



April 11, 2017

#5B25501-BG6

NMOCD District II
Mike Bratcher
811 S. First St.
Eddy, NM 88210

SUBJECT: WORK PLAN FOR INCIDENT 2RP-4146, Scottsdale Federal #3, UNIT G SECTION 27-T18S-R31E NMPM, API# 30-015-25307, EDDY COUNTY, NEW MEXICO

Dear Mr. Bratcher:

On behalf of Judah Oil LLC, Souder Miller & Associates is pleased to submit a work plan summarizing the planned soil remediation for the release site located at the Scottsdale Federal #3 in Eddy County, New Mexico. The purpose of the work plan is to obtain approval from the New Mexico Oil Conservation Division (NMOCD) for the remediation of the release that occurred on Federal Lands on March, 1 2017.

Souder, Miller & Associates (SMA) responded at the request of Judah Oil, to assess and delineate the release of production fluids associated with the Scottsdale Federal #3 well location. The release was initially reported to NMOCD by Judah on March 1, 2017 and was a result of equipment failure. The table below summarizes information regarding the release. Results of the assessment and delineation are described in the following report.

Table 1: Release information and Site Ranking					
Name	Scottsdale Federal #3				
Location	Incident Number	API Number	Section, Township, Range		
	2RP-4146	30-15-25307	Unit Letter G	Section 27	T18 S, R31 E NMPM
Date of Release	March 1, 2017				
Date Reported to NMOCD	March 1, 2017				
Land Owner	BLM				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Equipment failure				
Released Material	Crude Oil				
Released Volume	30 bbls Crude Oil				
Recovered Volume	0 bbls				
Net Release	30 bbls Crude Oil				
Nearest Waterway	Pecos River is 26 miles west of the location				
Depth to Groundwater	Estimated to be 200				

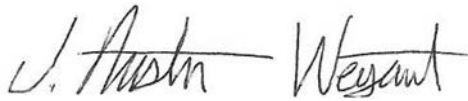


Nearest Domestic Water Source	greater than 1,000 feet
NMOCD Ranking	0

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

Submitted by:

SOUDER, MILLER & ASSOCIATES



Austin Weyant
Project Scientist

Reviewed by:



Shawna Chubbuck
Senior Scientist

SOIL REMEDIATION WORK PLAN FOR INCIDENT 2RP-4146

JUDAH OIL LLC

SCOTTSDALE FEDERAL #3
UL G, SECTION 27, T18S R31E, NMPM
API #30-015-25307
EDDY COUNTY, NM



Prepared for:
Judah Oil LLC
PO Box 568,
Artesia, NM 88211

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

April 7, 2017
SMA Reference
5B25501 BG6

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1.0 Introduction

On behalf of Judah Oil LLC, Souder, Miller & Associates (SMA) has prepared this work plan that describes the assessment, initial delineation and proposed remediation for a release associated with the Scottsdale Federal #3 location API# 30-015-25307. The site is located in Section 27, Township 18S, Range 31E NMPM, Eddy County, New Mexico, on federal lands. Figure 1 illustrates the vicinity and location of the site.

2.0 Site Ranking and Land Jurisdiction

The release site is located approximately 10 miles southeast of the Loco Hills, with an elevation of approximately 3,640 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be greater than 200 feet below ground surface (bgs). A search of the New Mexico State Engineer's Office (NMOSE) online water well database for water wells in the vicinity of the release proved to be mostly inconclusive. One well (CP00818), located 5 miles to the west of the Scottsdale Fed #3, has a depth of 240 feet. Figure 1 depicts the site vicinity and Figure 2 shows the site itself.

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

3.0 Assessment and Initial Results

On March 9, 2017 SMA field personnel assessed the release on behalf of Judah Oil LLC. Soil samples were field-screened using a Photo Ionization Detector (PID) and a mobile chlorides titration kit (EPA method 9045D) and meter (see Table 2). The potentially affected area was found to be approximately 300 feet long and 75 feet wide, as depicted in figure 2. The location was initially scraped and the resulting spill pile will be hauled to an NMOCD approved facility (sample point SP1). The site delineation samples were taken after the initial scraping to depths of 1 foot below ground surface (bgs). Specific locations for all samples are depicted on Figure 2 along with sampling details. The samples were sent to Hall Laboratory for analysis for Benzene and Total BTEX using EPA Method 8021B, MRO, DRO, and GRO by EPA Method 8015D, and total Chlorides using EPA Method 300.0.

Location 3 (L3) and Location 6 (L6) did not meet the recommended remediation action levels for TPH and BTEX. L3 also had elevated chlorides. Field screens show this is probably due to its proximity to the wellhead, not a result of this spill (see table 2).

4.0 Soil Remediation Work Plan

With approval from area utilities owners via 811, NMOCD, and the BLM, SMA proposes to excavate the area of L3 to one foot, we will then further delineate the chlorides found in that location to satisfy NMOCD Conditions of approval for 2RP-4146. Excavation of the rest of the pad will be 6 inches. The area in the pasture, represented by L6, will be excavated to 18 inches. All excavated soils will be hauled to an NMOCD approved facility.

5.0 Conclusions and Recommendations

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

A summary of the laboratory analyses is included in Table 2. Laboratory reports are included in Appendix A.

After the soil remediation work plan is approved by NMOCD, SMA will begin soil remediation activities on site.

Photo documentation is available by request.

6.0 Re-vegetation Plan

Seeding of the location is recommended for June or July to coincide with the "rainy" season to achieve optimum results. Seed will be planted a quarter to half- inch deep using a disc type or similar rangeland drill sufficient to accommodate variations in seed sizes. If broadcast, seeding rates should be doubled. Seeding can be accomplished as early as May given all dirt work for the location is stabilized. Soil in this area will be tilled to reduce compaction.

Seed-bed preparation will be performed to provide a hospitable environment for germinating seed by breaking up impermeable soil layers that have formed and increasing void spaces for air and water. Ground shall be roughed-up prior to planting, by raking, harrowing or other methods.

Mulch will be placed to prevent loss of moisture and seed to wind.

Mulching shall be accomplished using one of these following methods:

- a. weed free straw (2 tons/ac;kg/ha)
- b. wood residues-sawdust, wood chips, bark (2 tons/ac;kg/ha)
- c. hydro-mulching (1,500 lb/ac;kg/ha)
- d. composted manure (5 tons/ac;kg/ha)
- e. excelsior blanket
- f. straw jute
- g. peanut hulls (2 tons/ac;kg/ha)
- h. cotton bolls

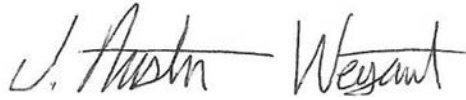
7.0 Closure and Limitations

The scope of our services consisted of the evaluation of previous spill mitigation assessment sampling, verification of release stabilization, regulatory liaison, and preparation of this work 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 Austin Weyant at 575-689-7040 or Shawna Chubbuck at 505-325-7535.

Submitted by:

SOUDER, MILLER & ASSOCIATES



Austin Weyant
Project Scientist

Reviewed by:



Shawna Chubbuck
Senior Scientist

Figures:

Figure 1: Vicinity Map

Figure 2: Site and Sample Location Map

Tables:

Table 1: Release Information and Site Ranking

Table 2: Summary of Sample Results

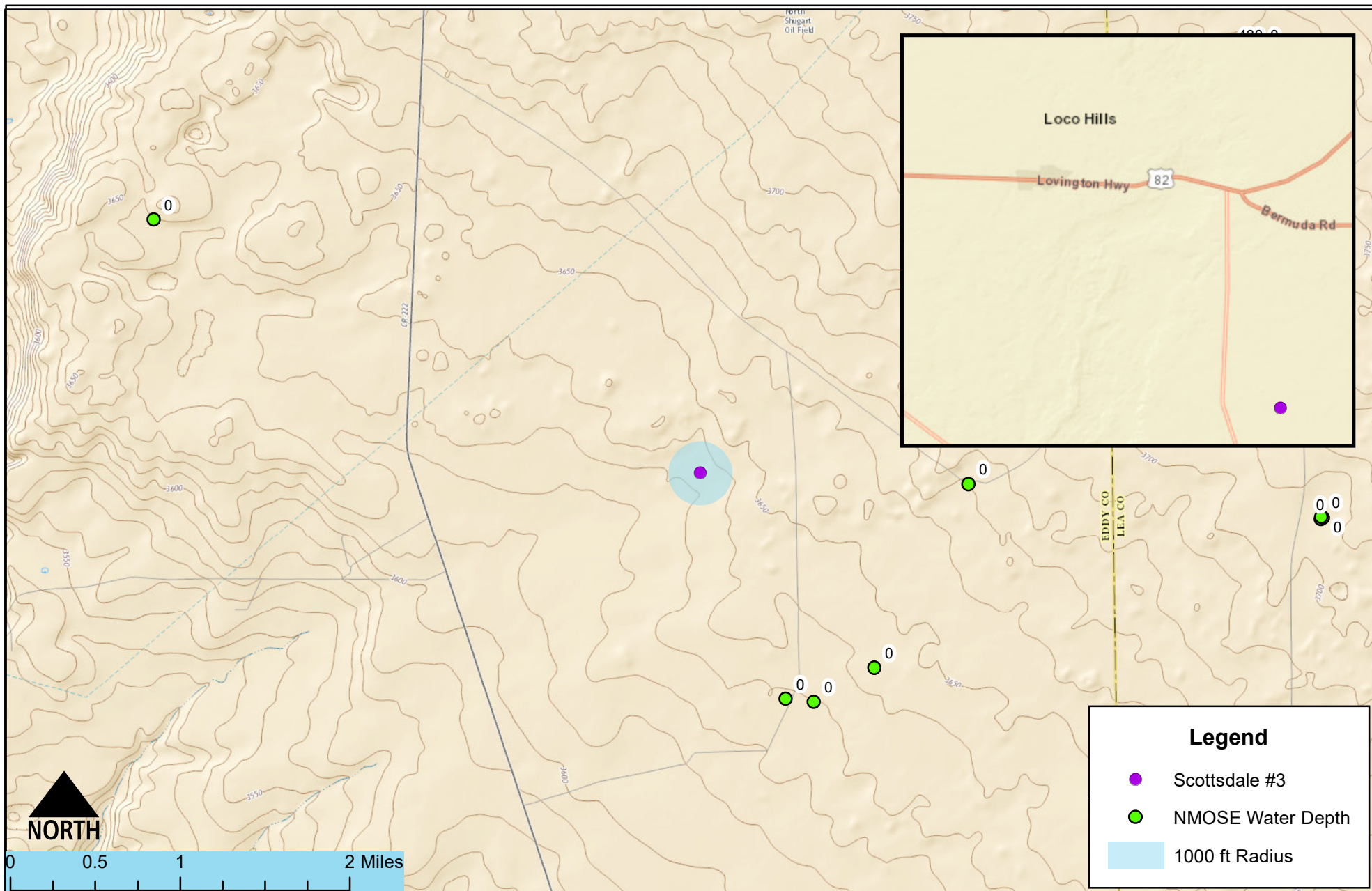
Appendices:

Appendix A: Laboratory Analytical Reports

Appendix B: Form C141 Initial

Appendix C: NMOSE Water Column

FIGURE 1
VICINITY MAP



Vicinity and NMOSE Wells Map
 Scottsdale Federal #3 - Judah Oil
 S 27-T18S-R31E, New Mexico

Figure 1

Date Saved:
 4/12/2017

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

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Drawn	Heather Patterson
Checked	_____
Approved	_____



201 South Halaguena Street
 Carlsbad, New Mexico 88221
 (575) 689-7040
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FIGURE 2
SITE AND SAMPLE
LOCATION MAP



Site and Sample Location Map
 Scottsdale Federal #3 - Judah Oil
 S 27-T18S-R31E, New Mexico

Figure 2

Date Saved:
4/12/2017

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

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Drawn Heather Patterson
 Checked _____
 Approved _____



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TABLE 1

**RELEASE INFORMATION AND
SITE RANKING**

Judah Oil LLC
Table 2: Site Ranking

Scottsdale Federal #3
Oil Release
3/1/2017

Site Ranking Determination Table

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 50 BGS = 20		USGS Topo Maps; Google Earth , NMOSE database	average depth of ground water is 200 feet bgs
50' to 99' = 10			
>100' = 0	0		
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 200' = 20		USGS Topo Maps; Google Earth ; ArcMap	26 Miles East of Pecos River
200' - 1000' = 10			
>1000' = 0	0		
Ranking Criteria for Horizontal Distance to a Water Well or Water Source	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
<1000' from a water source? <200' from a private domestic water source? YES OR NO to BOTH. YES = 20, NO = 0		NM State Engineer Water Well Database	Nearest well greater than 1000 ft distance
	0		
Total Site Ranking	0		
Soil Remedation Standards	0 to 9	10 to 19	>19
Benzene	10 PPM	10 PPM	10 PPM
BTEX	50 PPM	50 PPM	50 PPM
TPH	5000 PPM	1000 PPM	100 PPM



TABLE 2
SUMMARY OF
SAMPLE RESULTS

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Proposed Action	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- Field Screens (ppm)	Cl- Laboratory mg/Kg
NMOCD RRAL's for Site Ranking 0				50 mg/Kg	10 mg/Kg				5000 mg/Kg		
L1	3/9/2017	0.5'	in-situ	<0.097	<0.024	<4.8	<9.7	<48	<62.5	64	--
L2	3/9/2017	0.5'	in-situ	0.23	<0.024	9.4	1100	650	1759.4	41	--
	3/9/2017	1'	in-situ	<0.099	<0.025	<4.9	<9.9	<49	<63.8	--	--
L3	3/9/2017	0.5'	excavate	0.57	0.51	46	10,000	9,100	19,146	3527	3700
	3/9/2017	1'	in-situ	<0.098	<0.024	<4.9	200	210	414.9	324	--
L4	3/9/2017	0.5'	in-situ	0.41	<0.024	19	930	650	1599	41	--
	3/9/2017	1'	in-situ	<0.098	<0.025	<4.9	<9.8	<49	<63.7	--	--
L5	3/9/2017	0.5'	in-situ	<0.092	<0.023	<4.6	470	310	784.6	52	--
	3/9/2017	1.5'	in-situ	<0.098	<0.025	<4.9	59	93	156.9	--	--
L6	3/9/2017	0.5'	excavate	31	<0.48	1200	11,000	5,300	17,500	--	<30
	3/9/2017	2'	in-situ	0.8	<0.023	35	1900	1300	3235	--	--

"--" = Not Analyzed

APPENDIX A
LABORATORY ANALYTICAL
REPORTS



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

March 24, 2017

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

RE: Scottsdale 3

OrderNo.: 1703597

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 12 sample(s) on 3/11/2017 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 #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: SP1

Project: Scottsdale 3

Collection Date: 3/9/2017

Lab ID: 1703597-001

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3500	150		mg/Kg	100	3/20/2017 5:51:02 PM	30754
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	32000	970		mg/Kg	100	3/15/2017 4:05:15 PM	30674
Motor Oil Range Organics (MRO)	18000	4900		mg/Kg	100	3/15/2017 4:05:15 PM	30674
Surr: DNOP	0	70-130	S	%Rec	100	3/15/2017 4:05:15 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1500	97		mg/Kg	20	3/15/2017 9:40:33 AM	30675
Surr: BFB	503	54-150	S	%Rec	20	3/15/2017 9:40:33 AM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.9		mg/Kg	20	3/15/2017 9:40:33 AM	30675
Benzene	1.8	0.48		mg/Kg	20	3/15/2017 9:40:33 AM	30675
Toluene	34	0.97		mg/Kg	20	3/15/2017 9:40:33 AM	30675
Ethylbenzene	88	0.97		mg/Kg	20	3/15/2017 9:40:33 AM	30675
Xylenes, Total	48	1.9		mg/Kg	20	3/15/2017 9:40:33 AM	30675
Surr: 4-Bromofluorobenzene	130	66.6-132		%Rec	20	3/15/2017 9:40:33 AM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-.5

Project: Scottsdale 3

Collection Date: 3/9/2017 11:45:00 AM

Lab ID: 1703597-002

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	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	3/15/2017 12:02:56 PM	30674
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/15/2017 12:02:56 PM	30674
Surr: DNOP	112	70-130		%Rec	1	3/15/2017 12:02:56 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/15/2017 10:33:06 AM	30675
Surr: BFB	95.4	54-150		%Rec	1	3/15/2017 10:33:06 AM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	3/15/2017 10:33:06 AM	30675
Benzene	ND	0.024		mg/Kg	1	3/15/2017 10:33:06 AM	30675
Toluene	ND	0.048		mg/Kg	1	3/15/2017 10:33:06 AM	30675
Ethylbenzene	ND	0.048		mg/Kg	1	3/15/2017 10:33:06 AM	30675
Xylenes, Total	ND	0.097		mg/Kg	1	3/15/2017 10:33:06 AM	30675
Surr: 4-Bromofluorobenzene	101	66.6-132		%Rec	1	3/15/2017 10:33:06 AM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: L2-.5

Project: Scottsdale 3

Collection Date: 3/9/2017 12:00:00 PM

Lab ID: 1703597-003

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	1100	98		mg/Kg	10	3/15/2017 12:24:42 PM	30674
Motor Oil Range Organics (MRO)	650	490		mg/Kg	10	3/15/2017 12:24:42 PM	30674
Surr: DNOP	0	70-130	S	%Rec	10	3/15/2017 12:24:42 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	9.4	4.7		mg/Kg	1	3/15/2017 11:51:47 AM	30675
Surr: BFB	161	54-150	S	%Rec	1	3/15/2017 11:51:47 AM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.095		mg/Kg	1	3/15/2017 11:51:47 AM	30675
Benzene	ND	0.024		mg/Kg	1	3/15/2017 11:51:47 AM	30675
Toluene	0.060	0.047		mg/Kg	1	3/15/2017 11:51:47 AM	30675
Ethylbenzene	0.36	0.047		mg/Kg	1	3/15/2017 11:51:47 AM	30675
Xylenes, Total	0.23	0.095		mg/Kg	1	3/15/2017 11:51:47 AM	30675
Surr: 4-Bromofluorobenzene	78.5	66.6-132		%Rec	1	3/15/2017 11:51:47 AM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: L2-1

Project: Scottsdale 3

Collection Date: 3/9/2017 12:15:00 PM

Lab ID: 1703597-004

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/15/2017 12:46:21 PM	30674
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/15/2017 12:46:21 PM	30674
Surr: DNOP	117	70-130		%Rec	1	3/15/2017 12:46:21 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/15/2017 12:44:22 PM	30675
Surr: BFB	79.3	54-150		%Rec	1	3/15/2017 12:44:22 PM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	3/15/2017 12:44:22 PM	30675
Benzene	ND	0.025		mg/Kg	1	3/15/2017 12:44:22 PM	30675
Toluene	ND	0.049		mg/Kg	1	3/15/2017 12:44:22 PM	30675
Ethylbenzene	ND	0.049		mg/Kg	1	3/15/2017 12:44:22 PM	30675
Xylenes, Total	ND	0.099		mg/Kg	1	3/15/2017 12:44:22 PM	30675
Surr: 4-Bromofluorobenzene	87.7	66.6-132		%Rec	1	3/15/2017 12:44:22 PM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: L3-.5

Project: Scottsdale 3

Collection Date: 3/9/2017 12:30:00 PM

Lab ID: 1703597-005

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3700	150		mg/Kg	100	3/20/2017 6:28:16 PM	30754
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	10000	990		mg/Kg	100	3/15/2017 1:08:17 PM	30674
Motor Oil Range Organics (MRO)	9100	4900		mg/Kg	100	3/15/2017 1:08:17 PM	30674
Surr: DNOP	0	70-130	S	%Rec	100	3/15/2017 1:08:17 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	46	4.8		mg/Kg	1	3/15/2017 1:10:41 PM	30675
Surr: BFB	119	54-150		%Rec	1	3/15/2017 1:10:41 PM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	3/15/2017 1:10:41 PM	30675
Benzene	0.51	0.024		mg/Kg	1	3/15/2017 1:10:41 PM	30675
Toluene	2.1	0.048		mg/Kg	1	3/15/2017 1:10:41 PM	30675
Ethylbenzene	1.6	0.048		mg/Kg	1	3/15/2017 1:10:41 PM	30675
Xylenes, Total	0.57	0.096		mg/Kg	1	3/15/2017 1:10:41 PM	30675
Surr: 4-Bromofluorobenzene	71.4	66.6-132		%Rec	1	3/15/2017 1:10:41 PM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: L3-1

Project: Scottsdale 3

Collection Date: 3/9/2017 12:45:00 PM

Lab ID: 1703597-006

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	200	9.8		mg/Kg	1	3/15/2017 4:27:27 PM	30674
Motor Oil Range Organics (MRO)	210	49		mg/Kg	1	3/15/2017 4:27:27 PM	30674
Surr: DNOP	114	70-130		%Rec	1	3/15/2017 4:27:27 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/15/2017 2:03:12 PM	30675
Surr: BFB	93.3	54-150		%Rec	1	3/15/2017 2:03:12 PM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	3/15/2017 2:03:12 PM	30675
Benzene	ND	0.024		mg/Kg	1	3/15/2017 2:03:12 PM	30675
Toluene	ND	0.049		mg/Kg	1	3/15/2017 2:03:12 PM	30675
Ethylbenzene	0.095	0.049		mg/Kg	1	3/15/2017 2:03:12 PM	30675
Xylenes, Total	ND	0.098		mg/Kg	1	3/15/2017 2:03:12 PM	30675
Surr: 4-Bromofluorobenzene	87.4	66.6-132		%Rec	1	3/15/2017 2:03:12 PM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: L4-.5

Project: Scottsdale 3

Collection Date: 3/9/2017 1:00:00 PM

Lab ID: 1703597-007

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	930	97		mg/Kg	10	3/15/2017 1:52:08 PM	30674
Motor Oil Range Organics (MRO)	650	490		mg/Kg	10	3/15/2017 1:52:08 PM	30674
Surr: DNOP	0	70-130	S	%Rec	10	3/15/2017 1:52:08 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	19	4.9		mg/Kg	1	3/15/2017 2:29:45 PM	30675
Surr: BFB	255	54-150	S	%Rec	1	3/15/2017 2:29:45 PM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	3/15/2017 2:29:45 PM	30675
Benzene	ND	0.024		mg/Kg	1	3/15/2017 2:29:45 PM	30675
Toluene	0.075	0.049		mg/Kg	1	3/15/2017 2:29:45 PM	30675
Ethylbenzene	0.63	0.049		mg/Kg	1	3/15/2017 2:29:45 PM	30675
Xylenes, Total	0.41	0.097		mg/Kg	1	3/15/2017 2:29:45 PM	30675
Surr: 4-Bromofluorobenzene	90.7	66.6-132		%Rec	1	3/15/2017 2:29:45 PM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: L4-1

Project: Scottsdale 3

Collection Date: 3/9/2017 1:15:00 PM

Lab ID: 1703597-008

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/15/2017 2:14:05 PM	30674
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/15/2017 2:14:05 PM	30674
Surr: DNOP	124	70-130		%Rec	1	3/15/2017 2:14:05 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/15/2017 4:40:37 PM	30675
Surr: BFB	78.5	54-150		%Rec	1	3/15/2017 4:40:37 PM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	3/15/2017 4:40:37 PM	30675
Benzene	ND	0.025		mg/Kg	1	3/15/2017 4:40:37 PM	30675
Toluene	ND	0.049		mg/Kg	1	3/15/2017 4:40:37 PM	30675
Ethylbenzene	ND	0.049		mg/Kg	1	3/15/2017 4:40:37 PM	30675
Xylenes, Total	ND	0.098		mg/Kg	1	3/15/2017 4:40:37 PM	30675
Surr: 4-Bromofluorobenzene	85.9	66.6-132		%Rec	1	3/15/2017 4:40:37 PM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: L5-.5

Project: Scottsdale 3

Collection Date: 3/9/2017 1:30:00 PM

Lab ID: 1703597-009

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	470	9.3		mg/Kg	1	3/17/2017 12:33:23 PM	30674
Motor Oil Range Organics (MRO)	310	47		mg/Kg	1	3/17/2017 12:33:23 PM	30674
Surr: DNOP	112	70-130		%Rec	1	3/17/2017 12:33:23 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/15/2017 5:06:50 PM	30675
Surr: BFB	116	54-150		%Rec	1	3/15/2017 5:06:50 PM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.092		mg/Kg	1	3/15/2017 5:06:50 PM	30675
Benzene	ND	0.023		mg/Kg	1	3/15/2017 5:06:50 PM	30675
Toluene	ND	0.046		mg/Kg	1	3/15/2017 5:06:50 PM	30675
Ethylbenzene	0.16	0.046		mg/Kg	1	3/15/2017 5:06:50 PM	30675
Xylenes, Total	ND	0.092		mg/Kg	1	3/15/2017 5:06:50 PM	30675
Surr: 4-Bromofluorobenzene	80.5	66.6-132		%Rec	1	3/15/2017 5:06:50 PM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1703597**

Date Reported: **3/24/2017**

CLIENT: Souder, Miller & Associates

Client Sample ID: L5-1.5

Project: Scottsdale 3

Collection Date: 3/9/2017 1:40:00 PM

Lab ID: 1703597-010

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	59	9.8		mg/Kg	1	3/15/2017 5:12:03 PM	30674
Motor Oil Range Organics (MRO)	93	49		mg/Kg	1	3/15/2017 5:12:03 PM	30674
Surr: DNOP	113	70-130		%Rec	1	3/15/2017 5:12:03 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/15/2017 5:59:12 PM	30675
Surr: BFB	80.4	54-150		%Rec	1	3/15/2017 5:59:12 PM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	3/15/2017 5:59:12 PM	30675
Benzene	ND	0.025		mg/Kg	1	3/15/2017 5:59:12 PM	30675
Toluene	ND	0.049		mg/Kg	1	3/15/2017 5:59:12 PM	30675
Ethylbenzene	ND	0.049		mg/Kg	1	3/15/2017 5:59:12 PM	30675
Xylenes, Total	ND	0.098		mg/Kg	1	3/15/2017 5:59:12 PM	30675
Surr: 4-Bromofluorobenzene	74.7	66.6-132		%Rec	1	3/15/2017 5:59:12 PM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: L6-.5

Project: Scottsdale 3

Collection Date: 3/9/2017 1:45:00 PM

Lab ID: 1703597-011

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/17/2017 1:45:08 PM	30754
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	11000	920		mg/Kg	100	3/15/2017 3:20:43 PM	30674
Motor Oil Range Organics (MRO)	5300	4600		mg/Kg	100	3/15/2017 3:20:43 PM	30674
Surr: DNOP	0	70-130	S	%Rec	100	3/15/2017 3:20:43 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1200	95		mg/Kg	20	3/15/2017 10:06:54 AM	30675
Surr: BFB	514	54-150	S	%Rec	20	3/15/2017 10:06:54 AM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.9		mg/Kg	20	3/15/2017 10:06:54 AM	30675
Benzene	ND	0.48		mg/Kg	20	3/15/2017 10:06:54 AM	30675
Toluene	13	0.95		mg/Kg	20	3/15/2017 10:06:54 AM	30675
Ethylbenzene	52	0.95		mg/Kg	20	3/15/2017 10:06:54 AM	30675
Xylenes, Total	31	1.9		mg/Kg	20	3/15/2017 10:06:54 AM	30675
Surr: 4-Bromofluorobenzene	128	66.6-132		%Rec	20	3/15/2017 10:06:54 AM	30675

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703597

Date Reported: 3/24/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: L6-2

Project: Scottsdale 3

Collection Date: 3/9/2017 2:00:00 PM

Lab ID: 1703597-012

Matrix: SOIL

Received Date: 3/11/2017 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	1900	97		mg/Kg	10	3/16/2017 5:13:01 PM	30674
Motor Oil Range Organics (MRO)	1300	480		mg/Kg	10	3/16/2017 5:13:01 PM	30674
Surr: DNOP	0	70-130	S	%Rec	10	3/16/2017 5:13:01 PM	30674
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	35	4.6		mg/Kg	1	3/15/2017 6:25:25 PM	30675
Surr: BFB	386	54-150	S	%Rec	1	3/15/2017 6:25:25 PM	30675
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.091		mg/Kg	1	3/15/2017 6:25:25 PM	30675
Benzene	ND	0.023		mg/Kg	1	3/15/2017 6:25:25 PM	30675
Toluene	0.25	0.046		mg/Kg	1	3/15/2017 6:25:25 PM	30675
Ethylbenzene	1.3	0.046		mg/Kg	1	3/15/2017 6:25:25 PM	30675
Xylenes, Total	0.80	0.091		mg/Kg	1	3/15/2017 6:25:25 PM	30675
Surr: 4-Bromofluorobenzene	88.8	66.6-132		%Rec	1	3/15/2017 6:25:25 PM	30675

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703597

24-Mar-17

Client: Souder, Miller & Associates

Project: Scottsdale 3

Sample ID	MB-30754		SampType:	mblk		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	30754		RunNo:	41494				
Prep Date:	3/17/2017		Analysis Date:	3/17/2017		SeqNo:	1301123		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-30754		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 30754		RunNo: 41494					
Prep Date:	3/17/2017		Analysis Date: 3/17/2017		SeqNo: 1301124		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.6	90	110			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703597

24-Mar-17

Client: Souder, Miller & Associates

Project: Scottsdale 3

Sample ID	MB-30674		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 30674		RunNo: 41378					
Prep Date:	3/14/2017		Analysis Date: 3/15/2017		SeqNo: 1297019		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	8.6		10.00		86.0	70	130			

Sample ID	LCS-30674		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	30674		RunNo:	41378				
Prep Date:	3/14/2017		Analysis Date:	3/15/2017		SeqNo:	1297024		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	52	10	50.00	0	105	63.8	116				
Surr: DNOP	4.6		5.000		93.0	70	130				

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703597

24-Mar-17

Client: Souder, Miller & Associates

Project: Scottsdale 3

Sample ID	MB-30675		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 30675		RunNo: 41383					
Prep Date:	3/14/2017		Analysis Date: 3/15/2017		SeqNo: 1297752		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	880		1000		87.6	54	150			

Sample ID	LCS-30675		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 30675		RunNo: 41383					
Prep Date:	3/14/2017		Analysis Date: 3/15/2017		SeqNo: 1297753		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	117	76.4	125			
Surr: BFB	1100		1000		107	54	150			

Sample ID	1703597-002AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	L1-.5		Batch ID: 30675		RunNo: 41383					
Prep Date:	3/14/2017		Analysis Date: 3/15/2017		SeqNo: 1297757		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.8	23.99	0	124	61.3	150			
Surr: BFB	960		959.7		100	54	150			

Sample ID	1703597-002AMSD		SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	L1-.5		Batch ID:	30675		RunNo:	41383				
Prep Date:	3/14/2017		Analysis Date:	3/15/2017		SeqNo:	1297758		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	30	4.8	23.83	0	125	61.3	150	0.00322	20		
Surr: BFB	890		953.3		93.8	54	150	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
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703597

24-Mar-17

Client: Souder, Miller & Associates

Project: Scottsdale 3

Sample ID	MB-30675		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 30675		RunNo: 41383					
Prep Date:	3/14/2017		Analysis Date: 3/15/2017		SeqNo: 1297775		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.3	66.6	132			

Sample ID	LCS-30675		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 30675		RunNo: 41383					
Prep Date:	3/14/2017		Analysis Date: 3/15/2017		SeqNo: 1297776		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.84	0.10	1.000	0	84.1	66.5	120			
Benzene	0.97	0.025	1.000	0	97.2	80	120			
Toluene	0.99	0.050	1.000	0	98.6	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.1	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.1	66.6	132			

Qualifiers:

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

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



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: 1703597

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

3/11/2017 8:15:00 AM

Completed By: Lindsay Mangin

3/13/2017 9:32:09 AM

Reviewed By:

WJS

03/13/17

[Signature]

[Signature]

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			

APPENDIX B
FORM C141 INITIAL

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

State of New Mexico
Energy Minerals and Natural Resources

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

This is an updated
C-141 see original in
well file for
original
approval
on 3/15/17

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Judah Oil	Contact Blaise Campanella
Address PO Box 568, Artesia NM, 88211	Telephone No. 575-748-5488
Facility Name Scottsdale Federal #3	Facility Type production well

Surface Owner BLM	Mineral Owner BLM	API No. 30-015-25307
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LOCATION OF RELEASE

Unit Letter G	Section 27	Township 18s	Range 31e	Feet from the 1850	North/South Line FNL	Feet from the 2310	East/West Line FEL	County Eddy
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Latitude 32.720606 Longitude -103.856527

This is an update
C-141 received on 3/2
coordinates
were
updated

NATURE OF RELEASE

Type of Release crude oil	Volume of Release 30 bbl	Volume Recovered 0
Source of Release production tank	Date and Hour of Occurrence 3/1/2017	Date and Hour of Discovery 3/1/2017
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Blaise Campanella	Date and Hour 3/1/2017 11:40am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

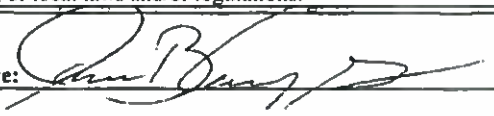

Describe Cause of Problem and Remedial Action Taken.*

The release occurred when oil from a failed tank was brought back to the wellbore to be stored in the casing of the well. The packing then gave way and the fluid was released from the stuffing box resulting in a release of crude oil. The area was scraped and the resulting spill pile is on location.

Describe Area Affected and Cleanup Action Taken.*

The affected area covers the pad, partially into the lease road, and a small area that ran off into the pasture on the west side of location. The site will be evaluated and remediated as per an NMOCD approved work plan.

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: are: 	OIL CONSERVATION DIVISION	
Printed Name: Blaise Campanella	Approved by Environmental Specialist: 	
Title: Member/Manager	Approval Date: 4/6/17	Expiration Date:
E-mail Address: judahoil@yahoo.com	Conditions of Approval: see original	Attached <input type="checkbox"/>
Date: 3/14/17 Phone: 575-748-5488		

* Attach Additional Sheets If Necessary

C-141 2RP-4146

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 3/14/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4146 has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a **workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 5/2/17**. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

APPENDIX C

OSE WATER COLUMN DATA



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00849 POD1	CP	LE		3	1	3	35	18S	31E	608012	3618757*	2296	300		
CP 00672		LE		4	4	07	18S	32E	612475	3624947*	6675	524	430	94	
CP 00672 CLW475398	O	LE		4	4	07	18S	32E	612475	3624947*	6675	540	460	80	
CP 00829 POD1	CP	LE		2	4	16	19S	31E	606165	3614009*	6958	120			
CP 01554 POD1	CP	LE		2	2	1	22	19S	31E	607166	3613354	7539	400		
CP 01554 POD2	CP	LE		2	2	1	22	19S	31E	607165	3613322	7571	400		
CP 00818 POD1	CP	LE		1	4	26	18S	30E	599289	3620364*	7899	240			

Average Depth to Water: **445 feet**

Minimum Depth: **430 feet**

Maximum Depth: **460 feet**

Record Count: 7

UTM NAD83 Radius Search (in meters):

Easting (X): 607171

Northing (Y): 3620894

Radius: 8000

*UTM location was derived from PLSS - see Help

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