Souder, Miller & Associates • 201 S. Halagueno St. • Carlsbad, NM 88220

July 6, 2020

#5E29071-BG2

NMOCD District 2
Victoria Venegas
811 S First St.
Artesia, New Mexico 88210

SUBJECT: Remediation Plan for the Ford State 1 Release (2RP-634), Carlsbad, New Mexico

Ms. Venegas:

On behalf of Judah Oil, LLC, Souder, Miller & Associates (SMA) has prepared this Remediation Plan that describes the delineation and proposed remediation for a release of liquids related to oil and gas production activities at the Ford State 1 site. The site is in Unit C, Section 2, Township 22S, Range 28E, Eddy 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 information regarding the release.

Table 1: Release Information and Closure Criteria			
Name	Ford State 1	Company	Judah Oil LLC
API Number	30-015-22512	Location	32.42858, -104.05852
Incident Number	2RP-634		
Estimated Date of Release	2/4/2011	Date Reported to NMOCD	3/3/2011
Land Owner	State	Reported To	NMOCD
Source of Release	A flowline was punctured due to a heavy equipment driving over it.		
Released Volume	42 BBLS, 42 BBLS	Released Material	Crude Oil & Produced Water
Recovered Volume	0	Net Release	84 BBLS
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	2/28/2020, 4/8/2020, 6/15/2020		

1.0 Background

On February 4, 2011, a release was discovered at the Ford State No.1 site due to a poly flowline rupture caused by a vehicle driving over it. Initial response activities were conducted by Judah Oil personnel, and included source elimination and site security activities, which were unable to recover any free-standing fluid. Figure 1 illustrates the vicinity and site location, Figures 2 and 3 illustrate the release location. The C-141 form is included in Appendix A.

2.0 Site Information and Closure Criteria

The Ford State No.1 is located approximately 10 miles from Carlsbad, New Mexico on State land at an elevation of approximately 3180 feet above mean sea level (amsl).

Based upon water well data (Appendix B), depth to groundwater in the area is estimated to be 140 feet below grade surface (bgs). There are no known water sources within ½-mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) online water well database (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/; accessed 7/2/2020). However, an exploratory well in the vicinity (0.47 miles to the north east) approximates depth to groundwater to be over 100 feet bgs. The nearest significant watercourse is an unnamed pond, located approximately 5,000 feet to the south. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC. The site is not considered an "exploration, development, production or storage site" and therefore the top four feet must be remediated to the most stringent standards. Additionally, the release area did not occur on land considered "in-use", as outlined by 19.15.29.13.D NMAC. Therefore, the release area shall be reclaimed within the upper four feet to meet the standards of 19.15.29.13.D(1).

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for groundwater depth of greater than 100 feet bgs in addition to the requirements of reclamation for the upper four feet of impacted soil. Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

3.0 Release Characterization Activities and Findings

On February 28, April 8, and June 15, 2020, SMA performed site delineation activities at the Ford State No.1 by collecting soil samples around the release site, using the guidance of Judah Oil personnel. Soil samples were field-screened for chloride using an electrical conductivity (EC) meter and for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV.

A total of eight (8) sample locations (S1-S8) were investigated using an anchor machine, to depths up to 11 feet bgs, in addition to four sidewalls samples (SW1-SW4) collected from the surface. A total of twenty-eight (28) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Locations for all samples are depicted on Figure 3.

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 and Cardinal Laboratories in Hobbs, New Mexico (Appendix D).

As summarized in Table 3, results indicate that an area approximately 85 feet by 45 feet by 2-11 feet deep has been impacted.

4.0 Proposed Soil Remediation Work Plan

SMA proposes excavation and removal of contaminated soil, along with the placement of a liner at the most impacted areas. The impacted area surrounding sample points (S1 & S5) will be excavated to four (4) feet bgs, followed by the placement of a 40-mil liner to prevent further migration of contaminants. The area surrounding sample point (S2) will be excavated to approximately two (2) feet bgs, and the area surrounding sample point (S3) will be excavated to three (3) feet bgs. SMA will guide the excavation by collecting composite soil samples for field screens using the methods above.

The release area will be excavated to the NMOCD Closure Criteria as demonstrated in the attached Table 2. In addition, the top four (4) feet of impacted areas off of the well pad will meet the Reclamation requirement of 19.15.29.13(D)(1).

Confirmation samples will be comprised of representative wall and base 5-point composite samples, in accordance with a systematic sampling approach, as defined by SW846 using Gilbert, 1987 equation 5.2.3 for Stratified Random Sampling (Appendix C). This systematic method meets the EPAs data quality assessment standards (DQA) for composite sampling.

Approximately 315 cubic yards of contaminated soil is expected to be removed and replaced with topsoil material from a nearby source in order to return the surface to previous contours. The contaminated soil will be transported for disposal at R360 Environmental Solutions near Hobbs, NM, an NMOCD permitted disposal facility. Upon approval by NMOCD, the projected timeline for completion of remediation activities is approximately 90 days.

5.0 Scope and Limitations

The scope of our services included: assessment sampling; verifying release stabilization, regulatory liaison, and preparing this remediation plan. 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 Ashley Maxwell at 505-320-9241 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:

Shawna Chubbuck

Ashley Maxwell
Project Manager

Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

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

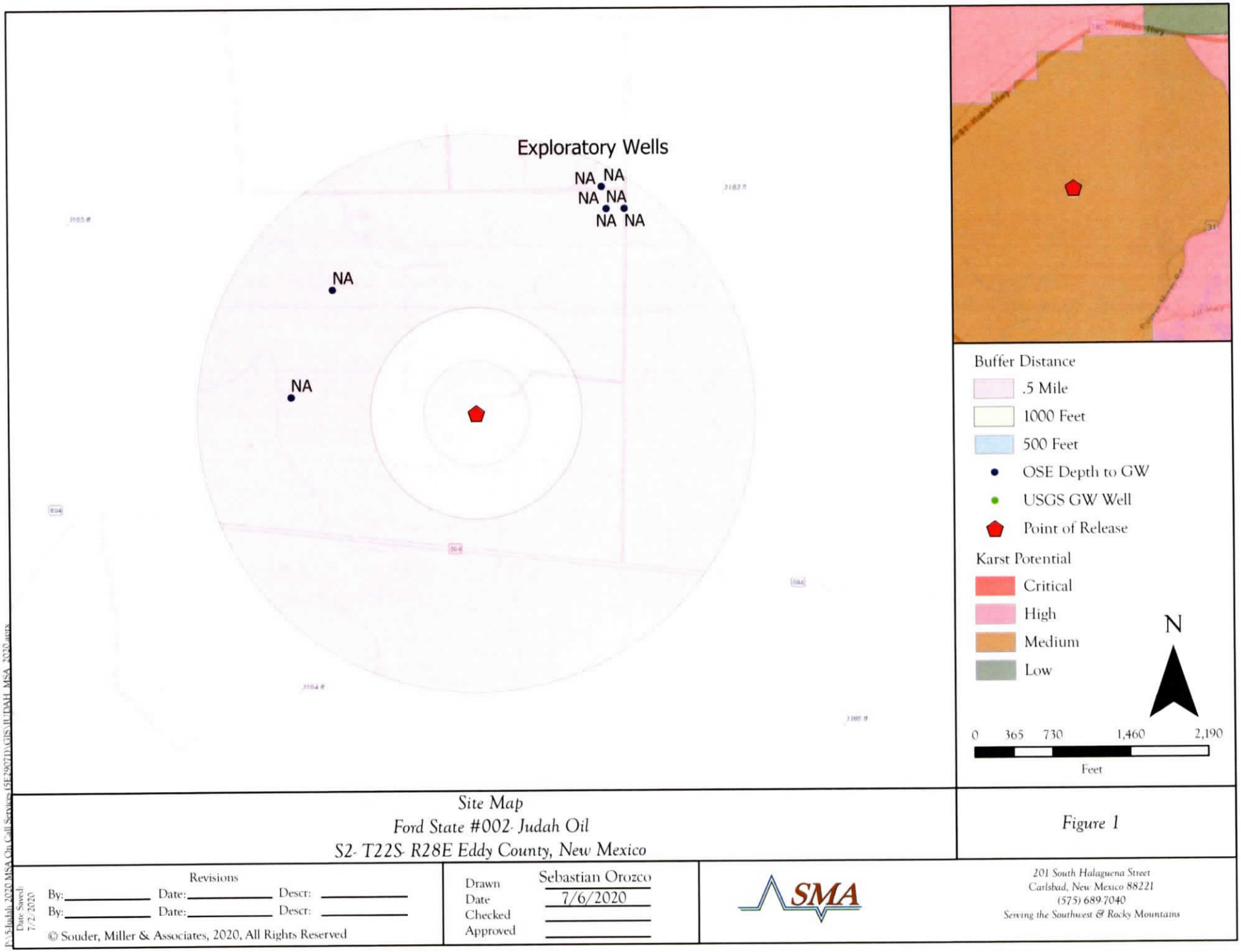
Tables:

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

Appendices:

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

FIGURES



Site Map
Ford State #002- Judah Oil
S2- T22S- R28E Eddy County, New Mexico

Figure 1

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

Drawn Sebastian Orozco
Date 7/6/2020
Checked
Approved

SMA

201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689.7040
Serving the Southwest & Rocky Mountains

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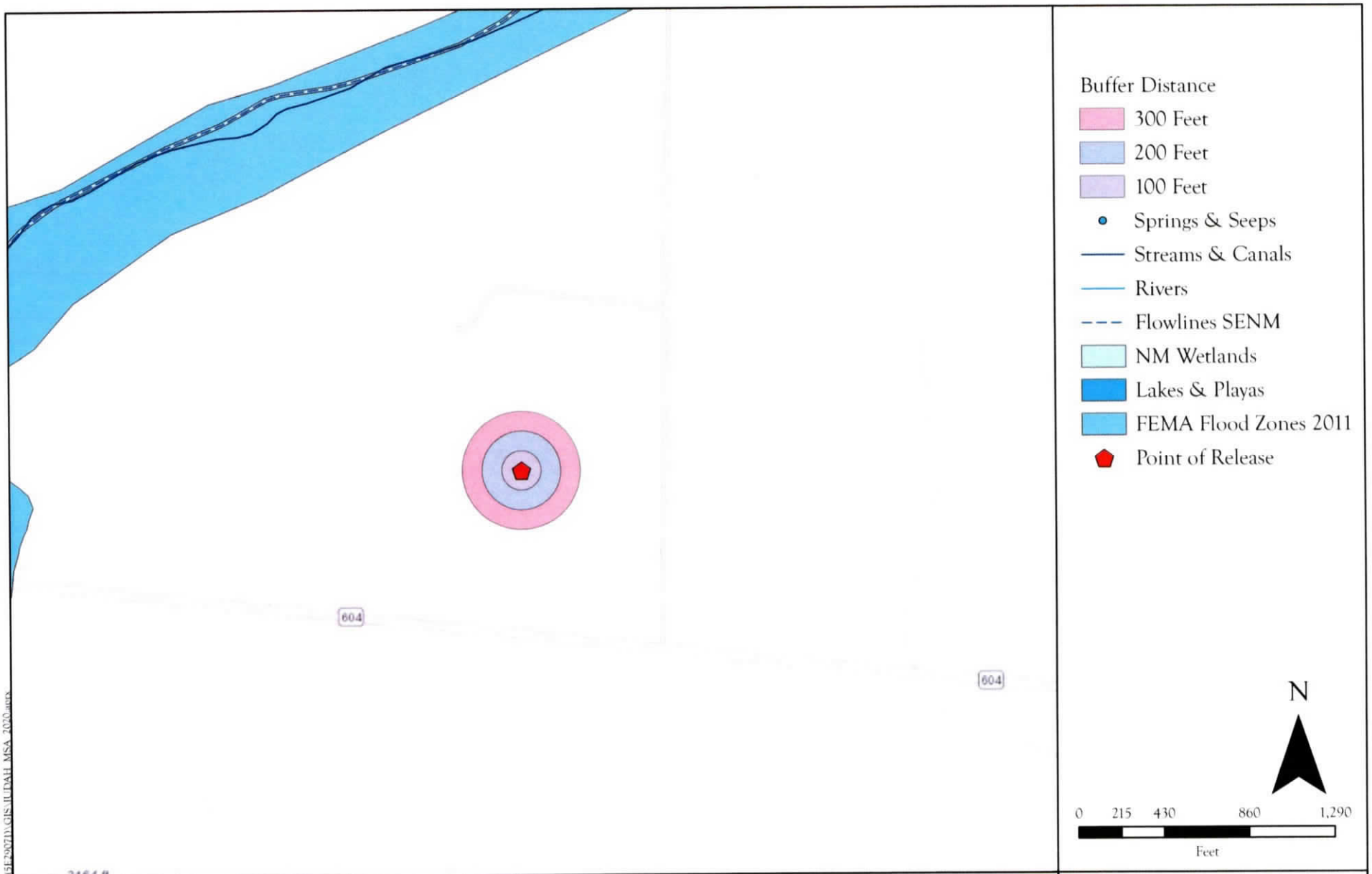
Date Saved: 7/2/2020



Surface Water Protection Map
Ford State #001- Judah Oil
S2- T22S- R28E Eddy County, New Mexico

Figure 2

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Date Saved: 7/2/2020

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

Drawn Sebastian Orozco
Date 7/2/2020
Checked
Approved

SMA

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Carlsbad, New Mexico 88221
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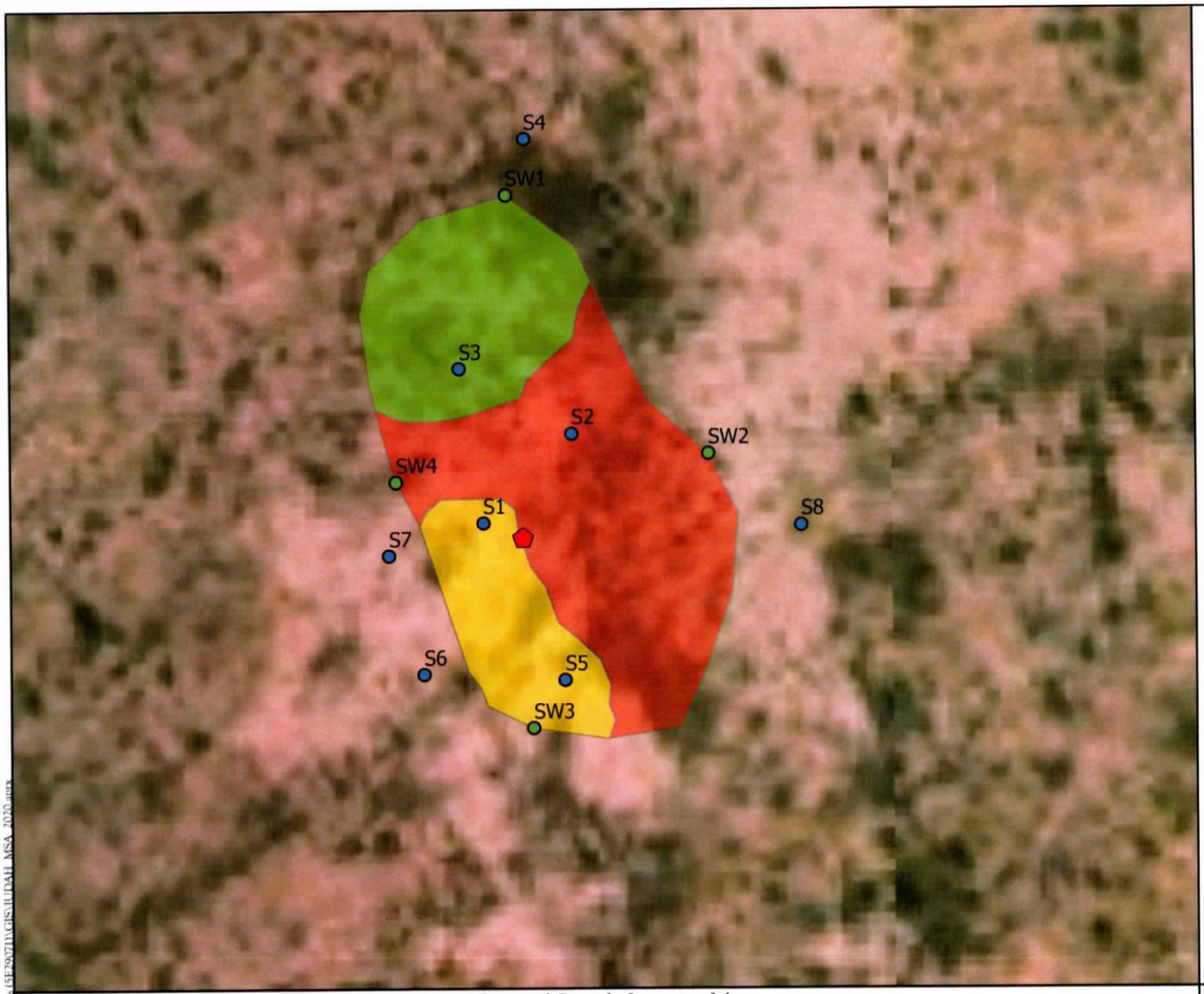


Side Wall Samples
Initial Soil Samples
4' Excavation (Liner)
2' Excavation
3' Excavation
Point of Release

N

0 5 10 20 30
Feet

Site and Sample Location Map
Ford State #001- Judah Oil
S2- T22S- R28E Eddy County, New Mexico

Figure 3

P:\Judah, 2020 MSA On Call Services (5E29071)\GIS\JUDAH_MSA_2020.mxd
Date Saved: 7/2/2020

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

Drawn Sebastian Orozco
Date 7/2/2020
Checked
Approved

SMA

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

TABLES

Table 2:
NMOCD Closure Criteria

Judah Oil LLC
Ford State #1 (2RP-634)

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	140	NMOSE
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	-	N/A
Hortizontal Distance to Nearest Significant Watercourse (ft)	1,980	Unnamed Draw (North West)

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		Closure Criteria (units in mg/kg)				
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
< 50' BGS		600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'	X	20000	2500	1000	50	10
Surface Water	**yes or no**	**if yes, then**				
<300' from continuously flowing watercourse or other significant watercourse?	No					
<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		600	100		50	10
<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 (Med)					
within a 100-year floodplain?	No					

SMA #

Table 3:
Summary of Sample Results

Judah Oil
Ford State #1 (RP#)

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action/ Action Taken	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Reclamation Requirements (0-4 ft)				50	10	1,000			100	600
NMOCD Closure Criteria (>4ft)				50	10	1,000			2,500	20,000
S1	4/8/2020	2	excavate	16.08	<0.12	490	5,800	2,300	8,590	330
		4	excavate	-	-	110	1,500	590	2,200	-
		6	excavate	-	-	<4.9	280	150	430	-
		11	excavate	-	-	<4.9	51	<47	51	-
S2	2/28/2020	1	excavate	<1.08	<0.12	<24	3000	3200	6200	130
		2	in- situ	<0.224	<0.025	<5.0	<9.1	<46	<60.1	250
		4	in- situ	-	-	<5.0	<9.5	<48	<62.5	-
		5	in- situ	-	-	<4.9	<9.7	<49	<63.6	-
S3	4/8/2020	2	excavate	<0.222	<0.025	<4.9	65	170	235	<60
		3	in- situ	-	-	<5.0	25	59	84	-
		4	in- situ	-	-	<5.0	10	<47	10	-
S4	2/28/2020	1	in- situ	<0.207	<0.023	<4.6	<9.6	<48	<62.2	<60
S5	2/28/2020	1	excavate	<1.08	<0.12	<24	69	200	269	200
	4/8/2020	2	excavate	2.15	<0.20	100	2,400	1,300	2,800	390
		3	excavate	-	-	52	1,300	790	2,142	-
		4	excavate	-	-	30	730	480	1,240	-
	6/15/2020	5	in- situ	<0.217	<0.024	<4.8	<9.1	<46	<60	<60
S6	4/8/2020	1	in- situ	<0.224	<0.025	<5.0	<10	<50	<65.0	190
		2	in- situ	<0.224	<0.025	<5.0	<9.5	<48	<62.5	220
		4	in- situ	-	-	<4.9	<9.8	<49	<63.7	-
S7	4/8/2020	1	in- situ	<0.221	<0.025	<4.9	23	<47	23	110
		2	in- situ	<0.224	<0.025	<5.0	<9.8	<49	<63.8	100
		4	in- situ	-	-	<4.9	11	<48	11	-
S8	2/28/2020	1	in- situ	<0.216	<0.024	<4.8	<9.8	<49	<63.6	140
SW1	4/8/2020	surface	in- situ	<0.222	<0.025	<4.9	<8.9	<45	<58.8	<60
SW2	4/8/2020	surface	in- situ	<0.222	<0.025	<4.9	<9.7	<48	<62.6	<60
SW3	4/8/2020	surface	in- situ	<1.11	<0.12	<25	<9.4	<47	<81.4	150
SW4	4/8/2020	surface	in- situ	<1.12	<0.12	<25	<9.0	<45	<79	<60

"--" = Not Analyzed

SMA #

APPENDIX A

FORM C141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

RECEIVED
MAR 08 2011
NMOCD ARTESIA

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

nKMW1106735785

OPERATOR

X Initial Report ☐ Final Report

Name of Company: Judah Oil, LLC 245872	Contact: Blaise Campanella	
Address: PO Box 568, Artesia, NM 88211-0568	Telephone No.: 575-748-5488	NMOCD 2RP No.: 634
Facility Name: Ford State No. 1	Facility Type: Oil	API No.: 30-015-22512

Surface Owner: State	Mineral Owner:	State Lease No.: E4205

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	2	22S	28E	330	FNL	2310	FWL	Eddy

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release: Hydrocarbon and produced water.	Volume of Release: 42 bbls. oil and 42 bbls. produced water	Volume Recovered: None due to duration, rapid horizontal and vertical absorption.
Source of Release: Split in poly flowline caused by vehicle driving over it.	Date and Hour of Occurrence: Estimated 4 February 2011.	Date and Hour of Discovery: 18 February 2011 1000 Hrs.
Was Immediate Notice Given? ☐ Yes X No ☐ Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Blaise Campanella / Cheryl Winkler	Date and Hour: Approximately 1600 Hrs. 3 March 2010	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.* Upon discovery, the polyline was immediately repaired and the discharge ceased. Subsequently, Judah Oil has taken immediate, proactive steps to remove the contaminated soils to an authorized disposal facility as soon as possible. Samples will be taken and following that, the NMOCD shall be notified of the soil chloride levels such that discernment may be employed in implementing the *Corrective Action Plan* as quickly as possible. Following excavation, confirmation samples will be taken to verify compliance with NMOCD standards.

Describe Area Affected and Cleanup Action Taken.*

Please refer to the *Final Remediation Report* for details.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:

Printed Name: Blaise Campanella

Title: Member/Manager

E-mail Address: judahoil@yahoo.com

Date: 3 March 2011 **Phone: 575-748-5488**

OIL CONSERVATION DIVISION

Approved by District Supervisor: Signed By: Mike Bratcher

Approval Date: 3/8/2011 Expiration Date:

Conditions of Approval:

REMEDIATION per OCD Rules and Guidelines. SUBMIT REMEDIATION PROPOSAL BY: 4/8/2011

Attached ☐

* Attach Additional Sheets If Necessary

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-634
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?	140 (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	2RP-634
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: James B Campanella Title: Memba / Manager

Signature: Date: 2-13-2020

email: judah6@yahoo.com Telephone: 575-748-4730

OCD Only

Received by: Date:

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-634
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: [illegible] Title: Member / Manager

Signature: James B Campanella Date: July 13 2020

email: judahoil@yahoo.com Telephone: 575-748-4730

OCD Only

Received by: _____ Date: _____

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

Signature: Brittany Hall Date: 2/28/2023

Conditions of Approval:
1. File was uploaded with the name "Ford St 1 closure". NMOCD did not review this report as a closure report but has been reviewed as a remediation plan. Closure has not been approved for this incident number.
2. Base and side wall samples must be representative of no more than 200 square feet.
3. Confirmation samples must be analyzed for all constituents in Table I.
4. Based on the data included on Table 3, a liner may not be necessary as contamination appears to meet the closure criteria of Table I for soils below 4 feet where groundwater is greater than 100 feet below ground surface.
5. 2RP-634 has been closed. Refer to incident #nKMW1106735785 in all future communication.
6. Submit a complete closure report per 19.15.29.12 NMAC through the OCD Permitting website by 5/28/2023.

Mr. James Blaise Campanella
Member/Manager
Judah Oil, LLC
PO Box 568
Artesia, NM 88211-0568

3 March 2011

Mr. Mike Bratcher
OIL CONSERVATION DIVISION
1301 West Grand Ave.
Artesia, NM 88210

Re: Ford State No. 1 Polyline Discharge *Corrective Action Plan*
U/L C Sec 2 22S 28E 330' FNL 2310' FWL State Lease No.: E4205
API No.: 30-015-22512
NMOCD 2RP No.: 634

Dear Mr. Bratcher:

Judah Oil, LLC (Judah) herewith notifies the New Mexico Oil Conservation Division (NMOCD) that a hydrocarbon and produced water discharge occurred at the Ford State No. 1 which was discovered on 18 February 2011 by the pumper. The point of discharge occurred at a split that developed in the flowline running from the well to the remote tank battery when a geological survey crew drove across it.

Due to the fact that this point of discharge was approximately 640 feet from the Ford State No. 1 location and approximately 852 feet from the remote tank battery hidden in a dense grassy field exhibiting dull, straw-like winter killed vegetation supported within a noticeably undulating terrain, the discharge was not found immediately (photos enclosed). Production data indicates the discharge probably began on 4 February 2011 but remained unknown to the operator because the pumper apparently was not verifying or back checking his daily well production figures or he would have noticed something was wrong. When the monthly production figures reached Judah Oil's company office and the discrepancy was revealed, the pumper was severely reprimanded both for not notifying the office immediately and for repairing the flowline on 22 February 2011 and still not telling the office! However, the well was put back on line at this time.

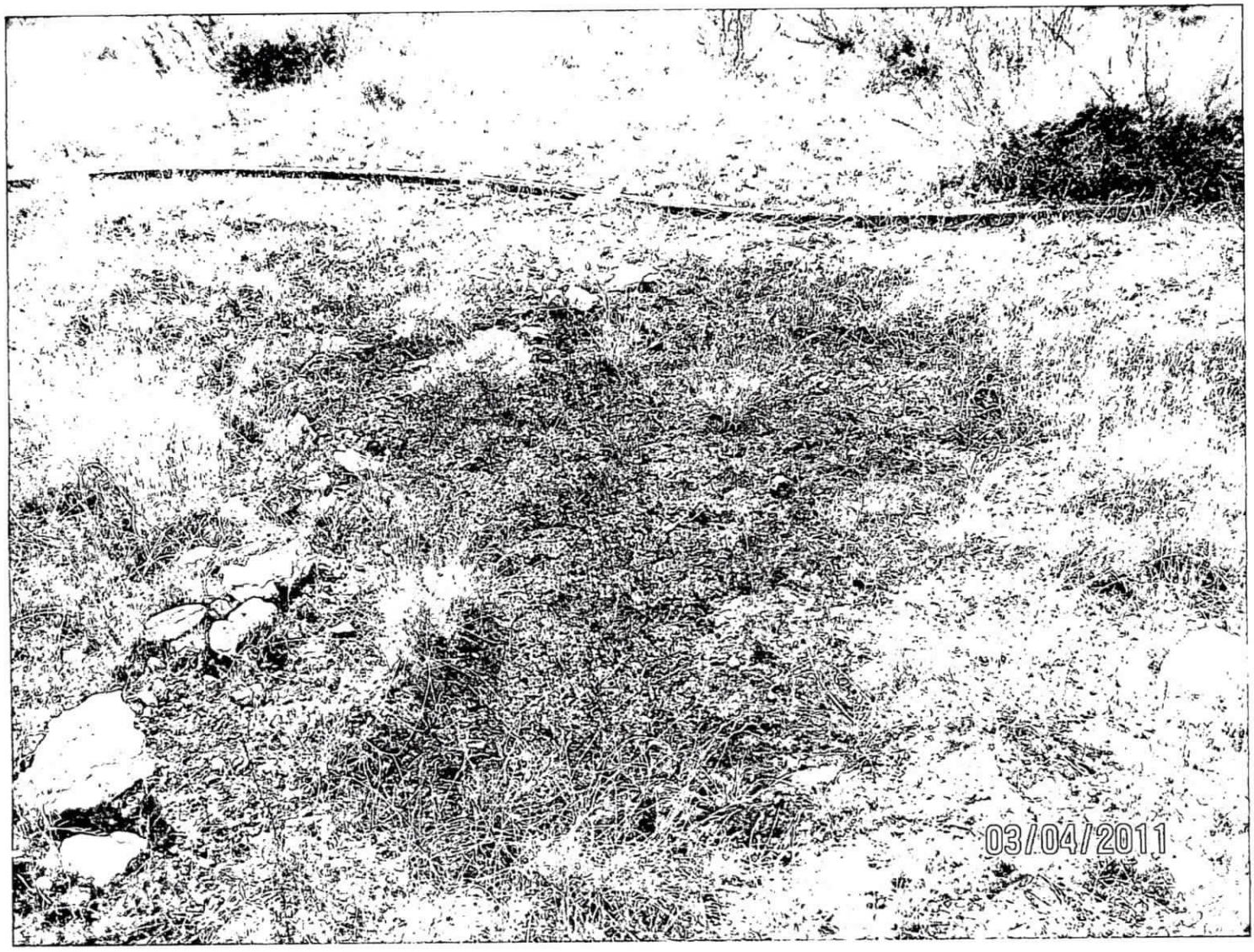
Subsequently, Judah Oil has taken immediate proactive steps to remove the contaminated soils to an authorized disposal facility as soon as possible. Samples will be taken and following that, the NMOCD shall be notified of the soil chloride levels such that discernment may be employed in

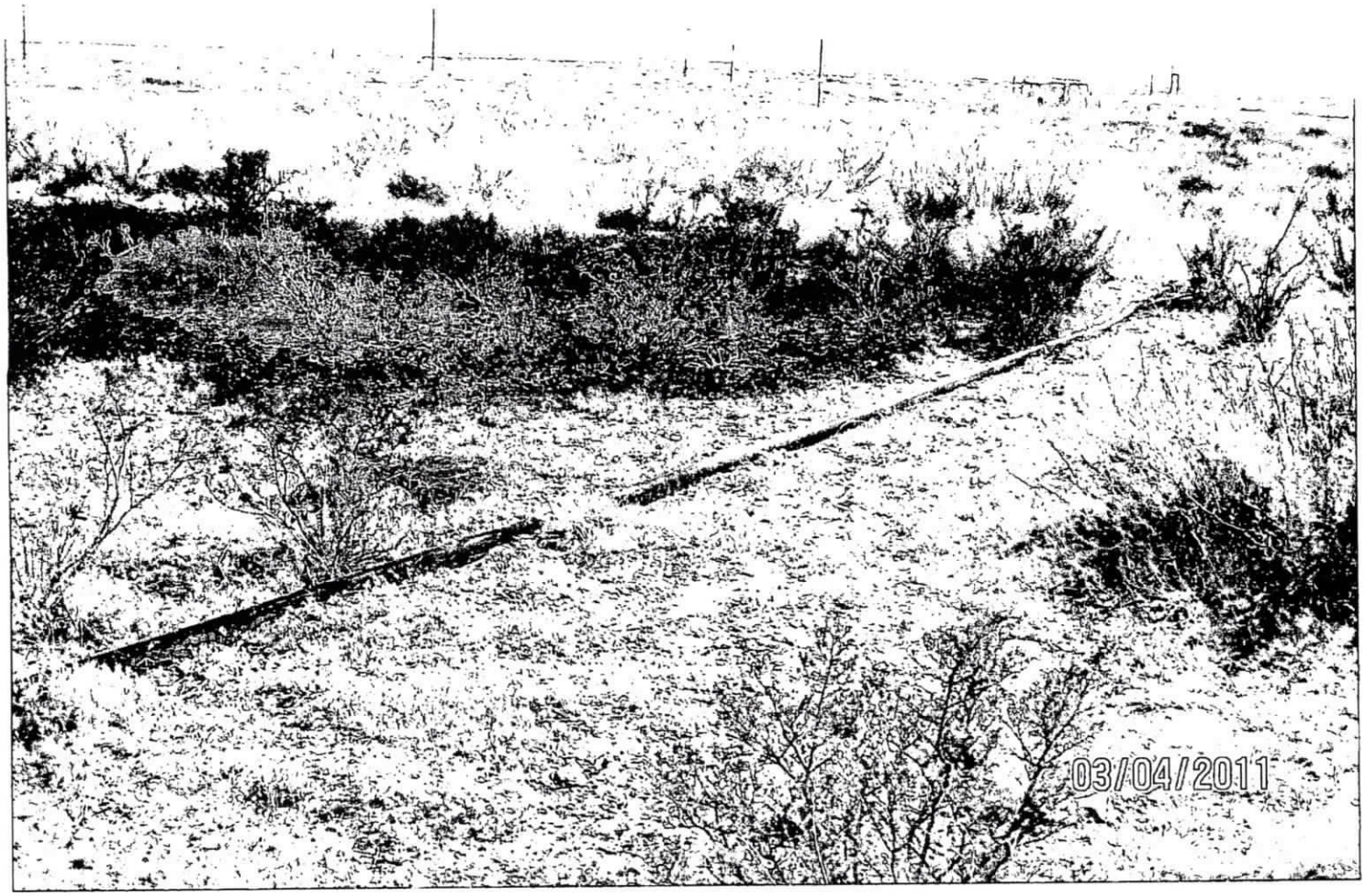
implementing the *Corrective Action Plan* as quickly as possible. Following excavation, confirmation samples will be taken to verify compliance with NMOCD standards. Should you have questions, please call (575-748-5488).

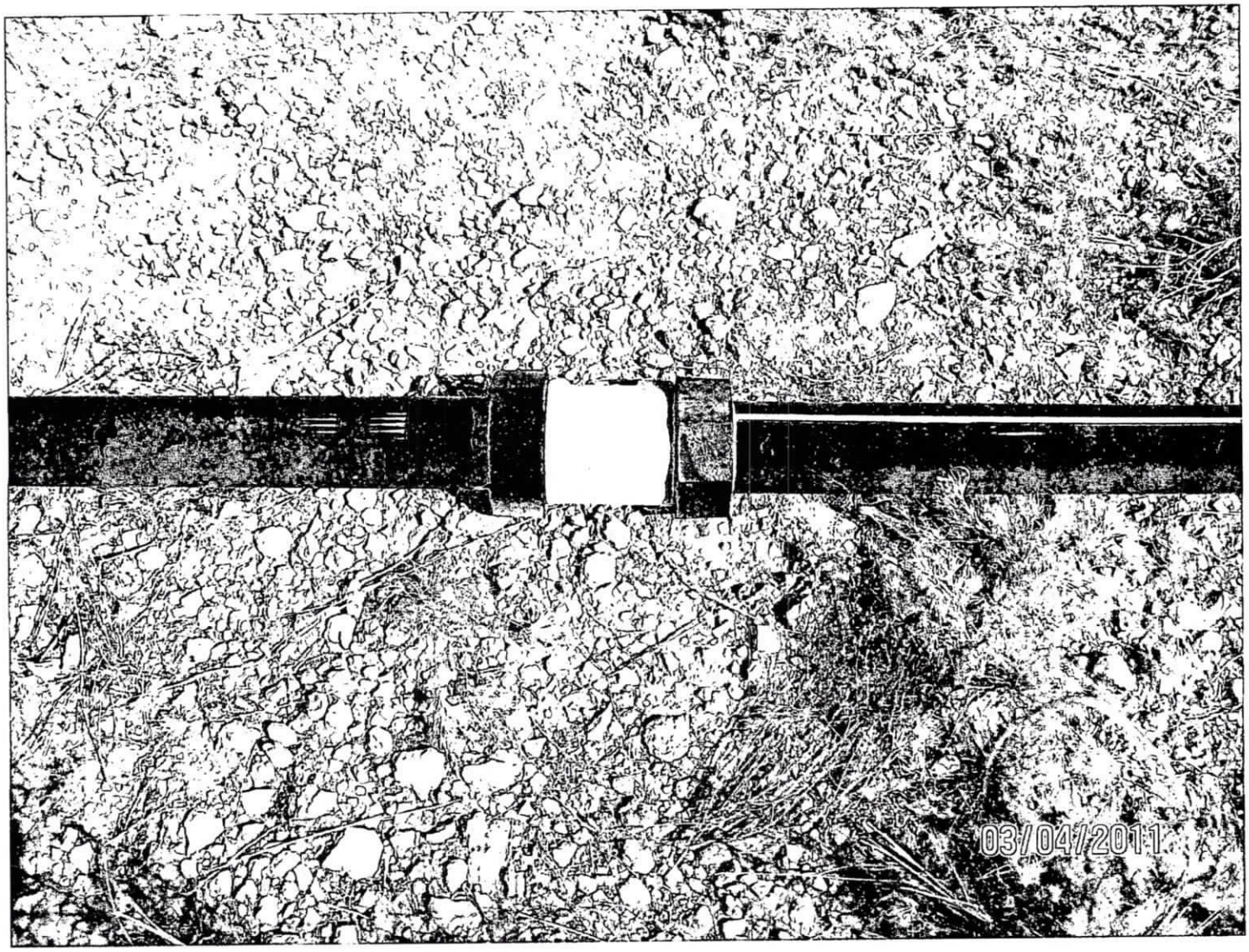
Sincerely,

James Blaise Campanella
Member/Manager

Enclosures: Photos, Initial C-141


03/04/2011


03/04/2011


03/04/2011

APPENDIX B
NMOSE WELLS REPORT

F lo.

NEW MEXICO OFFICE OF THE STATE ENGINEER

APPLICATION FOR PERMIT TO DRILL A WELL WITH NO CONSUMPTIVE USE OF WATER

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/ 2.3305D

Purpose:	☐ Pollution Control And / Or Recovery	☐ Geo-Thermal
☒ Exploratory	☐ Construction Site De-Watering	☐ Other (Describe):
☐ Monitoring	☐ Mineral De-Watering	

A separate permit will be required to apply water to beneficial use.

☐ Temporary Request - Requested Start Date: **5/20/2013** Requested End Date:

Plugging Plan of Operations Submitted? ☐ Yes ☒ No

---

1. APPLICANT(S)

Name: **BOPCO, LP**	Name:
Contact or Agent: check here if Agent ☒ **Ben J. Arguijo (Basin Environmental)**	Contact or Agent: check here if Agent ☒
Mailing Address: **3100 Plains Hwy.**	Mailing Address:
City: **Lovington**	City:
State: **NM** Zip Code: **88220**	State: Zip Code:
Phone: **(806)549-9597** ☐ Home ☒ Cell Phone (Work):	Phone: ☐ Home ☐ Cell Phone (Work):
E-mail (optional): **bjarguijo@basinenv.com**	E-mail (optional):

POD Renumbered

From: CP-1171

To: CP-01171 POD 1-5

FOR OSE INTERNAL USE Application for Permit, Form wr-07, Rev 4/12/12

File Number: CP-1171	Trn Number: 527952
Trans Description (optional): POD 1-5	
Sub-Basin:	
PCW/LOG Due Date: 5-31-14	

2. **WELL(S)** Describe the well(s) applicable to this application. 2.3305U

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

☒ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range)* OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
SB-6 CP-1171 POD1	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-7 CP-1171 POD2	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-8 CP-1171 POD3	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-9 CP-1171 POD4	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-10 CP-1171 POD5	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ☒ No If yes, how many_____

Other description relating well to common landmarks, streets, or other: **See attached Site Location Map.**

Well is on land owned by: **US Department Of The Interior - Bureau Of Land Management**

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. **Attached?** ☐ Yes ☐ No
If yes, how many_____

Approximate depth of well (feet): **50.00**	Outside diameter of well casing (inches): **0.00**
Driller Name: **Straub Corporation**	Driller License Number: **WD1478**

3. **ADDITIONAL STATEMENTS OR EXPLANATIONS**

Up to five (5) soil borings will be drilled on-site to investigate the vertical and horizontal extent of contamination following a series of produced water and/or crude oil releases at BOPCO's Indian Flats Bass Federal Salt Water Disposal (SWD) site. The exact number, location(s), and depth(s) of the soil bore(s) will be determined on the drilling date by field-screens using a chloride test kit and/or Photo-Ionization Detector. Due to the depth to water at the location (approximately 140 feet below ground surface), it is unlikely that monitor wells will be required.

FOR OSE INTERNAL USE Application for Permit, Form wr-07

File Number: CP-1171	Trn Number: 527952

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

4 No water shall be appropriated and beneficially used under this permit.

7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated.

C Driller's well record must be filed with the State Engineer within 20 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.

C2 No water shall be diverted from this well except for testing purposes which shall not exceed ten (10) cumulative days, and well shall be plugged or capped on or before , unless a permit to use water from this well is acquired from the Office of the State Engineer.

P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between geologic zones.

LOG The Point of Diversion CP 01171 POD1 must be completed and the Well Log filed on or before 05/31/2014.

LOG The Point of Diversion CP 01171 POD2 must be completed and the Well Log filed on or before 05/31/2014.

Trn Desc: CP-1171 POD1-5 EXPL

File Number: CP 01171
Trn Number: 527952

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG The Point of Diversion CP 01171 POD3 must be completed and the Well Log filed on or before 05/31/2014.

LOG The Point of Diversion CP 01171 POD4 must be completed and the Well Log filed on or before 05/31/2014.

LOG The Point of Diversion CP 01171 POD5 must be completed and the Well Log filed on or before 05/31/2014.

ACTION OF STATE ENGINEER

Notice of Intention Rcvd: Date Rcvd. Corrected:
Formal Application Rcvd: 05/14/2013 Pub. of Notice Ordered:
Date Returned - Correction: Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 22nd day of May A.D., 2013

Scott A. Verhines, P.E., State Engineer

By: Andy Morley
Andy Morley

Trn Desc: CP-1171 POD1-5 EXPL File Number: CP 01171
Trn Number: 527952

page: 2

2-32017

District I
1625 N. French Dr , Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

2 33050

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

nMLB1205242397

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company BOPCO, L.P. 260737	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-556-8730
Facility Name: Indian Flats Bass Federal #1 SWD	Facility Type: E&P 30-015-24968

Surface Owner Federal	Mineral Owner Federal	Lease No. LC-067144

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E					Eddy

Latitude_N 32.433905___ Longitude W 104.055425_

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 200 bbls	Volume Recovered: 160 bbls
Source of Release: ½' fitting on the pump discharge line.	Date and Hour of Occurrence 2/8/12 time unknown	Date and Hour of Discovery 2/8/12 9:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Tony Savoie	Date and Hour 2/8/12 11:44 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
FEB 20 2012
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* a ½' fitting on the discharge of the salt water disposal pump broke. The fitting was replaced.

Describe Area Affected and Cleanup Action Taken.*The released fluid affected approximately 10,875 sq. ft. area around the pump, lease road and caliche well pad. The free standing fluid was picked up with a vacuum truck and the saturated soil was scraped up and stockpiled on-site. The Site remediation for the produced water will follow the NMOCD guidelines for leaks and spills.

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

Signature: Tony Savoie	OIL CONSERVATION DIVISION
Printed Name: Tony Savoie	Approved by District Supervisor: Signed By Mike Bratcher
Title: Waste Mgmt.& Remediation Specialist	Approval Date: FEB 21 2012 Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval: Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN: 3/21/2012 Attached ☐
Date: 2/20/12 Phone:432-556-8730	

* Attach Additional Sheets If Necessary

2RP-1037

2.33050

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St. Francis Dr, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

nJMW1219350779

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company BOPCO, L.P. 260737	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-556-8730
Facility Name: Indian Flats Bass Federal #1 SWD	Facility Type: E&P

Surface Owner Federal	Mineral Owner Federal	Lease No. LC-067144 API#

Indian Flats Bass Fed #1

LOCATION OF RELEASE

30-015-24968

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E					Eddy

Latitude_N 32.433905___ Longitude W 104.055425_

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 50 bbls	Volume Recovered: 10 bbls
Source of Release: A SWD pump	Date and Hour of Occurrence 5/23/12 time unknown	Date and Hour of Discovery 5/23/12 9:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD Emergency #104	
By Whom? Tony Savoie	Date and Hour 5/23/12 1:30 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A 1" valve was left open on the pump causing the sump to overflow. The valve was closed.

Describe Area Affected and Cleanup Action Taken.*The released fluid affected approximately 8,000 sq. ft. area around the pump, lease road and caliche well pad. The free standing fluid was picked up with a vacuum truck and the saturated soil was scraped up and stockpiled on-site. The spill covered the same area as another spill reported on 2/8/12.
The Site remediation for the produced water will follow the NMOCD guidelines for leaks and spills.

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

Signature: Tony Savoie	OIL CONSERVATION DIVISION
Printed Name: Tony Savoie	Approved by District Supervisor: Signed By Mike Bratcher
Title: Waste Mgmt.& Remediation Specialist	Approval Date: JUL 11 2012 Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval: Attached ☐
Date: 6/24/12 Phone:432-556-8730	

* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:** 8/11/12

2RP-1208

RECEIVED
JUN 26 2012
NMOCD ARTESIA

2. 3305 2. 32017

District I
1625 N. French Dr , Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr , Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

nJMW1219352653

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company BOPCO, L.P. 260737	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-556-8730
Facility Name: Indian Flats Bass Federal #1 SWD	Facility Type: E&P

Surface Owner Federal	Mineral Owner Federal	~~Lease No. LC 067144~~ NMNM

Indian Flats BASS Fed #1

LOCATION OF RELEASE 30-015-24968

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E					Eddy

Latitude_N 32.433905___ Longitude W 104.055425_

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 80 bbls	Volume Recovered: 20 bbls
Source of Release: A salt water transfer pump.	Date and Hour of Occurrence 5/25/12 time unknown	Date and Hour of Discovery 5/25/12 9:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Tony Savoie	Date and Hour 5/25/12 11:40 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A gauge broke on the pump, water was sprayed outside the containment area on the caliche pad and road at the facility. The gauge was replaced.

Describe Area Affected and Cleanup Action Taken.*The released fluid affected approximately 5,000 sq. ft. area around the pump, lease road and caliche well pad. The free standing fluid was picked up with a vacuum truck. The release is in the same location as previous spills of 2/8/12 and 5/23/12. An air rotary rig was used to determine the vertical extent of the first release. A rig will be re-scheduled to delineate the recent spills. The Site remediation for the produced water will follow the NMOCD guidelines for leaks and spills.

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

Signature: Tony Savoie	OIL CONSERVATION DIVISION
Printed Name: Tony Savoie	Approved by District Supervisor: Signed By Mike Bratcher
Title: Waste Mgmt.& Remediation Specialist	Approval Date: JUL 11 2012 Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval: Attached ☐
Date: 6/24/12 Phone:432-556-8730	

* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:** 8/11/12

2RP-1209

RECEIVED
JUN 26 2012
NMOCD ARTESIA

2 -32017

District I
1625 N. French Dr , Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

nJMW 1219348842

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company BOPCO, L.P. 260737	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-556-8730
Facility Name: Indian Flats Bass Federal #1 Tank Battery	Facility Type: E&P

Surface Owner Federal	Mineral Owner Federal	~~Lease No. LC-067144~~ API #

Indian Flats Bass Fed #1

LOCATION OF RELEASE

30-015-24968

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E					Eddy

Latitude_N 32.433905___ Longitude W 104.055425_

NATURE OF RELEASE

Type of Release: Crude oil	Volume of Release: 15 bbls	Volume Recovered: 5 bbls
Source of Release: 3" fill line to the tanks.	Date and Hour of Occurrence 6/21/12 time 1:00 p.m.	Date and Hour of Discovery 6/21/12 1:00 p.m.
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

~

Describe Cause of Problem and Remedial Action Taken.* Crews were installing a new heater treater at the location when a 3" line coming from the flow line header to the tanks broke. A vacuum truck was on-site removing oil from the separators and was used to recover the spilled fluid.

Describe Area Affected and Cleanup Action Taken.*The released fluid affected approximately 1500 sq. ft. inside the tank battery earthen containment. The free standing fluid was picked up with a vacuum truck.
The Site remediation for the crude oil will follow the NMOCD guidelines for leaks and spills.

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

Signature: Tony Savoie	OIL CONSERVATION DIVISION Approved by District Supervisor: Signed By Mike Bratcher	
Printed Name: Tony Savoie		
Title: Waste Mgmt.& Remediation Specialist	Approval Date: JUL 11 2012	Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval:	Attached ☐
Date: 6/24/12 Phone:432-556-8730		

* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:** 8/11/12

2RP-1207

RECEIVED
JUN 26 2012
NMOCD ARTESIA

2.33050

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

nJMW1235328868

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company BOPCO, L.P. 260737	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-556-8730
Facility Name: Indian Flats Bass Federal #1 SWD	Facility Type: E&P

Surface Owner Federal	Mineral Owner Federal	Lease No. LC-067144

API#30-015-24968

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E					Eddy

Latitude N 32.433905 Longitude W 104.055425

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 80 bbls	Volume Recovered: 70 bbls
Source of Release: A salt water transfer pump.	Date and Hour of Occurrence 11/27/12 time unknown	Date and Hour of Discovery 11/27/12 1:00 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD emergency #104	
By Whom? Tony Savoie	Date and Hour 11/27/12 2:30 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
DEC 17 2012
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A backpressure valve broke on the pump, water was sprayed outside the containment area on the caliche pad and road at the facility. The valve was replaced.

Describe Area Affected and Cleanup Action Taken.*The released fluid affected approximately 4,500 sq. ft. area around the pump, lease road and caliche well pad. The free standing fluid was picked up with a vacuum truck. The release is in the same location as previous spills. An air rotary rig was used to determine the vertical extent of the first release. A rig was on location 12/12/12 and advanced 5 soil bores at various locations around the tank battery location, samples were collected to determine vertical extent. A remediation plan will be developed and submitted to the NMOCD. The Site remediation for the produced water will follow the NMOCD guidelines for leaks and spills.

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

Signature: Tony Savoie	OIL CONSERVATION DIVISION
Printed Name: Tony Savoie	Approved by District Supervisor: Signed By Mike Bratcher
Title: Waste Mgmt.& Remediation Specialist	Approval Date: DEC 18 2012 Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval: Attached ☐
Date: 12/17/12 Phone:432-556-8730	Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:** January 18, 2013

2RP-1457

* Attach Additional Sheets If Necessary

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Carlsbad Field Office
620 E. Greene St.
Carlsbad, New Mexico 88220-6292
www.blm.gov/nm

TAKE PRIDE IN AMERICA

2-33050

In Reply Refer To:
3162.4 (NM-080)
NMLC067144

May 13, 2013

NM Office of the State Engineer
Attn: Bill Duemling
1900 W. Second St.
Roswell, NM 99201

RE: NMLC067144; Indian Flats Bass Federal #1 SWD
NWSE, Section 35, T21S-R28E
Latitude: 32.433816, Longitude: -104.055308
Eddy County, New Mexico

Gentlemen:

The above well location has had recent spill events related to oil and gas operation on the above well location. In order to fully delineate the impacted sites, a drilling unit will be needed to complete the delineation. The Bureau of Land Management (land owner) authorizes the use of a drilling unit to accomplish the full delineation of the site.

If there are any questions please call Jim Amos, Supervisory Environmental Protection Specialist, at (505) 234-5909.

Sincerely,

James A. Amos
Supervisory Environmental
Protection Specialist

CP-1171/527952

2. 33050

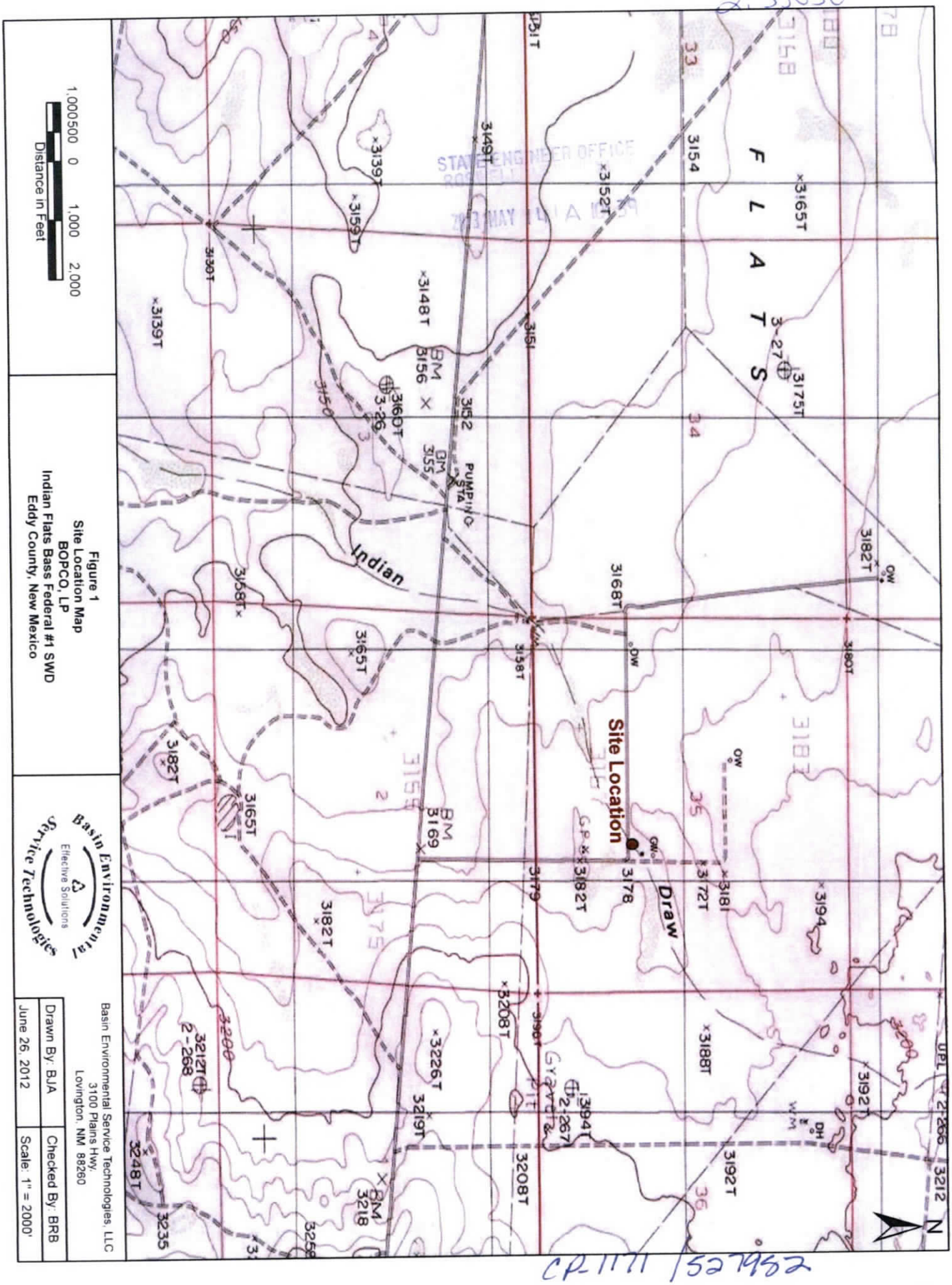


Figure 1
Site Location Map
BOPCO, LP
Indian Flats Bass Federal #1 SWD
Eddy County, New Mexico

Basin Environmental Service Technologies, LLC
3100 Plains Hwy.
Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
June 26, 2012	Scale: 1" = 2000'

CP-1171 / 527952

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application: 2.33050

Exploratory: ☒ Include a description of any proposed pump test, if applicable.	**Pollution Control and/or Recovery:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge. ☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Construction De-Watering:** ☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	**Mine De-Watering:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ☐ Include the reason for the monitoring well, and, ☐ The duration of the planned monitoring.		**Geo-Thermal:** ☐ Include a description of the geothermal heat exchange project, ☐ The amount of water to be diverted and re-injected for the project, ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), **Ben J. Arguijo**
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Applicant Signature 5/13/13

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☒ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 22nd day of May 20 13, for the State Engineer,

Scott A Verhines, P.E., State Engineer

By: Andy Morley
Signature Print

Title: Andy Morley, District II Manager
Print

FOR OSE INTERNAL USE Application for Permit, Form wr-07

File Number: CP 1171 Trn Number: 527952

Scott A. Verhines, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 527952
File Nbr: CP 01171

May. 22, 2013

BEN J ARGUIJO
BOPCO LP
3100 PLAINS HWY
LOVINGTON, NM 88260

Greetings:

Enclosed is your copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page. In accordance with the conditions of approval, the well can only be tested for 10 cumulative days, and the well is to be plugged on or before 05/31/2014, unless a permit to use the water is acquired from this office.

A Well Record & Log (OSE Form wr-20) shall be filed in this office within twenty (20) days after completion of drilling, but no later than 05/31/2014.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us or will be mailed upon request.

Sincerely,

Andy Morley
(575)622-6521

Enclosure

File No. C-3534

NEW MEXICO OFFICE OF THE STATE ENGINEER

APPLICATION FOR PERMIT TO DRILL A WELL WITH NO CONSUMPTIVE USE OF WATER

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And / Or Recovery	☐ Geo-Thermal
☐ Exploratory	☐ Construction Site De-Watering	☐ Other (Describe):
☒ Monitoring	☐ Mineral De-Watering	

A separate permit will be required to apply water to beneficial use.

☒ Temporary Request - Requested Start Date: 2/1/12 Requested End Date: ~~2/1/13~~ UnKnown

Plugging Plan of Operations Submitted: ☐ Yes ☒ No

STATE ENGINEER OFFICE ROSWELL, NEW MEXICO 2012 FEB 10 P 03:38

1. APPLICANT(S)

Name: ~~Tony Savoie~~ BOPCO L.P.	Name: U.S. Dept. of Interior -- BLM
Contact or Agent: check here if Agent ☐ Contact: Tony Savoie	Contact or Agent: check here if Agent ☐ James A. Amos
Mailing Address: 522 W. Mermod, Suite 704	Mailing Address: 620 East Greene Street
City: Carlsbad	City: Carlsbad
State: NM Zip Code: 88220	State: NM Zip Code: 88220-6292
Phone: 432-556-8730 ☐ Home ☒ Cell Phone (Work): 575-887-7329	Phone: ☐ Home ☐ Cell Phone (Work): 575-234-5909
E-mail (optional): tasavoie@basspet.com	E-mail (optional): Jamos@blm.gov

2012 FEB 10 A 10:38 STATE ENGINEER OFFICE ROSWELL, NEW MEXICO

FOR OSE INTERNAL USE Application for Permit, Form wr-07, Rev 12/14/11

File Number: C-3534	Trn Number: 496111
Trans Description (optional): Monitor Well	
Sub-Basin: C	
PCW/LOG Due Date: 02/28/2013	

2. **WELL(S)** Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84)

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

☒ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Optional: Complete boxes labeled "Other" below with PLSS (Public Land Survey System, i.e. Quarters, Section, Township, Range); Hydrographic Survey Map & Tract; Lot, Block & Subdivision; OR Land Grant Name if known.
SITE B TMW-1 POD 1			N 32° 24' 58.38" W 104° 4' 19.89" NWSESWSE, Section 03, T.22S, R.28E

2017 FEB 10 A 10: 39
STATE ENGINEER OFFICE ROSWELL, NEW MEXICO

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☒ Yes ☐ No If yes, how many_____

Other description relating well to common landmarks, streets, or other: U.L P Section 3, Twns. 22S, Range 28E

Well is on land owned by: Blm

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ☒ No
If yes, how many_____

Approximate depth of well (feet): 147.86	Outside diameter of well casing (inches): 2.00
Driller Name: Straub	Driller License Number: WD 1478

3. **ADDITIONAL STATEMENTS OR EXPLANATIONS**

The temporary well was drilled to gather infomration on the estimated depth to ground water in relationship to 3 other soil bores that were advanced at the site for vertical delineation at a flow line spill area. The estimated depth to water prior to drilling was between 150 to 180 feet below ground surface. Water was encountered at a depth of approxiamtely 106 ft. below ground surface. A temporary well was set and water samples were collected for Chloride and BTEX analysis. The chloride concentration was <15 mg/kg and BTEX was <.001. The NMOCD would like for this well to be completed as sentry monitor well. It is not known how long we will be required to monitor the groundwater at this point.

2017 FEB 10 A 10: 38
ROSWELL, NEW MEXICO
STATE ENGINEER OFFICE

FOR OSE INTERNAL USE Application for Permit, Form wr-07

File Number: C-3534	Trn Number: 495111

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory: ☐ Include a description of any proposed pump test, if applicable.	**Pollution Control and/or Recovery:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	**Construction De-Watering:** ☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	**Mine De-Watering:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ☒ Include the reason for the monitoring well, and, ☐ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Geo-Thermal:** ☐ Include a description of the geothermal heat exchange project, ☐ The amount of water to be diverted and re-injected for the project, ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), John A. "Tony" Savoie James A. Amos (BLM-CFO)
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Tony Savoie 2/10/12
Applicant Signature

James A. Amos 2-10-12
Applicant Signature

STATE ENGINEER OFFICE ROSWELL, NEW MEXICO 2012 FEB 10 A 10:39

ACTION OF THE STATE ENGINEER

This application is:

☒ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 16th day of February 2012, for the State Engineer,

Scott A. Verhines, P.E., State Engineer

By: Bill Duemling
Signature Print

Title: Carlsbad Basin Supervisor
Print

FOR OSE INTERNAL USE Application for Permit, Form wr-07

File Number: C-3534 Trn Number: 495111

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO MONITOR

SPECIFIC CONDITIONS OF APPROVAL

4 No water shall be appropriated and beneficially used under this permit.

B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated.

C Driller's well record must be filed with the State Engineer within 20 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.

LOG The Point of Diversion C 03534 POD1 must be completed and the Well Log filed on or before 02/28/2013.

NO WATER SHALL BE DIVERTED FROM THIS WELL EXCEPT FOR TESTING PURPOSES WHICH SHALL NOT EXCEED TEN (10) CUMULATIVE DAYS UNLESS A PERMIT TO USE WATER FROM THIS WELL IS ACQUIRED FROM THE OFFICE OF THE STATE ENGINEER.

SHOULD THE PERMITTEE CHANGE THE PURPOSE OF USE TO OTHER THAN MONITORING PURPOSES, AN APPLICATION SHALL BE ACQUIRED FROM THE OFFICE OF THE STATE ENGINEER.

THE WELL SHALL BE CONSTRUCTED, MAINTAINED AND OPERATED THAT EACH WATER SHALL BE CONFINED TO THE AQUIFER IN WHICH IT IS ENCOUNTERED.

ACTION OF STATE ENGINEER

Notice of Intention Rcvd: Date Rcvd. Corrected:
Formal Application Rcvd: 02/10/2012 Pub. of Notice Ordered:
Date Returned - Correction: Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

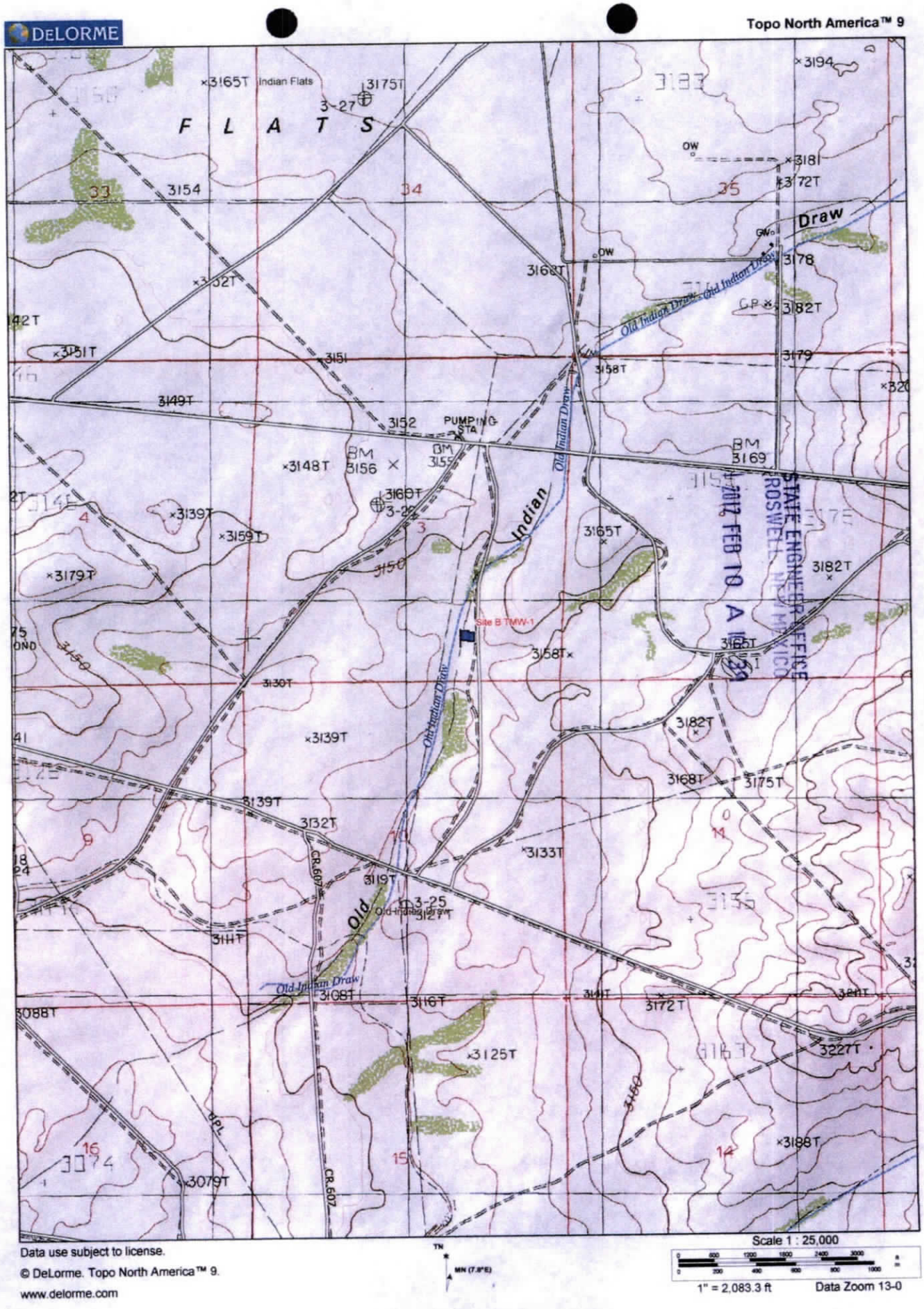
Witness my hand and seal this 16 day of Feb A.D., 2012

Scott A. Verhines, P.E., State Engineer

By: Bill Duemling
Bill Duemling, Basin Supv.

Trn Desc: C 03534-WATER QUALITY SAMPLING File Number: C 03534
Trn Number: 495111

page: 1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Draw
Old Indian Draw
PUMPING STA
BM 3156
BM 3155
BM 3169
Site B TMW-1
Old Indian Draw
CR 607
STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2012 FEB 10 A 11:59
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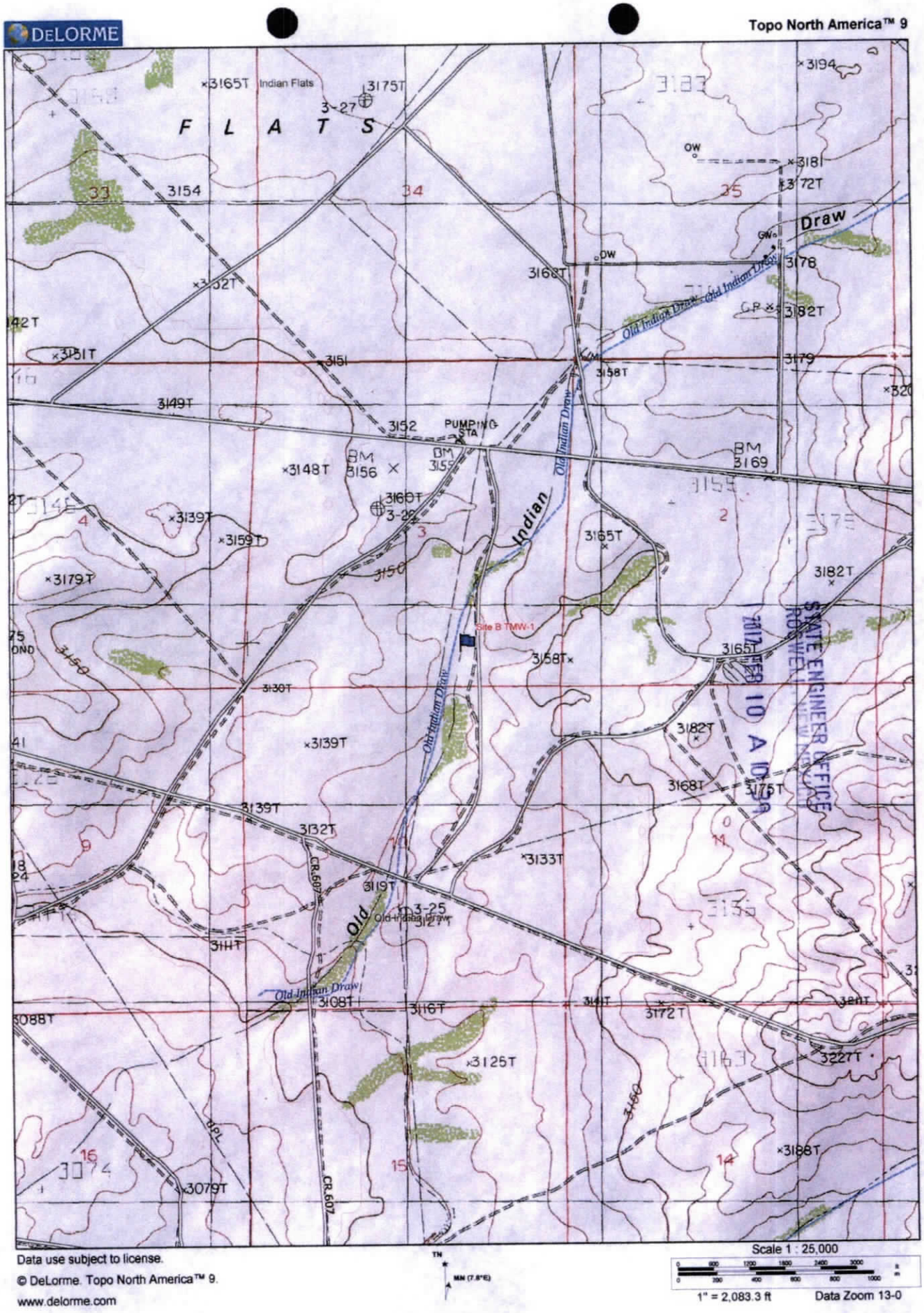
Scale 1 : 25,000
1" = 2,083.3 ft
Data Zoom 13-0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Scale 1 : 25,000
1" = 2,083.3 ft
Data Zoom 13-0

Locator Tool Report

General Information:

Application ID:30 Date: 02-15-2012 Time: 16:59:09

WR File Number: C-03534-POD1
Purpose: POINT OF DIVERSION

Applicant First Name: BOPCO LLP
Applicant Last Name: MONITOR WELL

GW Basin: CARLSBAD
County: EDDY

Critical Management Area Name(s): NONE
Special Condition Area Name(s): NONE
Land Grant Name: NON GRANT

PLSS Description (New Mexico Principal Meridian):

NW 1/4 of SE 1/4 of SW 1/4 of SE 1/4 of Section 03, Township 22S, Range 28E.

Coordinate System Details:

Geographic Coordinates:

Latitude:	32 Degrees	24 Minutes	58.4 Seconds	N
Longitude:	104 Degrees	4 Minutes	19.9 Seconds	W

Universal Transverse Mercator Zone: 13N

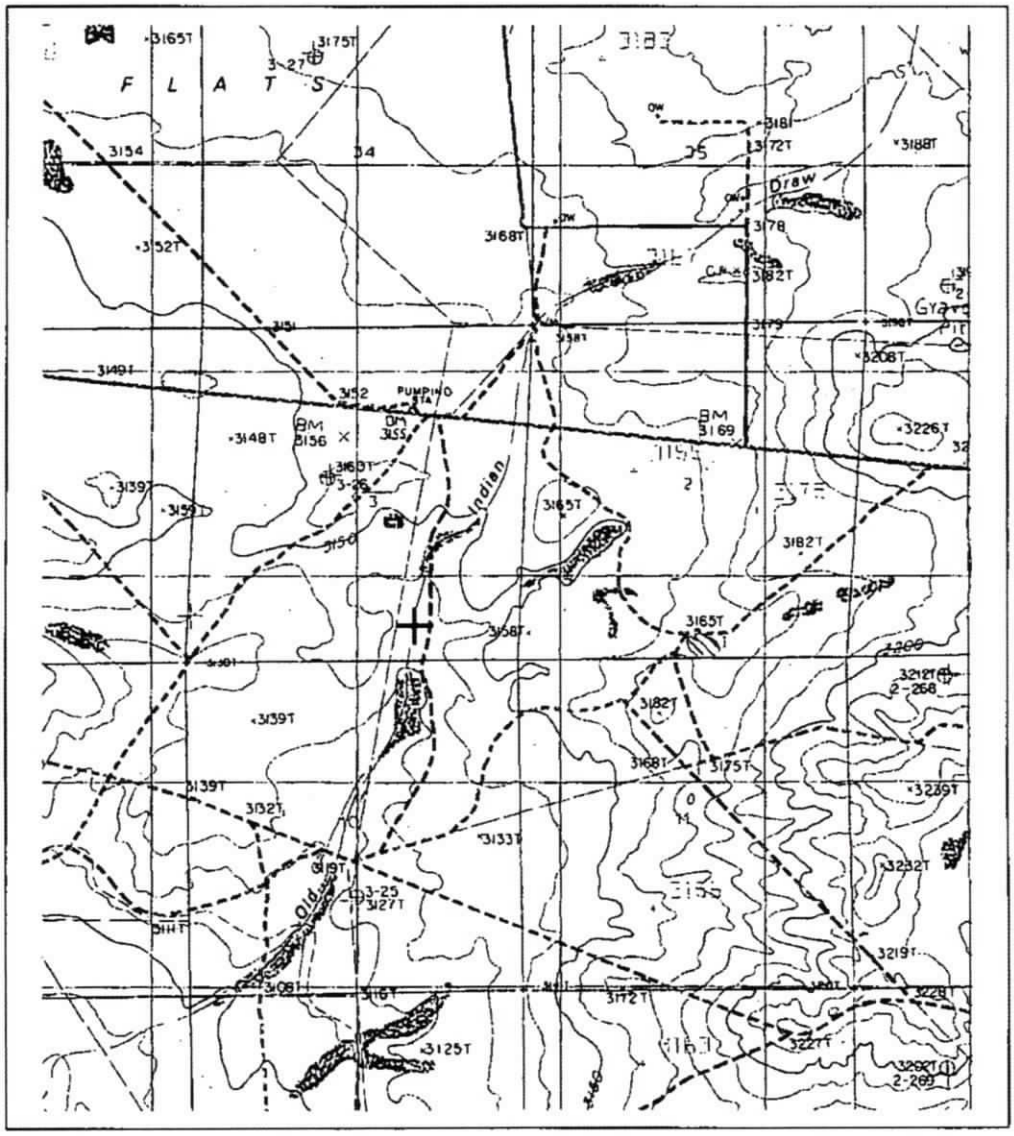
NAD 1983(92) (Meters)	N: 3,586,950	E: 587,240
NAD 1983(92) (Survey Feet)	N: 11,768,186	E: 1,926,636
NAD 1927 (Meters)	N: 3,586,748	E: 587,289
NAD 1927 (Survey Feet)	N: 11,767,524	E: 1,926,797

State Plane Coordinate System Zone: New Mexico East

NAD 1983(92) (Meters)	N: 157,048	E: 189,562
NAD 1983(92) (Survey Feet)	N: 515,249	E: 621,921
NAD 1927 (Meters)	N: 157,030	E: 177,010
NAD 1927 (Survey Feet)	N: 515,189	E: 580,739

NEW MEXICO OFFICE OF STATE ENGINEER

Locator Tool Report



WR File Number: C-03534-POD1 Scale: 1:34,654

Northing/Easting: UTM83(92) (Meter): N: 3,586,950 E: 587,240

Northing/Easting: SPCS83(92) (Feet): N: 515,249 E: 621,921

GW Basin: Carlsbad

Print Date: 02/15/2012

Scott A. Verhines, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 495111
File Nbr: C 03534

Feb. 16, 2012

JAMES AMOS
U.S. DEPT. OF INTERIOR--BLM
620 EAST GREENE STREET
CARLSBAD, NM 88220-6292

Greetings:

Enclosed is your copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page. In accordance with the conditions of approval, the well can only be tested for 10 cumulative days, and the well is to be plugged on or before 02/28/2013, unless a permit to use the water is acquired from this office.

A Well Record & Log (OSE Form wr-20) shall be filed in this office within twenty (20) days after completion of drilling, but no later than 02/28/2013.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us or will be mailed upon request.

Sincerely,

Bill Duemling
(575)622-6521

Enclosure

explore

APPENDIX C
VISUAL SAMPLING PLAN
(VSP)

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

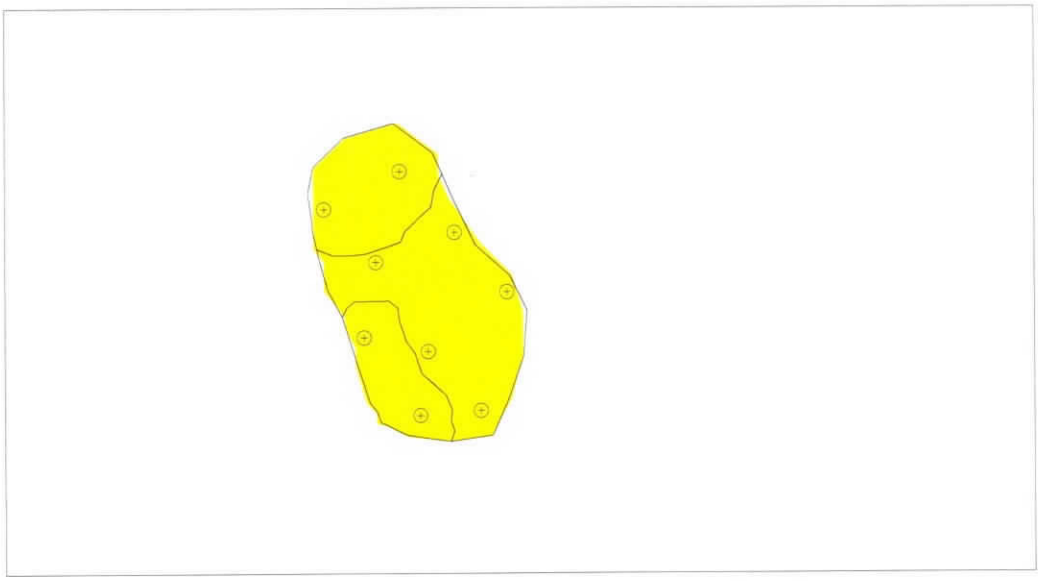
Summary

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	Simple random sampling 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	5
Stratum 1	2
Total area of all strata	419.90 m^2
Total cost of sampling [a]	

[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
-11583597.1222	3819434.2286			Random		
-11583591.7557	3819426.7407			Random		

Area: Area 2						
X Coord	Y Coord	Label	Value	Type	Historical	Sample Area
-11583593.7212	3819450.0337			Random		
-11583600.9426	3819446.4612			Random		

Area: Area 3						
X Coord	Y Coord	Label	Value	Type	Historical	Sample Area
-11583590.9808	3819432.8999			Random		
-11583595.9951	3819441.4186			Random		
-11583585.9664	3819427.2208			Random		
-11583588.4736	3819444.2581			Random		
-11583583.4592	3819438.5790			Random		

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:

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

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	78.5391

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	2
Total Samples	5

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 simple random sampling in each stratum.

Locating the sample points randomly within each stratum provides sampling locations that can, due to the random selection process, leave some areas of the stratum that are not well represented in the samples collected. This potential problem is not expected to result in inappropriate data for estimating the strata proportions or the entire site proportion if the population values in each stratum do not vary greatly among different portions of the stratum. If major spatial patterns of population values are expected to occur within a stratum, then systematic grid sampling is usually a better choice for that stratum.

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 is valid because simple random sampling is used.

Cost of Sampling
The total cost of the completed sampling program depends on several cost inputs, some of which are fixed, and others that are based on the number of samples collected and measured. Based on the numbers of samples determined above, the estimated total cost of sampling and analysis at this site is $5,500.00, which averages out to a per sample cost of $1,100.00. The following table summarizes the inputs and resulting cost estimates.

COST INFORMATION				
Stratum	**Samples**	**Collection Cost Per Sample**	**Analytic Cost Per Sample**	**Total Cost**
1	2			
2	2			
3	5			
Total Samples:	**9**		**Subtotal:**	
			Fixed Startup Cost:	
			Grand Total:	

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

LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 20, 2020

Ashley Maxwell
Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL:
FAX:

RE: Ford State 001 OrderNo.: 2004515

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 23 sample(s) on 4/10/2020 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 **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-001 **Matrix:** SOIL

Client Sample ID: S1-2'
Collection Date: 4/8/2020 10:58:00 AM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	5800	96		mg/Kg	10	4/13/2020 10:34:57 AM	51740
Motor Oil Range Organics (MRO)	2300	480		mg/Kg	10	4/13/2020 10:34:57 AM	51740
Surr: DNOP	0	55.1-146	S	%Rec	10	4/13/2020 10:34:57 AM	51740
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	490	99		mg/Kg	20	4/14/2020 3:11:34 PM	51735
Surr: BFB	220	66.6-105	S	%Rec	20	4/14/2020 3:11:34 PM	51735

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-002 **Matrix:** SOIL

Client Sample ID: S1-4'
Collection Date: 4/8/2020 11:02:00 AM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	1500	100		mg/Kg	10	4/13/2020 4:04:15 AM	51740
Motor Oil Range Organics (MRO)	590	500		mg/Kg	10	4/13/2020 4:04:15 AM	51740
Surr: DNOP	0	55.1-146	S	%Rec	10	4/13/2020 4:04:15 AM	51740
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	110	25		mg/Kg	5	4/14/2020 3:34:53 PM	51735
Surr: BFB	212	66.6-105	S	%Rec	5	4/14/2020 3:34:53 PM	51735

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-003 **Matrix:** SOIL

Client Sample ID: S1-6'
Collection Date: 4/8/2020 11:08:00 AM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	280	10		mg/Kg	1	4/13/2020 11:23:01 AM	51740
Motor Oil Range Organics (MRO)	150	50		mg/Kg	1	4/13/2020 11:23:01 AM	51740
Surr: DNOP	86.8	55.1-146		%Rec	1	4/13/2020 11:23:01 AM	51740
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/14/2020 3:58:14 PM	51735
Surr: BFB	135	66.6-105	S	%Rec	1	4/14/2020 3:58:14 PM	51735

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-004 **Matrix:** SOIL

Client Sample ID: S1-11'
Collection Date: 4/8/2020 11:40:00 AM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	51	9.5		mg/Kg	1	4/13/2020 4:52:21 AM	51740
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/13/2020 4:52:21 AM	51740
Surr: DNOP	92.4	55.1-146		%Rec	1	4/13/2020 4:52:21 AM	51740
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/14/2020 4:21:37 PM	51735
Surr: BFB	98.8	66.6-105		%Rec	1	4/14/2020 4:21:37 PM	51735

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-005 **Matrix:** SOIL

Client Sample ID: S2-2'
Collection Date: 4/8/2020 11:52:00 AM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	4/13/2020 5:16:28 AM	51740
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/13/2020 5:16:28 AM	51740
Surr: DNOP	78.7	55.1-146		%Rec	1	4/13/2020 5:16:28 AM	51740
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/14/2020 4:45:08 PM	51735
Surr: BFB	96.9	66.6-105		%Rec	1	4/14/2020 4:45:08 PM	51735

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-006 **Matrix:** SOIL

Client Sample ID: S2-4'
Collection Date: 4/8/2020 11:56:00 AM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/13/2020 5:40:30 AM	51740
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/13/2020 5:40:30 AM	51740
Surr: DNOP	87.0	55.1-146		%Rec	1	4/13/2020 5:40:30 AM	51740
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/14/2020 5:08:39 PM	51735
Surr: BFB	97.3	66.6-105		%Rec	1	4/14/2020 5:08:39 PM	51735

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-007 **Matrix:** SOIL

Client Sample ID: S2-5'
Collection Date: 4/8/2020 12:00:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/13/2020 6:04:56 AM	51740
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/13/2020 6:04:56 AM	51740
Surr: DNOP	83.9	55.1-146		%Rec	1	4/13/2020 6:04:56 AM	51740
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/14/2020 5:32:03 PM	51735
Surr: BFB	99.0	66.6-105		%Rec	1	4/14/2020 5:32:03 PM	51735

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-008 **Matrix:** SOIL

Client Sample ID: S3-2'
Collection Date: 4/8/2020 12:13:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	65	9.4		mg/Kg	1	4/13/2020 5:44:59 AM	51742
Motor Oil Range Organics (MRO)	170	47		mg/Kg	1	4/13/2020 5:44:59 AM	51742
Surr: DNOP	91.4	55.1-146		%Rec	1	4/13/2020 5:44:59 AM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/14/2020 5:55:24 PM	51738
Surr: BFB	97.5	66.6-105		%Rec	1	4/14/2020 5:55:24 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-009 **Matrix:** SOIL

Client Sample ID: S3-3'
Collection Date: 4/8/2020 12:19:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	25	9.3		mg/Kg	1	4/15/2020 1:29:03 PM	51742
Motor Oil Range Organics (MRO)	59	46		mg/Kg	1	4/15/2020 1:29:03 PM	51742
Surr: DNOP	110	55.1-146		%Rec	1	4/15/2020 1:29:03 PM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/14/2020 6:18:47 PM	51738
Surr: BFB	98.1	66.6-105		%Rec	1	4/14/2020 6:18:47 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-010 **Matrix:** SOIL

Client Sample ID: S3-4'
Collection Date: 4/8/2020 12:20:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	10	9.5		mg/Kg	1	4/13/2020 7:19:58 AM	51742
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/13/2020 7:19:58 AM	51742
Surr: DNOP	84.2	55.1-146		%Rec	1	4/13/2020 7:19:58 AM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/14/2020 8:39:46 PM	51738
Surr: BFB	98.4	66.6-105		%Rec	1	4/14/2020 8:39:46 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-011 **Matrix:** SOIL

Client Sample ID: S5-2'
Collection Date: 4/8/2020 10:38:00 AM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	2400	190		mg/Kg	20	4/13/2020 7:43:39 AM	51742
Motor Oil Range Organics (MRO)	1300	950		mg/Kg	20	4/13/2020 7:43:39 AM	51742
Surr: DNOP	0	55.1-146	S	%Rec	20	4/13/2020 7:43:39 AM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	100	50		mg/Kg	10	4/14/2020 9:03:21 PM	51738
Surr: BFB	159	66.6-105	S	%Rec	10	4/14/2020 9:03:21 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-012 **Matrix:** SOIL

Client Sample ID: S5-3'
Collection Date: 4/8/2020 10:45:00 AM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	1300	99		mg/Kg	10	4/13/2020 8:07:15 AM	51742
Motor Oil Range Organics (MRO)	790	500		mg/Kg	10	4/13/2020 8:07:15 AM	51742
Surr: DNOP	0	55.1-146	S	%Rec	10	4/13/2020 8:07:15 AM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	52	25		mg/Kg	5	4/14/2020 9:26:54 PM	51738
Surr: BFB	168	66.6-105	S	%Rec	5	4/14/2020 9:26:54 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-013 **Matrix:** SOIL

Client Sample ID: S5-4'
Collection Date: 4/8/2020 10:47:00 AM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	730	93		mg/Kg	10	4/13/2020 8:54:31 AM	51742
Motor Oil Range Organics (MRO)	480	470		mg/Kg	10	4/13/2020 8:54:31 AM	51742
Surr: DNOP	0	55.1-146	S	%Rec	10	4/13/2020 8:54:31 AM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	30	25		mg/Kg	5	4/14/2020 9:50:20 PM	51738
Surr: BFB	136	66.6-105	S	%Rec	5	4/14/2020 9:50:20 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-014 **Matrix:** SOIL

Client Sample ID: S6-1'
Collection Date: 4/8/2020 12:43:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/13/2020 10:05:16 AM	51742
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/13/2020 10:05:16 AM	51742
Surr: DNOP	90.4	55.1-146		%Rec	1	4/13/2020 10:05:16 AM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/14/2020 10:13:50 PM	51738
Surr: BFB	94.7	66.6-105		%Rec	1	4/14/2020 10:13:50 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-015 **Matrix:** SOIL

Client Sample ID: S6-2'
Collection Date: 4/8/2020 12:45:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/13/2020 10:28:46 AM	51742
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/13/2020 10:28:46 AM	51742
Surr: DNOP	99.0	55.1-146		%Rec	1	4/13/2020 10:28:46 AM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/14/2020 10:37:16 PM	51738
Surr: BFB	95.5	66.6-105		%Rec	1	4/14/2020 10:37:16 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-016 **Matrix:** SOIL

Client Sample ID: S6-4'
Collection Date: 4/8/2020 12:53:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/13/2020 10:52:17 AM	51742
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/13/2020 10:52:17 AM	51742
Surr: DNOP	88.0	55.1-146		%Rec	1	4/13/2020 10:52:17 AM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/14/2020 11:00:46 PM	51738
Surr: BFB	93.0	66.6-105		%Rec	1	4/14/2020 11:00:46 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-017 **Matrix:** SOIL

Client Sample ID: S7-1'
Collection Date: 4/8/2020 12:30:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	23	9.5		mg/Kg	1	4/15/2020 1:53:05 PM	51742
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/15/2020 1:53:05 PM	51742
Surr: DNOP	77.6	55.1-146		%Rec	1	4/15/2020 1:53:05 PM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/14/2020 11:24:18 PM	51738
Surr: BFB	95.8	66.6-105		%Rec	1	4/14/2020 11:24:18 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-018 **Matrix:** SOIL

Client Sample ID: S7-2'
Collection Date: 4/8/2020 12:30:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/13/2020 11:39:18 AM	51742
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/13/2020 11:39:18 AM	51742
Surr: DNOP	82.0	55.1-146		%Rec	1	4/13/2020 11:39:18 AM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/14/2020 11:47:44 PM	51738
Surr: BFB	95.6	66.6-105		%Rec	1	4/14/2020 11:47:44 PM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-019 **Matrix:** SOIL

Client Sample ID: S7-4'
Collection Date: 4/8/2020 12:35:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	11	9.7		mg/Kg	1	4/13/2020 12:02:48 PM	51742
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/13/2020 12:02:48 PM	51742
Surr: DNOP	78.9	55.1-146		%Rec	1	4/13/2020 12:02:48 PM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/15/2020 12:11:10 AM	51738
Surr: BFB	97.6	66.6-105		%Rec	1	4/15/2020 12:11:10 AM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-020 **Matrix:** SOIL

Client Sample ID: SW 1
Collection Date: 4/8/2020 1:22:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/14/2020 5:08:24 PM	51782
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	4/16/2020 8:33:36 AM	51849
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/16/2020 8:33:36 AM	51849
Surr: DNOP	89.5	55.1-146		%Rec	1	4/16/2020 8:33:36 AM	51849
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/15/2020 12:34:34 AM	51738
Surr: BFB	97.0	66.6-105		%Rec	1	4/15/2020 12:34:34 AM	51738
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	4/15/2020 12:34:34 AM	51738
Toluene	ND	0.049		mg/Kg	1	4/15/2020 12:34:34 AM	51738
Ethylbenzene	ND	0.049		mg/Kg	1	4/15/2020 12:34:34 AM	51738
Xylenes, Total	ND	0.099		mg/Kg	1	4/15/2020 12:34:34 AM	51738
Surr: 4-Bromofluorobenzene	99.5	80-120		%Rec	1	4/15/2020 12:34:34 AM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-021 **Matrix:** SOIL

Client Sample ID: SW 2
Collection Date: 4/8/2020 1:27:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/14/2020 5:20:49 PM	51782
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/13/2020 12:49:50 PM	51742
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/13/2020 12:49:50 PM	51742
Surr: DNOP	65.0	55.1-146		%Rec	1	4/13/2020 12:49:50 PM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/15/2020 12:57:58 AM	51738
Surr: BFB	93.2	66.6-105		%Rec	1	4/15/2020 12:57:58 AM	51738
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	4/15/2020 12:57:58 AM	51738
Toluene	ND	0.049		mg/Kg	1	4/15/2020 12:57:58 AM	51738
Ethylbenzene	ND	0.049		mg/Kg	1	4/15/2020 12:57:58 AM	51738
Xylenes, Total	ND	0.099		mg/Kg	1	4/15/2020 12:57:58 AM	51738
Surr: 4-Bromofluorobenzene	97.4	80-120		%Rec	1	4/15/2020 12:57:58 AM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-022 **Matrix:** SOIL

Client Sample ID: SW 3
Collection Date: 4/8/2020 1:31:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	150	60		mg/Kg	20	4/14/2020 5:33:13 PM	51782
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/13/2020 1:13:28 PM	51742
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/13/2020 1:13:28 PM	51742
Surr: DNOP	66.8	55.1-146		%Rec	1	4/13/2020 1:13:28 PM	51742
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	25	D	mg/Kg	5	4/15/2020 1:21:21 AM	51738
Surr: BFB	95.6	66.6-105	D	%Rec	5	4/15/2020 1:21:21 AM	51738
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12	D	mg/Kg	5	4/15/2020 1:21:21 AM	51738
Toluene	ND	0.25	D	mg/Kg	5	4/15/2020 1:21:21 AM	51738
Ethylbenzene	ND	0.25	D	mg/Kg	5	4/15/2020 1:21:21 AM	51738
Xylenes, Total	ND	0.49	D	mg/Kg	5	4/15/2020 1:21:21 AM	51738
Surr: 4-Bromofluorobenzene	97.9	80-120	D	%Rec	5	4/15/2020 1:21:21 AM	51738

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

Qualifiers:

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

Analytical Report
Lab Order **2004515**
Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2004515-023 **Matrix:** SOIL

Client Sample ID: SW 4
Collection Date: 4/8/2020 1:36:00 PM
Received Date: 4/10/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/14/2020 6:10:27 PM	51782
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	4/16/2020 8:57:16 AM	51849
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/16/2020 8:57:16 AM	51849
Surr: DNOP	82.9	55.1-146		%Rec	1	4/16/2020 8:57:16 AM	51849
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	25	D	mg/Kg	5	4/15/2020 1:44:43 AM	51738
Surr: BFB	92.8	66.6-105	D	%Rec	5	4/15/2020 1:44:43 AM	51738
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12	D	mg/Kg	5	4/15/2020 1:44:43 AM	51738
Toluene	ND	0.25	D	mg/Kg	5	4/15/2020 1:44:43 AM	51738
Ethylbenzene	ND	0.25	D	mg/Kg	5	4/15/2020 1:44:43 AM	51738
Xylenes, Total	ND	0.50	D	mg/Kg	5	4/15/2020 1:44:43 AM	51738
Surr: 4-Bromofluorobenzene	97.5	80-120	D	%Rec	5	4/15/2020 1:44:43 AM	51738

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

Qualifiers:

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

QC SUMMARY REPORT

WO#: **2004515**

Hall Environmental Analysis Laboratory, Inc.

20-Apr-20

Client: Souder, Miller & Associates
Project: Ford State 001

Sample ID: **MB-51782**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **51782**	RunNo: **68129**							
Prep Date: **4/14/2020**	Analysis Date: **4/14/2020**	SeqNo: **2355256**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-51782**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **51782**	RunNo: **68129**							
Prep Date: **4/14/2020**	Analysis Date: **4/14/2020**	SeqNo: **2355257**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **2004515**

Hall Environmental Analysis Laboratory, Inc.

20-Apr-20

Client: Souder, Miller & Associates
Project: Ford State 001

Sample ID: **LCS-51740**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **51740**	RunNo: **68050**
Prep Date: **4/11/2020**	Analysis Date: **4/12/2020**	SeqNo: **2352100** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.2	70	130			
Surr: DNOP	4.0		5.000		79.6	55.1	146			

Sample ID: **MB-51740**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **51740**	RunNo: **68050**
Prep Date: **4/11/2020**	Analysis Date: **4/12/2020**	SeqNo: **2352102** 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	5.9		10.00		59.3	55.1	146			

Sample ID: **MB-51742**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **51742**	RunNo: **68052**
Prep Date: **4/11/2020**	Analysis Date: **4/13/2020**	SeqNo: **2352273** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		81.7	55.1	146			

Sample ID: **LCS-51742**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **51742**	RunNo: **68052**
Prep Date: **4/11/2020**	Analysis Date: **4/13/2020**	SeqNo: **2352274** 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	97.6	70	130			
Surr: DNOP	4.8		5.000		96.4	55.1	146			

Sample ID: **2004515-008AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S3-2'**	Batch ID: **51742**	RunNo: **68052**
Prep Date: **4/11/2020**	Analysis Date: **4/13/2020**	SeqNo: **2352276** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	10	49.95	64.98	97.9	47.4	136			
Surr: DNOP	5.3		4.995		107	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **2004515**

Hall Environmental Analysis Laboratory, Inc.

20-Apr-20

Client: Souder, Miller & Associates
Project: Ford State 001

Sample ID: **2004515-008AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S3-2'** Batch ID: **51742** RunNo: **68052**
Prep Date: **4/11/2020** Analysis Date: **4/13/2020** SeqNo: **2352277** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	9.8	48.78	64.98	95.4	47.4	136	2.11	43.4	
Surr: DNOP	5.4		4.878		110	55.1	146	0	0	

Sample ID: **MB-51849** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51849** RunNo: **68131**
Prep Date: **4/16/2020** Analysis Date: **4/16/2020** SeqNo: **2356515** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		86.8	55.1	146			

Sample ID: **LCS-51849** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51849** RunNo: **68131**
Prep Date: **4/16/2020** Analysis Date: **4/16/2020** SeqNo: **2356517** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.5	70	130			
Surr: DNOP	4.3		5.000		85.7	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **2004515**

Hall Environmental Analysis Laboratory, Inc.

20-Apr-20

Client: Souder, Miller & Associates
Project: Ford State 001

Sample ID: **mb-51735** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **51735** RunNo: **68118**
Prep Date: **4/11/2020** Analysis Date: **4/14/2020** SeqNo: **2354646** 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	970		1000		96.6	66.6	105			

Sample ID: **lcs-51735** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **51735** RunNo: **68118**
Prep Date: **4/11/2020** Analysis Date: **4/14/2020** SeqNo: **2354647** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.6	80	120			
Surr: BFB	1000		1000		104	66.6	105			

Sample ID: **mb-51738** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **51738** RunNo: **68118**
Prep Date: **4/11/2020** Analysis Date: **4/14/2020** SeqNo: **2354670** 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	970		1000		97.3	66.6	105			

Sample ID: **lcs-51738** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **51738** RunNo: **68118**
Prep Date: **4/11/2020** Analysis Date: **4/14/2020** SeqNo: **2354671** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.8	80	120			
Surr: BFB	1100		1000		106	66.6	105			S

Sample ID: **2004515-009ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S3-3'** Batch ID: **51738** RunNo: **68118**
Prep Date: **4/11/2020** Analysis Date: **4/14/2020** SeqNo: **2354674** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	24.98	0	89.0	69.1	142			
Surr: BFB	1100		999.0		109	66.6	105			S

Sample ID: **2004515-009amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S3-3'** Batch ID: **51738** RunNo: **68118**
Prep Date: **4/11/2020** Analysis Date: **4/14/2020** SeqNo: **2354675** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

WO#: **2004515**

Hall Environmental Analysis Laboratory, Inc.

20-Apr-20

Client: Souder, Miller & Associates
Project: Ford State 001

Sample ID: **2004515-009amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S3-3'** Batch ID: **51738** RunNo: **68118**
Prep Date: **4/11/2020** Analysis Date: **4/14/2020** SeqNo: **2354675** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.9	24.73	0	82.0	69.1	142	9.22	20	
Surr: BFB	1100		989.1		108	66.6	105	0	0	S

Qualifiers:

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

QC SUMMARY REPORT

WO#: 2004515

Hall Environmental Analysis Laboratory, Inc.

20-Apr-20

Client: Souder, Miller & Associates
Project: Ford State 001

Sample ID: **mb-51735** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **51735** RunNo: **68086**
Prep Date: **4/11/2020** Analysis Date: **4/13/2020** SeqNo: **2353636** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		99.0	80	120			

Sample ID: **LCS-51735** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **51735** RunNo: **68086**
Prep Date: **4/11/2020** Analysis Date: **4/13/2020** SeqNo: **2353637** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID: **mb-51738** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **51738** RunNo: **68086**
Prep Date: **4/11/2020** Analysis Date: **4/13/2020** SeqNo: **2353660** 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	0.98		1.000		98.3	80	120			

Sample ID: **LCS-51738** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **51738** RunNo: **68086**
Prep Date: **4/11/2020** Analysis Date: **4/13/2020** SeqNo: **2353661** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.0	80	120			
Toluene	0.91	0.050	1.000	0	91.4	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.0	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID: **2004515-008ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S3-2'** Batch ID: **51738** RunNo: **68086**
Prep Date: **4/11/2020** Analysis Date: **4/13/2020** SeqNo: **2353663** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.97	0.098	0.9833	0	99.1	21.6	180			
Benzene	0.88	0.025	0.9833	0	89.4	78.5	119			
Toluene	0.90	0.049	0.9833	0.01325	90.2	75.7	123			
Ethylbenzene	0.93	0.049	0.9833	0	94.2	74.3	126			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **2004515**

Hall Environmental Analysis Laboratory, Inc.

20-Apr-20

Client: Souder, Miller & Associates
Project: Ford State 001

Sample ID: **2004515-008ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S3-2'** Batch ID: **51738** RunNo: **68086**
Prep Date: **4/11/2020** Analysis Date: **4/13/2020** SeqNo: **2353663** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	2.8	0.098	2.950	0.01909	93.4	72.9	130			
Surr: 4-Bromofluorobenzene	0.98		0.9833		99.6	80	120			

Sample ID: **2004515-008amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S3-2'** Batch ID: **51738** RunNo: **68086**
Prep Date: **4/11/2020** Analysis Date: **4/13/2020** SeqNo: **2353664** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	0.9911	0	90.6	78.5	119	2.15	20	
Toluene	0.92	0.050	0.9911	0.01325	91.9	75.7	123	2.62	20	
Ethylbenzene	0.95	0.050	0.9911	0	95.4	74.3	126	2.03	20	
Xylenes, Total	2.8	0.099	2.973	0.01909	95.1	72.9	130	2.56	20	
Surr: 4-Bromofluorobenzene	0.98		0.9911		99.4	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: SMA-CARLSBAD Work Order Number: 2004515 RcptNo: 1

Received By: Isaiah Ortiz 4/10/2020 8:25:00 AM I-04

Completed By: Desiree Dominguez 4/10/2020 9:45:10 AM DD

Reviewed By: JB 4/10/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
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: JR 4/10/20

Special Handling (if applicable)

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

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	Good	Not Present			

Chain-of-Custody Record

Client: SMA

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
☑ Standard ☐ Rush

Project Name: Ford State #001

Project #:

Project Manager: Ashley Maxwell

Sampler: SO

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 4.7+0.1 (c)|4.8 (°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. 2004515	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)
4/8/20	10:58	Soil	S1-2'	4oz	Cool	-001		X								
	11:02		S1-4'			-002										
	11:08		S1-6'			-003										
	11:40		S1-11'			-004										
	11:52		S2-2'			-005										
	11:56		S2-4'			-006										
	12:00		S2-5'			-007										
	12:13		S3-2'			-008										
	12:19		S3-3'			-009										
	12:20		S3-4'			-010										
	10:38		S5-2'			-011										
	10:45		S5-3'			-012										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
4/9/20	1300	Sebastian Orozco			4/9/20	1300
4/9/20	1900		I-C- courier		4/10/20	0825

Remarks: Judah

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.

A

Chain-of-Custody Record

Client: SMA

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
☑ Standard ☐ Rush

Project Name: Ford State #001

Project #:

Project Manager: Ashley Maxwell

Sampler: SO

On Ice: ☒ Yes ☐ No

# of Coolers: 4.7+0.1(CF) 1 = 10

Cooler Temp(including CF): (°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. 2004515	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)
4/8/20	10:47	Soil	S5-4'	402	Cool	-013		X								
	12:43		S6-1'			-014		X								
	12:45		S6-2'			-015		X								
	12:53		S6-4'			-016		X								
	12:30		S7-1'			-017		X								
	12:30		S7-2'			-018		X								
	12:35		S7-4'			-019		X								
	1:22		SW1			-020	X	X					X			
	1:27		SW2			-021	X	X					X			
	1:31		SW3			-022	X	X					X			
SO	~~1:32~~ 1:36		SW4			-023	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/9/20	1340	Sebastian Orozco			4/9/20	1300
4/9/20	1900		Iron Canin		4/10/20	0825

Remarks: Judah

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 10, 2020

Ashley Maxwell
Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-8801
FAX

RE: Ford State 001 OrderNo.: 2002D03

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 6 sample(s) on 2/29/2020 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 **2002D03**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2002D03-001 **Matrix:** SOIL

Client Sample ID: Comp (1)-1'
Collection Date: 2/28/2020 3:40:00 PM
Received Date: 2/29/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	74	60		mg/Kg	20	3/4/2020 10:54:39 PM	50887
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	2300	190		mg/Kg	20	3/9/2020 12:07:42 PM	50842
Motor Oil Range Organics (MRO)	2400	970		mg/Kg	20	3/9/2020 12:07:42 PM	50842
Surr: DNOP	0	55.1-146	S	%Rec	20	3/9/2020 12:07:42 PM	50842
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	69	23	D	mg/Kg	5	3/6/2020 12:07:54 PM	50833
Surr: BFB	170	66.6-105	SD	%Rec	5	3/6/2020 12:07:54 PM	50833
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.12	D	mg/Kg	5	3/6/2020 12:07:54 PM	50833
Toluene	ND	0.23	D	mg/Kg	5	3/6/2020 12:07:54 PM	50833
Ethylbenzene	ND	0.23	D	mg/Kg	5	3/6/2020 12:07:54 PM	50833
Xylenes, Total	0.59	0.46	D	mg/Kg	5	3/6/2020 12:07:54 PM	50833
Surr: 4-Bromofluorobenzene	94.4	80-120	D	%Rec	5	3/6/2020 12:07:54 PM	50833

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

Qualifiers:

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

Analytical Report
Lab Order **2002D03**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2002D03-002 **Matrix:** SOIL

Client Sample ID: Comp (2)-1'
Collection Date: 2/28/2020 3:50:00 PM
Received Date: 2/29/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	78	60		mg/Kg	20	3/4/2020 11:07:00 PM	50887
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	60	9.7		mg/Kg	1	3/9/2020 12:47:20 PM	50842
Motor Oil Range Organics (MRO)	110	49		mg/Kg	1	3/9/2020 12:47:20 PM	50842
Surr: DNOP	89.4	55.1-146		%Rec	1	3/9/2020 12:47:20 PM	50842
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/6/2020 12:31:33 PM	50833
Surr: BFB	83.5	66.6-105		%Rec	1	3/6/2020 12:31:33 PM	50833
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.023		mg/Kg	1	3/6/2020 12:31:33 PM	50833
Toluene	ND	0.046		mg/Kg	1	3/6/2020 12:31:33 PM	50833
Ethylbenzene	ND	0.046		mg/Kg	1	3/6/2020 12:31:33 PM	50833
Xylenes, Total	ND	0.093		mg/Kg	1	3/6/2020 12:31:33 PM	50833
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	3/6/2020 12:31:33 PM	50833

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

Qualifiers:

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

Analytical Report
Lab Order **2002D03**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2002D03-003 **Matrix:** SOIL

Client Sample ID: S2-1'
Collection Date: 2/28/2020 1:35:00 PM
Received Date: 2/29/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	130	60		mg/Kg	20	3/4/2020 11:19:21 PM	50887
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	3000	200		mg/Kg	20	3/9/2020 1:09:23 PM	50842
Motor Oil Range Organics (MRO)	3200	980		mg/Kg	20	3/9/2020 1:09:23 PM	50842
Surr: DNOP	0	55.1-146	S	%Rec	20	3/9/2020 1:09:23 PM	50842
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	24	D	mg/Kg	5	3/6/2020 12:55:10 PM	50833
Surr: BFB	110	66.6-105	SD	%Rec	5	3/6/2020 12:55:10 PM	50833
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.12	D	mg/Kg	5	3/6/2020 12:55:10 PM	50833
Toluene	ND	0.24	D	mg/Kg	5	3/6/2020 12:55:10 PM	50833
Ethylbenzene	ND	0.24	D	mg/Kg	5	3/6/2020 12:55:10 PM	50833
Xylenes, Total	ND	0.48	D	mg/Kg	5	3/6/2020 12:55:10 PM	50833
Surr: 4-Bromofluorobenzene	86.5	80-120	D	%Rec	5	3/6/2020 12:55:10 PM	50833

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

Qualifiers:

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

Analytical Report
Lab Order **2002D03**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2002D03-004 **Matrix:** SOIL

Client Sample ID: S4-1'
Collection Date: 2/28/2020 1:40:00 PM
Received Date: 2/29/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	3/4/2020 11:31:43 PM	50887
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/4/2020 9:27:35 PM	50842
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/4/2020 9:27:35 PM	50842
Surr: DNOP	87.9	55.1-146		%Rec	1	3/4/2020 9:27:35 PM	50842
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/6/2020 1:18:43 PM	50833
Surr: BFB	80.9	66.6-105		%Rec	1	3/6/2020 1:18:43 PM	50833
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.023		mg/Kg	1	3/6/2020 1:18:43 PM	50833
Toluene	ND	0.046		mg/Kg	1	3/6/2020 1:18:43 PM	50833
Ethylbenzene	ND	0.046		mg/Kg	1	3/6/2020 1:18:43 PM	50833
Xylenes, Total	ND	0.092		mg/Kg	1	3/6/2020 1:18:43 PM	50833
Surr: 4-Bromofluorobenzene	90.2	80-120		%Rec	1	3/6/2020 1:18:43 PM	50833

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

Qualifiers:

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

Analytical Report
Lab Order **2002D03**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2002D03-005 **Matrix:** SOIL

Client Sample ID: S5-1'
Collection Date: 2/28/2020 2:00:00 PM
Received Date: 2/29/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	200	59		mg/Kg	20	3/4/2020 11:44:04 PM	50887
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	69	9.8		mg/Kg	1	3/9/2020 1:53:39 PM	50842
Motor Oil Range Organics (MRO)	200	49		mg/Kg	1	3/9/2020 1:53:39 PM	50842
Surr: DNOP	89.0	55.1-146		%Rec	1	3/9/2020 1:53:39 PM	50842
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	24	D	mg/Kg	5	3/6/2020 1:42:05 PM	50833
Surr: BFB	78.3	66.6-105	D	%Rec	5	3/6/2020 1:42:05 PM	50833
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.12	D	mg/Kg	5	3/6/2020 1:42:05 PM	50833
Toluene	ND	0.24	D	mg/Kg	5	3/6/2020 1:42:05 PM	50833
Ethylbenzene	ND	0.24	D	mg/Kg	5	3/6/2020 1:42:05 PM	50833
Xylenes, Total	ND	0.48	D	mg/Kg	5	3/6/2020 1:42:05 PM	50833
Surr: 4-Bromofluorobenzene	87.1	80-120	D	%Rec	5	3/6/2020 1:42:05 PM	50833

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

Qualifiers:

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

Analytical Report
Lab Order **2002D03**
Date Reported: **3/10/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State 001
Lab ID: 2002D03-006 **Matrix:** SOIL

Client Sample ID: S8-1'
Collection Date: 2/28/2020 2:38:00 PM
Received Date: 2/29/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	140	60		mg/Kg	20	3/4/2020 11:56:26 PM	50887
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/4/2020 9:45:46 PM	50842
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/4/2020 9:45:46 PM	50842
Surr: DNOP	99.3	55.1-146		%Rec	1	3/4/2020 9:45:46 PM	50842
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/6/2020 2:05:27 PM	50833
Surr: BFB	80.1	66.6-105		%Rec	1	3/6/2020 2:05:27 PM	50833
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	3/6/2020 2:05:27 PM	50833
Toluene	ND	0.048		mg/Kg	1	3/6/2020 2:05:27 PM	50833
Ethylbenzene	ND	0.048		mg/Kg	1	3/6/2020 2:05:27 PM	50833
Xylenes, Total	ND	0.096		mg/Kg	1	3/6/2020 2:05:27 PM	50833
Surr: 4-Bromofluorobenzene	88.2	80-120		%Rec	1	3/6/2020 2:05:27 PM	50833

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2002D03**

10-Mar-20

Client: Souder, Miller & Associates

Project: Ford State 001

Sample ID: **MB-50887**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **50887**	RunNo: **67015**
Prep Date: **3/4/2020**	Analysis Date: **3/4/2020**	SeqNo: **2307606** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-50887**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **50887**	RunNo: **67015**
Prep Date: **3/4/2020**	Analysis Date: **3/4/2020**	SeqNo: **2307607** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.1	90	110			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **2002D03**

Hall Environmental Analysis Laboratory, Inc.

10-Mar-20

Client: Souder, Miller & Associates
Project: Ford State 001

Sample ID: **LCS-50842** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **50842** RunNo: **67011**
Prep Date: **3/3/2020** Analysis Date: **3/4/2020** SeqNo: **2306911** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.8	70	130			
Surr: DNOP	4.6		5.000		92.2	55.1	146			

Sample ID: **MB-50842** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **50842** RunNo: **67011**
Prep Date: **3/3/2020** Analysis Date: **3/4/2020** SeqNo: **2306913** 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		105	55.1	146			

Sample ID: **LCS-50931** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **50931** RunNo: **67107**
Prep Date: **3/6/2020** Analysis Date: **3/9/2020** SeqNo: **2312091** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.8	55.1	146			

Sample ID: **MB-50931** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **50931** RunNo: **67107**
Prep Date: **3/6/2020** Analysis Date: **3/9/2020** SeqNo: **2312093** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		91.5	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **2002D03**

Hall Environmental Analysis Laboratory, Inc.

10-Mar-20

Client: Souder, Miller & Associates
Project: Ford State 001

Sample ID: **mb-50833**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **50833**	RunNo: **67050**
Prep Date: **3/3/2020**	Analysis Date: **3/6/2020**	SeqNo: **2307829** 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	840		1000		83.5	66.6	105			

Sample ID: **lcs-50833**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **50833**	RunNo: **67050**
Prep Date: **3/3/2020**	Analysis Date: **3/6/2020**	SeqNo: **2307830** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	82.2	80	120			
Surr: BFB	880		1000		87.8	66.6	105			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **2002D03**

Hall Environmental Analysis Laboratory, Inc.

10-Mar-20

Client: Souder, Miller & Associates
Project: Ford State 001

Sample ID: **mb-50833**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **50833**	RunNo: **67050**
Prep Date: **3/3/2020**	Analysis Date: **3/6/2020**	SeqNo: **2307876** 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	0.92		1.000		92.2	80	120			

Sample ID: **LCS-50833**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **50833**	RunNo: **67050**
Prep Date: **3/3/2020**	Analysis Date: **3/6/2020**	SeqNo: **2307877** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.3	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.7	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **SMA-CARLSBAD** Work Order Number: **2002D03** RcptNo: 1

Received By: **Erin Melendrez** **2/29/2020 8:00:00 AM**

Completed By: **Erin Melendrez** **2/29/2020 11:29:12 AM**

Reviewed By: ENM 3/2/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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 3/2/20

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	3.8	Good				
2	1.4	Good				

Chain-of-Custody Record

Client: SMA - Carlsbad

Mailing Address: 201 S. Halagueno St. Carlsbad NM 88220

Phone #:

email or Fax#: ashley.maxwell@sadermiller.

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 day
☑ Standard ☐ Rush

Project Name: Ford State #001

Project #:

Project Manager: Ashley Maxwell

Sampler: SOV/BAJ

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp (including CF): 4.1-0.3(CF)=3.8 (°C)
1.7-0.3(CF)=1.4

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. 2002D03	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)
2/28/20	3:40	soil	Comp (1) - 1'	(1)-4oz	cool	-001	X	X					X			
	3:50		comp (2) - 1'			-002										
	1:35		S2 - 1'			-003										
	1:40		S4 - 1'			-004										
	2:00		S5 - 1'			-005										
↓	2:38	↓	S8 - 1'	↓	↓	-006	↓	↓					↓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2/28/20	16:05	Keleastan Draco	Chip Tay		2/28/20	1610
2/28/20	1900			Courier	2/29/20	0800

Remarks:

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

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

June 23, 2020

Ashley Maxwell
Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-8801
FAX: (505) 327-1496

RE: Ford State #1 OrderNo.: 2006854

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/17/2020 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 **2006854**
Date Reported: **6/23/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Ford State #1
Lab ID: 2006854-001 **Matrix:** SOIL

Client Sample ID: S5-5'
Collection Date: 6/15/2020 10:30:00 AM
Received Date: 6/17/2020 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	6/21/2020 11:52:40 PM	53209
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	6/19/2020 10:21:15 PM	53169
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/19/2020 10:21:15 PM	53169
Surr: DNOP	90.0	55.1-146		%Rec	1	6/19/2020 10:21:15 PM	53169
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/20/2020 1:33:50 AM	53137
Surr: BFB	81.0	66.6-105		%Rec	1	6/20/2020 1:33:50 AM	53137
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	6/20/2020 1:33:50 AM	53137
Toluene	ND	0.048		mg/Kg	1	6/20/2020 1:33:50 AM	53137
Ethylbenzene	ND	0.048		mg/Kg	1	6/20/2020 1:33:50 AM	53137
Xylenes, Total	ND	0.097		mg/Kg	1	6/20/2020 1:33:50 AM	53137
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	6/20/2020 1:33:50 AM	53137

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2006854**

23-Jun-20

Client: Souder, Miller & Associates

Project: Ford State #1

Sample ID: **MB-53209**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **53209**	RunNo: **69792**
Prep Date: **6/21/2020**	Analysis Date: **6/21/2020**	SeqNo: **2423510** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-53209**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **53209**	RunNo: **69792**
Prep Date: **6/21/2020**	Analysis Date: **6/21/2020**	SeqNo: **2423511** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2006854**

23-Jun-20

Client: Souder, Miller & Associates

Project: Ford State #1

Sample ID: **LCS-53169** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **53169** RunNo: **69757**

Prep Date: **6/19/2020** Analysis Date: **6/19/2020** SeqNo: **2421977** 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	102	70	130			
Surr: DNOP	4.4		5.000		88.0	55.1	146			

Sample ID: **MB-53169** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **53169** RunNo: **69757**

Prep Date: **6/19/2020** Analysis Date: **6/19/2020** SeqNo: **2421979** 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	9.6		10.00		95.6	55.1	146			

Sample ID: **LCS-53187** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **53187** RunNo: **69768**

Prep Date: **6/19/2020** Analysis Date: **6/20/2020** SeqNo: **2422440** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.5		5.000		131	55.1	146			

Sample ID: **MB-53187** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **53187** RunNo: **69768**

Prep Date: **6/19/2020** Analysis Date: **6/20/2020** SeqNo: **2422443** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		115	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2006854**

23-Jun-20

Client: Souder, Miller & Associates

Project: Ford State #1

Sample ID: **lcs-53137**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **53137**	RunNo: **69769**
Prep Date: **6/17/2020**	Analysis Date: **6/19/2020**	SeqNo: **2422183** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.8	80	120			
Surr: BFB	910		1000		90.9	66.6	105			

Sample ID: **mb-53137**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **53137**	RunNo: **69769**
Prep Date: **6/17/2020**	Analysis Date: **6/19/2020**	SeqNo: **2422184** 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	830		1000		83.2	66.6	105			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2006854**

23-Jun-20

Client: Souder, Miller & Associates

Project: Ford State #1

Sample ID: **LCS-53137**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **53137**	RunNo: **69769**
Prep Date: **6/17/2020**	Analysis Date: **6/19/2020**	SeqNo: **2422214** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.6	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	99.8	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID: **mb-53137**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **53137**	RunNo: **69769**
Prep Date: **6/17/2020**	Analysis Date: **6/19/2020**	SeqNo: **2422215** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Souder, Miller & Associates | Work Order Number: 2006854 | RcptNo: 1

Received By: **Emily Mocho** 6/17/2020 9:10:00 AM

Completed By: **Juan Rojas** 6/17/2020 9:58:23 AM

Reviewed By: EM 6/17/20

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

IO

# of preserved bottles checked for pH: 6/17/20 (<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	3.4	Good				

Chain-of-Custody Record

Client: SMA

Mailing Address:

Phone #:

email or Fax#: Sebastian.Orozco@Souleemiller

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

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

Turn-Around Time: 5day
☑ Standard ☐ Rush

Project Name: Ford State #1

Project #:

Project Manager: Ashley Maxwell

Sampler: SO

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.4±0=3.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

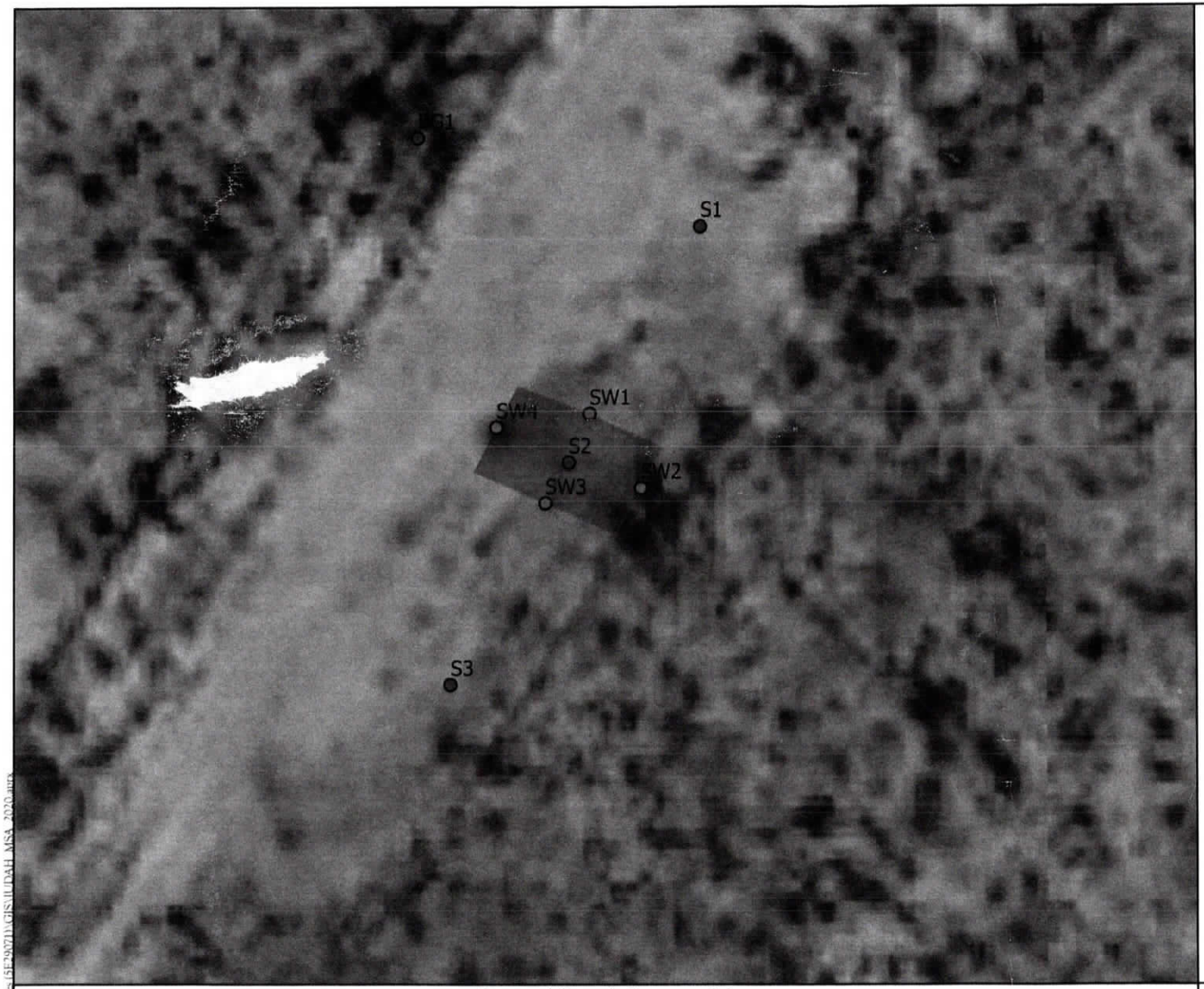
Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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)
6/15/20	10:30	Soil	SS-5'	1-4oz	Cool	2006854-001	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6/16/20	1300	Sebastian Orozco	CCumm		6/16/20	1300
6/16/20	1900	CCumm	Ekm	courier	6/17/20	9:10

Remarks: Bill SMA

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.



Side Wall Samples

Initial Soil Samples

4' Excavation

N

0 5 10 20 30

Feet

Site and Sample Location Map
Ford State #002- Judah Oil
UL: L3 S: 02 T: 22S R: 28E Eddy County, New Mexico

Figure 3

P:\Judah 2020 MSA Oil\Gill Services\SF2907\1\GIS\JUDAH_MSA_2020.mxd
Date Saved
6/3/2020

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

Drawn Sebastian Orozco
Date 6/17/2020
Checked
Approved

SMA

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

Table 3:
Sample Results

Judah Oil
Ford State #2

Sample ID	Sample Date	Depth of Sample (feet bgs)	Action Taken	Method 8021B		Method 8015D				Method 300.0
				BTEX	Benzene	GRO	DRO	MRO	Total TPH	Cl-
				mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
NMOCD Reclamation Requirement (0-4 ft)				50	10	--	--	--	100	600
NMOCD Closure Criteria (>4 ft)				50	10					
S1	1/15/2020	2'		<0.300	<0.050	<10.0	28.1	<10.0	28.1	592
		3'		<0.300	<0.050	<10.0	12.9	<10.0	12.9	912
		4'		-	-	-	-	-	-	1,090
		6'		-	-	-	-	-	-	2,130
		8'		-	-	-	-	-	-	3,640
		10'		-	-	-	-	-	-	2,320
S2	1/15/2020	2'		<0.300	<0.050	19.9	301	47.1	368	1,330
		3'		<0.300	<0.050	10.6	178	24.6	213.2	1,330
	4/8/2020	4'		-	-	<4.9	<9.1	<45	<59	1,360
		5'		-	-	<4.9	<10	<50	<64.9	-
	1/15/2020	6'		-	-	-	-	-	-	1,360
		8'		-	-	-	-	-	-	1,200
		10'		-	-	-	-	-	-	1,310
S3	1/15/2020	2'		<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	3,160
		3'		<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	1,970
		4'		-	-	-	-	-	-	2,320
		6'		-	-	-	-	-	-	864
		8'		-	-	-	-	-	-	960
		10'		-	-	-	-	-	-	624
SW1	4/8/2020	Surface		<0.224	<0.025	<5.0	<9.3	<47	<61.3	200
SW2		Surface		<0.224	<0.025	<5.0	<10	<50	<65	<60
SW3		Surface		<0.224	<0.025	<5.0	<9.6	<48	<62.6	<60
SW4		Surface		<0.224	<0.025	<5.0	<8.9	<44	<57.9	390
BG1	5/6/2020	4'		-	-	-	-	-	-	1940

"--" = Not Analyzed
BG: Background sample

High Cl levels justified by background sample.

SMA #

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 9198

CONDITIONS

Operator: JUDAH OIL LLC PO Box 568 Artesia, NM 88211	OGRID: 245872
	Action Number: 9198
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	File was uploaded with the name "Ford St 1 closure". NMOCD did not review this report as a closure report but has been reviewed as a remediation plan. Closure has not been approved for this incident number.	2/28/2023
bhall	Base and side wall samples must be representative of no more than 200 square feet.	2/28/2023
bhall	Confirmation samples must be analyzed for all constituents in Table I.	2/28/2023
bhall	Based on the data included on Table 3, a liner may not be necessary as contamination appears to meet the closure criteria of Table I for soils below 4 feet where groundwater is greater than 100 feet below ground surface.	2/28/2023
bhall	2RP-634 has been closed. Refer to incident #nKMW1106735785 in all future communication.	2/28/2023
bhall	Submit a complete closure report per 19.15.29.12 NMAC through the OCD Permitting website by 5/28/2023.	2/28/2023