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

APPROVED
By Olivia Yu at 11:38 am, Jul 25, 2018

July 10, 2018

#5E27122-BG13

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

NMOCD approves of the delineation and remediation completed for 1RP-5046. Provide photo documentation of the backfilled area.

SUBJECT: SOIL REMEDIATION CLOSURE REPORT FOR THE INCIDENT AT THE ANGELL COM #1 (1RP-5046), LEA COUNTY, NEW MEXICO

Dear Ms.Yu:

On behalf of Marathon Oil Company (Marathon), Souder, Miller & Associates (SMA) has prepared this CLOSURE REPORT that describes the assessment, and remediation for a release associated with the Angell Com #1. The site is located in UNIT A, SECTION 11, TOWNSHIP 17S, RANGE 36E, NMPM, Lea County, New Mexico, on Private land. Figure 1 illustrates the vicinity and location of the site. Table 1, below, summarizes information regarding the release.

Table 1: Release information and Site Ranking

Name	Angell Com #1
Company	Marathon Oil Company
Incident Number	1RP-5046
API Number	30-025-37902
Location	32.855019, -103.318259
Estimated Date of Release	10/5/2017
Date Reported to NMOCD	10/23/2017
Land Owner	Private
Reported To	NMOCD District I
Source of Release	Tank overflow
Released Material	Oil
Released Volume	12 bbls
Recovered Volume	11 bbls
Net Release	1 bbls
Nearest Waterway	an unnamed playa is approximately 4000 feet southwest of the location
Depth to Groundwater	Estimated to be less than 50 feet
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	20
SMA Response Dates	5/15/2018, 6/12/2018

1.0 Background

Due to operator error, one of the tanks at the Angell Com #1 facility was not gauged correctly and overflowed on October 5, 2017. The battery was originally believed to be lined, but this was later found to be false. The impacted area was within the tank battery. The tank battery was dismantled and rebuilt on the east side of the location. The impacted area was excavated and backfilled after the battery was dismantled.

2.0 Site Ranking and Land Jurisdiction

The release site is located approximately 5.5 miles south of Lovington, with an elevation of approximately 3,830 feet above sea level. SMA searched the New Mexico State Engineer's Office (NMOSE) online water well database for water wells in the vicinity of the release. Several wells are located within a one-mile radius of the site. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 50 feet below ground surface (bgs).

Recommended Remediation Action Levels (RRALs) are determined by the site ranking according to the NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (1993). Below in Table 2 are the remediation standards and the site ranking for this location. Justification for this site ranking is found in Figure 1 and Appendix B.

Table 2.

Soil Remediation 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

Depth to Groundwater	NMOCD Numeric Rank
< 50 BGS = 20	20
50' to 99' = 10	
>100' = 0	
Distance to Nearest Surface Water	**NMOCD Numeric Rank**
< 200' = 20	
200' - 1000' = 10	
>1000' = 0	0
Well Head Protection	**NMOCD Numeric Rank**
<1000' (or <200' domestic) = 20	
> 1000' = 0	0
Total Site Ranking	**20**

3.0 Release Characterization

On May 15, 2018, SMA field personnel assessed the spill and remedial actions performed before SMA's arrival. Five sample locations (S1-S5) were collected at 10 or 14 inches bgs across the footprint of the battery. One sample (S6) was collected from the pasture to the east of the former battery.

All samples were collected and processed according to NMOCD soil sampling procedures. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis for MRO, DRO, and GRO by EPA Method 8015D, BTEX by EPA Method 8021, and Chlorides by Method 300. Sample locations are depicted on Figure 2. All laboratory results are summarized in Table 3. Laboratory reports are included in Appendix C.

All samples results were non-detect for hydrocarbons. Sample S2, located at the southern end of the former tank battery, was slightly elevated in chlorides. Soil contaminant concentrations are illustrated in Figure 2.

4.0 Soil Remediation Summary

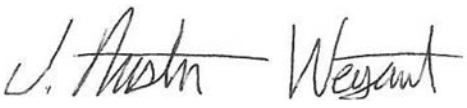
On June 12, 2018, SMA field personnel returned to the location to guide the excavation around sample point S2. Soil samples were field-screened for chloride using a mobile titration kit. The excavation in this area was extended to 10 feet by 6 feet by 3 feet deep bgs. Four sidewall samples were collected from this area (SW1-SW4). The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for the analyses mentioned above. Sampling results indicate that confirmation samples are within NMOCD recommended concentrations for chloride and NMOCD RRAL's. No further action is recommended at this time.

5.0 Scope and Limitations

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

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

Submitted by:
SOUDER, MILLER & ASSOCIATES



Austin Weyant
Project Scientist

Reviewed by:

Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

Figure 1: Vicinity and Well Head Protection Map
Figure 2: Site and Sample Location Map

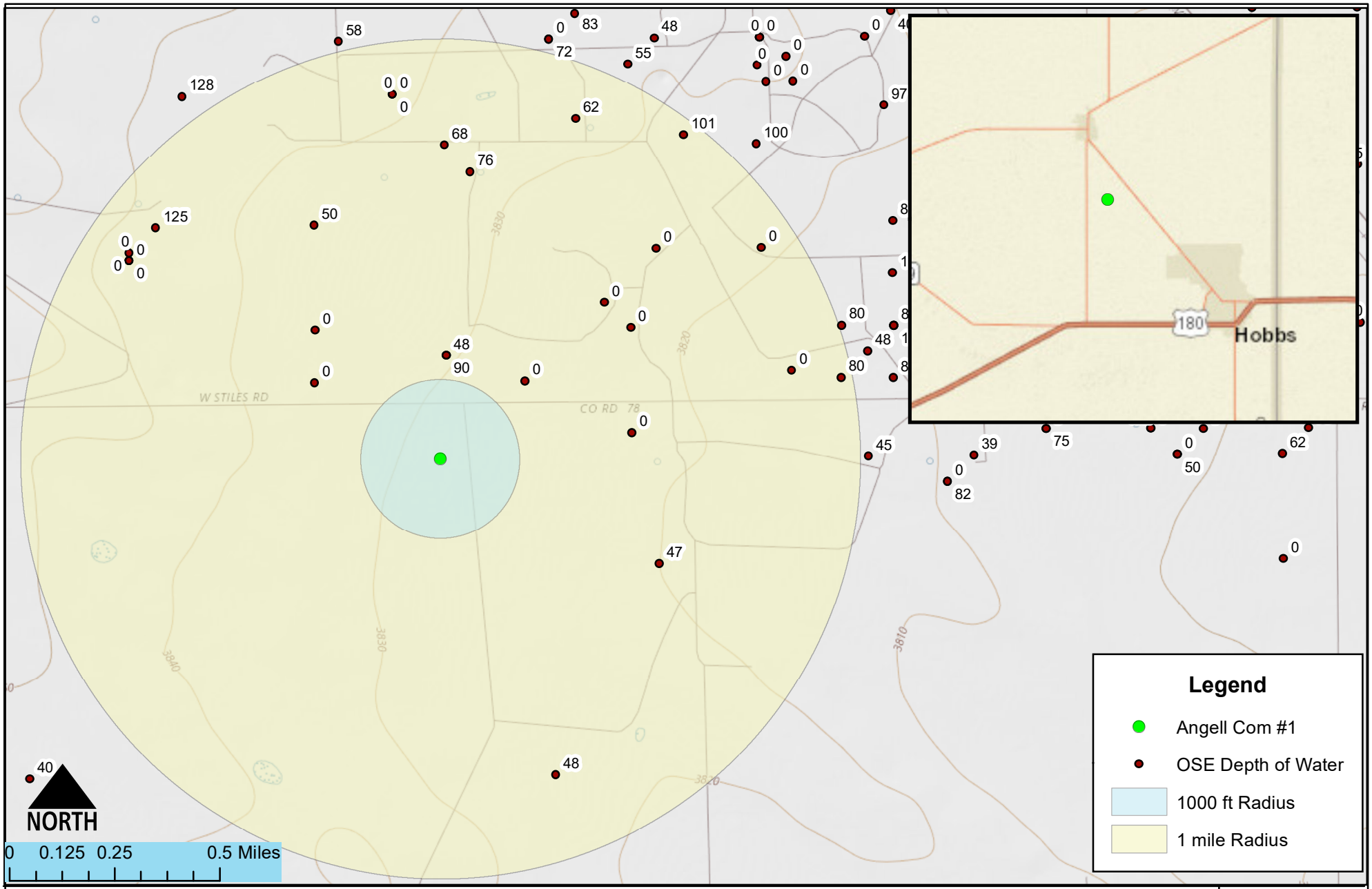
Tables:

Table 3: Summary of Sample Results

Appendices:

Appendix A: Form C141 Initial and Final
Appendix B: NMOSE Wells Report
Appendix C: Laboratory Analytical Reports

FIGURE 1
VICINITY AND NMOSE DATA MAP



Vicinity and Well Head Protection Map
Angell Com #1 - Marathon
S 11-T17S-R36E, New Mexico

Figure 1

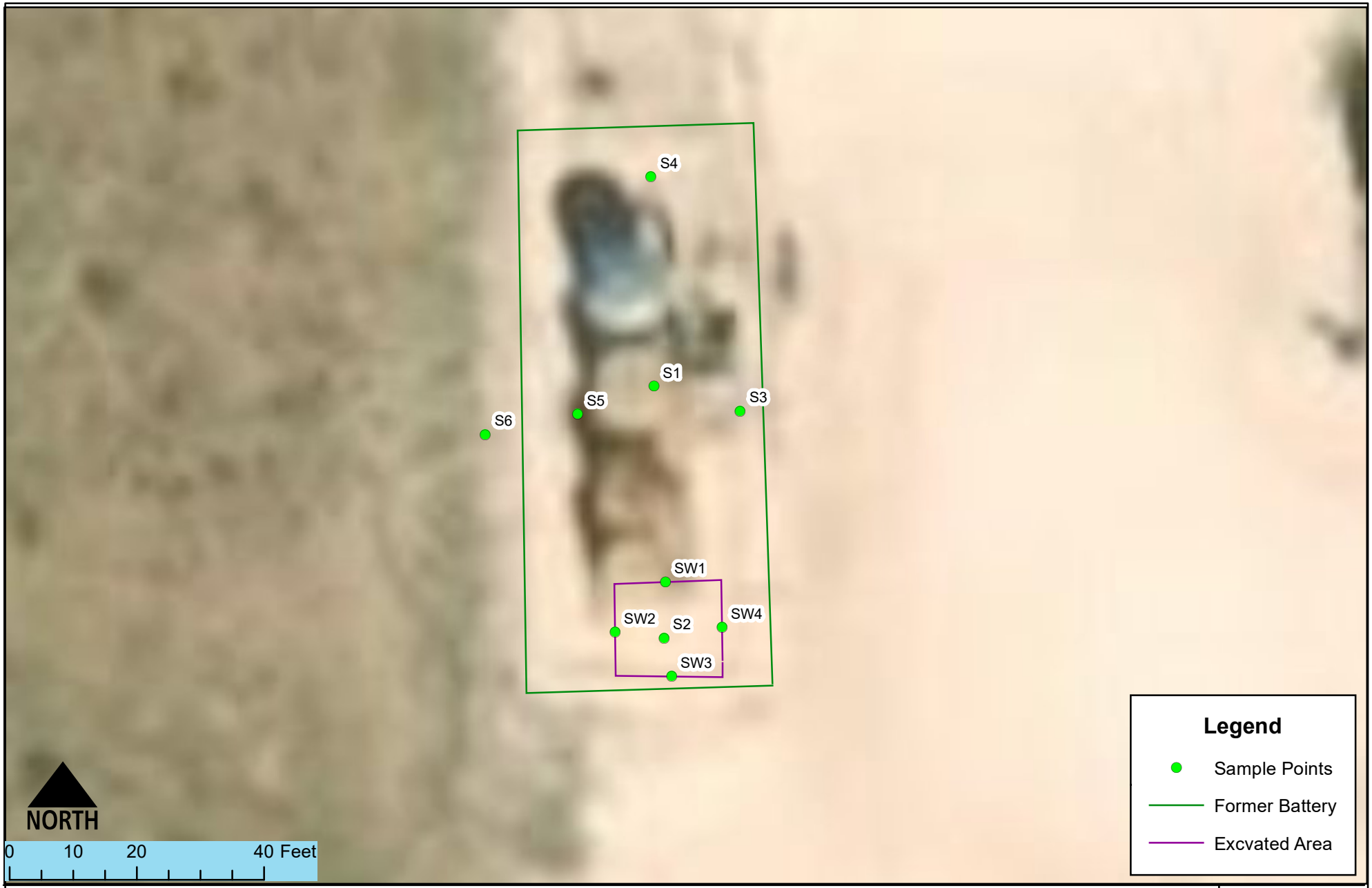
Date Saved: 5/25/2018

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

Drawn Heather Patterson
Checked
Approved

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

FIGURE 2
SITE AND SAMPLE LOCATION MAP



Site and Sample Location Map
Angell Com #1 - Marathon
S 11-T17S-R36E, New Mexico

Figure 2

Date Saved: 7/17/2018

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

Drawn Heather Patterson
Checked
Approved

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TABLE 3
SUMMARY SAMPLE RESULTS

Angell Com #1 Sample Summary

Table 3.

Sample Number on Figure 2	Sample Date	Depth (inches bgs)	Action	BTEX mg/Kg	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 20				50 mg/Kg	10 mg/Kg				100 mg/Kg		
S1	5/15/2018	14	in-situ	<0.23	<0.023	<4.6	<9.6	<48	<63	--	<30
S2	5/15/2018	10	excavated	<0.23	<0.024	<4.8	<10	<50	<65	--	960
	6/12/2018	12	excavated	--	--	--	--	--	--	811	--
	6/12/2018	24	excavated	--	--	--	--	--	--	1109	--
	6/12/2018	36	in-situ	<0.23	<0.024	<4.7	<9.7	<47	<62	<271	190
S3	5/15/2018	14	in-situ	<0.23	<0.023	<4.7	<9.7	<49	<64	--	<30
S4	5/15/2018	14	in-situ	<0.23	<0.025	<5.0	<9.9	<49	<64	--	<30
S5	5/15/2018	14	in-situ	<0.23	<0.023	<4.6	<9.2	<46	<62	--	<30
S6	5/15/2018	10	in-situ	<0.23	<0.024	<4.9	<9.7	<49	<64	--	<30
SW1	6/12/2018	sidewall	in-situ	--	--	--	--	--	--	<271	200
SW2	6/12/2018	sidewall	in-situ	--	--	--	--	--	--	<271	130
SW3	6/12/2018	sidewall	in-situ	--	--	--	--	--	--	428	290
SW4	6/12/2018	sidewall	in-situ	--	--	--	--	--	--	<271	300

"--" = Not Analyzed

APPENDIX A
FORM C141 INITIAL AND FINAL

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

Initial only

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company Marathon Oil Company	Contact Raquel Chacon
Address 5555 San Felipe Street, Houston, Texas 77056	Telephone No. 281-910-0441(cell) 575-297-0988 (office)
Facility Name Angell COM #1	Facility Type Oil and gas production facility

Surface Owner: Private	Mineral Owner	API No. 30-025-37902

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	11	17S	36E	660	North	660	East	Lea

Latitude 32.855019 **Longitude** -103.318259 NAD83

NATURE OF RELEASE

Type of Release: Oil	Volume of Release 11 barrels	Volume Recovered 11 barrels
Source of Release: Tank overflow	Date and Hour of Occurrence 10/5/2017 10:00 pm	Date and Hour of Discovery 10/5/2017 10:00 pm
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom? Raquel Chacon	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

REVISED
1:17 pm, May 07, 2018

RECEIVED
By Olivia Yu at 3:39 pm, Oct 23, 2017

If a Watercourse was Impacted, Describe Fully.*
Not applicable.

Describe Cause of Problem and Remedial Action Taken.*
Due to Operator Error, no automation on site, operator did not gauge location day before and approximately 11 bbls of oil were spilled and contained in a lined secondary containment. Vacuumed unit called out onsite and recovered 11 bbls.

Describe Area Affected and Cleanup Action Taken.*
Base material (chat) was removed from lined containment. Liner was checked for integrity and intact, new material was brought in to protect plastic liner.

not a lined facility

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:	OIL CONSERVATION DIVISION
Printed Name: Raquel Chacon	Approved by Environmental Specialist:
Title: Sr. HES Environmental Professional	Approval Date: 10/23/2017 Expiration Date:
E-mail Address: rchacon@marathonoil.com	Conditions of Approval: see attached directive
Date: October 9, 2017 Phone: 281-910-0441 (cell) 575-297-0988 (office)	Attached ☑

* Attach Additional Sheets If Necessary

1RP-5046

nOY1729656856

pOY1812748024

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _10/19/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-5046__ 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 _1_ office in __Hobbs____ on or before _6/7/2018_. 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; C_6 thru C_{36}), 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; C_6 thru C_{36}), 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 B
NMOSE WELLS REPORT

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

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 02413	L	LE		4	4	02	17S	36E	657318	3636861*	393	90	90	0
L 02426	L	LE		4	4	02	17S	36E	657318	3636861*	393	115	48	67
L 11198	L	LE	3	3	3	01	17S	36E	657620	3636766*	428	186		
L 00379	L	LE	1	2	1	12	17S	36E	658031	3636570*	725	110		
L 02119	L	LE	1	4	3	01	17S	36E	658024	3636973*	872	130		
L 06395	L	LE		4	1	12	17S	36E	658138	3636069*	917	112	47	65
L 01716	L	LE	1	1	4	02	17S	36E	656808	3637357*	1022	145	50	95
L 02481	L	LE	4	4	2	02	17S	36E	657405	3637566*	1101	150	76	74
L 03676	L	LE		4	2	02	17S	36E	657306	3637667*	1199	75	68	7
L 05413	L	LE		3	3	12	17S	36E	657747	3635257*	1286	100	48	52
L 05486	L	LE	2	3	1	01	17S	36E	657808	3637773*	1396	225	62	163
L 14187 POD3	L	LE	3	1	3	02	17S	36E	656141	3637232	1398	80		
L 14187 POD1	L	LE	3	1	3	02	17S	36E	656130	3637225	1404	78		
L 01724 S3	L	LE	2	1	3	02	17S	36E	656201	3637343*	1414	140	125	15
L 14187 POD2	L	LE	3	1	3	02	17S	36E	656095	3637201	1421	77		
L 14187 POD4	L	LE	3	1	3	02	17S	36E	656103	3637219	1423	80		
L 14263 POD7	L	LE	3	4	4	01	17S	36E	658785	3636874	1527	124		
L 14207 POD2	L	LE	2	4	1	01	17S	36E	658222	3637712	1541	230	101	129
L 10633 POD6	L	LE	3	4	4	01	17S	36E	658832	3636787*	1552	196	80	116
L 10633 POD4	L	LE	1	4	4	01	17S	36E	658832	3636987*	1605	209	80	129
L 02205	L	LE		2	2	12	17S	36E	658939	3636485*	1626	110	45	65
L 02480	L	LE		1	2	02	17S	36E	656897	3638063*	1648	130	58	72
L 01713	L	LE		1	1	01	17S	36E	657703	3638076*	1654	150	72	78
L 04988 S	L	LE	3	2	1	01	17S	36E	658006	3637982*	1665	182	55	127
L 02331	L	LE		4	4	01	17S	36E	658933	3636888*	1674	105	48	57
L 14263 POD1	L	LE	4	4	4	01	17S	36E	658944	3636867	1679	226		

***UTM location was derived from PLSS - see Help**

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number		POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 14263 POD2		L	LE	4	4	4	01	17S	36E	658944	3636867	1679	223		
L 14263 POD4		L	LE	4	4	4	01	17S	36E	658944	3636867	1679	235		
L 14263 POD6		L	LE	4	4	4	01	17S	36E	658944	3636867	1679	124		
L 14207 POD1		L	LE	3	3	2	01	17S	36E	658500	3637679	1696	240	100	140
L 01724 S2		L	LE			1	02	17S	36E	656298	3637848*	1712	140	128	12
L 10633 S3		L	LE	4	4	4	01	17S	36E	659032	3636787*	1749	188	80	108
L 05486 POD2		L	LE	2	1	1	01	17S	36E	657802	3638175*	1775	232	83	149
L 10633 POD5		L	LE	2	4	4	01	17S	36E	659032	3636987*	1796	228	120	108
L 10633 S2	R	L	LE			4	13	17S	36E	659032	3636987*	1796	196	80	116
L 10633 S4		L	LE	2	4	4	01	17S	36E	659032	3636987*	1796	204	110	94
L 01584 POD1		L	LE		2	1	01	17S	36E	658107	3638083*	1800	110	48	62
L 10633 S	R	L	LE			4	13	17S	36E	659026	3637189*	1859	228	120	108
L 04359 S		L	LE	3	1	1	07	17S	37E	659242	3636391*	1931	110	82	28
L 11558		L	LE	3	1	1	07	17S	37E	659242	3636391*	1931	216		
L 10633	R	L	LE			4	13	17S	36E	659026	3637389*	1945	209	80	129
L 01557 POD1		L	LE	4	3	3	36	16S	36E	657796	3638374*	1966	110	40	70
L 04058 S19		L	LE	4	3	3	36	16S	36E	657796	3638374*	1966	245	50	195
L 05879		L	LE		4	4	10	17S	36E	655731	3635227*	2010	120	40	80
L 04988		L	LE		1	2	01	17S	36E	658510	3638089*	2015	195	55	140
L 01724 S		L	LE	3	4	2	03	17S	36E	655593	3637539*	2025	135	85	50
L 07042		L	LE	3	4	2	03	17S	36E	655593	3637539*	2025	100	60	40
L 01603 POD1		L	LE		1	1	07	17S	37E	659343	3636492*	2030	120	39	81
L 01466		L	LE		3	4	35	16S	36E	656891	3638461*	2037	110	47	63
L 02987		L	LE		3	4	35	16S	36E	656891	3638461*	2037	105	40	65
L 12562 POD11		L	LE	2	4	2	01	17S	36E	658989	3637831	2161	112	97	15
L 02474		L	LE		1	3	06	17S	37E	659331	3637296*	2182	100	40	60
L 12562 POD4		L	LE	4	4	2	36	16S	36E	658584	3638296	2227	121	106	15
L 01724		L	LE			2	03	17S	36E	655492	3637835*	2276	146	80	66
L 04359		L	LE	1	2	1	07	17S	37E	659619	3636595*	2310	111	75	36

***UTM location was derived from PLSS - see Help**

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 04359	R	L	LE	1	2	1	07	17S	37E	659619	3636595*	2310	111	75	36
L 04359 POD4		L	LE	1	2	1	07	17S	37E	659619	3636595*	2310	222		
L 01371		L	LE	4	3	4	36	16S	36E	658603	3638389*	2314	115	45	70
L 01438		L	LE		3	4	36	16S	36E	658504	3638490*	2347	110	45	65
L 03882		L	LE		3	1	14	17S	36E	656147	3634430*	2347	120	57	63
L 02508		L	LE	2	2	2	01	17S	36E	659013	3638194*	2423	120	40	80
L 05161		L	LE		2	4	14	17S	36E	657363	3634043*	2425	105	36	69
L 04058 S22		L	LE		1	3	36	16S	36E	657691	3638878*	2439	239	68	171
L 00380		L	LE	1	4	1	10	17S	36E	654811	3636117	2525	90		
L 00380	R	L	LE	1	4	1	10	17S	36E	654811	3636117	2525	90		
L 09666		L	LE		2	3	13	17S	36E	658170	3634055*	2560	150		
L 02561		L	LE	3	3	3	31	16S	37E	659210	3638403*	2710	137	50	87
L 01963		L	LE	1	1	2	07	17S	37E	660021	3636599*	2711	150	132	18
L 04058 S31		L	LE	4	3	2	35	16S	36E	656978	3639166*	2718	230	100	130
L 12821 POD4		L								656899	3639157	2721	20		
L 04058 S18		L	LE	4	3	1	36	16S	36E	657783	3639180*	2752	265	50	215
L 14263 POD3		L	LE	4	4	4	01	17S	36E	658914	3638715	2760	225		
L 03173		L	LE		4	2	35	16S	36E	657282	3639274*	2806	110	55	55
L 01963 S		L	LE		1	2	07	17S	37E	660122	3636500*	2809	128	50	78
L 02984		L	LE		1	1	10	17S	36E	654502	3636414*	2810	125	45	80
L 02199		L	LE		4	4	14	17S	36E	657369	3633640*	2828	110	45	65
L 13332 POD1		L	LE	1	3	3	36	16S	37E	659161	3638638	2851	106	102	4
L 01220 POD1		L	LE		3	3	31	16S	37E	659311	3638504*	2853	120	55	65
L 00449		L	LE	1	1	4	06	17S	37E	660008	3637404*	2853	100	70	30
L 00449 POD5		L	LE	1	1	4	06	17S	37E	660008	3637404*	2853	247	101	146
L 00449 POD5	R	L	LE	1	1	4	06	17S	37E	660008	3637404*	2853	247	101	146
L 01350		L	LE		2	4	36	16S	36E	658901	3638899*	2904	110	55	55
L 12823 POD1		L	LE	2	1	2	07	17S	37E	660221	3636599	2911	200		
L 04058 S25		L	LE	2	3	1	36	16S	36E	657783	3639380*	2949	256	88	168

***UTM location was derived from PLSS - see Help**

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin	Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 12562 POD12	L		LE	3	1	3	31	16S	37E	659166	3638783	2966	109	94	15
L 12562 POD10	L		LE	2	2	4	36	16S	36E	659032	3638913	2989	113	98	15
L 14377 POD3	L		LE	2	3	3	31	16S	37E	659423	3638586	2990	115		
L 13332 POD2	L		LE	4	3	2	36	16S	36E	658677	3639129	2991	120	104	16
L 12562 POD1	L		LE	2	2	4	36	16S	36E	658908	3639001	2993	120	105	15
L 12562 POD14	L		LE		2	2	36	16S	36E	658677	3639136	2996	116	101	15

Average Depth to Water: **72 feet**

Minimum Depth: **36 feet**

Maximum Depth: **132 feet**

Record Count: 90

UTMNAD83 Radius Search (in meters):

Easting (X): 657312.21 **Northing (Y):** 3636467.96 **Radius:** 3000

APPENDIX C

LABORATORY ANALYTICAL REPORTS

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

May 25, 2018

Heather Patterson

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

RE: Angel 1 OrderNo.: 1805986

Dear Heather Patterson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/17/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S1-14"
Project: Angel 1
Collection Date: 5/15/2018 12:05:00 PM
Lab ID: 1805986-001
Matrix: SOIL
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	5/22/2018 2:53:51 PM	38253
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/18/2018 5:08:36 PM	38177
Surr: BFB	121	70-130		%Rec	1	5/18/2018 5:08:36 PM	38177
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/22/2018 2:26:45 AM	38208
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/22/2018 2:26:45 AM	38208
Surr: DNOP	99.7	70-130		%Rec	1	5/22/2018 2:26:45 AM	38208
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	5/18/2018 5:08:36 PM	38177
Toluene	ND	0.046		mg/Kg	1	5/18/2018 5:08:36 PM	38177
Ethylbenzene	ND	0.046		mg/Kg	1	5/18/2018 5:08:36 PM	38177
Xylenes, Total	ND	0.092		mg/Kg	1	5/18/2018 5:08:36 PM	38177
Surr: 4-Bromofluorobenzene	132	70-130	S	%Rec	1	5/18/2018 5:08:36 PM	38177
Surr: Toluene-d8	93.2	70-130		%Rec	1	5/18/2018 5:08:36 PM	38177

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S2-10"
Project: Angel 1
Collection Date: 5/15/2018 12:26:00 PM
Lab ID: 1805986-002
Matrix: SOIL
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	960	30		mg/Kg	20	5/22/2018 3:06:17 PM	38253
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/18/2018 5:31:41 PM	38177
Surr: BFB	120	70-130		%Rec	1	5/18/2018 5:31:41 PM	38177
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/22/2018 2:50:45 AM	38208
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/22/2018 2:50:45 AM	38208
Surr: DNOP	90.5	70-130		%Rec	1	5/22/2018 2:50:45 AM	38208
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	5/18/2018 5:31:41 PM	38177
Toluene	ND	0.048		mg/Kg	1	5/18/2018 5:31:41 PM	38177
Ethylbenzene	ND	0.048		mg/Kg	1	5/18/2018 5:31:41 PM	38177
Xylenes, Total	ND	0.096		mg/Kg	1	5/18/2018 5:31:41 PM	38177
Surr: 4-Bromofluorobenzene	131	70-130	S	%Rec	1	5/18/2018 5:31:41 PM	38177
Surr: Toluene-d8	93.2	70-130		%Rec	1	5/18/2018 5:31:41 PM	38177

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S3-14"
Project: Angel 1
Collection Date: 5/15/2018 12:36:00 PM
Lab ID: 1805986-003
Matrix: SOIL
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	5/22/2018 3:43:30 PM	38253
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/18/2018 5:54:46 PM	38177
Surr: BFB	118	70-130		%Rec	1	5/18/2018 5:54:46 PM	38177
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/22/2018 3:14:49 AM	38208
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/22/2018 3:14:49 AM	38208
Surr: DNOP	97.2	70-130		%Rec	1	5/22/2018 3:14:49 AM	38208
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	5/18/2018 5:54:46 PM	38177
Toluene	ND	0.047		mg/Kg	1	5/18/2018 5:54:46 PM	38177
Ethylbenzene	ND	0.047		mg/Kg	1	5/18/2018 5:54:46 PM	38177
Xylenes, Total	ND	0.094		mg/Kg	1	5/18/2018 5:54:46 PM	38177
Surr: 4-Bromofluorobenzene	128	70-130		%Rec	1	5/18/2018 5:54:46 PM	38177
Surr: Toluene-d8	91.1	70-130		%Rec	1	5/18/2018 5:54:46 PM	38177

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S4-14"
Project: Angel 1
Collection Date: 5/15/2018 12:49:00 PM
Lab ID: 1805986-004
Matrix: SOIL
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	5/22/2018 3:55:55 PM	38253
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/18/2018 6:17:55 PM	38177
Surr: BFB	116	70-130		%Rec	1	5/18/2018 6:17:55 PM	38177
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/22/2018 3:38:48 AM	38208
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/22/2018 3:38:48 AM	38208
Surr: DNOP	94.2	70-130		%Rec	1	5/22/2018 3:38:48 AM	38208
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.025		mg/Kg	1	5/18/2018 6:17:55 PM	38177
Toluene	ND	0.050		mg/Kg	1	5/18/2018 6:17:55 PM	38177
Ethylbenzene	ND	0.050		mg/Kg	1	5/18/2018 6:17:55 PM	38177
Xylenes, Total	ND	0.099		mg/Kg	1	5/18/2018 6:17:55 PM	38177
Surr: 4-Bromofluorobenzene	127	70-130		%Rec	1	5/18/2018 6:17:55 PM	38177
Surr: Toluene-d8	92.2	70-130		%Rec	1	5/18/2018 6:17:55 PM	38177

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S5-14"
Project: Angel 1
Collection Date: 5/15/2018 1:10:00 PM
Lab ID: 1805986-005 **Matrix:** SOIL **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	5/22/2018 4:08:19 PM	38253
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/18/2018 6:41:06 PM	38177
Surr: BFB	120	70-130		%Rec	1	5/18/2018 6:41:06 PM	38177
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/22/2018 4:02:51 AM	38208
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/22/2018 4:02:51 AM	38208
Surr: DNOP	95.8	70-130		%Rec	1	5/22/2018 4:02:51 AM	38208
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	5/18/2018 6:41:06 PM	38177
Toluene	ND	0.046		mg/Kg	1	5/18/2018 6:41:06 PM	38177
Ethylbenzene	ND	0.046		mg/Kg	1	5/18/2018 6:41:06 PM	38177
Xylenes, Total	ND	0.093		mg/Kg	1	5/18/2018 6:41:06 PM	38177
Surr: 4-Bromofluorobenzene	130	70-130	S	%Rec	1	5/18/2018 6:41:06 PM	38177
Surr: Toluene-d8	91.8	70-130		%Rec	1	5/18/2018 6:41:06 PM	38177

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S6-10"
Project: Angel 1
Collection Date: 5/15/2018 1:24:00 PM
Lab ID: 1805986-006
Matrix: SOIL
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	5/22/2018 4:20:44 PM	38253
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/18/2018 7:04:16 PM	38177
Surr: BFB	120	70-130		%Rec	1	5/18/2018 7:04:16 PM	38177
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/22/2018 4:26:56 AM	38208
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/22/2018 4:26:56 AM	38208
Surr: DNOP	93.6	70-130		%Rec	1	5/22/2018 4:26:56 AM	38208
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	5/18/2018 7:04:16 PM	38177
Toluene	ND	0.049		mg/Kg	1	5/18/2018 7:04:16 PM	38177
Ethylbenzene	ND	0.049		mg/Kg	1	5/18/2018 7:04:16 PM	38177
Xylenes, Total	ND	0.098		mg/Kg	1	5/18/2018 7:04:16 PM	38177
Surr: 4-Bromofluorobenzene	131	70-130	S	%Rec	1	5/18/2018 7:04:16 PM	38177
Surr: Toluene-d8	92.6	70-130		%Rec	1	5/18/2018 7:04:16 PM	38177

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805986**

25-May-18

Client: Souder, Miller & Associates

Project: Angel 1

Sample ID	**MB-38253**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**38253**	RunNo:	**51434**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1676144**	Units:	**mg/Kg**			

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

Sample ID	**LCS-38253**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**38253**	RunNo:	**51434**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1676145**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.9	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805986**

25-May-18

Client: Souder, Miller & Associates

Project: Angel 1

Sample ID **LCS-38208**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38208**	RunNo: **51394**
Prep Date: **5/18/2018**	Analysis Date: **5/22/2018**	SeqNo: **1673851** 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	98.9	70	130			
Surr: DNOP	4.7		5.000		93.9	70	130			

Sample ID **MB-38208**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38208**	RunNo: **51394**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673852** 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	9.9		10.00		98.6	70	130			

Sample ID **LCS-38269**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38269**	RunNo: **51394**
Prep Date: **5/22/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676949** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		105	70	130			

Sample ID **MB-38269**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38269**	RunNo: **51394**
Prep Date: **5/22/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676950** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		116	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805986**

25-May-18

Client: Souder, Miller & Associates

Project: Angel 1

Sample ID	**lcs-38177**	SampType:	**LCS4**	TestCode:	**EPA Method 8260B: Volatiles Short List**
Client ID:	**BatchQC**	Batch ID:	**38177**	RunNo:	**51378**
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**	SeqNo:	**1671710** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	83.9	80	120			
Toluene	0.98	0.050	1.000	0	97.7	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.5	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Sample ID	**mb-38177**	SampType:	**MBLK**	TestCode:	**EPA Method 8260B: Volatiles Short List**
Client ID:	**PBS**	Batch ID:	**38177**	RunNo:	**51378**
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**	SeqNo:	**1671711** 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	0.65		0.5000		130	70	130			
Surr: Toluene-d8	0.48		0.5000		96.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805986**

25-May-18

Client: Souder, Miller & Associates

Project: Angel 1

Sample ID	**lcs-38177**	SampType:	**LCS**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**38177**		RunNo:	**51378**				
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**		SeqNo:	**1671707**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.9	70	130			
Surr: BFB	510		500.0		102	70	130			

Sample ID	**mb-38177**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**38177**		RunNo:	**51378**				
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**		SeqNo:	**1672698**	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	590		500.0		119	70	130			

Qualifiers:

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

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: 1805986 | RcptNo: 1

Received By: **Isaiah Ortiz** 5/17/2018 9:25:00 AM

Completed By: **Ashley Gallegos** 5/17/2018 11:36:50 AM

Reviewed By: 5/17/18

Labeled by: JB 05/17/18

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? JB
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:

05/17/18

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	1.2	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 201 S. Halagueno
Carlsbad, NM 88221

Phone #: (575) 689-7040

email or Fax#: ~~hpatterson@sou~~ heather.patterson@soudermiller.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time: 5 day
☒ Standard ☐ Rush _____

Project Name: Angell #1

Project #:

Project Manager: H. Patterson

Sampler: SH

On Ice: ☒ Yes ☐ No

Sample Temperature: 6.2

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805980	Analysis Request: (BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-, Cl^-, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
5-15-18	12:05	soil	S1 - 14"	1-4oz		-001	X		X					X								
	12:20		S2 - 10"			-002	X		X					X								
	12:36		S3 - 14"			-003	X		X					X								
	12:49		S4 - 14"			-004	X		X					X								
	13:10		S5 - 14			-005	X		X					X								
↓	13:24		S6 - 10"	↓		-006	X		X					X								

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
5/16/18	0900	Stephanie Hill		5/16/18	0900	
5/16/18	1900		Carin	5/17/18	925	

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

July 05, 2018

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

RE: Angell 1 OrderNo.: 1806A21

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/15/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1806A21**
Date Reported: **7/5/2018**

CLIENT: Souder, Miller & Associates
Client Sample ID: S2-3
Project: Angell 1
Collection Date: 6/12/2018 10:28:00 AM
Lab ID: 1806A21-001 **Matrix:** SOIL **Received Date:** 6/15/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	190	30		mg/Kg	20	6/27/2018 5:20:12 PM	38916
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/20/2018 7:19:32 PM	38767
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/20/2018 7:19:32 PM	38767
Surr: DNOP	132	70-130	S	%Rec	1	6/20/2018 7:19:32 PM	38767
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/19/2018 9:21:19 PM	38742
Surr: BFB	74.4	15-316		%Rec	1	6/19/2018 9:21:19 PM	38742
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.094		mg/Kg	1	6/19/2018 9:21:19 PM	38742
Benzene	ND	0.024		mg/Kg	1	6/19/2018 9:21:19 PM	38742
Toluene	ND	0.047		mg/Kg	1	6/19/2018 9:21:19 PM	38742
Ethylbenzene	ND	0.047		mg/Kg	1	6/19/2018 9:21:19 PM	38742
Xylenes, Total	ND	0.094		mg/Kg	1	6/19/2018 9:21:19 PM	38742
Surr: 4-Bromofluorobenzene	96.1	80-120		%Rec	1	6/19/2018 9:21:19 PM	38742

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW1
Project: Angell 1
Collection Date: 6/12/2018 10:50:00 AM
Lab ID: 1806A21-002
Matrix: SOIL
Received Date: 6/15/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	200	30		mg/Kg	20	6/29/2018 1:44:32 PM	38971

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW2
Project: Angell 1
Collection Date: 6/12/2018 10:35:00 AM
Lab ID: 1806A21-003
Matrix: SOIL
Received Date: 6/15/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	130	30		mg/Kg	20	6/29/2018 1:56:56 PM	38971

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW3
Project: Angell 1
Collection Date: 6/12/2018 10:42:00 AM
Lab ID: 1806A21-004
Matrix: SOIL
Received Date: 6/15/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	290	30		mg/Kg	20	6/29/2018 2:09:20 PM	38971

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW4
Project: Angell 1
Collection Date: 6/12/2018 10:58:00 AM
Lab ID: 1806A21-005 **Matrix:** SOIL **Received Date:** 6/15/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	300	30		mg/Kg	20	6/29/2018 2:46:34 PM	38971

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806A21**

05-Jul-18

Client: Souder, Miller & Associates

Project: Angell 1

Sample ID	**MB-38916**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**38916**	RunNo:	**52281**					
Prep Date:	**6/27/2018**	Analysis Date:	**6/27/2018**	SeqNo:	**1714260**	Units:	**mg/Kg**			

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

Sample ID	**LCS-38916**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**38916**	RunNo:	**52281**					
Prep Date:	**6/27/2018**	Analysis Date:	**6/27/2018**	SeqNo:	**1714261**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.0	90	110			

Sample ID	**MB-38971**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**38971**	RunNo:	**52369**					
Prep Date:	**6/29/2018**	Analysis Date:	**6/29/2018**	SeqNo:	**1717233**	Units:	**mg/Kg**			

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

Sample ID	**LCS-38971**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**38971**	RunNo:	**52369**					
Prep Date:	**6/29/2018**	Analysis Date:	**6/29/2018**	SeqNo:	**1717234**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting 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#: **1806A21**

05-Jul-18

Client: Souder, Miller & Associates

Project: Angell 1

Sample ID **LCS-38767**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38767**	RunNo: **52095**
Prep Date: **6/19/2018**	Analysis Date: **6/20/2018**	SeqNo: **1705232** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.7	70	130			
Surr: DNOP	4.8		5.000		95.2	70	130			

Sample ID **MB-38767**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38767**	RunNo: **52095**
Prep Date: **6/19/2018**	Analysis Date: **6/20/2018**	SeqNo: **1705233** 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	9.8		10.00		98.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806A21**

05-Jul-18

Client: Souder, Miller & Associates

Project: Angell 1

Sample ID	**MB-38742**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**38742**	RunNo:	**52090**					
Prep Date:	**6/18/2018**	Analysis Date:	**6/19/2018**	SeqNo:	**1704624**	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	740		1000		74.2	15	316			

Sample ID	**LCS-38742**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**38742**	RunNo:	**52090**					
Prep Date:	**6/18/2018**	Analysis Date:	**6/19/2018**	SeqNo:	**1704625**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	75.9	131			
Surr: BFB	880		1000		87.7	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806A21**

05-Jul-18

Client: Souder, Miller & Associates

Project: Angell 1

Sample ID **MB-38742**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **38742**	RunNo: **52090**
Prep Date: **6/18/2018**	Analysis Date: **6/19/2018**	SeqNo: **1704672** 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	0.95		1.000		95.0	80	120			

Sample ID **LCS-38742**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **38742**	RunNo: **52090**
Prep Date: **6/18/2018**	Analysis Date: **6/19/2018**	SeqNo: **1704674** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.91	0.10	1.000	0	90.6	70.1	121			
Benzene	0.95	0.025	1.000	0	94.7	77.3	128			
Toluene	0.97	0.050	1.000	0	96.9	79.2	125			
Ethylbenzene	0.95	0.050	1.000	0	95.2	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	98.0	81.6	129			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.2	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: SMA-CARLSBAD Work Order Number: 1806A21 RcptNo: 1

Received By: **Jazzmine Burkhead** 6/15/2018 9:00:00 AM

Completed By: **Ashley Gallegos** 6/15/2018 4:50:08 PM

Reviewed By: ENM 6/18/18
LB: 10 6/18/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: 10 (<2 or >12 unless noted)
Adjusted? 4
Checked by: 6/18/18

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	3.3	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

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

Project Name: Angell #1

Project #:

Project Manager: Austyn Weyant

Sampler: Heather Patterson

On Ice: ☑ Yes ☐ No

Sample Temperature: 3.3

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1806A21	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-, Cl^-, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6/12/18	10:28	Soil	S2-3	4oz		-001	X		X					X								
	10:50		SW1			-002								X								
	10:35		SW2			-003								X								
	10:42		SW3			-004								X								
	10:58		SW4			-005								X								

Date: 6/14/18 Time: 0800 Relinquished by:

Received by: Date: 6/14/18 Time: 0800

Date: 6/14/18 Time: 1900 Relinquished by:

Received by: FedEx Date: 06/15/18 Time: 09:00

Remarks:

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