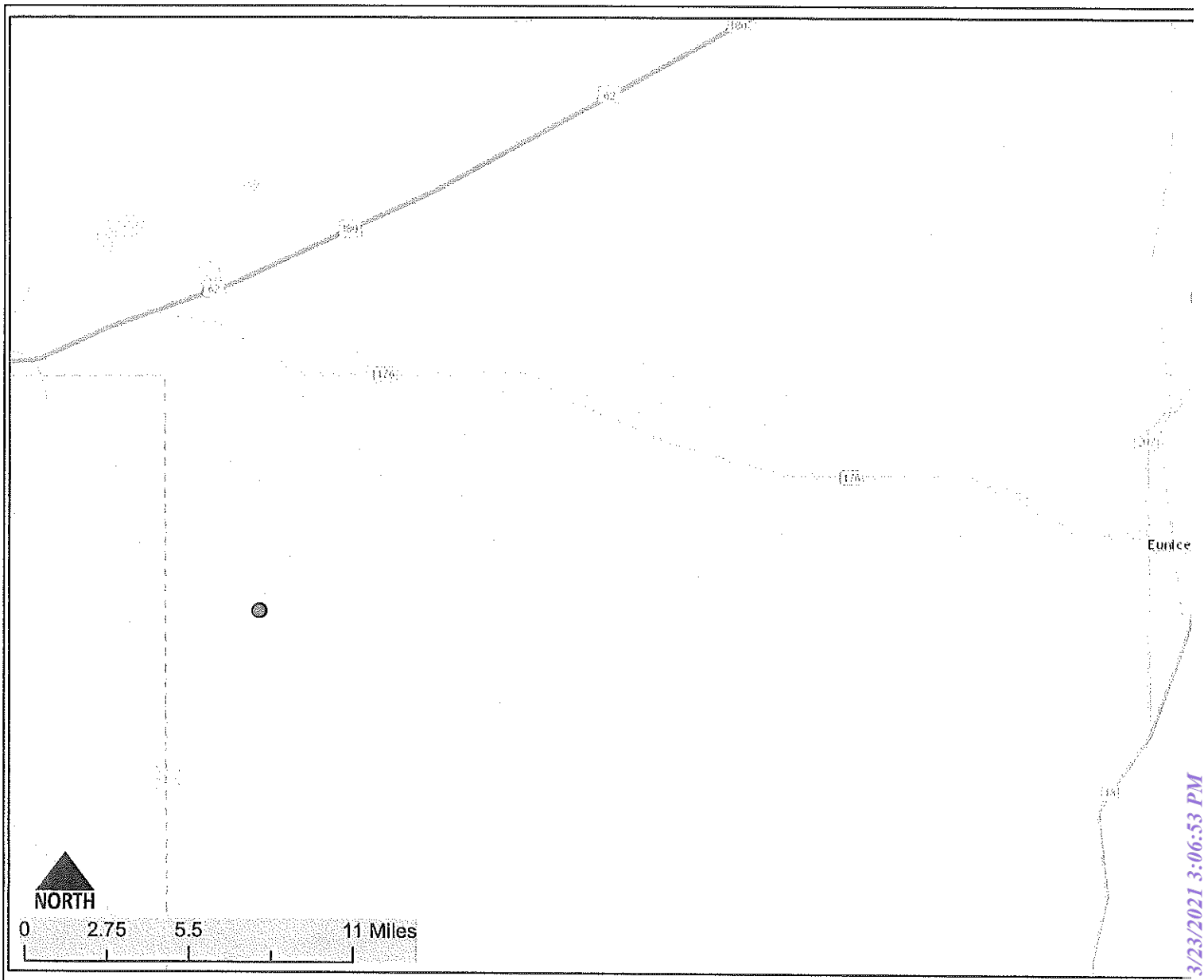
Tables:

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

FIGURE 1
VICINITY MAP



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

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

Drawn Lucas Middleton
Checked
Approved

Date Saved: 2/7/2017

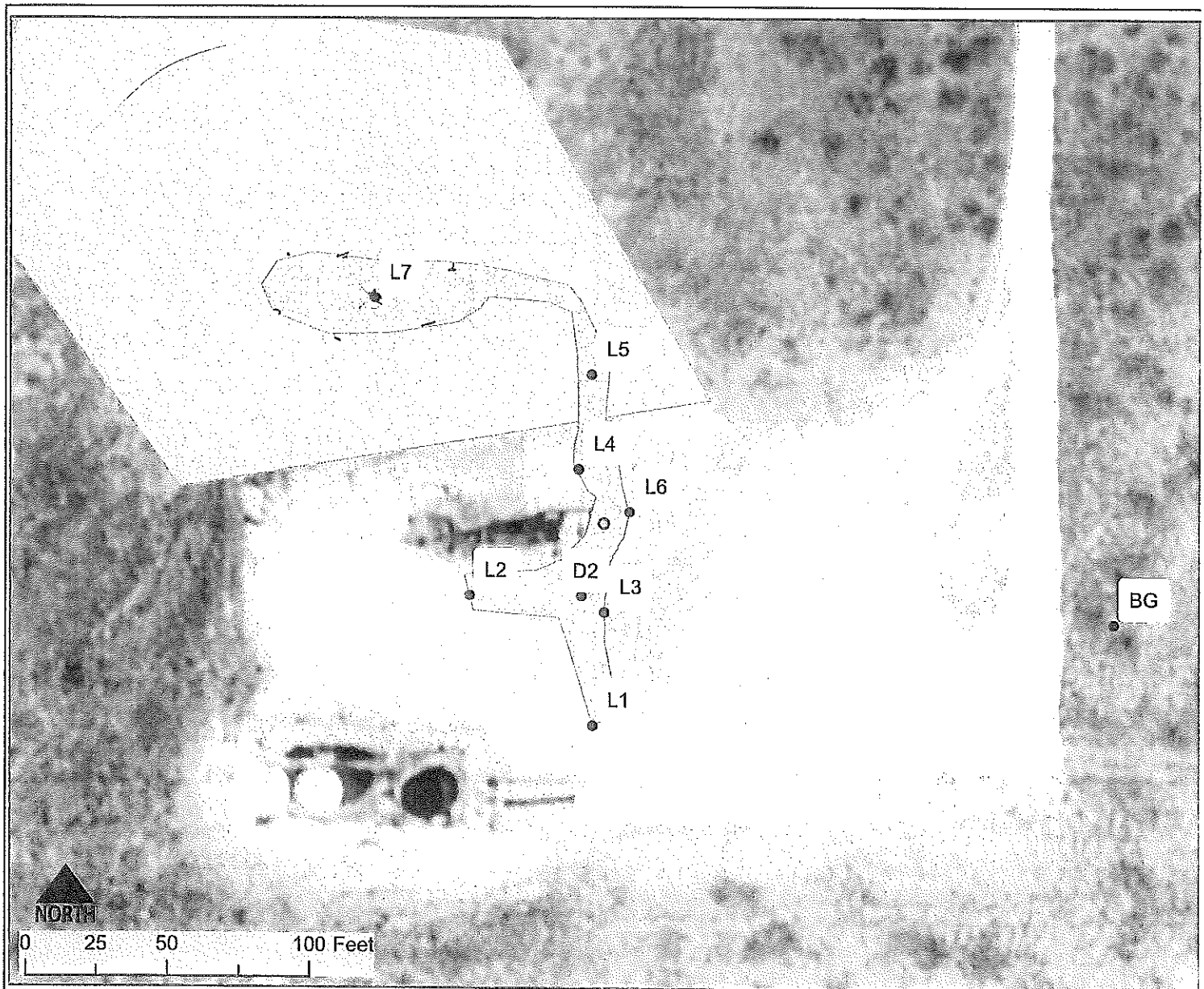
SMA

Serving

Document: C:\Users\tcm.CBO\Documents\GIS DATA\MAPS\barn none Figure1.mxd

FIGURE 2

DETAILED SITE AND SAMPLE MAP



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

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

Drawn Lucas Middleton
Checked
Approved

Date Saved: 2/7/2017

Document: C:\Users\tam.CBO\Documents\GIS DATA\MAPS\barn none Figure 2.mxd

SMA

Serving th

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	Producted 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^3 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

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

APPENDIX A

LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

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

CLIENT: Souder, Miller & Associates
Project: Barr None
Lab ID: 1612B53-001 **Matrix:** SOIL

Client Sample ID: L1
Collection Date: 12/13/2016 10:00:00 AM
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	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

Hall Environmental Analysis Laboratory, Inc.

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

CLIENT: Souder, Miller & Associates
Project: Barr None
Lab ID: 1612B53-002 **Matrix:** SOIL

Client Sample ID: L2
Collection Date: 12/13/2016 10:00:00 AM
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
Project: Barr None
Lab ID: 1612B53-003 **Matrix:** SOIL

Client Sample ID: L3
Collection Date: 12/13/2016 10:00:00 AM
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	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.

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: 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
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
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.

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
Project: Barr None
Lab ID: 1612B53-006 **Matrix:** SOIL

Client Sample ID: D2-3
Collection Date: 12/13/2016 10:00:00 AM
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	420	30		mg/Kg	20	12/28/2016 5:38:38 PM	29432
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
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
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
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
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Barr None
Lab ID: 1612B53-007 **Matrix:** SOIL

Client Sample ID: D2-2
Collection Date: 12/13/2016 10:00:00 AM
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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Barr None
Lab ID: 1612B53-008 **Matrix:** SOIL

Client Sample ID: L4
Collection Date: 12/13/2016 10:00:00 AM
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	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.

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Barr None
Lab ID: 1612B53-009 **Matrix:** SOIL

Client Sample ID: L6
Collection Date: 12/13/2016 10:00:00 AM
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 & 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

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.	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-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 & 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: dtj 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° C to 6.0°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: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: SMA - Caldwell

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:
Bar None

Project #:

Project Manager:
Austin Weyant

Sampler: LMX

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0C

HALL 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. 1612853	BTEX + MTBE + TMB's (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,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
12-13-16	10:00	Soil	L1	4oz		-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
				12/20/16	0940
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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.

APPENDIX B
FORM C141 FINAL

Hall Environmental Analysis Laboratory, Inc.

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

CLIENT: Souder, Miller & Associates
Project: Barr None
Lab ID: 1612B53-009

Client Sample ID: L6
Collection Date: 12/13/2016 10:00:00 AM
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 & 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

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.	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-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 & 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: dtJ 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° C to 6.0°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: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °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:
Bar None

Project #:

Project Manager:
Austin Weyant

Sampler: Lmx

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0 C

HALL 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. 1612853	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,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
12-13-16	10:00	Soil	L1	4oz		-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
				12/20/16	0940
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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.

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 9033

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
TALON LPE 408 W Texas Artesia, NM88210	329944	9033	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 rememdiation 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.