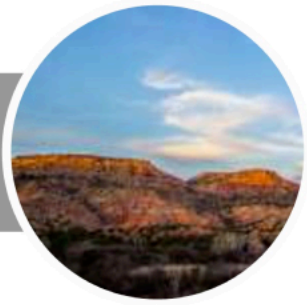


talonlpe.com • 866.742.0742

TALON LPE

Closure Report

Bill Alexander Tank Battery
Lea County, New Mexico
Incident # nAB1907829070

Prepared For:

Matador Resources
5347 N. 26th Street, 2nd Floor
Artesia, New Mexico 88210

Prepared By:

Talon/LPE, Ltd.
408 W. Texas Avenue
Artesia, New Mexico 88210

March 5, 2024

NMOCD
506 W. Texas Ave
Artesia, New Mexico 88210

NMSLO
914 N. Linam Street
Hobbs, New Mexico 88240

Subject: **Closure Report**
Bill Alexander Tank Battery
Lea County, New Mexico
Incident # nAB1907829070

To Whom It May Concern,

Matador Resources contracted Talon/LPE, Ltd. (Talon) to complete remediation and closure activities at the above referenced location. The incident description, soil sampling results, remedial actions, and closure request are presented herein.

Site Information

The Bill Alexander Tank Battery is located approximately 20 miles west of Eunice, New Mexico. The legal location for this release is Unit Letter M, Section 33, Township 22S, and Range 35E in Lea County, New Mexico. The latitude and longitude for the site is 32.3419462, -103.3762897. Site maps are presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soils in the area are made up of Simona fine sandy loam with 0 to 3 percent slopes. The referenced soil data is presented in Appendix III. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology consists of eolian and piedmont deposits, Holocene to middle Pleistocene in age. Drainage courses in this area are typically well drained. Further site characterization data is summarized in the following table.

Site Characterization

What is the shallowest depth to groundwater beneath the area affected by the release?	Between 75 and 100 (ft bgs)
What method was used to determine the depth to groundwater?	US Geological Survey
Did the release impact groundwater or surface water?	No
Distance from a flowing watercourse or any other significant watercourse.	Greater than 5 miles
Distance from any lakebed, sinkhole, or playa lake.	Between 1 and 5 mile
Distance from an occupied permanent residence, school, hospital, institution, or church.	Greater than 5 miles
Distance from a spring or private domestic fresh water well used by less than five households for domestic or stock watering purposes.	Between 1 and 5 mile
Distance from any fresh water well or spring.	Between 1 and 5 mile
Distance from incorporated municipal boundaries or a defined municipal fresh water field.	Greater than 5 miles
Distance from a wetland.	Between 1/2 and 1 mile
Distance from a subsurface mine.	Greater than 5 miles
Distance from (non-karst) unstable area.	Between 1 and 5 mile
Categorize the risk of this well/site being in a karst geology.	Low
Distance from a 100 year floodplain.	Greater than 5 miles
Did the release impact areas not on an exploration, development, production, or storage site?	No

Data from the nearby USGS well 322101103211902 22S.35E.34.12224A lists the depth to groundwater at approximately 78 feet below ground surface (bgs). Extrapolating from available data, the depth to groundwater in the area is estimated to be between 75 and 100 feet bgs. Based upon the presented site characterization, the responsible party must therefore adhere to the cleanup criteria for this site of groundwater between 50 and 100 feet bgs, Table I, NMOCD Rule 19.15.29.12 NMAC.

Table I - Closure Criteria for Soils Impacted by a Release			
Depth below horizontal extents of release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
51-100 feet	Total Chlorides***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	TPH (GRO+DRO)	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

*Or other test methods approved by the division,

**Numerical limits or natural background level, whichever is greater.

***This applies to releases of produced water or other fluids, which may contain chloride.

[19.15.29.12 NMAC - N, 8/14/2018]

Incident Description

On February 18, 2019, approximately 57 barrels (bbls) of crude oil and produced water were discharged onto the well pad due to a mechanical failure at the production separator. A vacuum truck was dispatched and 50 bbls of fluid were recovered from the area and disposed at a NMOCD approved facility. The release was reported to the NMSLO and NMOCD and was assigned incident # nAB1907829070.

Site maps of the release are presented in Appendix I. Initial C-141 spill notifications were filed with the NMSLO and NMOCD and are attached in Appendix V.

Site Assessment Activities

A previous environmental consultant performed the site assessment activities after the release. On February 19, 2019, three (3) sample points (L1, L2, and L3) were completed to depths of two (2) feet bgs. Samples were submitted to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for analysis of Total Chlorides (EPA Method 300.0), Total Petroleum Hydrocarbons (TPH, EPA Method 8015D), and benzene, toluene, ethylbenzene, and total xylenes (BTEX, EPA Method 8021B).

Results from the initial sampling event, complete laboratory report, and site assessment sample locations are attached for reference in Appendix II, Appendix VI, and Appendix I respectively.

Remediation Activities

The previous environmental consultant returned to the site to complete soil remediation efforts around the sample location, L2. The area was excavated to a depth of two (2) feet bgs and approximately 1,202 square feet on the perimeter. Four (4) composite soil confirmation samples (BH1, BH2, BH3, and BH4) were collected from the bottom of the excavation. Two (2) composite soil confirmation samples (SW1 and SW2) were collected from the sidewalls. Final confirmation samples were collected on March 15, 2019. All six (6) soil confirmation samples were delivered to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for analysis of Total Chlorides (EPA Method 300.0), Total Petroleum Hydrocarbons (TPH, EPA Method 8015D), and BTEX (EPA Method 8021B). The excavation was backfilled with 89 cubic yards of clean material.

Results from the remediation event, the complete laboratory report, and confirmation sample locations are attached for reference in Appendix II, Appendix VI, and Appendix I respectively.

Following internal client review of the release and remediation activities, it was determined there were insufficient confirmation samples collected. A sampling notification was sent to the NMOCD on January 23, 2024 stating ten (10) samples would be collected in two (2) business days.

Final confirmation samples were collected on January 25, 2024 to confirm that NMOCD closure criteria had been met from previous remediation activities, the results of which can be found Table 2 in Appendix II. Confirmation sample locations and excavation dimensions can be found on the confirmation sample map in Appendix I.

All samples were transported via chain of custody to Eurofins Laboratories Inc., for analysis of Total Chlorides (EPA Method 300.0), Total Petroleum Hydrocarbons (TPH, EPA Method 8015B NM) and Volatile Organics (BTEX, EPA Method 8021B). Complete laboratory reports for the remediation efforts are attached in Appendix VI.

Remedial Action Summary

- The impacted area was excavated to a depth of two (2) feet bgs.
- Approximately 596 cubic yards of excavated material was transported to R360, a NMOCD approved solid waste disposal facility.
- Pursuant to NMOCD guidance, confirmation soil samples were collected at 200 square foot intervals and analyzed for TPH, BTEX and Total Chlorides to insure all other areas outside of deferment had reached NMOCD closure criteria.
- The excavated area was backfilled with new, nonimpacted caliche, machine compacted, and contoured to match the surrounding location.
- Photographic documentation is provided in Appendix IV.

Closure

Based on the site characterization data, completed remedial actions, and analytical results of confirmation samples, on behalf of Matador Resources, we respectfully request that no further actions be required and that closure of this incident be granted.

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, Ltd.

Kayla Taylor
Project Manager

Chad Hensley
Senior Project Manager

Attachments:

Appendix I	Site Maps
Appendix II	Analytical Data Table
Appendix III	Site Characterization
Appendix IV	Photographic Documentation

APPENDIX I

Site Maps

Sample Locations
Point of Release
Release Area
2' Excavation
Equipment

N

67.5 Feet

Site & Initial Sample Map
Bill Alexander: Matador Resources

Figure3a

P:\5-Matador 2019 MSA (5E27961)\GIS\ARCGIS\MATADOR_MIT.aprx

Date Saved: 3/14/2019

Revisions

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

Drawn
Date 3/15/2019
Checked
Approved

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

SW Sample Locations
BH Sample Locations
Point of Release
Release Area
2' Excavation
Equipment

N

43
Feet

Site & Closure Sample Map
Bill Alexander: Matador Resources

Figure 3b

P:\5-Matador 2019 MSA (5E27961)\GIS\ARCGIS\MATADOR_MIT.aprx

Date Saved: 3/15/2019

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

Drawn
Date ~~3/15/2019~~
Checked
Approved

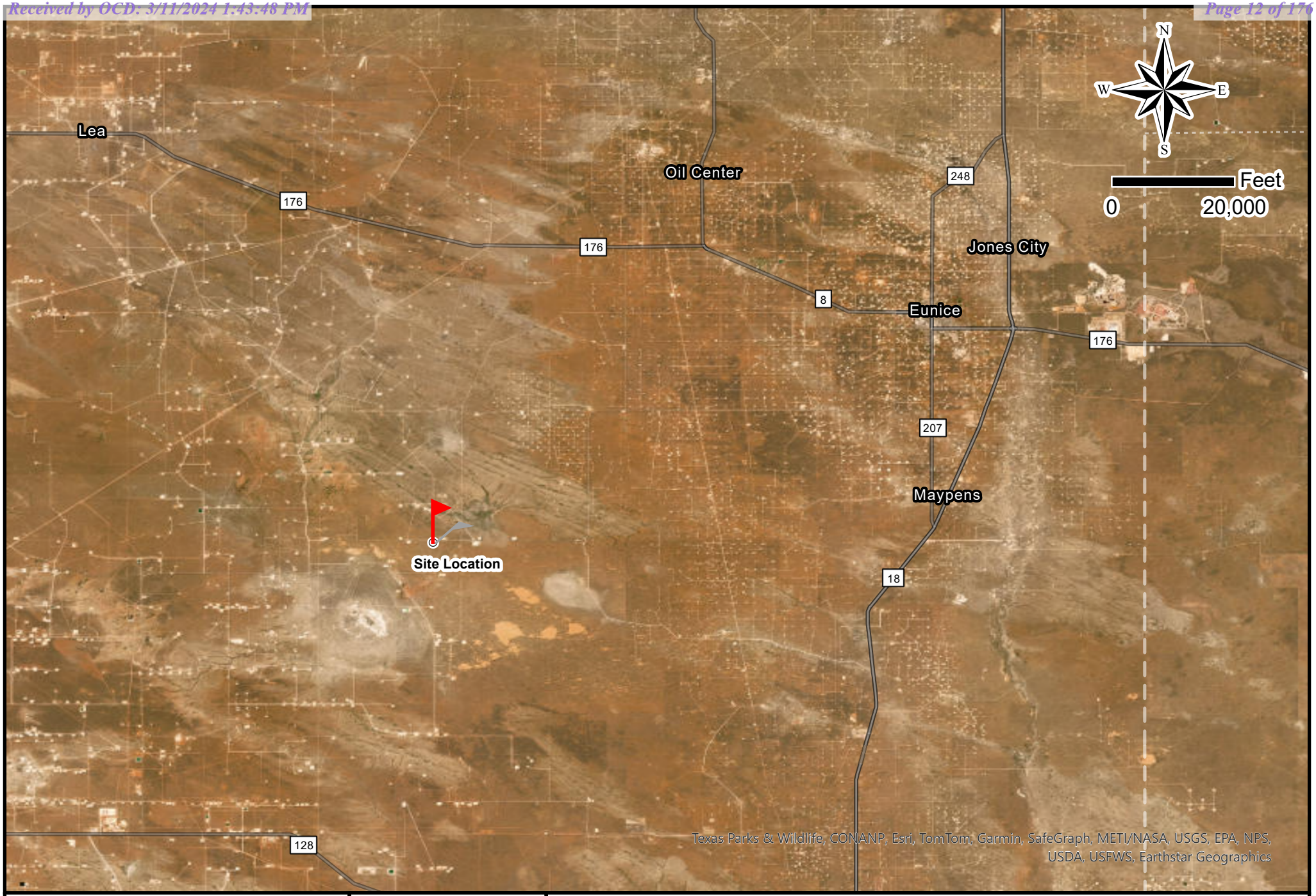
SMA

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

TALON LPE

Drafted: 2/6/2024
1 in = 30 ft
Drafted By: IJR

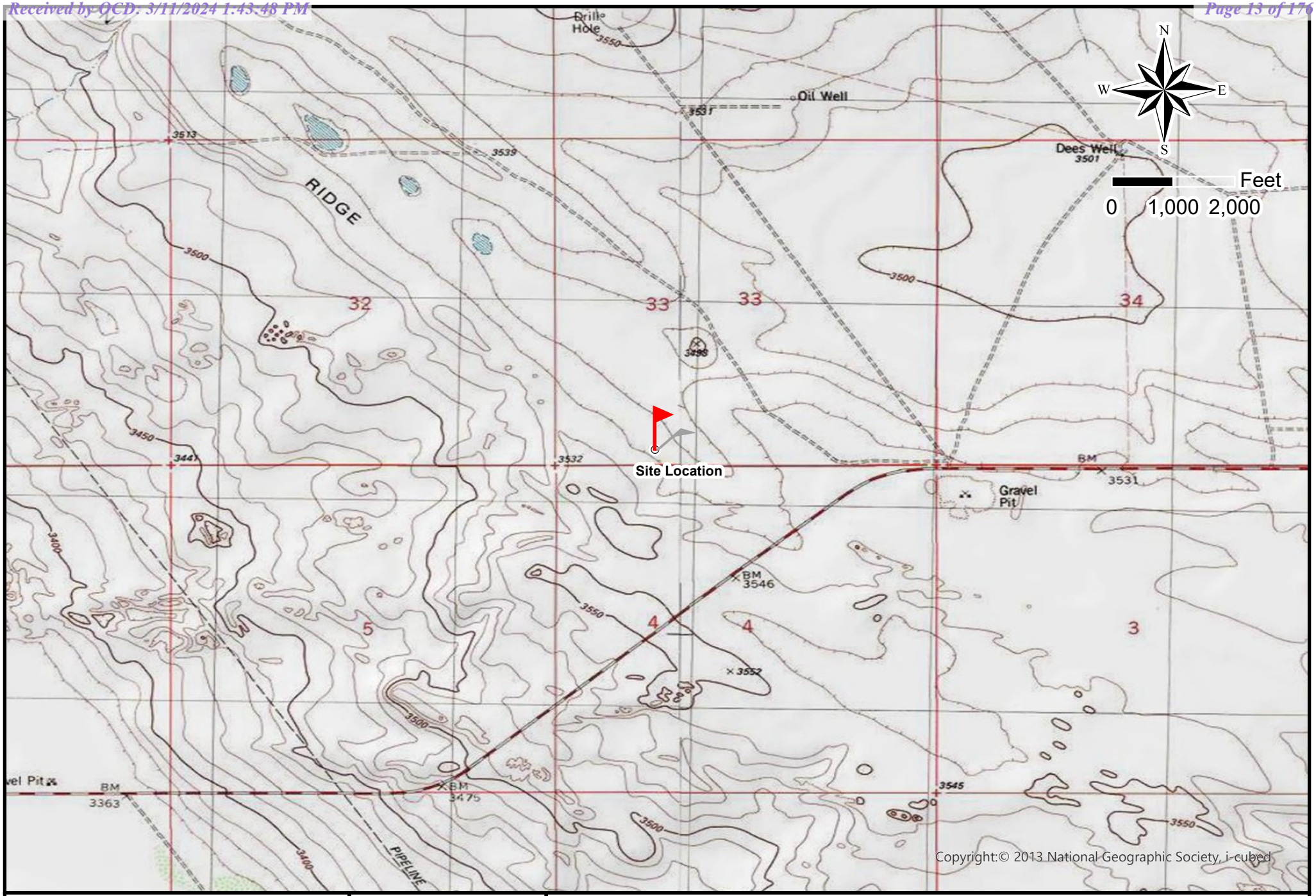
Bill Alexander Tank Battery
Matador Resources Company
Lea County, NM
Confirmation Sample Map



TALON LPE

Drafted: 2/6/2024
1 in = 20,000 ft
Drafted By: IJR

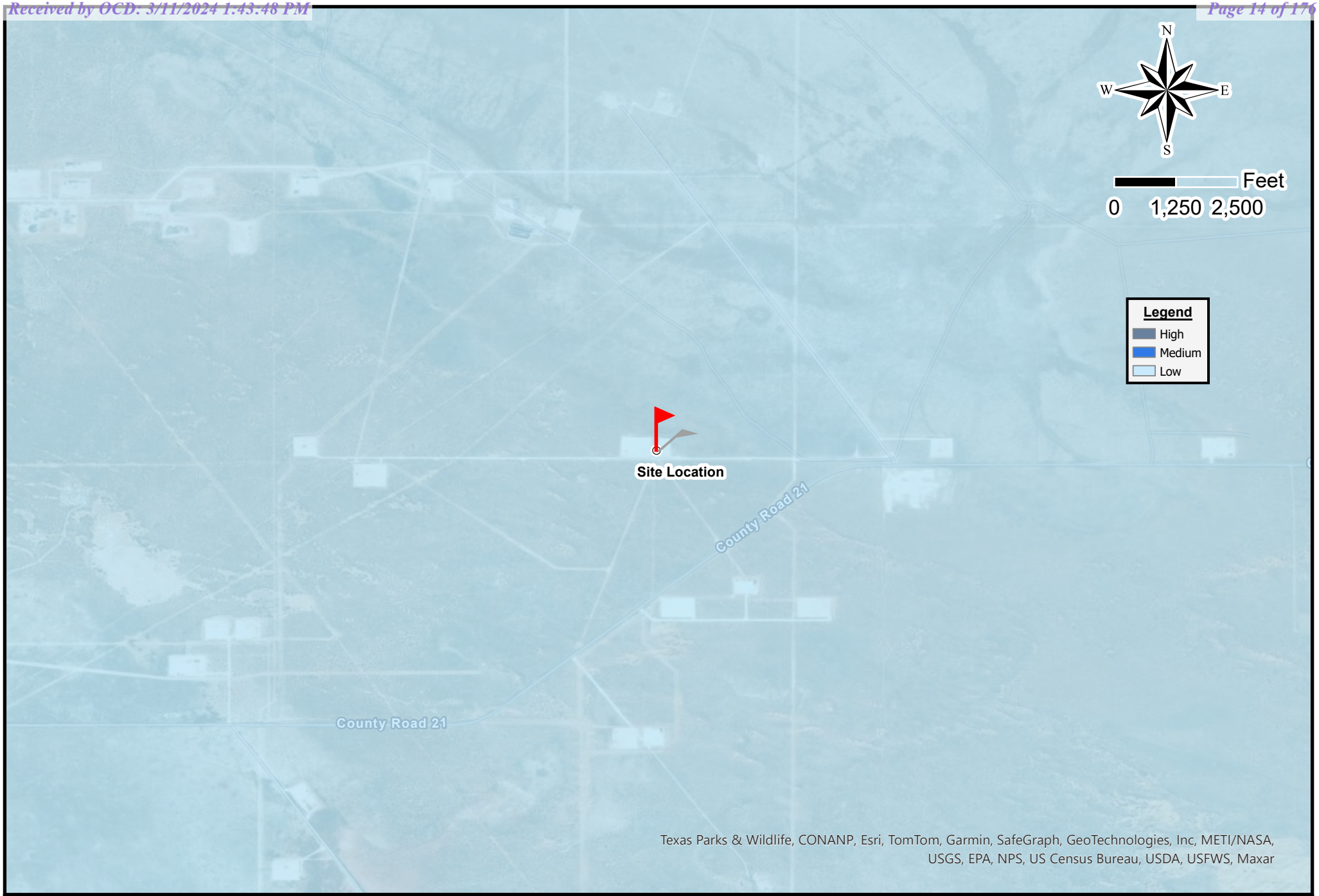
Bill Alexander Tank Battery
Matador Resources Company
Lea County, NM
Site Location Map



TALON LPE

Drafted: 2/6/2024
1 in = 2,000 ft
Drafted By: IJR

Bill Alexander Tank Battery
Matador Resources Company
Lea County, NM
Topographic Map



TALON LPE

Drafted: 2/6/2024
1 in = 2,500 ft
Drafted By: IJR

Bill Alexander Tank Battery
Matador Resources Company
Lea County, NM
Karst Map

APPENDIX II

Analytical Data Table

Table 1:
Summary of Sample Results

Matador Resources
Bill Alexander Tank Battery

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action	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	10000
L1	2/19/2019	0.5	insitu	4.22	□0.024	89	760	330	1179	97
	2/19/2019	1	insitu	--	--	□4.8	20	□49	20	--
L2	2/19/2019	0.5	excavate	**57.41**	□0.21	540	**3600**	1300	**5440**	440
	2/19/2019	1	excavate	0.7	□0.024	10	580	230	820	--
	2/19/2019	2	insitu	--	--	□4.7	□9.8	□49	□63.5	--
L3	2/19/2019	0.5	insitu	□0.216	□0.024	□4.8	67	83	150	980
	2/19/2019	1	insitu	--	--	□4.9	□9.7	□49	□63.6	810
	2/19/2019	2	insitu	--	--	--	--	--	--	210
BH1	3/15/2019	2	sample	□0.219	□0.024	□4.9	□9.7	□49	□63.6	□60
BH2	3/15/2019	2	sample	□0.211	□0.023	□4.7	□9.6	□48	□62.3	□60
BH3	3/15/2019	2	sample	□0.219	□0.024	□4.9	□9.6	□48	□62.5	□60
BH4	3/15/2019	2	sample	□0.211	□0.023	□4.7	62	82	144	130
SW1	3/15/2019	S-2	sample	□0.224	□0.025	□5.0	190	460	650	250
SW2	3/15/2019	S-2	sample	□0.215	□0.024	□4.8	44	62	106	99

□-□□ Not Analyzed

Table 2

Confirmation Samples
Incident # NAB1907829070

Bill Alexander Tank Battery									
Sample ID	Sample Date	Depth (BGS)	Benzene mg/kg	BTEX mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			10 mg/kg	50 mg/kg	DRO + GRO combined = 1000 mg/kg			2500 mg/kg	10000 mg/kg
C-1	1/25/2024	2'	ND	ND	ND	ND	ND	-	ND
C-2	1/25/2024	2'	ND	ND	ND	ND	ND	-	ND
C-3	1/25/2024	2'	ND	ND	ND	ND	ND	-	ND
C-4	1/25/2024	2'	ND	ND	ND	ND	ND	-	ND
C-5	1/25/2024	2'	ND	ND	ND	ND	ND	-	ND
C-6	1/25/2024	2'	ND	ND	ND	ND	ND	-	ND
SW-1	1/25/2024	-	ND	ND	ND	ND	ND	-	20.6
SW-2	1/25/2024	-	ND	ND	ND	ND	ND	-	ND
SW-3	1/25/2024	-	ND	ND	ND	ND	ND	-	ND
SW-4	1/25/2024	-	ND	ND	ND	ND	ND	-	ND

NOTES:

BGS	Below ground surface
mg/kg	Milligrams per kilogram
TPH	Total Petroleum Hydrocarbons
GRO	Gasoline range organics
DRO	Diesel range organics
MRO	Motor oil range organics
C	Confirmation Sample
SW	Sidewall Sample
ND	Analyte Not Detected

Highlighted cells indicate exceedance of NMOCD Table 1 Closure Criteria

APPENDIX III

Site Characterization

Custom Soil Resource Report
Soil Map

Map Scale: 1:270 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 4 8 16 24

Feet: 0 10 20 40 60

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 20, Sep 6, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Lea County, New Mexico

SE—Simona fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: dmr2
Elevation: 3,000 to 4,200 feet
Mean annual precipitation: 10 to 15 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: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Simona

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 8 inches: fine sandy loam
Bk - 8 to 16 inches: gravelly 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
Drainage class: Well drained
Runoff class: Very high
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 content: 35 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): 6s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R070BD002NM - Shallow Sandy
Hydric soil rating: No

Minor Components

Kimbrough

Percent of map unit: 8 percent
Ecological site: R077CY037TX - Very Shallow 16-21" PZ
Hydric soil rating: No

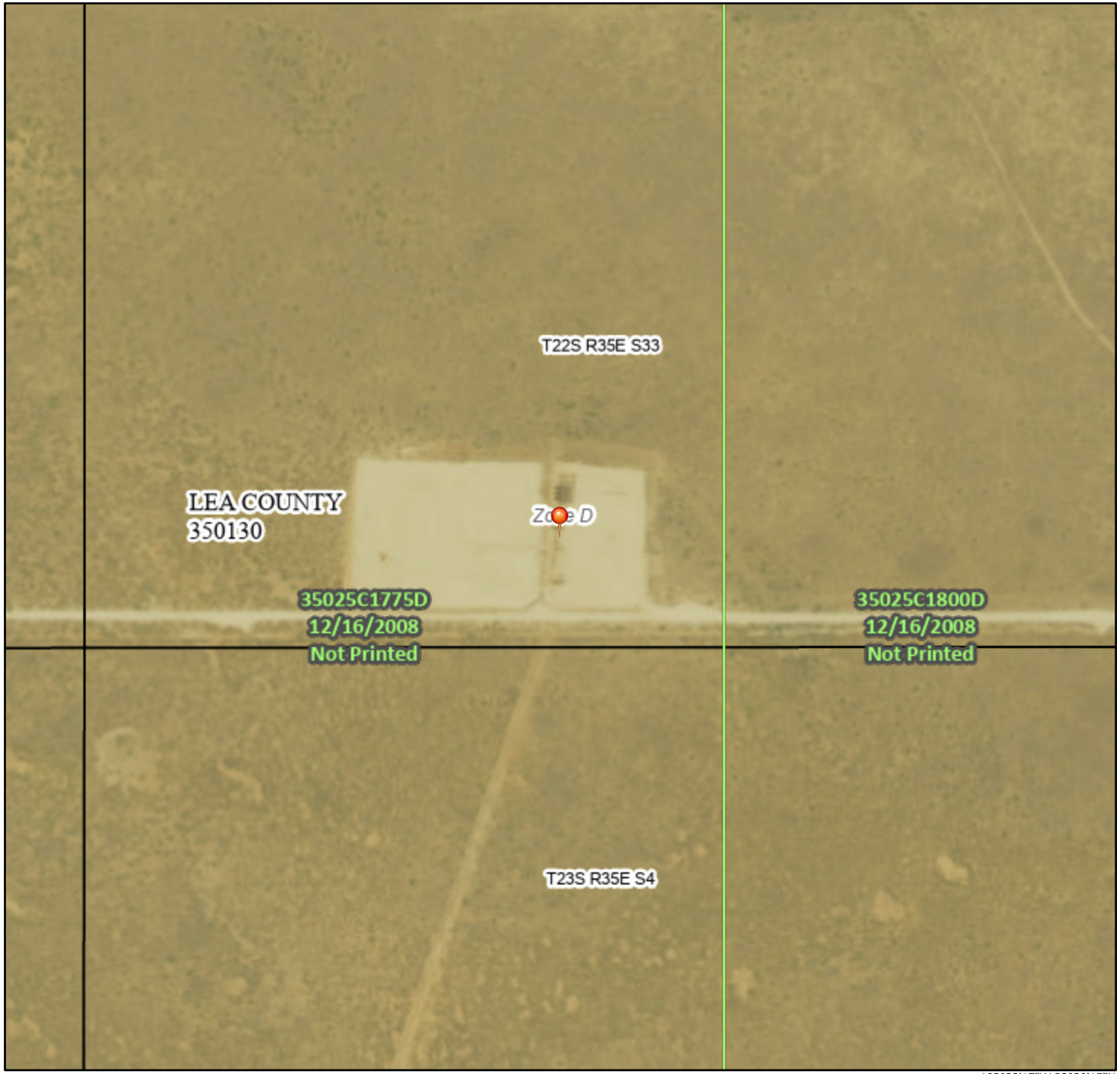
Lea

Percent of map unit: 7 percent
Ecological site: R077CY028TX - Limy Upland 16-21" PZ
Hydric soil rating: No

National Flood Hazard Layer FIRMette

FEMA

103°22'54"W 32°20'46"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

103°22'17"W 32°20'15"N

Basemap Imagery Source: USGS National Map 2023

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, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/20/2023 at 4:09 PM 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 regulatory purposes.

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 322101103211902

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

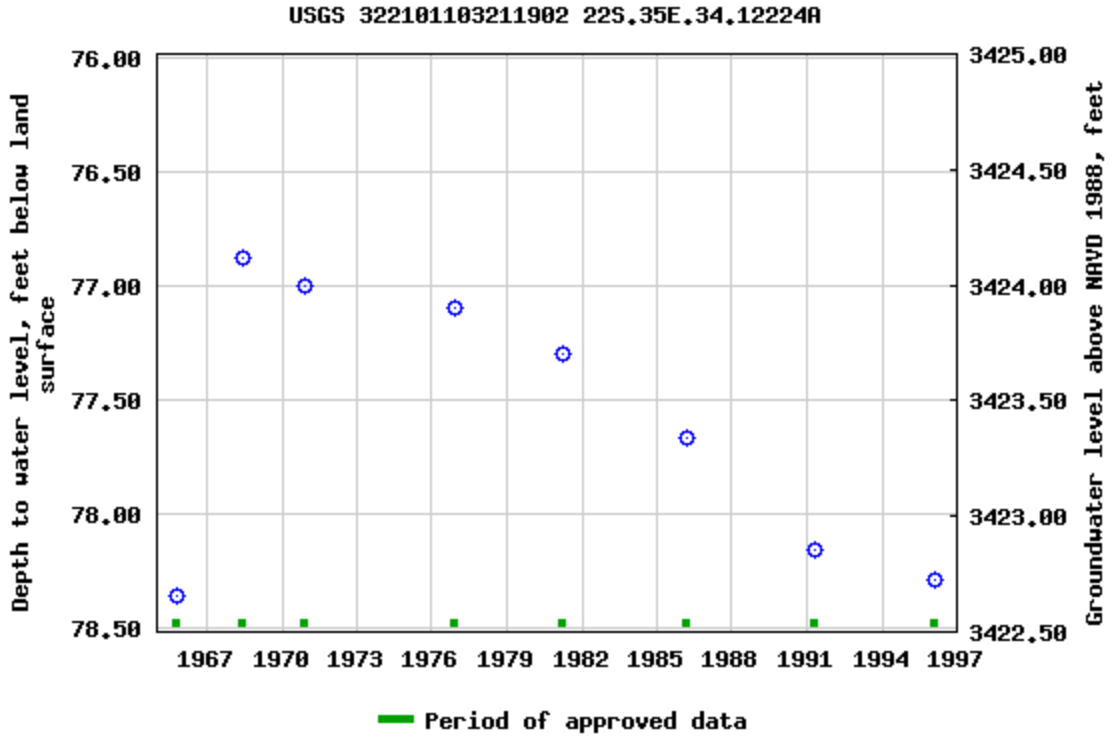
USGS 322101103211902 22S.35E.34.12224A

Available data for this site | Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°21'01", Longitude 103°21'19" NAD27
Land-surface elevation 3,501 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) 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

APPENDIX IV

Photographic Documentation

Bill Alexander Tank Battery
Lea County, New Mexico

Photograph No. 1 **Description:**	2' excavation.

APPENDIX V

Correspondence

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Matador Resources Company	OGRID 228937
Contact Name John Hurt	Contact Telephone 972-371-5200
Contact email JHurt@matadorresources.com	Incident # *(assigned by OCD)*
Contact mailing address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	

Location of Release Source

Latitude 32.3419462 Longitude -103.3762897
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Bill Alexander Tank Battery	Site Type Tank Battery
Date Release Discovered 2/18/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
M	33	22S	35E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) Approx. 57	Volume Recovered (bbls) Approx. 50
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
Equipment Failure at the Production Separator

** 57 bbls of produced water/
crude oil mixture

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? >50 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by SMA to SLO and NMOCD via the district 1 spills email on 2/19/2018	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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: John Hurt Title: RES Specialist

Signature: Date: 2/20/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Matador Resources Company	OGRID 228937
Contact Name John Hurt	Contact Telephone 972-371-5200
Contact email JHurt@matadorresources.com	Incident # *(assigned by OCD)*
Contact mailing address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	

Location of Release Source

Latitude 32.3419462 Longitude -103.3762897
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Bill Alexander Tank Battery	Site Type: Tank Battery
Date Release Discovered: 2/18/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
M	33	22S	35E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) Approx. 57	Volume Recovered (bbls) Approx 50
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release Equipment Failure at the Production Separator		

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? >25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by SMA to SLO and NMOCD via the district 1 spills email on 2/19/2018	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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: John Hurt Title: RES Specialist

Signature: Date: 4/11/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

Incident ID	
District RP	
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?	61-75 (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.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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: John Hurt Title: RES Specialist

Signature: Date: 4/1/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: John Hurt Title: RES Specialist

Signature: Date: 4/1/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Date:

Printed Name: Title:

APPENDIX VI

Laboratory Analytical Data

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

February 25, 2019

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

RE: Bill Alexander OrderNo.: 1902897

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 8 sample(s) on 2/21/2019 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.

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

CLIENT: Souder, Miller & Associates
Project: Bill Alexander
Lab ID: 1902897-001 **Matrix:** SOIL

Client Sample ID: L1-0.5
Collection Date: 2/19/2019 8:00:00 AM
Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	97	60		mg/Kg	20	2/22/2019 8:15:46 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	760	10		mg/Kg	1	2/22/2019 12:38:15 PM	43278
Motor Oil Range Organics (MRO)	330	50		mg/Kg	1	2/22/2019 12:38:15 PM	43278
Surr: DNOP	90.9	70-130		%Rec	1	2/22/2019 12:38:15 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	89	4.7		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Surr: BFB	519	73.8-119	S	%Rec	1	2/22/2019 3:29:29 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Toluene	0.70	0.047		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Ethylbenzene	0.92	0.047		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Xylenes, Total	2.6	0.094		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	1	2/22/2019 3:29:29 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-1
Project: Bill Alexander
Collection Date: 2/19/2019 8:05:00 AM
Lab ID: 1902897-002 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	20	9.7		mg/Kg	1	2/22/2019 2:15:06 PM	43278
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/22/2019 2:15:06 PM	43278
Surr: DNOP	88.8	70-130		%Rec	1	2/22/2019 2:15:06 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/22/2019 1:31:30 PM	43274
Surr: BFB	110	73.8-119		%Rec	1	2/22/2019 1:31:30 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-0.5
Project: Bill Alexander
Collection Date: 2/19/2019 8:15:00 AM
Lab ID: 1902897-004 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Chloride	440	60		mg/Kg	20	2/22/2019 8:28:10 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	3600	99		mg/Kg	10	2/22/2019 2:39:17 PM	43278
Motor Oil Range Organics (MRO)	1300	490		mg/Kg	10	2/22/2019 2:39:17 PM	43278
Surr: DNOP	0	70-130	S	%Rec	10	2/22/2019 2:39:17 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	540	23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Surr: BFB	522	73.8-119	S	%Rec	5	2/22/2019 5:03:36 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	0.21	0.11		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Toluene	9.2	0.23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Ethylbenzene	13	0.23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Xylenes, Total	35	0.46		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Surr: 4-Bromofluorobenzene	149	80-120	S	%Rec	5	2/22/2019 5:03:36 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Bill Alexander
Lab ID: 1902897-005 **Matrix:** SOIL

Client Sample ID: L2-1
Collection Date: 2/19/2019 8:20:00 AM
Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	580	9.9		mg/Kg	1	2/22/2019 3:03:36 PM	43278
Motor Oil Range Organics (MRO)	230	50		mg/Kg	1	2/22/2019 3:03:36 PM	43278
Surr: DNOP	116	70-130		%Rec	1	2/22/2019 3:03:36 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	10	4.8		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Surr: BFB	172	73.8-119	S	%Rec	1	2/22/2019 5:50:35 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-0.5
Project: Bill Alexander
Collection Date: 2/19/2019 8:30:00 AM
Lab ID: 1902897-007 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Chloride	980	60		mg/Kg	20	2/22/2019 8:40:34 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	67	9.9		mg/Kg	1	2/22/2019 3:54:06 PM	43278
Motor Oil Range Organics (MRO)	83	49		mg/Kg	1	2/22/2019 3:54:06 PM	43278
Surr: DNOP	102	70-130		%Rec	1	2/22/2019 3:54:06 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Surr: BFB	103	73.8-119		%Rec	1	2/22/2019 6:37:27 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Toluene	ND	0.048		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Ethylbenzene	ND	0.048		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Xylenes, Total	ND	0.096		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	2/22/2019 6:37:27 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-1
Project: Bill Alexander
Collection Date: 2/19/2019 8:35:00 AM
Lab ID: 1902897-008 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/22/2019 4:42:31 PM	43278
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/22/2019 4:42:31 PM	43278
Surr: DNOP	70.9	70-130		%Rec	1	2/22/2019 4:42:31 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/22/2019 2:42:12 PM	43274
Surr: BFB	104	73.8-119		%Rec	1	2/22/2019 2:42:12 PM	43274

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#: **1902897**

25-Feb-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43302**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **43302**	RunNo: **57905**							
Prep Date: **2/22/2019**	Analysis Date: **2/22/2019**	SeqNo: **1939513**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-43302**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **43302**	RunNo: **57905**							
Prep Date: **2/22/2019**	Analysis Date: **2/22/2019**	SeqNo: **1939514**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	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 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#: **1902897**

25-Feb-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **LCS-43278**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **43278**	RunNo: **57896**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938482** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	63.9	124			
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID: **MB-43278**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **43278**	RunNo: **57896**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938483** 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	11		10.00		109	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
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#: **1902897**

25-Feb-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43274**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1937715** 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	1000		1000		104	73.8	119			

Sample ID: **LCS-43274**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1937716** 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	106	80.1	123			
Surr: BFB	1100		1000		113	73.8	119			

Sample ID: **1902897-002AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **L1-1**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938736** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.9	24.65	0	120	69.1	142			
Surr: BFB	1300		986.2		133	73.8	119			S

Sample ID: **1902897-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **L1-1**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938737** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.9	24.44	0	112	69.1	142	7.51	20	
Surr: BFB	1200		977.5		121	73.8	119	0	0	S

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#: **1902897**

25-Feb-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43274**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938745** 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	0.99		1.000		98.6	80	120			

Sample ID: **LCS-43274**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938746** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.8	80	120			
Toluene	0.95	0.050	1.000	0	94.7	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.0	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.4	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.8	80	120			

Sample ID: **1902897-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **L1-0.5**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938750** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.024	0.9470	0	87.1	63.9	127			
Toluene	1.4	0.047	0.9470	0.6973	73.0	69.9	131			
Ethylbenzene	1.6	0.047	0.9470	0.9160	74.1	71	132			
Xylenes, Total	4.8	0.095	2.841	2.630	74.8	71.8	131			
Surr: 4-Bromofluorobenzene	1.1		0.9470		120	80	120			

Sample ID: **1902897-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **L1-0.5**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938751** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9756	0	92.2	63.9	127	8.75	20	
Toluene	1.5	0.049	0.9756	0.6973	83.9	69.9	131	8.72	20	
Ethylbenzene	1.8	0.049	0.9756	0.9160	89.6	71	132	10.1	20	
Xylenes, Total	5.3	0.098	2.927	2.630	90.5	71.8	131	10.4	20	
Surr: 4-Bromofluorobenzene	1.2		0.9756		125	80	120	0	0	S

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: 1902897 RcptNo: 1

Received By: Isaiah Ortiz 2/21/2019 8:40:00 AM I-04

Completed By: Victoria Zellar 2/21/2019 8:58:24 AM Victoria Zellar labeled by IO 2/21/19

Reviewed By: DAD 2/21/19

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 ☑	IO 2/21/19
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? _____
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 ☐	Checked by: _____

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	2.1	Good	Yes			

Chain-of-Custody Record

Client: SMA Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

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

Project Name: Bill Alexander

Project #:

Project Manager: A. Weygant

Sampler: MRS

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.1°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. 1902987	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, ~~NO3, NO2, PO4, SO4~~	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
2-19-19	8:00	soil	L1 - 0.5	4oz		-001	X	X					X			
	8:05		L1 - 1	1		-002		X								
	8:10		L1 - 2*	Please	hold	-003										
	8:15		L2 - 0.5	1		-004	X	X					X			
	8:20		L2 - 1	1		-005		X								
	8:25		L2 - 2*	Please	hold	-006										
	8:30		L3 - 0.5	1		-007	X	X					X			
	8:35		L3 - 1	1		-008		X								

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2/20/19	8:30	Samantha Watson				
2/20/19	1907			Courier	2/21/19	0840

Remarks: Matador

*Please hold for further testing

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.

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-0.5
Project: Bill Alexander
Collection Date: 2/19/2019 8:00:00 AM
Lab ID: 1902897-001 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Chloride	97	60		mg/Kg	20	2/22/2019 8:15:46 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	760	10		mg/Kg	1	2/22/2019 12:38:15 PM	43278
Motor Oil Range Organics (MRO)	330	50		mg/Kg	1	2/22/2019 12:38:15 PM	43278
Surr: DNOP	90.9	70-130		%Rec	1	2/22/2019 12:38:15 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	89	4.7		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Surr: BFB	519	73.8-119	S	%Rec	1	2/22/2019 3:29:29 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Toluene	0.70	0.047		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Ethylbenzene	0.92	0.047		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Xylenes, Total	2.6	0.094		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	1	2/22/2019 3:29:29 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-1
Project: Bill Alexander
Collection Date: 2/19/2019 8:05:00 AM
Lab ID: 1902897-002 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	20	9.7		mg/Kg	1	2/22/2019 2:15:06 PM	43278
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/22/2019 2:15:06 PM	43278
Surr: DNOP	88.8	70-130		%Rec	1	2/22/2019 2:15:06 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/22/2019 1:31:30 PM	43274
Surr: BFB	110	73.8-119		%Rec	1	2/22/2019 1:31:30 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-0.5
Project: Bill Alexander
Collection Date: 2/19/2019 8:15:00 AM
Lab ID: 1902897-004 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Chloride	440	60		mg/Kg	20	2/22/2019 8:28:10 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	3600	99		mg/Kg	10	2/22/2019 2:39:17 PM	43278
Motor Oil Range Organics (MRO)	1300	490		mg/Kg	10	2/22/2019 2:39:17 PM	43278
Surr: DNOP	0	70-130	S	%Rec	10	2/22/2019 2:39:17 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	540	23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Surr: BFB	522	73.8-119	S	%Rec	5	2/22/2019 5:03:36 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	0.21	0.11		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Toluene	9.2	0.23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Ethylbenzene	13	0.23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Xylenes, Total	35	0.46		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Surr: 4-Bromofluorobenzene	149	80-120	S	%Rec	5	2/22/2019 5:03:36 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-1
Project: Bill Alexander
Collection Date: 2/19/2019 8:20:00 AM
Lab ID: 1902897-005 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	580	9.9		mg/Kg	1	2/22/2019 3:03:36 PM	43278
Motor Oil Range Organics (MRO)	230	50		mg/Kg	1	2/22/2019 3:03:36 PM	43278
Surr: DNOP	116	70-130		%Rec	1	2/22/2019 3:03:36 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	10	4.8		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Surr: BFB	172	73.8-119	S	%Rec	1	2/22/2019 5:50:35 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Benzene	ND	0.024		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Toluene	0.080	0.048		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Ethylbenzene	0.14	0.048		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Xylenes, Total	0.48	0.096		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	2/22/2019 5:50:35 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-2
Project: Bill Alexander
Collection Date: 2/19/2019 8:25:00 AM
Lab ID: 1902897-006 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/27/2019 9:29:15 AM	43351
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/27/2019 9:29:15 AM	43351
Surr: DNOP	86.9	70-130		%Rec	1	2/27/2019 9:29:15 AM	43351
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/27/2019 9:47:49 AM	43340
Surr: BFB	93.4	73.8-119		%Rec	1	2/27/2019 9:47:49 AM	43340

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	Page 5 of 0
	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	

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-0.5
Project: Bill Alexander
Collection Date: 2/19/2019 8:30:00 AM
Lab ID: 1902897-007 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Chloride	980	60		mg/Kg	20	2/22/2019 8:40:34 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	67	9.9		mg/Kg	1	2/22/2019 3:54:06 PM	43278
Motor Oil Range Organics (MRO)	83	49		mg/Kg	1	2/22/2019 3:54:06 PM	43278
Surr: DNOP	102	70-130		%Rec	1	2/22/2019 3:54:06 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Surr: BFB	103	73.8-119		%Rec	1	2/22/2019 6:37:27 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Toluene	ND	0.048		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Ethylbenzene	ND	0.048		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Xylenes, Total	ND	0.096		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	2/22/2019 6:37:27 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-1
Project: Bill Alexander
Collection Date: 2/19/2019 8:35:00 AM
Lab ID: 1902897-008 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	810	60		mg/Kg	20	2/26/2019 5:08:21 PM	43360
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/22/2019 4:42:31 PM	43278
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/22/2019 4:42:31 PM	43278
Surr: DNOP	70.9	70-130		%Rec	1	2/22/2019 4:42:31 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/22/2019 2:42:12 PM	43274
Surr: BFB	104	73.8-119		%Rec	1	2/22/2019 2:42:12 PM	43274

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	Page 7 of 0
	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

March 01, 2019

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

RE: Bill Alexander OrderNo.: 1902B86

Dear Melodie Sanjari:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/28/2019 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

Analytical Report
Lab Order **1902B86**
Date Reported: **3/1/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-2'
Project: Bill Alexander
Collection Date: 2/19/2019 2:00:00 PM
Lab ID: 1902B86-001 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	210	60		mg/Kg	20	3/1/2019 12:10:09 AM	43420

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#: **1902B86**

01-Mar-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43420**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **43420**	RunNo: **58032**							
Prep Date: **2/28/2019**	Analysis Date: **2/28/2019**	SeqNo: **1944811**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-43420**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **43420**	RunNo: **58032**							
Prep Date: **2/28/2019**	Analysis Date: **2/28/2019**	SeqNo: **1944812**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	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 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: **1902B86** RcptNo: **1**

Received By: **Thom Maybee** **2/28/2019 8:55:00 AM**

Completed By: **Leah Baca** **2/28/2019 9:00:15 AM** Leah Baca

Reviewed By: LB 2/28/19

Labeled by YG 2/28/19

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: YG 2/28/19 (<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: _____ 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	5.1	Good	Yes			

Chain-of-Custody Record

Client: SMA - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 2day.

Project Name: Bill Alexander

Project #:

Project Manager: Melodie Sanjari

Sampler: MRS

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 5.1°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 Name	Container Type and #	Preservative Type	HEAL No. 1902886	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)
2/19/19	2:00	soil	L3-2'	4oz		-001							✓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
					2/21/19	1400
2/21/19	1900			Via: courier	2-28-19	8.55

Remarks: Matador

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.

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

March 25, 2019

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

RE: Bill Alexander OrderNo.: 1903789

Dear Melodie Sanjari:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/16/2019 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.

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

CLIENT: Souder, Miller & Associates
Client Sample ID: SW1
Project: Bill Alexander
Collection Date: 3/15/2019 10:15:00 AM
Lab ID: 1903789-001 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	250	60		mg/Kg	20	3/22/2019 10:20:49 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	190	9.6		mg/Kg	1	3/20/2019 3:37:17 PM	43742
Motor Oil Range Organics (MRO)	160	48		mg/Kg	1	3/20/2019 3:37:17 PM	43742
Surr: DNOP	107	70-130		%Rec	1	3/20/2019 3:37:17 PM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/20/2019 12:04:47 AM	43727
Surr: BFB	98.9	73.8-119		%Rec	1	3/20/2019 12:04:47 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	3/20/2019 12:04:47 AM	43727
Toluene	ND	0.050		mg/Kg	1	3/20/2019 12:04:47 AM	43727
Ethylbenzene	ND	0.050		mg/Kg	1	3/20/2019 12:04:47 AM	43727
Xylenes, Total	ND	0.099		mg/Kg	1	3/20/2019 12:04:47 AM	43727
Surr: 4-Bromofluorobenzene	99.4	80-120		%Rec	1	3/20/2019 12:04:47 AM	43727

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

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW2
Project: Bill Alexander
Collection Date: 3/15/2019 10:40:00 AM
Lab ID: 1903789-002 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	99	60		mg/Kg	20	3/22/2019 10:33:14 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	44	9.4		mg/Kg	1	3/20/2019 4:25:34 PM	43742
Motor Oil Range Organics (MRO)	62	47		mg/Kg	1	3/20/2019 4:25:34 PM	43742
Surr: DNOP	102	70-130		%Rec	1	3/20/2019 4:25:34 PM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/20/2019 12:28:12 AM	43727
Surr: BFB	97.9	73.8-119		%Rec	1	3/20/2019 12:28:12 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/20/2019 12:28:12 AM	43727
Toluene	ND	0.048		mg/Kg	1	3/20/2019 12:28:12 AM	43727
Ethylbenzene	ND	0.048		mg/Kg	1	3/20/2019 12:28:12 AM	43727
Xylenes, Total	ND	0.095		mg/Kg	1	3/20/2019 12:28:12 AM	43727
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	3/20/2019 12:28:12 AM	43727

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

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH1
Project: Bill Alexander
Collection Date: 3/15/2019 9:15:00 AM
Lab ID: 1903789-003 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	3/22/2019 10:45:38 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/20/2019 1:04:58 AM	43742
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/20/2019 1:04:58 AM	43742
Surr: DNOP	102	70-130		%Rec	1	3/20/2019 1:04:58 AM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/20/2019 12:51:45 AM	43727
Surr: BFB	96.5	73.8-119		%Rec	1	3/20/2019 12:51:45 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/20/2019 12:51:45 AM	43727
Toluene	ND	0.049		mg/Kg	1	3/20/2019 12:51:45 AM	43727
Ethylbenzene	ND	0.049		mg/Kg	1	3/20/2019 12:51:45 AM	43727
Xylenes, Total	ND	0.097		mg/Kg	1	3/20/2019 12:51:45 AM	43727
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	3/20/2019 12:51:45 AM	43727

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

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH2
Project: Bill Alexander
Collection Date: 3/15/2019 11:00:00 AM
Lab ID: 1903789-004 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	3/22/2019 10:58:03 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/20/2019 1:28:34 AM	43742
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/20/2019 1:28:34 AM	43742
Surr: DNOP	101	70-130		%Rec	1	3/20/2019 1:28:34 AM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/20/2019 1:15:20 AM	43727
Surr: BFB	96.4	73.8-119		%Rec	1	3/20/2019 1:15:20 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/20/2019 1:15:20 AM	43727
Toluene	ND	0.047		mg/Kg	1	3/20/2019 1:15:20 AM	43727
Ethylbenzene	ND	0.047		mg/Kg	1	3/20/2019 1:15:20 AM	43727
Xylenes, Total	ND	0.094		mg/Kg	1	3/20/2019 1:15:20 AM	43727
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	3/20/2019 1:15:20 AM	43727

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

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH3
Project: Bill Alexander
Collection Date: 3/15/2019 11:30:00 AM
Lab ID: 1903789-005 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	3/22/2019 11:10:27 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/20/2019 1:52:09 AM	43742
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/20/2019 1:52:09 AM	43742
Surr: DNOP	103	70-130		%Rec	1	3/20/2019 1:52:09 AM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/20/2019 1:38:51 AM	43727
Surr: BFB	95.5	73.8-119		%Rec	1	3/20/2019 1:38:51 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/20/2019 1:38:51 AM	43727
Toluene	ND	0.049		mg/Kg	1	3/20/2019 1:38:51 AM	43727
Ethylbenzene	ND	0.049		mg/Kg	1	3/20/2019 1:38:51 AM	43727
Xylenes, Total	ND	0.097		mg/Kg	1	3/20/2019 1:38:51 AM	43727
Surr: 4-Bromofluorobenzene	99.9	80-120		%Rec	1	3/20/2019 1:38:51 AM	43727

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.

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

CLIENT: Souder, Miller & Associates
Client Sample ID: BH4
Project: Bill Alexander
Collection Date: 3/15/2019 10:00:00 AM
Lab ID: 1903789-006 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	130	60		mg/Kg	20	3/22/2019 11:22:52 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	62	9.3		mg/Kg	1	3/20/2019 2:15:39 AM	43742
Motor Oil Range Organics (MRO)	82	47		mg/Kg	1	3/20/2019 2:15:39 AM	43742
Surr: DNOP	107	70-130		%Rec	1	3/20/2019 2:15:39 AM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/20/2019 2:02:25 AM	43727
Surr: BFB	97.8	73.8-119		%Rec	1	3/20/2019 2:02:25 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/20/2019 2:02:25 AM	43727
Toluene	ND	0.047		mg/Kg	1	3/20/2019 2:02:25 AM	43727
Ethylbenzene	ND	0.047		mg/Kg	1	3/20/2019 2:02:25 AM	43727
Xylenes, Total	ND	0.094		mg/Kg	1	3/20/2019 2:02:25 AM	43727
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	3/20/2019 2:02:25 AM	43727

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#: **1903789**

25-Mar-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43837**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **43837**	RunNo: **58569**							
Prep Date: **3/22/2019**	Analysis Date: **3/22/2019**	SeqNo: **1967112**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-43837**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **43837**	RunNo: **58569**							
Prep Date: **3/22/2019**	Analysis Date: **3/22/2019**	SeqNo: **1967113**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	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 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#: **1903789**

25-Mar-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43742**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **43742**	RunNo: **58454**
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1963736** 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	10		10.00		101	70	130			

Sample ID: **LCS-43742**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **43742**	RunNo: **58454**
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1963737** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.9	63.9	124			
Surr: DNOP	4.8		5.000		95.1	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
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#: **1903789**

25-Mar-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43727**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **43727**	RunNo: **58461**
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1962672** 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	980		1000		97.6	73.8	119			

Sample ID: **LCS-43727**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **43727**	RunNo: **58461**
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1962673** 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	102	80.1	123			
Surr: BFB	1100		1000		111	73.8	119			

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#: **1903789**

25-Mar-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43727**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **43727**	RunNo: **58461**							
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1962711**	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	1.0		1.000		103	80	120			

Sample ID: **LCS-43727**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **43727**	RunNo: **58461**							
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1962712**	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	99.5	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	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: **1903789** RcptNo: **1**

Received By: **Erin Melendrez** **3/16/2019 10:50:00 AM**

Completed By: **Erin Melendrez** **3/16/2019 1:14:15 PM**

Reviewed By: ENM 3/18/19

LB: DAD 3/18/19

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 3/18/19

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	3.7	Good	Yes			

Chain-of-Custody Record

Client: SMA-Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5day

Project Name: Bill Alexander

Project #:

Project Manager: Melodie Sanjari

Sampler: MRS

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.7°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 Name	Container Type and #	Preservative Type	HEAL No. 1903789	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)
3/15/19	10:15	soil	SW1	4oz		-001	✓	✓					✓			
	10:40		SW2			-002	✓	✓					✓			
	9:15		BH1			-003	✓	✓					✓			
	11:00		BH2			-004	✓	–					✓			
	11:30		BH 3			-005	✓	–					✓			
	10:00		BH 4			-006	✓	✓					✓			

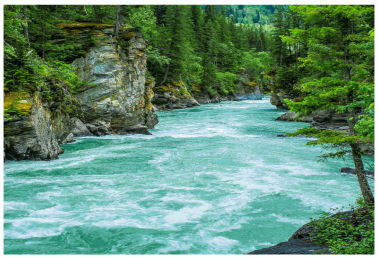
Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/15/19	9:00				3/15/19	1200
3/15/19	1900			Courier	3/16/19	1050

Remarks: Matador

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.

Report to:

Chad Hensley



5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Matador Resources, LLC.

Project Name:	Bill Alexander
Work Order:	E401211
Job Number:	23052-0001
Received:	1/29/2024

Revision: 2

Report Reviewed By:

Walter Hinchman
Laboratory Director
2/5/24

Date Reported: 2/5/24

Chad Hensley
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240

Project Name: Bill Alexander
Workorder: E401211
Date Received: 1/29/2024 11:48:00AM

Chad Hensley,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 1/29/2024 11:48:00AM, under the Project Name: Bill Alexander.

The analytical test results summarized in this report with the Project Name: Bill Alexander apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

Alexa Michaels
Sample Custody Officer
Office: 505-632-1881
labadmin@envirotech-inc.com

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Southern New Mexico Area

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Office: 505-421-LABS(5227)
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ljarboe@envirotech-inc.com

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mgonzales@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

Matador Resources, LLC.	Project Name:	Bill Alexander	**Reported:**
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Chad Hensley	02/05/24 13:57

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
C - 1 @ 2'	E401211-01A	Soil	01/25/24	01/29/24	Glass Jar, 2 oz.
C - 2 @ 2'	E401211-02A	Soil	01/25/24	01/29/24	Glass Jar, 2 oz.
C - 3@ 2'	E401211-03A	Soil	01/25/24	01/29/24	Glass Jar, 2 oz.
C - 4 @ 2'	E401211-04A	Soil	01/25/24	01/29/24	Glass Jar, 2 oz.
C - 5 @ 2'	E401211-05A	Soil	01/25/24	01/29/24	Glass Jar, 2 oz.
C - 6 @ 2'	E401211-06A	Soil	01/25/24	01/29/24	Glass Jar, 2 oz.
SW - 1 @ 0-2'	E401211-07A	Soil	01/25/24	01/29/24	Glass Jar, 2 oz.
SW -2 @ 0-2'	E401211-08A	Soil	01/25/24	01/29/24	Glass Jar, 2 oz.
SW - 3 @ 0-2	E401211-09A	Soil	01/25/24	01/29/24	Glass Jar, 2 oz.
SW - 4 @0-2'	E401211-10A	Soil	01/25/24	01/29/24	Glass Jar, 2 oz.

Sample Data

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

C - 1 @ 2'

E401211-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Benzene	ND	0.0250	1	01/30/24	01/31/24	
Ethylbenzene	ND	0.0250	1	01/30/24	01/31/24	
Toluene	ND	0.0250	1	01/30/24	01/31/24	
o-Xylene	ND	0.0250	1	01/30/24	01/31/24	
p,m-Xylene	ND	0.0500	1	01/30/24	01/31/24	
Total Xylenes	ND	0.0250	1	01/30/24	01/31/24	
Surrogate: 4-Bromochlorobenzene-PID		*97.9 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/24	01/31/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.9 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2405100
Diesel Range Organics (C10-C28)	ND	25.0	1	02/01/24	02/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/01/24	02/02/24	
Surrogate: n-Nonane		*79.5 %*	*50-200*	*02/01/24*	*02/02/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2405065
Chloride	ND	20.0	1	01/31/24	01/31/24	

Sample Data

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

C - 2 @ 2'

E401211-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Benzene	ND	0.0250	1	01/30/24	01/31/24	
Ethylbenzene	ND	0.0250	1	01/30/24	01/31/24	
Toluene	ND	0.0250	1	01/30/24	01/31/24	
o-Xylene	ND	0.0250	1	01/30/24	01/31/24	
p,m-Xylene	ND	0.0500	1	01/30/24	01/31/24	
Total Xylenes	ND	0.0250	1	01/30/24	01/31/24	
Surrogate: 4-Bromochlorobenzene-PID		*97.0 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/24	01/31/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.1 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2405100
Diesel Range Organics (C10-C28)	ND	25.0	1	02/01/24	02/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/01/24	02/02/24	
Surrogate: n-Nonane		*82.3 %*	*50-200*	*02/01/24*	*02/02/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2405065
Chloride	ND	20.0	1	01/31/24	01/31/24	

Sample Data

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

C - 3@ 2'

E401211-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Benzene	ND	0.0250	1	01/30/24	01/31/24	
Ethylbenzene	ND	0.0250	1	01/30/24	01/31/24	
Toluene	ND	0.0250	1	01/30/24	01/31/24	
o-Xylene	ND	0.0250	1	01/30/24	01/31/24	
p,m-Xylene	ND	0.0500	1	01/30/24	01/31/24	
Total Xylenes	ND	0.0250	1	01/30/24	01/31/24	
Surrogate: 4-Bromochlorobenzene-PID		*96.4 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/24	01/31/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.3 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2405100
Diesel Range Organics (C10-C28)	ND	25.0	1	02/01/24	02/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/01/24	02/02/24	
Surrogate: n-Nonane		*82.9 %*	*50-200*	*02/01/24*	*02/02/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2405065
Chloride	ND	20.0	1	01/31/24	01/31/24	

Sample Data

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

C - 4 @ 2'

E401211-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Benzene	ND	0.0250	1	01/30/24	01/31/24	
Ethylbenzene	ND	0.0250	1	01/30/24	01/31/24	
Toluene	ND	0.0250	1	01/30/24	01/31/24	
o-Xylene	ND	0.0250	1	01/30/24	01/31/24	
p,m-Xylene	ND	0.0500	1	01/30/24	01/31/24	
Total Xylenes	ND	0.0250	1	01/30/24	01/31/24	
Surrogate: 4-Bromochlorobenzene-PID		*96.7 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/24	01/31/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.1 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2405100
Diesel Range Organics (C10-C28)	ND	25.0	1	02/01/24	02/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/01/24	02/02/24	
Surrogate: n-Nonane		*105 %*	*50-200*	*02/01/24*	*02/02/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2405065
Chloride	ND	20.0	1	01/31/24	01/31/24	

Sample Data

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

C - 5 @ 2'

E401211-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Benzene	ND	0.0250	1	01/30/24	01/31/24	
Ethylbenzene	ND	0.0250	1	01/30/24	01/31/24	
Toluene	ND	0.0250	1	01/30/24	01/31/24	
o-Xylene	ND	0.0250	1	01/30/24	01/31/24	
p,m-Xylene	ND	0.0500	1	01/30/24	01/31/24	
Total Xylenes	ND	0.0250	1	01/30/24	01/31/24	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/24	01/31/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.1 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2405100
Diesel Range Organics (C10-C28)	ND	25.0	1	02/01/24	02/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/01/24	02/02/24	
Surrogate: n-Nonane		*101 %*	*50-200*	*02/01/24*	*02/02/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2405065
Chloride	ND	20.0	1	01/31/24	01/31/24	

Sample Data

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

C - 6 @ 2'

E401211-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Benzene	ND	0.0250	1	01/30/24	01/31/24	
Ethylbenzene	ND	0.0250	1	01/30/24	01/31/24	
Toluene	ND	0.0250	1	01/30/24	01/31/24	
o-Xylene	ND	0.0250	1	01/30/24	01/31/24	
p,m-Xylene	ND	0.0500	1	01/30/24	01/31/24	
Total Xylenes	ND	0.0250	1	01/30/24	01/31/24	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/24	01/31/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.8 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2405100
Diesel Range Organics (C10-C28)	ND	25.0	1	02/01/24	02/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/01/24	02/02/24	
Surrogate: n-Nonane		*98.1 %*	*50-200*	*02/01/24*	*02/02/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2405065
Chloride	ND	20.0	1	01/31/24	01/31/24	

Sample Data

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

SW - 1 @ 0-2'

E401211-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Benzene	ND	0.0250	1	01/30/24	01/31/24	
Ethylbenzene	ND	0.0250	1	01/30/24	01/31/24	
Toluene	ND	0.0250	1	01/30/24	01/31/24	
o-Xylene	ND	0.0250	1	01/30/24	01/31/24	
p,m-Xylene	ND	0.0500	1	01/30/24	01/31/24	
Total Xylenes	ND	0.0250	1	01/30/24	01/31/24	
Surrogate: 4-Bromochlorobenzene-PID		*95.9 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/24	01/31/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.2 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2405100
Diesel Range Organics (C10-C28)	ND	25.0	1	02/01/24	02/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/01/24	02/02/24	
Surrogate: n-Nonane		*85.8 %*	*50-200*	*02/01/24*	*02/02/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2405065
Chloride	**20.6**	20.0	1	01/31/24	01/31/24	

Sample Data

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

SW -2 @ 0-2'

E401211-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Benzene	ND	0.0250	1	01/30/24	01/31/24	
Ethylbenzene	ND	0.0250	1	01/30/24	01/31/24	
Toluene	ND	0.0250	1	01/30/24	01/31/24	
o-Xylene	ND	0.0250	1	01/30/24	01/31/24	
p,m-Xylene	ND	0.0500	1	01/30/24	01/31/24	
Total Xylenes	ND	0.0250	1	01/30/24	01/31/24	
Surrogate: 4-Bromochlorobenzene-PID		*97.0 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/24	01/31/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.5 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2405100
Diesel Range Organics (C10-C28)	ND	25.0	1	02/01/24	02/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/01/24	02/02/24	
Surrogate: n-Nonane		*87.5 %*	*50-200*	*02/01/24*	*02/02/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2405065
Chloride	ND	20.0	1	01/31/24	01/31/24	

Sample Data

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

SW - 3 @ 0-2

E401211-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Benzene	ND	0.0250	1	01/30/24	01/31/24	
Ethylbenzene	ND	0.0250	1	01/30/24	01/31/24	
Toluene	ND	0.0250	1	01/30/24	01/31/24	
o-Xylene	ND	0.0250	1	01/30/24	01/31/24	
p,m-Xylene	ND	0.0500	1	01/30/24	01/31/24	
Total Xylenes	ND	0.0250	1	01/30/24	01/31/24	
Surrogate: 4-Bromochlorobenzene-PID		*96.4 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/24	01/31/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.3 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2405100
Diesel Range Organics (C10-C28)	ND	25.0	1	02/01/24	02/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/01/24	02/02/24	
Surrogate: n-Nonane		*79.0 %*	*50-200*	*02/01/24*	*02/02/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2405065
Chloride	ND	20.0	1	01/31/24	01/31/24	

Sample Data

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

SW - 4 @0-2'

E401211-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Benzene	ND	0.0250	1	01/30/24	01/31/24	
Ethylbenzene	ND	0.0250	1	01/30/24	01/31/24	
Toluene	ND	0.0250	1	01/30/24	01/31/24	
o-Xylene	ND	0.0250	1	01/30/24	01/31/24	
p,m-Xylene	ND	0.0500	1	01/30/24	01/31/24	
Total Xylenes	ND	0.0250	1	01/30/24	01/31/24	
Surrogate: 4-Bromochlorobenzene-PID		*95.4 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: EG			Batch: 2405043
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/30/24	01/31/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.0 %*	*70-130*	*01/30/24*	*01/31/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2405100
Diesel Range Organics (C10-C28)	ND	25.0	1	02/01/24	02/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/01/24	02/02/24	
Surrogate: n-Nonane		*79.9 %*	*50-200*	*02/01/24*	*02/02/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2405065
Chloride	ND	20.0	1	01/31/24	01/31/24	

QC Summary Data

Matador Resources, LLC.	Project Name:	Bill Alexander	**Reported:**
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

Volatile Organics by EPA 8021B

Analyst: EG

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2405043-BLK1)									Prepared: 01/30/24 Analyzed: 01/31/24
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*7.77*		*8.00*		*97.1*	*70-130*			
LCS (2405043-BS1)									Prepared: 01/30/24 Analyzed: 01/31/24
Benzene	4.50	0.0250	5.00		90.0	70-130			
Ethylbenzene	4.48	0.0250	5.00		89.6	70-130			
Toluene	4.47	0.0250	5.00		89.4	70-130			
o-Xylene	4.47	0.0250	5.00		89.4	70-130			
p,m-Xylene	9.04	0.0500	10.0		90.4	70-130			
Total Xylenes	13.5	0.0250	15.0		90.1	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.80*		*8.00*		*97.5*	*70-130*			
Matrix Spike (2405043-MS1)				**Source: E401211-01**					Prepared: 01/30/24 Analyzed: 01/31/24
Benzene	4.16	0.0250	5.00	ND	83.1	54-133			
Ethylbenzene	4.13	0.0250	5.00	ND	82.7	61-133			
Toluene	4.13	0.0250	5.00	ND	82.6	61-130			
o-Xylene	4.19	0.0250	5.00	ND	83.8	63-131			
p,m-Xylene	8.37	0.0500	10.0	ND	83.7	63-131			
Total Xylenes	12.6	0.0250	15.0	ND	83.7	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*7.92*		*8.00*		*99.0*	*70-130*			
Matrix Spike Dup (2405043-MSD1)				**Source: E401211-01**					Prepared: 01/30/24 Analyzed: 01/31/24
Benzene	4.05	0.0250	5.00	ND	81.0	54-133	2.58	20	
Ethylbenzene	4.03	0.0250	5.00	ND	80.7	61-133	2.46	20	
Toluene	4.02	0.0250	5.00	ND	80.4	61-130	2.69	20	
o-Xylene	4.02	0.0250	5.00	ND	80.5	63-131	4.00	20	
p,m-Xylene	8.15	0.0500	10.0	ND	81.5	63-131	2.61	20	
Total Xylenes	12.2	0.0250	15.0	ND	81.2	63-131	3.07	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.00*		*8.00*		*100*	*70-130*			

QC Summary Data

Matador Resources, LLC.	Project Name:	Bill Alexander	**Reported:**
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2405043-BLK1)									Prepared: 01/30/24 Analyzed: 01/31/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.55*		*8.00*		*94.3*	*70-130*			
LCS (2405043-BS2)									Prepared: 01/30/24 Analyzed: 01/31/24
Gasoline Range Organics (C6-C10)	41.8	20.0	50.0		83.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.51*		*8.00*		*93.9*	*70-130*			
Matrix Spike (2405043-MS2)				**Source: E401211-01**					Prepared: 01/30/24 Analyzed: 01/31/24
Gasoline Range Organics (C6-C10)	44.8	20.0	50.0	ND	89.6	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.57*		*8.00*		*94.6*	*70-130*			
Matrix Spike Dup (2405043-MSD2)				**Source: E401211-01**					Prepared: 01/30/24 Analyzed: 01/31/24
Gasoline Range Organics (C6-C10)	44.2	20.0	50.0	ND	88.4	70-130	1.42	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.48*		*8.00*		*93.5*	*70-130*			

QC Summary Data

Matador Resources, LLC.	Project Name:	Bill Alexander	**Reported:**
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2405100-BLK1)									Prepared: 02/01/24 Analyzed: 02/02/24
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*41.3*		*50.0*		*82.7*	*50-200*			
LCS (2405100-BS1)									Prepared: 02/01/24 Analyzed: 02/02/24
Diesel Range Organics (C10-C28)	237	25.0	250		94.8	38-132			
Surrogate: n-Nonane	*40.8*		*50.0*		*81.5*	*50-200*			
LCS Dup (2405100-BSD1)									Prepared: 02/01/24 Analyzed: 02/02/24
Diesel Range Organics (C10-C28)	236	25.0	250		94.5	38-132	0.334	20	
Surrogate: n-Nonane	*40.7*		*50.0*		*81.5*	*50-200*			

QC Summary Data

Matador Resources, LLC.	Project Name:	Bill Alexander	**Reported:**
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Chad Hensley	2/5/2024 1:57:58PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2405065-BLK1)									Prepared: 01/31/24 Analyzed: 01/31/24
Chloride	ND	20.0							
LCS (2405065-BS1)									Prepared: 01/31/24 Analyzed: 01/31/24
Chloride	249	20.0	250		99.7	90-110			
Matrix Spike (2405065-MS1)				**Source: E401211-05**					Prepared: 01/31/24 Analyzed: 01/31/24
Chloride	260	20.0	250	ND	104	80-120			
Matrix Spike Dup (2405065-MSD1)				**Source: E401211-05**					Prepared: 01/31/24 Analyzed: 01/31/24
Chloride	259	20.0	250	ND	104	80-120	0.0902	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Definitions and Notes

Matador Resources, LLC.	Project Name:	Bill Alexander	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	**Reported:**
Dallas TX, 75240	Project Manager:	Chad Hensley	02/05/24 13:57

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
DNI	Did Not Ignite
DNR	Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Project Information | Chain of Custody | Page 1 of 1

Client: Matador Resources	Bill To
Project: 408 W. Texas AveTalon LPE	Attention: Clint Talley Matador
Project Manager: Chad Hensley	Address:
Address: 408. W. Texas Ave.	City, State, Zip
City, State, Zip Artesia, NM 88210	Phone:
Phone: 575-746-8768	Email:
Email: chensley@talonlpe.com	
Report due by:	

Lab Use Only		TAT				EPA Program	
Lab WO#	Job Number	1D	2D	3D	Standard	CWA	SDWA
E 401211	23052-0001				X		
							RCRA

State					
NM	CO	UT	AZ	TX	
X					

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	Remarks
	1/25/24		1	C-1 @ 2'	1	x	x			x			
	1/25/24		1	C-2 @ 2'	2	x	x			x			
	1/25/24		1	C-3 @ 2'	3	x	x			x			
	1/25/24		1	C-4 @ 2'	4	x	x			x			
	1/25/24		1	C-5 @ 2'	5	x	x			x			
	1/25/24		1	C-6 @ 2'	6	x	x			x			
	1/25/24		1	SW-1 @ 0-2'	7	x	x			x			
	1/25/24		1	SW-2 @ 0-2'	8	x	x			x			
	1/25/24		1	SW-3 @ 0-2'	9	x	x			x			
	1/25/24		1	SW-4 @ 0-2'	10	x	x			x			

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Chad Hensley

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	1/26/24	16:26		1-26-24	1626
	1-26-24	1715		1-26-24	1715
	1-26-24	2300		1-29-24	11:48

Lab Use Only
Received on ice: (Y) / N
T1 T2 T3
AVG Temp °C 4

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other _____

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Envirotech Analytical Laboratory

Printed: 1/29/2024 4:24:24PM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	01/29/24 11:48	Work Order ID:	E401211
Phone:	(972) 371-5200	Date Logged In:	01/29/24 11:48	Logged In By:	Angelina Pineda
Email:		Due Date:	02/02/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC?	Yes	
2. Does the number of samples per sampling site location match the COC	Yes	
3. Were samples dropped off by client or carrier?	Yes	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

Comments/Resolution

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT?	Yes

Sample Cooler

7. Was a sample cooler received?	Yes
8. If yes, was cooler received in good condition?	Yes
9. Was the sample(s) received intact, i.e., not broken?	Yes
10. Were custody/security seals present?	No
11. If yes, were custody/security seals intact?	NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling	Yes
13. If no visible ice, record the temperature. Actual sample temperature: 4°C	

Sample Container

14. Are aqueous VOC samples present?	No
15. Are VOC samples collected in VOA Vials?	NA
16. Is the head space less than 6-8 mm (pea sized or less)?	NA
17. Was a trip blank (TB) included for VOC analyses?	NA
18. Are non-VOC samples collected in the correct containers?	Yes
19. Is the appropriate volume/weight or number of sample containers collected?	Yes

Field Label

20. Were field sample labels filled out with the minimum information:	
Sample ID?	Yes
Date/Time Collected?	Yes
Collectors name?	Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved?	No
22. Are sample(s) correctly preserved?	NA
24. Is lab filteration required and/or requested for dissolved metals?	No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase?	No
27. If yes, does the COC specify which phase(s) is to be analyzed?	NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory?	No	
29. Was a subcontract laboratory specified by the client and if so who?	NA	Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date

envirotech Inc.

Project Information | Chain of Custody | Page 1 of 1

→ Bill Alexander

Client: Matador Resources	Bill To	Lab Use Only	TAT / EPA Program
Project: ~~408 W. Texas Ave Talon LPE~~ per. C. Hensley 2/8/24	Attention: Clint Talley Matador	Lab WO# E 401211	Job Number 23052-0001
Project Manager: Chad Hensley	Address:		1D 2D 3D Standard: X
Address: 408. W. Texas Ave.	City, State, Zip		CWA SDWA RCRA
City, State, Zip Artesia, NM 88210	Phone:		State: NM X, CO, UT, AZ, TX
Phone: 575-746-8768	Email:		
Email: chensley@talonlpe.com			
Report due by:			

Analysis and Method: TPH GRO/DRO/ORO by 8015; BTEX by 8021; VOC by 8260; Metals 6010; Chloride 300.0; BGDOC NM; GDOC TX

Time Sampled	Date Sampled	Matrix	No of Containers	Sample ID		Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	Remarks
	1/25/24		1	C-1 @ 2'		1	x	x			x			
	1/25/24		1	C-2 @ 2'		2	x	x			x			
	1/25/24		1	C-3 @ 2'		3	x	x			x			
	1/25/24		1	C-4 @ 2'		4	x	x			x			
	1/25/24		1	C-5 @ 2'		5	x	x			x			
	1/25/24		1	C-6 @ 2'		6	x	x			x			
	1/25/24		1	SW-1	@ 0-2'	7	x	x			x			
	1/25/24		1	SW-2	@ 0-2'	8	x	x			x			
	1/25/24		1	SW-3	@ 0-2'	9	x	x			x			
	1/25/24		1	SW-4	@ 0-2'	10	x	x			x			

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Chad Hensley

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	1/26/24	16:26		1-26-24	1626
	1-26-24	1715		1-26-24	1715
	1-26-24	2300		1-29-24	11:48

Lab Use Only: Received on ice: (Y) / N; T1; T2; T3; AVG Temp °C 4

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other ____

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

APPENDIX VII

Supporting Documents

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

March 27, 2019

#5E27961 BG5

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

SUBJECT: Remediation Closure Report for the Bill Alexander Tank Battery Release (1RP- 5393), Lea County, New Mexico

To Whom it May Concern

On behalf of Matador Resources, Souder, Miller Associates (SMA) has prepared this Remediation Closure Report that describes the remediation of a release of liquids related to oil and gas production activities at the Bill Alexander Tank Battery site. The site is in Unit M, Section 33, Township 22S, Range 35E, Lea County, New Mexico, on state 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	Bill Alexander Tank Battery	Company	Matador Resources
API Number	N/A	Location	32.3419462 -103.3762897
Incident Number	1RP-5393		
Estimated Date of Release	2/18/2019	Date Reported to NMOCD	2/19/2019
Land Owner	State	Reported To	NMOCD
Source of Release	Equipment Failure- Production Separator		
Released Volume	57 bbls	Released Material	Prod. Water Crude Oil Mixture
Recovered Volume	50 bbls	Net Release	7 bbls
NMOCD Closure Criteria	51-100 feet to groundwater		
SMA Response Dates	2/19/2019 3/15/2019		

1.0 Bac□ground

On February 18, 2019, a release was discovered at the Bill Alexander Tank Battery site due to a mechanical failure at the production separator. The release occurred around the separator and travelled east while also causing surficial overspray on the adjacent pad to the west. Initial response activities were conducted by the operator, and included source elimination and site security. Site stabilization activities recovered approximately 50 barrels of fluid which were hauled to and disposed of at an NMOCD approved facility. Figures 1 and 2 illustrate the vicinity and site location, Figure 3 illustrates the release location. The C-141 form is included in Appendix A.

2.0 Site Information and Closure Criteria

The Bill Alexander Tank Battery is located approximately 20 miles west of Eunice, New Mexico on State land at an elevation of approximately 3630 feet above mean sea level (amsl).

Based upon USGS online water well database (Appendix B), depth to groundwater in the area is estimated to be 61-75 feet below grade surface (bgs). There are no known NMOSE water sources within □-mile of the location, according to (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/□ accessed 2/20/2019). The nearest significant watercourse is an unnamed pond, located approximately 380 feet to the northwest. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that the site 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 between 51-100 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 and Remediation Activities

On February 19, 2019, SMA personnel arrived on site in response to the release associated with the Bill Alexander Tank Battery. SMA performed site delineation activities by collecting soil samples around the release site and throughout the visibly stained area. Soil samples were field-screened for chloride using an EC meter.

A total of 3 sample locations (L1-L3) were investigated using a hand-auger, to depths up to 2 feet bgs (Figure 3a). A minimum of two samples were collected at each sampling location and field-screened using the method above. A total of 8 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.

As summarized in Table 3, results indicated the total area approximately 2440 square feet. Impacted area is 1202 square feet by 2 feet deep located around sample location L2.

On March 15, 2019, SMA returned to the site to guide the excavation of contaminated soil. SMA guided the excavation activities by collecting soil samples for field screening. Samples were screened for chloride using an electrical conductivity (EC) meter. The walls and base were excavated until field screening results indicated that the NMOCD Closure Criteria would be met. NMOCD was notified on March 13, 2019 that closure samples were expected to be collected in two (2) business days.

SMA conducted confirmation sampling of the walls and base of the excavation, which measured approximately 1202 square feet. The area around sample location L2 was excavated to a depth of 2 feet bgs.

The confirmation samples were collected from within the excavation in accordance with a systematic sampling approach as defined by SW846 (using Gilbert, 1987 equation 5.2.3 for Stratified Random Sampling which is detailed in Appendix C). This systematic method meets the EPAs data quality assessment standards (D□A) for composite sampling (Myers 1997). Confirmation samples were comprised of five-point composites of the base (BH1-BH4) and walls (SW1 □ SW2) seen in Figure 3b.

A total of 6 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. Laboratory samples were collected in accordance with the sampling protocol included in Appendix C. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico (Appendix D).

Figures 3a and 3b show the extent of the excavation and sample locations. All laboratory results are summarized in Table 3. Laboratory reports are included in Appendix D. All closure samples are below the Closure Criteria standards for the excavated area.

In addition to meeting the Closure Criteria, the release area meets the Reclamation requirement of 19.15.29.13(D)(1). 89 cu/yds of contaminated soils were removed and replaced with clean backfill material to return the surface to previous contours. A photo of the open excavation is included in Appendix E. The contaminated soil was transported and disposed of at an NMOCD permitted disposal facility.

5.0 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 Melodie Sanjari at 574-370-9782 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER □ ASSOCIATES

Reviewed by:

M. Sanjari

Shawna Chubbuck

Melodie Sanjari
Staff Scientist

Shawna Chubbuck
Senior Scientist

ATTAC□MENTS:

Figures:

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

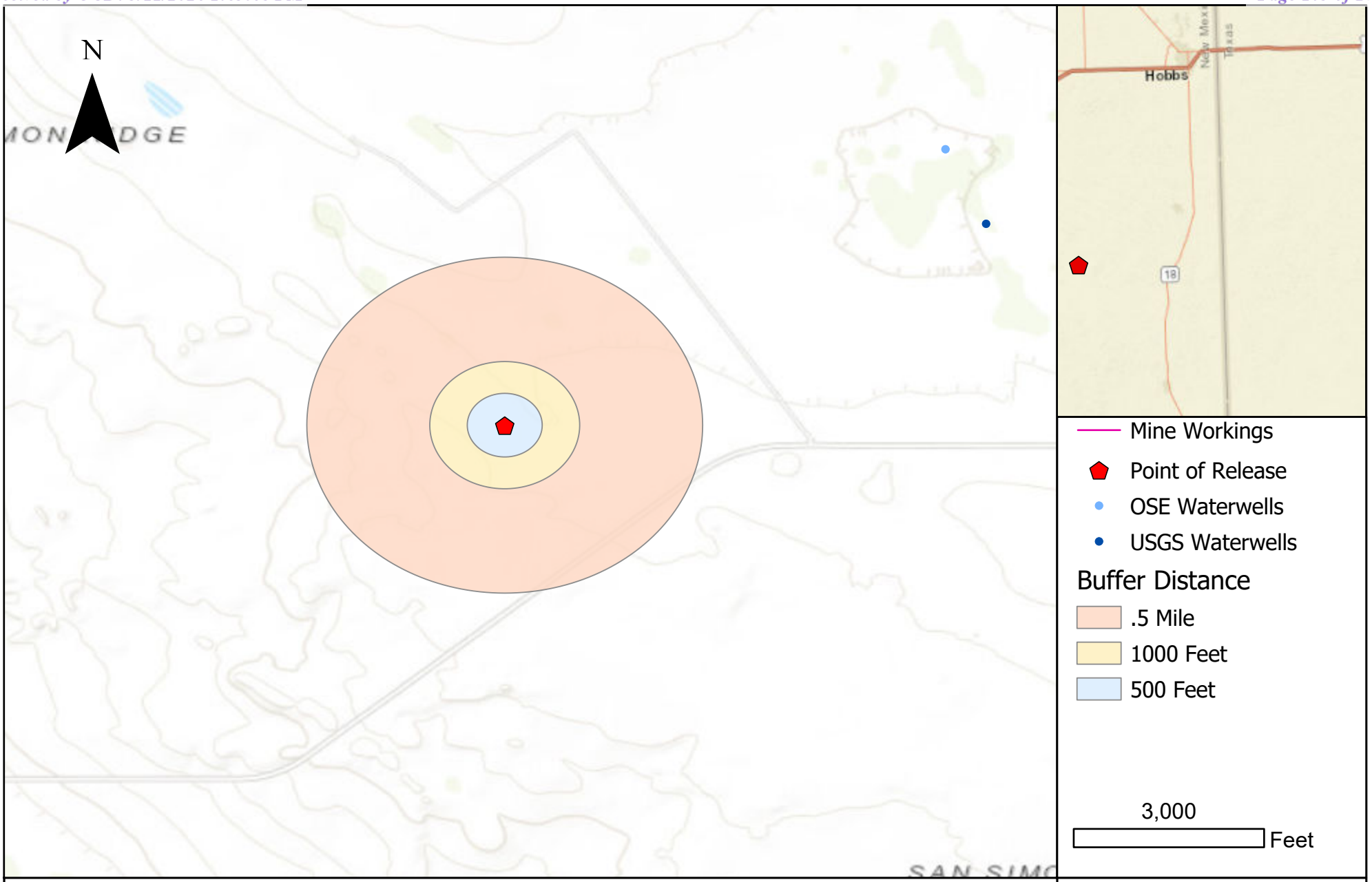
Tables:

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

Appendices:

Appendix A: Forms: C141
Appendix B: USGS Wells Report
Appendix C: VSP Sampling Protocol
Appendix D: Laboratory Analytical Reports
Appendix E: Open Excavation Photo

FIGURES



Regional Vicinity & Wellhead Protection Map
Bill Alexander - Matador Resources

Figure 1

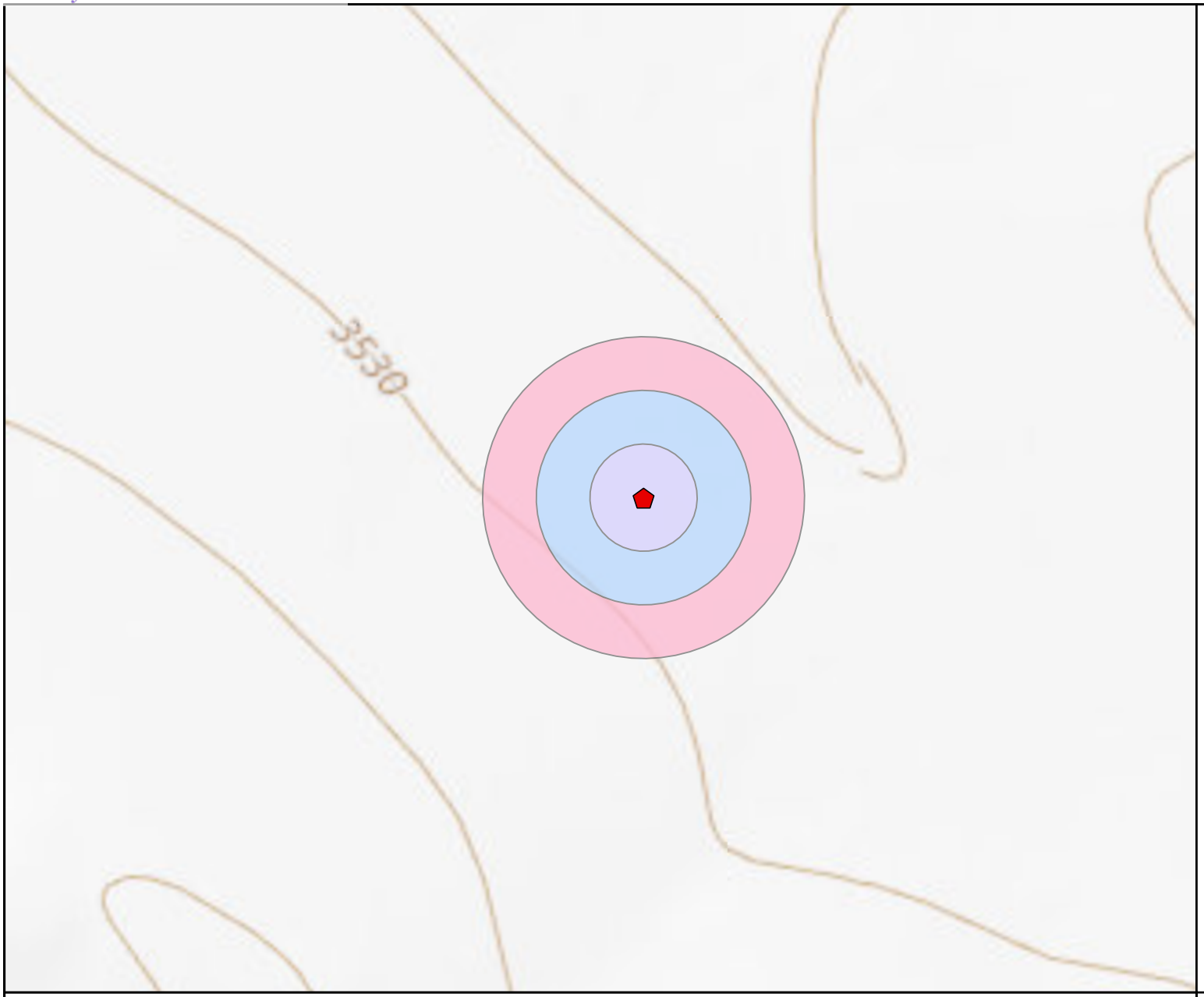
P:\5-Matador 2019 MSA (5E27961)\GIS\ARCGIS\MATADOR_MIT.aprx

Date Saved: 2/21/2019

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

Drawn MRS
Date 2/21/2019
Checked
Approved

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



Point of Release
Springs Seeps
Streams Canals
Rivers
NM Wetlands
Lakes Playas
FEMA Flood Zones 2011

Buffer Distance
100 Feet
200 Feet
300 Feet

N

430
Feet

Surface Water Protection Map
Bill Alexander Matador Resources
Lea County , NM

Figure 2

P:\5-Matador 2019 MSA (5E27961)\GIS\ARCGIS\MATADOR_MIT.aprx

Date Saved: 2/21/2019

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

Drawn
Date 2/21/2019
Checked
Approved

SMA

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Sample Locations
Point of Release
Release Area
2' Excavation
Equipment

N

67.5 Feet

Site & Initial Sample Map
Bill Alexander: Matador Resources

Figure3a

P:\5-Matador 2019 MSA (5E27961)\GIS\ARCGIS\MATADOR_MIT.aprx

Date Saved: 3/14/2019

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

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Date 3/15/2019
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Approved

SMA
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Carlsbad, New Mexico 88221
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SW Sample Locations
BH Sample Locations
Point of Release
Release Area
2' Excavation
Equipment

N

43
Feet

Site & Closure Sample Map
Bill Alexander: Matador Resources

Figure 3b

P:\5-Matador 2019 MSA (5E27961)\GIS\ARCGIS\MATADOR_MIT.aprx

Date Saved: 3/15/2019

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

Drawn
Date 3/15/2019
Checked
Approved

SMA
201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689-7040
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TABLES

Table 2:
NMOCD Closure Criteria

Matador Resources
Bill Alexander

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	61 - 75	USGS
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	n/a	
Hortizontal Distance to Nearest Significant Watercourse (ft)	380	Unnammed pond to the northwest

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'		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; low karst					
within a 100-year floodplain?	no					

SMA #

Table 3:
Summary of Sample Results

Matador Resources
Bill Alexander Tank Battery

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action	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	10000
L1	2/19/2019	0.5	insitu	4.22	□0.024	89	760	330	1179	97
	2/19/2019	1	insitu	--	--	□4.8	20	□49	20	--
L2	2/19/2019	0.5	excavate	**57.41**	□0.21	540	**3600**	1300	**5440**	440
	2/19/2019	1	excavate	0.7	□0.024	10	580	230	820	--
	2/19/2019	2	insitu	--	--	□4.7	□9.8	□49	□63.5	--
L3	2/19/2019	0.5	insitu	□0.216	□0.024	□4.8	67	83	150	980
	2/19/2019	1	insitu	--	--	□4.9	□9.7	□49	□63.6	810
	2/19/2019	2	insitu	--	--	--	--	--	--	210
BH1	3/15/2019	2	sample	□0.219	□0.024	□4.9	□9.7	□49	□63.6	□60
BH2	3/15/2019	2	sample	□0.211	□0.023	□4.7	□9.6	□48	□62.3	□60
BH3	3/15/2019	2	sample	□0.219	□0.024	□4.9	□9.6	□48	□62.5	□60
BH4	3/15/2019	2	sample	□0.211	□0.023	□4.7	62	82	144	130
SW1	3/15/2019	S-2	sample	□0.224	□0.025	□5.0	190	460	650	250
SW2	3/15/2019	S-2	sample	□0.215	□0.024	□4.8	44	62	106	99

□-□□ Not Analyzed

SMA #

APPENDIX A
FORMS: C141

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Matador Resources Company	OGRID 228937
Contact Name John Hurt	Contact Telephone 972-371-5200
Contact email JHurt@matadorresources.com	Incident # *(assigned by OCD)*
Contact mailing address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	

Location of Release Source

Latitude 32.3419462 Longitude -103.3762897
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Bill Alexander Tank Battery	Site Type Tank Battery
Date Release Discovered 2/18/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
M	33	22S	35E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) Approx. 57	Volume Recovered (bbls) Approx. 50
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
Equipment Failure at the Production Separator

** 57 bbls of produced water/
crude oil mixture

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? >50 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by SMA to SLO and NMOCD via the district 1 spills email on 2/19/2018	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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: John Hurt Title: RES Specialist

Signature: Date: 2/20/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

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 Department

Oil Conservation Division
1220 South St. Francis Dr.
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Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Matador Resources Company	OGRID 228937
Contact Name John Hurt	Contact Telephone 972-371-5200
Contact email JHurt@matadorresources.com	Incident # *(assigned by OCD)*
Contact mailing address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	

Location of Release Source

Latitude 32.3419462 Longitude -103.3762897
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Bill Alexander Tank Battery	Site Type: Tank Battery
Date Release Discovered: 2/18/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
M	33	22S	35E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) Approx. 57	Volume Recovered (bbls) Approx 50
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release Equipment Failure at the Production Separator		

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? >25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by SMA to SLO and NMOCD via the district 1 spills email on 2/19/2018	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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: John Hurt Title: RES Specialist

Signature: Date: 4/11/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

Incident ID	
District RP	
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?	61-75 (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	
District RP	
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: John Hurt Title: RES Specialist

Signature: Date: 4/1/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

Form C-141 State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: John Hurt Title: RES Specialist

Signature: Date: 4/1/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Date:

Printed Name: Title:

APPENDIX B
USGS WELLS REPORT

National Water Information System: Web Interface

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 322238103225201

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

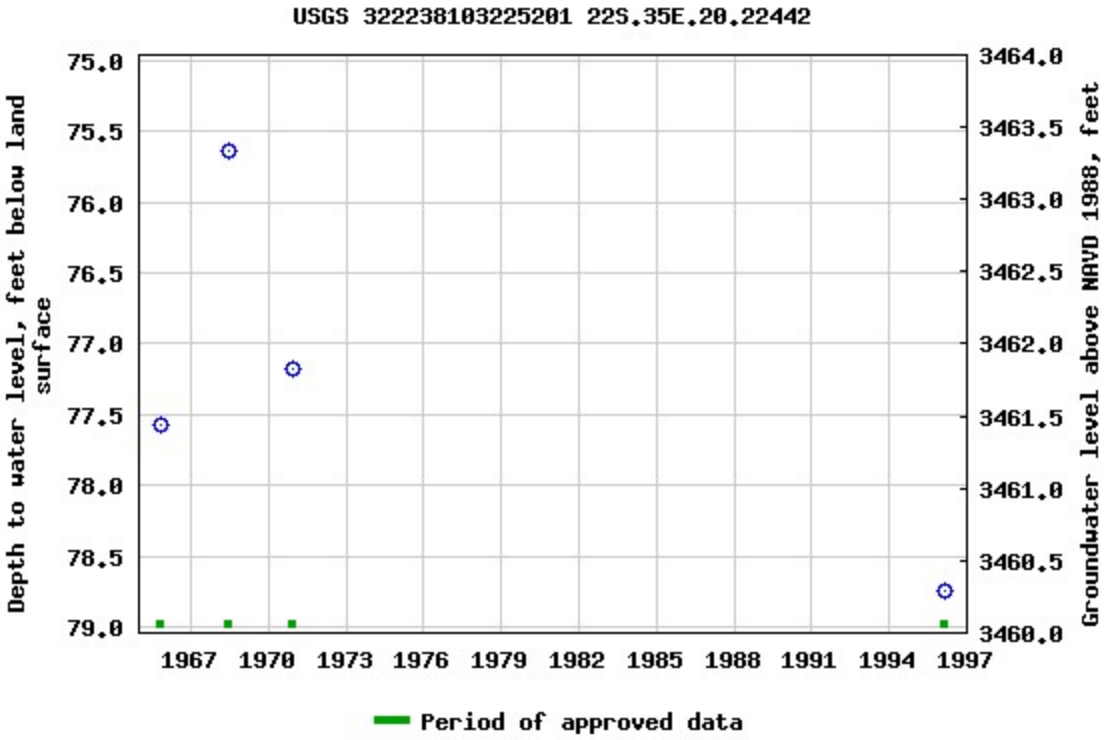
USGS 322238103225201 22S.35E.20.22442

Available data for this site Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°22'38", Longitude 103°22'52" NAD27
Land-surface elevation 3,539 feet above NAVD88
This well is completed in the Ogallala Formation (121OGLL) 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

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U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2019-02-21 15:06:37 EST
0.96 0.9 nadww01

National Water Information System: Web Interface

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 322101103211901

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

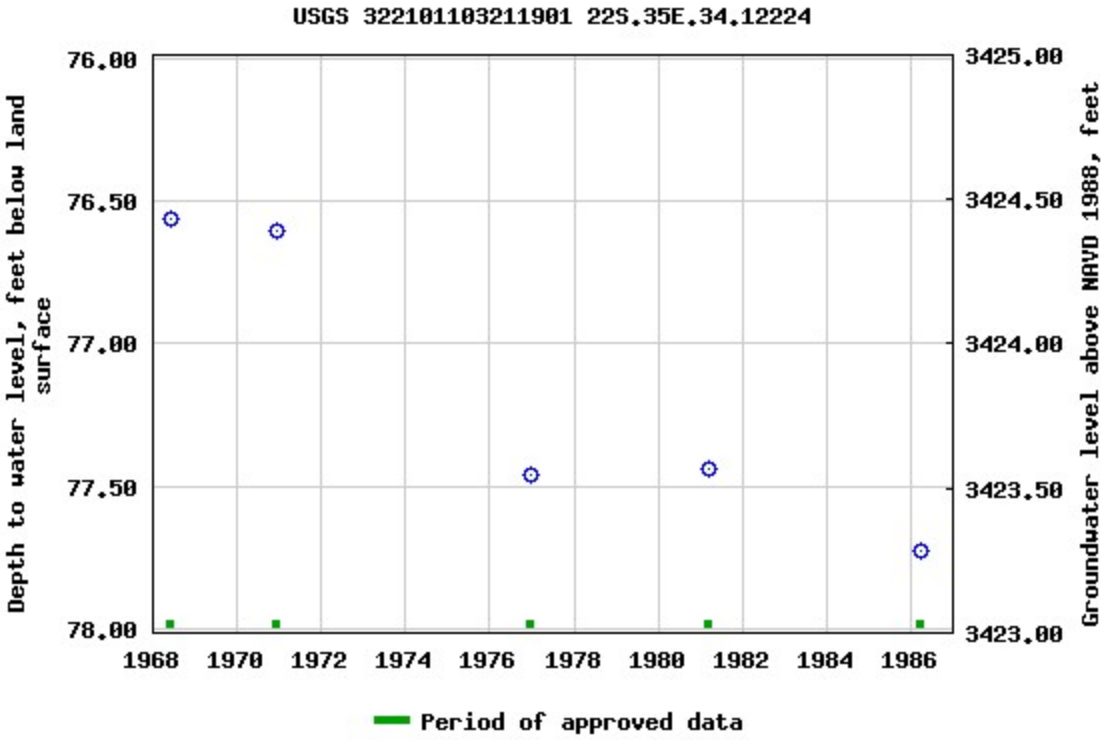
USGS 322101103211901 22S.35E.34.12224

Available data for this site Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°21'01", Longitude 103°21'19" NAD27
Land-surface elevation 3,501 feet above NAVD88
The depth of the well is 98 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) 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?
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Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility Plug-Ins FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2019-02-21 14:53:11 EST
1.23 1.1 nadww01

APPENDIX C
VSP SAMPLING PROTOCOL

VSP Sample Design Report for Using Stratified Sampling to Estimate the Population Proportion

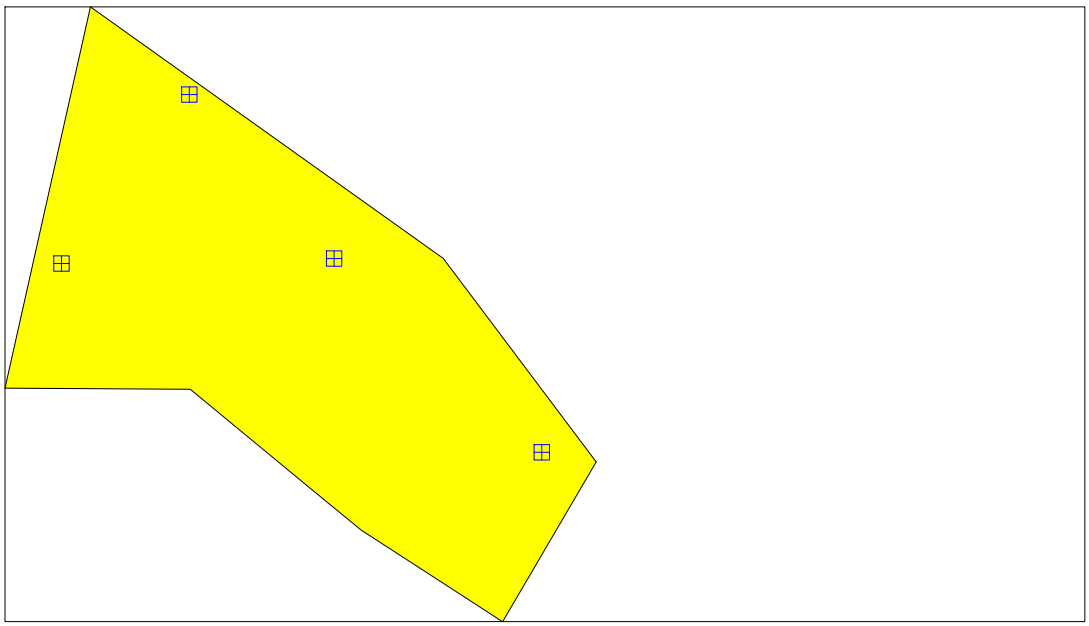
Summary

This report summarizes the stratified sampling design used, associated statistical assumptions, as well as general guidelines for conducting post-sampling data analysis. Sampling plan components presented here include how many sampling locations to choose and where within the sampling area to collect those samples. The type of medium to sample (i.e., soil, groundwater, etc.) and how to analyze the samples (in-situ, fixed laboratory, etc.) are addressed in other sections of the sampling plan. It is important to note that the decision for sample size calculation is determined for the combined strata, rather than any individual strata.

The following table summarizes the proportion stratified sampling design developed. A figure that shows sampling locations in the field and a table that lists sampling location coordinates are also provided below.

SUMMARY OF SAMPLING DESIGN	
Primary Objective of Design	Estimate the population proportion of all strata combined
Criteria for Determining Total Number of Samples	Achieve pre-specified precision of the estimated proportion for specified stratum costs, but no restriction on total costs
Sample Placement (Location) in the Field	Random sampling within grids within each stratum
Formula for calculating number of sampling locations	From Gilbert (1987, page 51)
Method for calculating number of sampling locations in each stratum	Optimal Allocation
Calculated total number of samples	4
Stratum 1	4
Total area of all strata	2364.05 ft^2

[a] Including measurement analyses and fixed overhead costs. See the Cost of Sampling section for an explanation of the costs presented here.



Area: Area 1

X Coord	Y Coord	Label	Value	Type	Historical	Sample Area
836903.0431	489308.6018			Random in Grid		
836845.3767	489331.2670			Random in Grid		
836878.1059	489331.8576			Random in Grid		
836860.7264	489351.5588			Random in Grid		

Primary Sampling Objective
The primary purpose of sampling at this site is to estimate the proportion for the entire site, i.e., for all strata combined, such that the estimated proportion has the minimum possible standard deviation under the condition that the sampling and measurement costs cannot exceed a specified amount. Preexisting information was used to divide the site into 1 non-overlapping strata that were expected to be more homogeneous internally than for the entire site (all strata combined). The expected variability of values within each stratum was estimated or approximated, and the stratum weights, W_h, were determined so that the total number of samples could be allocated appropriately among the strata.

Number of Total Samples: Calculation Equation and Inputs
The total number of samples is computed to achieve the pre-specified precision of the estimated population proportion for specified stratum costs, but no restriction on total costs. *Note that the calculation is for the total number of samples, i.e., for combined strata, rather than individual strata.*

The formula used to calculate the total number of samples is:

$$n = \frac{\left(\sum_{h=1}^{L} W_h \sqrt{P_h(1-P_h)}\sqrt{c_h}\right)\sum_{h=1}^{L} \frac{W_h \sqrt{P_h(1-P_h)}}{\sqrt{c_h}}}{V + \frac{1}{N}\sum_{h=1}^{L} W_h P_h (1-P_h)}$$

where
L is the number of strata, $h=1,2,...,L$,
P_h is the estimated proportion of measurements in stratum h,
$W_h = N_h / N$ is the weight associated with stratum h,
N_h is the total number of possible sampling locations (units) in stratum h,
N is the total number of possible units in all strata combined, $N = \sum_{h=1}^{L} N_h$
V is the pre-specified variance or precision, and
c_h is the cost of collecting and measuring a sample in stratum h.

The values of these inputs that result in the calculated number of sampling locations are:

Parameter	Stratum
	1
P_h	0.2
C_h	
W_h	2364.05

Parameter	Input Value
V	1

Allocation of Samples to Strata
The total number of samples is allocated to the individual strata on an optimal basis using the formula:

$$n_h = n \frac{N_h \sqrt{P_h(1-P_h)} / \sqrt{c_h}}{\sum_{h=1}^{L} N_h \sqrt{P_h(1-P_h)} / \sqrt{c_h}}$$

where

n_h is the number of samples allocated to stratum h,
L is the number of strata,
N_h is the total number of units in stratum h,
P_h is the proportion in stratum h,
c_h is the cost per population unit in stratum h.

n is the total number of units sampled in all strata, $n = \sum_{h=1}^{L} n_h$

Using this formula, the number of samples allocated to each stratum is:

Stratum	Number of Samples
1	4
Total Samples	4

Method for Determining Sampling Locations

Five methods for determining sample locations are provided in VSP: 1) simple random sampling, 2) random sampling within grids, 3) systematic sampling with a random start, 4) systematic sampling with a fixed start and 5) adaptive grid sampling. One may use a different method for each stratum, based on the conceptual site model and decision to be made for a given stratum. For this site, sample locations were chosen using random sampling within grids in each stratum.

Locating the sample points using a random sampling within grids method combines appealing aspects of both the random and the systematic grid methods. It provides data that are separated by many distances, providing information about the spatial structure of the potential contamination. It also ensures good coverage of the entire site, although not as completely as if systematic grid sampling were performed.

Statistical Assumptions

The assumptions associated with the formulas for computing the number of samples are:

1. The estimated stratum proportions, P_h, are reasonable and representative of the stratum populations being sampled.
2. The sampling locations are selected using simple random sampling.
3. The stratum costs, C_h, and the fixed cost C_0, are accurate.

The first and third assumptions will be assessed in a post data collection analysis. The second assumption, although not strictly valid for strata where systematic grid sampling was used rather than simple random sampling, is not expected to significantly affect conclusions of the study because (1) the gridded sample locations were selected based on a random start and (2) any patterns of contamination in the field that may exist are not expected to coincide with the regularity of the grid sampling pattern.

Recommended Data Analysis Activities

Post data collection activities generally follow those outlined in EPA's Guidance for Data Quality Assessment (EPA, 2000). The data analysts will become familiar with the context of the problem and goals for data collection and assessment. The data will be verified and validated before being subjected to statistical or other analyses. Graphical and analytical tools will be used to verify to the extent possible the assumptions of any statistical analyses that are performed as well as to achieve a general understanding of the data. The data will be assessed to determine whether they are adequate in both quality and quantity to support the primary objective of sampling.

Estimates for the proportion of the population values will be calculated using the formulas appropriate for stratified sampling; these formulas are found in EPA QA/G-5S (EPA, 2001). Results of the exploratory and quantitative assessments of the data will be reported, along with conclusions that may be supported by them.

APPENDIX D

LABORATOR□ ANAL□TICAL 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

February 25, 2019

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

RE: Bill Alexander OrderNo.: 1902897

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 8 sample(s) on 2/21/2019 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.

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

CLIENT: Souder, Miller & Associates
Project: Bill Alexander
Lab ID: 1902897-001 **Matrix:** SOIL

Client Sample ID: L1-0.5
Collection Date: 2/19/2019 8:00:00 AM
Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	97	60		mg/Kg	20	2/22/2019 8:15:46 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	760	10		mg/Kg	1	2/22/2019 12:38:15 PM	43278
Motor Oil Range Organics (MRO)	330	50		mg/Kg	1	2/22/2019 12:38:15 PM	43278
Surr: DNOP	90.9	70-130		%Rec	1	2/22/2019 12:38:15 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	89	4.7		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Surr: BFB	519	73.8-119	S	%Rec	1	2/22/2019 3:29:29 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Toluene	0.70	0.047		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Ethylbenzene	0.92	0.047		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Xylenes, Total	2.6	0.094		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	1	2/22/2019 3:29:29 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Bill Alexander
Lab ID: 1902897-002 **Matrix:** SOIL

Client Sample ID: L1-1
Collection Date: 2/19/2019 8:05:00 AM
Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	20	9.7		mg/Kg	1	2/22/2019 2:15:06 PM	43278
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/22/2019 2:15:06 PM	43278
Surr: DNOP	88.8	70-130		%Rec	1	2/22/2019 2:15:06 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/22/2019 1:31:30 PM	43274
Surr: BFB	110	73.8-119		%Rec	1	2/22/2019 1:31:30 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-0.5
Project: Bill Alexander
Collection Date: 2/19/2019 8:15:00 AM
Lab ID: 1902897-004 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Chloride	440	60		mg/Kg	20	2/22/2019 8:28:10 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	3600	99		mg/Kg	10	2/22/2019 2:39:17 PM	43278
Motor Oil Range Organics (MRO)	1300	490		mg/Kg	10	2/22/2019 2:39:17 PM	43278
Surr: DNOP	0	70-130	S	%Rec	10	2/22/2019 2:39:17 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	540	23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Surr: BFB	522	73.8-119	S	%Rec	5	2/22/2019 5:03:36 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	0.21	0.11		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Toluene	9.2	0.23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Ethylbenzene	13	0.23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Xylenes, Total	35	0.46		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Surr: 4-Bromofluorobenzene	149	80-120	S	%Rec	5	2/22/2019 5:03:36 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-1
Project: Bill Alexander
Collection Date: 2/19/2019 8:20:00 AM
Lab ID: 1902897-005 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	580	9.9		mg/Kg	1	2/22/2019 3:03:36 PM	43278
Motor Oil Range Organics (MRO)	230	50		mg/Kg	1	2/22/2019 3:03:36 PM	43278
Surr: DNOP	116	70-130		%Rec	1	2/22/2019 3:03:36 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	10	4.8		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Surr: BFB	172	73.8-119	S	%Rec	1	2/22/2019 5:50:35 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-0.5
Project: Bill Alexander
Collection Date: 2/19/2019 8:30:00 AM
Lab ID: 1902897-007 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Chloride	980	60		mg/Kg	20	2/22/2019 8:40:34 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	67	9.9		mg/Kg	1	2/22/2019 3:54:06 PM	43278
Motor Oil Range Organics (MRO)	83	49		mg/Kg	1	2/22/2019 3:54:06 PM	43278
Surr: DNOP	102	70-130		%Rec	1	2/22/2019 3:54:06 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Surr: BFB	103	73.8-119		%Rec	1	2/22/2019 6:37:27 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Toluene	ND	0.048		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Ethylbenzene	ND	0.048		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Xylenes, Total	ND	0.096		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	2/22/2019 6:37:27 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported: **2/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-1
Project: Bill Alexander
Collection Date: 2/19/2019 8:35:00 AM
Lab ID: 1902897-008 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/22/2019 4:42:31 PM	43278
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/22/2019 4:42:31 PM	43278
Surr: DNOP	70.9	70-130		%Rec	1	2/22/2019 4:42:31 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/22/2019 2:42:12 PM	43274
Surr: BFB	104	73.8-119		%Rec	1	2/22/2019 2:42:12 PM	43274

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#: **1902897**

25-Feb-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43302**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **43302**	RunNo: **57905**							
Prep Date: **2/22/2019**	Analysis Date: **2/22/2019**	SeqNo: **1939513**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-43302**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **43302**	RunNo: **57905**							
Prep Date: **2/22/2019**	Analysis Date: **2/22/2019**	SeqNo: **1939514**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	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 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#: **1902897**

25-Feb-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **LCS-43278**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **43278**	RunNo: **57896**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938482** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	63.9	124			
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID: **MB-43278**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **43278**	RunNo: **57896**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938483** 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	11		10.00		109	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
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#: **1902897**

25-Feb-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43274**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1937715** 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	1000		1000		104	73.8	119			

Sample ID: **LCS-43274**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1937716** 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	106	80.1	123			
Surr: BFB	1100		1000		113	73.8	119			

Sample ID: **1902897-002AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **L1-1**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938736** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.9	24.65	0	120	69.1	142			
Surr: BFB	1300		986.2		133	73.8	119			S

Sample ID: **1902897-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **L1-1**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938737** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.9	24.44	0	112	69.1	142	7.51	20	
Surr: BFB	1200		977.5		121	73.8	119	0	0	S

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#: **1902897**

25-Feb-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43274**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938745** 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	0.99		1.000		98.6	80	120			

Sample ID: **LCS-43274**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938746** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.8	80	120			
Toluene	0.95	0.050	1.000	0	94.7	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.0	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.4	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.8	80	120			

Sample ID: **1902897-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **L1-0.5**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938750** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.024	0.9470	0	87.1	63.9	127			
Toluene	1.4	0.047	0.9470	0.6973	73.0	69.9	131			
Ethylbenzene	1.6	0.047	0.9470	0.9160	74.1	71	132			
Xylenes, Total	4.8	0.095	2.841	2.630	74.8	71.8	131			
Surr: 4-Bromofluorobenzene	1.1		0.9470		120	80	120			

Sample ID: **1902897-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **L1-0.5**	Batch ID: **43274**	RunNo: **57872**
Prep Date: **2/21/2019**	Analysis Date: **2/22/2019**	SeqNo: **1938751** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9756	0	92.2	63.9	127	8.75	20	
Toluene	1.5	0.049	0.9756	0.6973	83.9	69.9	131	8.72	20	
Ethylbenzene	1.8	0.049	0.9756	0.9160	89.6	71	132	10.1	20	
Xylenes, Total	5.3	0.098	2.927	2.630	90.5	71.8	131	10.4	20	
Surr: 4-Bromofluorobenzene	1.2		0.9756		125	80	120	0	0	S

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: 1902897 RcptNo: 1

Received By: Isaiah Ortiz 2/21/2019 8:40:00 AM I-04

Completed By: Victoria Zellar 2/21/2019 8:58:24 AM Victoria Zellar labeled by IO 2/21/19

Reviewed By: DAD 2/21/19

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 ☑	IO 2/21/19
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? _____
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 ☐	Checked by: _____

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	2.1	Good	Yes			

Chain-of-Custody Record

Client: SMA Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

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

Project Name: Bill Alexander

Project #:

Project Manager: A. Weygant

Sampler: MRS

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 2.1°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. 1902987	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, ~~NO3, NO2, PO4, SO4~~	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
2-19-19	8:00	soil	L1 - 0.5	4oz		-001	X	X					X			
	8:05		L1 - 1	1		-002		X								
	8:10		L1 - 2*	Please	hold	-003										
	8:15		L2 - 0.5	1		-004	X	X					X			
	8:20		L2 - 1	1		-005		X								
	8:25		L2 - 2*	Please	hold	-006										
	8:30		L3 - 0.5	1		-007	X	X					X			
	8:35		L3 - 1	1		-008		X								

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2-20-19	8:30	Samantha Watson				
2/20/19	1907			Courier	2/21/19	0840

Remarks: Matador

*Please hold for further testing

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.

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-0.5
Project: Bill Alexander
Collection Date: 2/19/2019 8:00:00 AM
Lab ID: 1902897-001 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Chloride	97	60		mg/Kg	20	2/22/2019 8:15:46 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	760	10		mg/Kg	1	2/22/2019 12:38:15 PM	43278
Motor Oil Range Organics (MRO)	330	50		mg/Kg	1	2/22/2019 12:38:15 PM	43278
Surr: DNOP	90.9	70-130		%Rec	1	2/22/2019 12:38:15 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	89	4.7		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Surr: BFB	519	73.8-119	S	%Rec	1	2/22/2019 3:29:29 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Toluene	0.70	0.047		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Ethylbenzene	0.92	0.047		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Xylenes, Total	2.6	0.094		mg/Kg	1	2/22/2019 3:29:29 PM	43274
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	1	2/22/2019 3:29:29 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-1
Project: Bill Alexander
Collection Date: 2/19/2019 8:05:00 AM
Lab ID: 1902897-002 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	20	9.7		mg/Kg	1	2/22/2019 2:15:06 PM	43278
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/22/2019 2:15:06 PM	43278
Surr: DNOP	88.8	70-130		%Rec	1	2/22/2019 2:15:06 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/22/2019 1:31:30 PM	43274
Surr: BFB	110	73.8-119		%Rec	1	2/22/2019 1:31:30 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-0.5
Project: Bill Alexander
Collection Date: 2/19/2019 8:15:00 AM
Lab ID: 1902897-004 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Chloride	440	60		mg/Kg	20	2/22/2019 8:28:10 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	3600	99		mg/Kg	10	2/22/2019 2:39:17 PM	43278
Motor Oil Range Organics (MRO)	1300	490		mg/Kg	10	2/22/2019 2:39:17 PM	43278
Surr: DNOP	0	70-130	S	%Rec	10	2/22/2019 2:39:17 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	540	23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Surr: BFB	522	73.8-119	S	%Rec	5	2/22/2019 5:03:36 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	0.21	0.11		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Toluene	9.2	0.23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Ethylbenzene	13	0.23		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Xylenes, Total	35	0.46		mg/Kg	5	2/22/2019 5:03:36 PM	43274
Surr: 4-Bromofluorobenzene	149	80-120	S	%Rec	5	2/22/2019 5:03:36 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-1
Project: Bill Alexander
Collection Date: 2/19/2019 8:20:00 AM
Lab ID: 1902897-005 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	580	9.9		mg/Kg	1	2/22/2019 3:03:36 PM	43278
Motor Oil Range Organics (MRO)	230	50		mg/Kg	1	2/22/2019 3:03:36 PM	43278
Surr: DNOP	116	70-130		%Rec	1	2/22/2019 3:03:36 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	10	4.8		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Surr: BFB	172	73.8-119	S	%Rec	1	2/22/2019 5:50:35 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Benzene	ND	0.024		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Toluene	0.080	0.048		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Ethylbenzene	0.14	0.048		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Xylenes, Total	0.48	0.096		mg/Kg	1	2/22/2019 5:50:35 PM	43274
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	2/22/2019 5:50:35 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-2
Project: Bill Alexander
Collection Date: 2/19/2019 8:25:00 AM
Lab ID: 1902897-006 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/27/2019 9:29:15 AM	43351
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/27/2019 9:29:15 AM	43351
Surr: DNOP	86.9	70-130		%Rec	1	2/27/2019 9:29:15 AM	43351
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/27/2019 9:47:49 AM	43340
Surr: BFB	93.4	73.8-119		%Rec	1	2/27/2019 9:47:49 AM	43340

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	

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-0.5
Project: Bill Alexander
Collection Date: 2/19/2019 8:30:00 AM
Lab ID: 1902897-007 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Chloride	980	60		mg/Kg	20	2/22/2019 8:40:34 PM	43302
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	67	9.9		mg/Kg	1	2/22/2019 3:54:06 PM	43278
Motor Oil Range Organics (MRO)	83	49		mg/Kg	1	2/22/2019 3:54:06 PM	43278
Surr: DNOP	102	70-130		%Rec	1	2/22/2019 3:54:06 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Surr: BFB	103	73.8-119		%Rec	1	2/22/2019 6:37:27 PM	43274
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Toluene	ND	0.048		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Ethylbenzene	ND	0.048		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Xylenes, Total	ND	0.096		mg/Kg	1	2/22/2019 6:37:27 PM	43274
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	2/22/2019 6:37:27 PM	43274

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

Analytical Report
Lab Order **1902897**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-1
Project: Bill Alexander
Collection Date: 2/19/2019 8:35:00 AM
Lab ID: 1902897-008 **Matrix:** SOIL **Received Date:** 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	810	60		mg/Kg	20	2/26/2019 5:08:21 PM	43360
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/22/2019 4:42:31 PM	43278
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/22/2019 4:42:31 PM	43278
Surr: DNOP	70.9	70-130		%Rec	1	2/22/2019 4:42:31 PM	43278
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/22/2019 2:42:12 PM	43274
Surr: BFB	104	73.8-119		%Rec	1	2/22/2019 2:42:12 PM	43274

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

March 01, 2019

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

RE: Bill Alexander OrderNo.: 1902B86

Dear Melodie Sanjari:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/28/2019 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

Analytical Report
Lab Order **1902B86**
Date Reported: **3/1/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-2'
Project: Bill Alexander
Collection Date: 2/19/2019 2:00:00 PM
Lab ID: 1902B86-001 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	210	60		mg/Kg	20	3/1/2019 12:10:09 AM	43420

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#: **1902B86**

01-Mar-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43420**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **43420**	RunNo: **58032**							
Prep Date: **2/28/2019**	Analysis Date: **2/28/2019**	SeqNo: **1944811**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-43420**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **43420**	RunNo: **58032**							
Prep Date: **2/28/2019**	Analysis Date: **2/28/2019**	SeqNo: **1944812**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	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 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: **1902B86** RcptNo: **1**

Received By: **Thom Maybee** **2/28/2019 8:55:00 AM**

Completed By: **Leah Baca** **2/28/2019 9:00:15 AM** Leah Baca

Reviewed By: LB 2/28/19

Labeled by YG 2/28/19

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: YG 2/28/19 (<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: _____ 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	5.1	Good	Yes			

Chain-of-Custody Record

Client: SMA - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 2day.

Project Name: Bill Alexander

Project #:

Project Manager: Melodie Sanjari

Sampler: MRS

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 5.1°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 Name	Container Type and #	Preservative Type	HEAL No. 1902886	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)
2/19/19	2:00	soil	L3-2'	4oz		-001							✓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
					2/21/19	1400
2/22/19	1900			Via: courier	2-28-19	8.55

Remarks: Matador

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.

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

March 25, 2019

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

RE: Bill Alexander OrderNo.: 1903789

Dear Melodie Sanjari:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/16/2019 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

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW1
Project: Bill Alexander
Collection Date: 3/15/2019 10:15:00 AM
Lab ID: 1903789-001 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	250	60		mg/Kg	20	3/22/2019 10:20:49 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	190	9.6		mg/Kg	1	3/20/2019 3:37:17 PM	43742
Motor Oil Range Organics (MRO)	160	48		mg/Kg	1	3/20/2019 3:37:17 PM	43742
Surr: DNOP	107	70-130		%Rec	1	3/20/2019 3:37:17 PM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/20/2019 12:04:47 AM	43727
Surr: BFB	98.9	73.8-119		%Rec	1	3/20/2019 12:04:47 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	3/20/2019 12:04:47 AM	43727
Toluene	ND	0.050		mg/Kg	1	3/20/2019 12:04:47 AM	43727
Ethylbenzene	ND	0.050		mg/Kg	1	3/20/2019 12:04:47 AM	43727
Xylenes, Total	ND	0.099		mg/Kg	1	3/20/2019 12:04:47 AM	43727
Surr: 4-Bromofluorobenzene	99.4	80-120		%Rec	1	3/20/2019 12:04:47 AM	43727

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

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW2
Project: Bill Alexander
Collection Date: 3/15/2019 10:40:00 AM
Lab ID: 1903789-002 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	99	60		mg/Kg	20	3/22/2019 10:33:14 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	44	9.4		mg/Kg	1	3/20/2019 4:25:34 PM	43742
Motor Oil Range Organics (MRO)	62	47		mg/Kg	1	3/20/2019 4:25:34 PM	43742
Surr: DNOP	102	70-130		%Rec	1	3/20/2019 4:25:34 PM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/20/2019 12:28:12 AM	43727
Surr: BFB	97.9	73.8-119		%Rec	1	3/20/2019 12:28:12 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/20/2019 12:28:12 AM	43727
Toluene	ND	0.048		mg/Kg	1	3/20/2019 12:28:12 AM	43727
Ethylbenzene	ND	0.048		mg/Kg	1	3/20/2019 12:28:12 AM	43727
Xylenes, Total	ND	0.095		mg/Kg	1	3/20/2019 12:28:12 AM	43727
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	3/20/2019 12:28:12 AM	43727

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

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH1
Project: Bill Alexander
Collection Date: 3/15/2019 9:15:00 AM
Lab ID: 1903789-003 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	3/22/2019 10:45:38 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/20/2019 1:04:58 AM	43742
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/20/2019 1:04:58 AM	43742
Surr: DNOP	102	70-130		%Rec	1	3/20/2019 1:04:58 AM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/20/2019 12:51:45 AM	43727
Surr: BFB	96.5	73.8-119		%Rec	1	3/20/2019 12:51:45 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/20/2019 12:51:45 AM	43727
Toluene	ND	0.049		mg/Kg	1	3/20/2019 12:51:45 AM	43727
Ethylbenzene	ND	0.049		mg/Kg	1	3/20/2019 12:51:45 AM	43727
Xylenes, Total	ND	0.097		mg/Kg	1	3/20/2019 12:51:45 AM	43727
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	3/20/2019 12:51:45 AM	43727

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

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH2
Project: Bill Alexander
Collection Date: 3/15/2019 11:00:00 AM
Lab ID: 1903789-004 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	3/22/2019 10:58:03 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/20/2019 1:28:34 AM	43742
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/20/2019 1:28:34 AM	43742
Surr: DNOP	101	70-130		%Rec	1	3/20/2019 1:28:34 AM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/20/2019 1:15:20 AM	43727
Surr: BFB	96.4	73.8-119		%Rec	1	3/20/2019 1:15:20 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/20/2019 1:15:20 AM	43727
Toluene	ND	0.047		mg/Kg	1	3/20/2019 1:15:20 AM	43727
Ethylbenzene	ND	0.047		mg/Kg	1	3/20/2019 1:15:20 AM	43727
Xylenes, Total	ND	0.094		mg/Kg	1	3/20/2019 1:15:20 AM	43727
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	3/20/2019 1:15:20 AM	43727

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

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH3
Project: Bill Alexander
Collection Date: 3/15/2019 11:30:00 AM
Lab ID: 1903789-005 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	3/22/2019 11:10:27 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/20/2019 1:52:09 AM	43742
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/20/2019 1:52:09 AM	43742
Surr: DNOP	103	70-130		%Rec	1	3/20/2019 1:52:09 AM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/20/2019 1:38:51 AM	43727
Surr: BFB	95.5	73.8-119		%Rec	1	3/20/2019 1:38:51 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/20/2019 1:38:51 AM	43727
Toluene	ND	0.049		mg/Kg	1	3/20/2019 1:38:51 AM	43727
Ethylbenzene	ND	0.049		mg/Kg	1	3/20/2019 1:38:51 AM	43727
Xylenes, Total	ND	0.097		mg/Kg	1	3/20/2019 1:38:51 AM	43727
Surr: 4-Bromofluorobenzene	99.9	80-120		%Rec	1	3/20/2019 1:38:51 AM	43727

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

Analytical Report
Lab Order **1903789**
Date Reported: **3/25/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH4
Project: Bill Alexander
Collection Date: 3/15/2019 10:00:00 AM
Lab ID: 1903789-006 **Matrix:** SOIL **Received Date:** 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	130	60		mg/Kg	20	3/22/2019 11:22:52 PM	43837
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	62	9.3		mg/Kg	1	3/20/2019 2:15:39 AM	43742
Motor Oil Range Organics (MRO)	82	47		mg/Kg	1	3/20/2019 2:15:39 AM	43742
Surr: DNOP	107	70-130		%Rec	1	3/20/2019 2:15:39 AM	43742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/20/2019 2:02:25 AM	43727
Surr: BFB	97.8	73.8-119		%Rec	1	3/20/2019 2:02:25 AM	43727
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/20/2019 2:02:25 AM	43727
Toluene	ND	0.047		mg/Kg	1	3/20/2019 2:02:25 AM	43727
Ethylbenzene	ND	0.047		mg/Kg	1	3/20/2019 2:02:25 AM	43727
Xylenes, Total	ND	0.094		mg/Kg	1	3/20/2019 2:02:25 AM	43727
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	3/20/2019 2:02:25 AM	43727

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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903789**

25-Mar-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43837**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **43837**	RunNo: **58569**							
Prep Date: **3/22/2019**	Analysis Date: **3/22/2019**	SeqNo: **1967112**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-43837**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **43837**	RunNo: **58569**							
Prep Date: **3/22/2019**	Analysis Date: **3/22/2019**	SeqNo: **1967113**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	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 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#: **1903789**

25-Mar-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43742**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **43742**	RunNo: **58454**
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1963736** 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	10		10.00		101	70	130			

Sample ID: **LCS-43742**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **43742**	RunNo: **58454**
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1963737** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.9	63.9	124			
Surr: DNOP	4.8		5.000		95.1	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
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#: **1903789**

25-Mar-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43727**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **43727**	RunNo: **58461**
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1962672** 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	980		1000		97.6	73.8	119			

Sample ID: **LCS-43727**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **43727**	RunNo: **58461**
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1962673** 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	102	80.1	123			
Surr: BFB	1100		1000		111	73.8	119			

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#: **1903789**

25-Mar-19

Client: Souder, Miller & Associates

Project: Bill Alexander

Sample ID: **MB-43727**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **43727**	RunNo: **58461**							
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1962711**	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	1.0		1.000		103	80	120			

Sample ID: **LCS-43727**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **43727**	RunNo: **58461**							
Prep Date: **3/18/2019**	Analysis Date: **3/19/2019**	SeqNo: **1962712**	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	99.5	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	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: **1903789** RcptNo: **1**

Received By: **Erin Melendrez** **3/16/2019 10:50:00 AM**

Completed By: **Erin Melendrez** **3/16/2019 1:14:15 PM**

Reviewed By: ENM 3/18/19

LB: DAD 3/18/19

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 3/18/19

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	3.7	Good	Yes			

Chain-of-Custody Record

Client: SMA-Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5day

Project Name: Bill Alexander

Project #:

Project Manager: Melodie Sanjari

Sampler: NRS

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.7°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 Name	Container Type and #	Preservative Type	HEAL No. 1903789	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)
3/15/19	10:15	soil	SW1	4oz		-001	✓	✓					✓			
	10:40		SW2			-002	✓	✓					✓			
	9:15		BH1			-003	✓	✓					✓			
	11:00		BH2			-004	✓	–					✓			
	11:30		BH 3			-005	✓	–					✓			
	10:00		BH 4			-006	✓	✓					✓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/15/19	9:00				3/15/19	0900
3/15/19	1900			Courier	3/16/19	1050

Remarks: Matador

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 E
OPEN EXCAVATION PHOTO

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

QUESTIONS

Action 322173

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 322173
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1907829070**
Incident Name	**NAB1907829070 BILL ALEXANDER TANK BATTERY @ 0**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Facility	**[fAB1907828667] BILL ALEXANDER TANK BATTERY**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BILL ALEXANDER TANK BATTERY
Date Release Discovered	02/18/2019
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Equipment Failure | Separator | Produced Water | Released: 57 BBL | Recovered: 50 BBL | Lost: 7 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 322173
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Clint Talley Title: Assistant Foreman Email: clinton.talley@matadorresources.com Date: 03/11/2024

District I
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Energy, Minerals and Natural Resources
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Santa Fe, NM 87505

QUESTIONS (continued)

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 322173
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 75 and 100 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	980
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	5440
GRO+DRO (EPA SW-846 Method 8015M)	4140
BTEX (EPA SW-846 Method 8021B or 8260B)	57
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	02/19/2019
On what date will (or did) the final sampling or liner inspection occur	01/25/2024
On what date will (or was) the remediation complete(d)	01/25/2024
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	1202
What is the estimated volume (in cubic yards) that will be remediated	596
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 322173
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	*Not answered.*
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	Yes
What is the name of the NMED facility	R360
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Clint Talley Title: Assistant Foreman Email: clinton.talley@matadorresources.com Date: 03/11/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 322173
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only *Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

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	Action Number: 322173
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**306734**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**01/25/2024**
What was the (estimated) number of samples that were to be gathered	**10**
What was the sampling surface area in square feet	**1202**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	1202
What was the total volume (cubic yards) remediated	596
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	0
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	N/A

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Clint Talley Title: Assistant Foreman Email: clinton.talley@matadorresources.com Date: 03/11/2024

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QUESTIONS (continued)

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	Action Number: 322173
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 322173

CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
crystal.walker	None	5/21/2024