



September 7, 2018

#526934-BG3

NMOCD District 2  
Mr. Mike Bratcher  
811 S. First St.  
Artesia, NM 88210

SUBJECT: REMEDIATION CLOSURE REPORT FOR THE AMOCO FEDERAL 11 #1 RELEASE (2RP-4513), EDDY COUNTY, NEW MEXICO

Dear Mr. Bratcher:

On behalf of Rockcliff Operating New Mexico LLC (Rockcliff), Souder, Miller & Associates (SMA) has prepared this REMEDIATION CLOSURE REPORT that describes the remediation of the release site located at the Amoco Federal 11 #1 site. The site is in UNIT I, SECTION 11, TOWNSHIP 23S, RANGE 28E, Eddy County, New Mexico, on federal land. Figure 1 illustrates the vicinity and location of the site.

Table 1, below, summarizes information regarding the release.

Table 1: Release Information and Closure Criteria	
Name	Amoco Federal 11 #1
Company	Rockcliff Operating New Mexico LLC
Incident Number	2RP-4513
API Number	30-015-22975
Location	32.3182526, -104.052475
Estimated Date of Release	11/20/2017
Date Reported to NMOCD	12/5/2017
Land Owner	Federal
Reported To	NMOCD District II
Source of Release	Oil Storage Tank
Released Material	Oil
Released Volume	8 BBLs
Recovered Volume	6 BBLs
Net Release	2 BBLs
NMOCD Closure Criteria	<50 feet to groundwater
SMA Response Dates	3/5/2018, 5/16/2018, 8/15/2018

## **1.0 Background**

On November 20, 2017 a release of approximately 8 barrels of oil occurred as a result of pinhole leaks in the oil storage tank. The release was contained by earthen secondary containment. A vacuum truck

removed 6 barrels of oil. Approximately 18 cubic yards of visually impacted soil from within the containment was removed and hauled for disposal.

Figure 1 illustrates a regional map of the site vicinity and wellhead protection, Figure 2 illustrates the site location in reference to surface water, and Figure 3 represents the site and sample locations. The initial C-141 form is included in Appendix A.

## **2.0 Site Information and Closure Criteria**

The Amoco Federal 11 #1 is located approximately 3 miles northeast of Loving, New Mexico on private land.

As summarized in Table 2 and illustrated in Figure 1, depth to groundwater in the area is estimated to be less than 50 feet below grade surface (bgs). There are 3 water sources within ½-mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) online water well database. The nearest surface water is the Pecos River located approximately 958 feet to the west.

Based on this information, the applicable NMOCD Closure Criteria for this site is for groundwater depth of less than 50 feet bgs. Unless a deferral is requested and approved by NMOCD per 19.15.29.12.B.(2), the site will be restored to meet the standards of Table I of 19.15.29.12 NMAC.

The attached Table 2 demonstrates the Closure Criteria justification for this location. Pertinent well data is attached in Appendix B

## **3.0 Release Characterization Activities**

On March 5, 2018, SMA personnel arrived on site in response to the release associated with Amoco Federal 11 #1.

SMA performed site delineation activities by collecting soil samples around the release site and throughout the visibly surface stained area. Soil samples were field-screened for chloride using an electrical conductivity (EC) meter and converting results to chloride using a calibration curve equation.

A total of four sample locations (L1-L4) were investigated using a hand-auger to depths up to three feet bgs. Sample location L1 was representative of the source while L2 represented the area on the opposite side of the tank from the source. Sample locations L3 and L4 were established at the edge of the release area. A minimum of two samples were collected at each sampling location and field-screened using the method above. A total of 8 samples were collected for laboratory analysis for total chloride using EPA Method 300.0. L1 was also analyzed for benzene and total BTEX (benzene, toluene, ethylbenzene and total xylenes) using EPA Method 8021B and MRO, DRO, and GRO (motor, diesel and gasoline range organics, respectively) by EPA Method 8015D. Laboratory samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico (Appendix C).

Locations for all samples are depicted on Figure 3, and a summary of the laboratory results is displayed in Table 3. After receiving the laboratory analysis, it was determined that the location was impacted at varying depths and that a more precise delineation was required on sample locations L1-L4. SMA recommended excavation and removal of contaminated soil in the impacted area.

#### **4.0 Soil Remediation Summary**

On May 16, 2018 after approval from area utilities via 811, SMA returned to the site to oversee and guide the excavation of contaminated soil with a backhoe. SMA guided the excavation activities by collecting composite soil samples for field screening for chloride using an EC meter and converting results to chloride using a calibration curve equation during the vertical delineation. The base was excavated until the equipment hit refusal at bedrock in all four sample locations. The area around L1 was excavated to a depth of 2.5 feet bgs, L3 and L4 was excavated to a depth of 3 feet bgs, and a surficial scrape was performed on L2.

On August 15, 2018, SMA personnel returned to the location to collect confirmation sidewall samples. These sidewalls were comprised of five-point composites of the walls SW 1 through SW 5. Figure 3 demonstrates the extent of the excavation and sample locations.

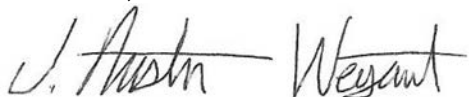
Contaminated soils were removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil was transported for proper disposal at an NMOCD permitted disposal facility. All laboratory results are summarized in Table 3. Laboratory reports are included in Appendix C.

#### **5.0 Scope and Limitations**

The scope of our services consisted of the performance of assessment sampling, verification of release stabilization, regulatory liaison, remediation, 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 & Reviewed by:  
SOUDER, MILLER & ASSOCIATES

A handwritten signature in black ink that reads "J. Austin Weyant". The signature is written in a cursive, flowing style.

Austin Weyant  
Senior Scientist

**ATTACHMENTS:**

**Figures:**

Figure 1: Regional Site Vicinity and Well Head Protection Map

Figure 2: Surface Water Map

Figure 3: Site and Sample Location Map

**Tables:**

Table 3: Summary of Sample Results

**Appendices:**

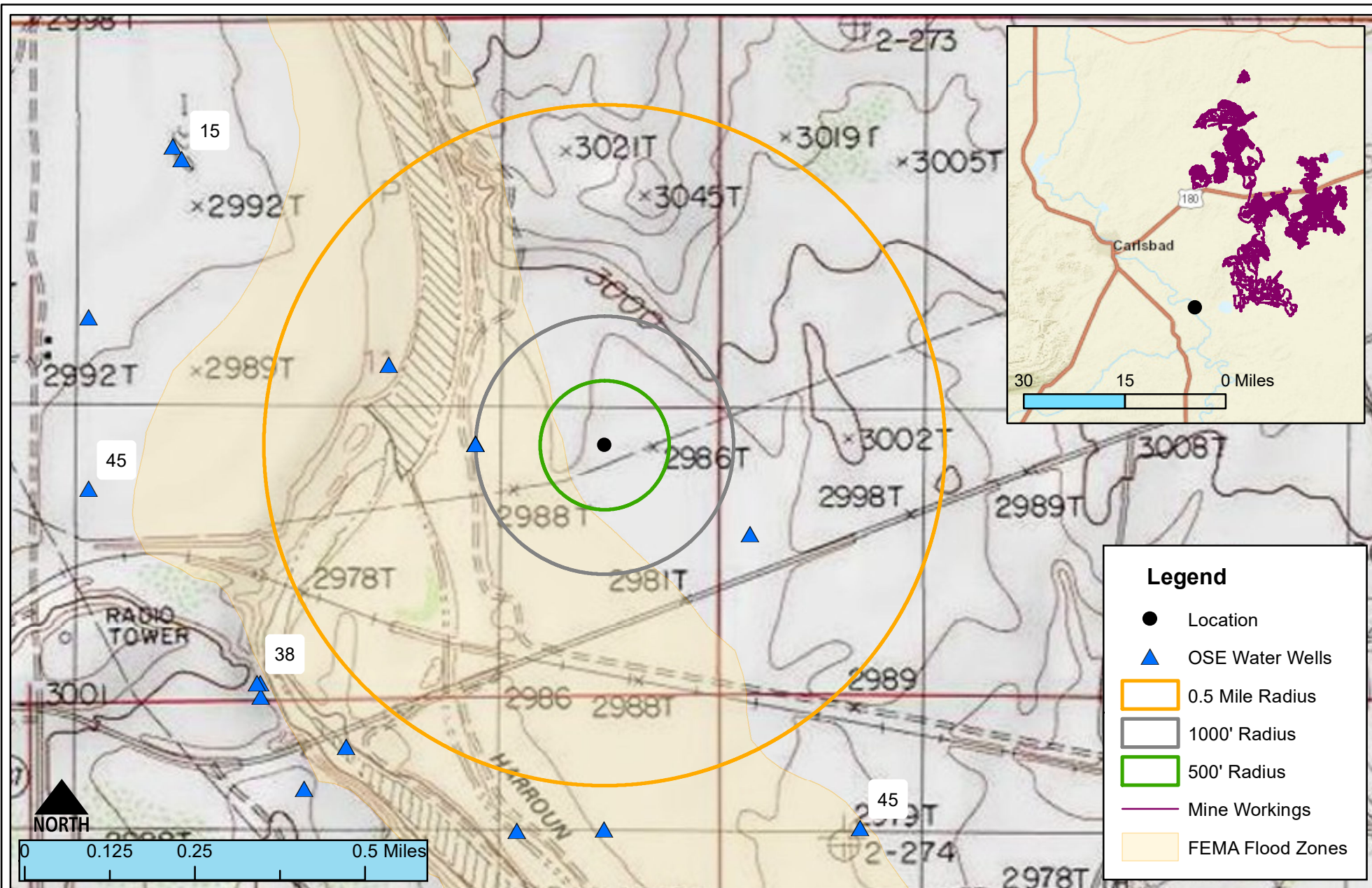
Appendix A: Form C141 Initial and Final

Appendix B: NMOSE Wells Report

Appendix C: Laboratory Analytical Reports

**FIGURE 1**

**REGIONAL SITE VICINITY AND  
WELLHEAD PROTECTION MAP**



Regional Site Vicinity & Wellhead Protection Map  
 Amoco Federal 11 #1 - Rockcliff Energy  
 Sec. 11, T23S, R28E Eddy County, New Mexico

Figure 1

Date Saved:  
8/20/2018

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

Copyright 2015 Souder, Miller & Associates - All Rights Reserved

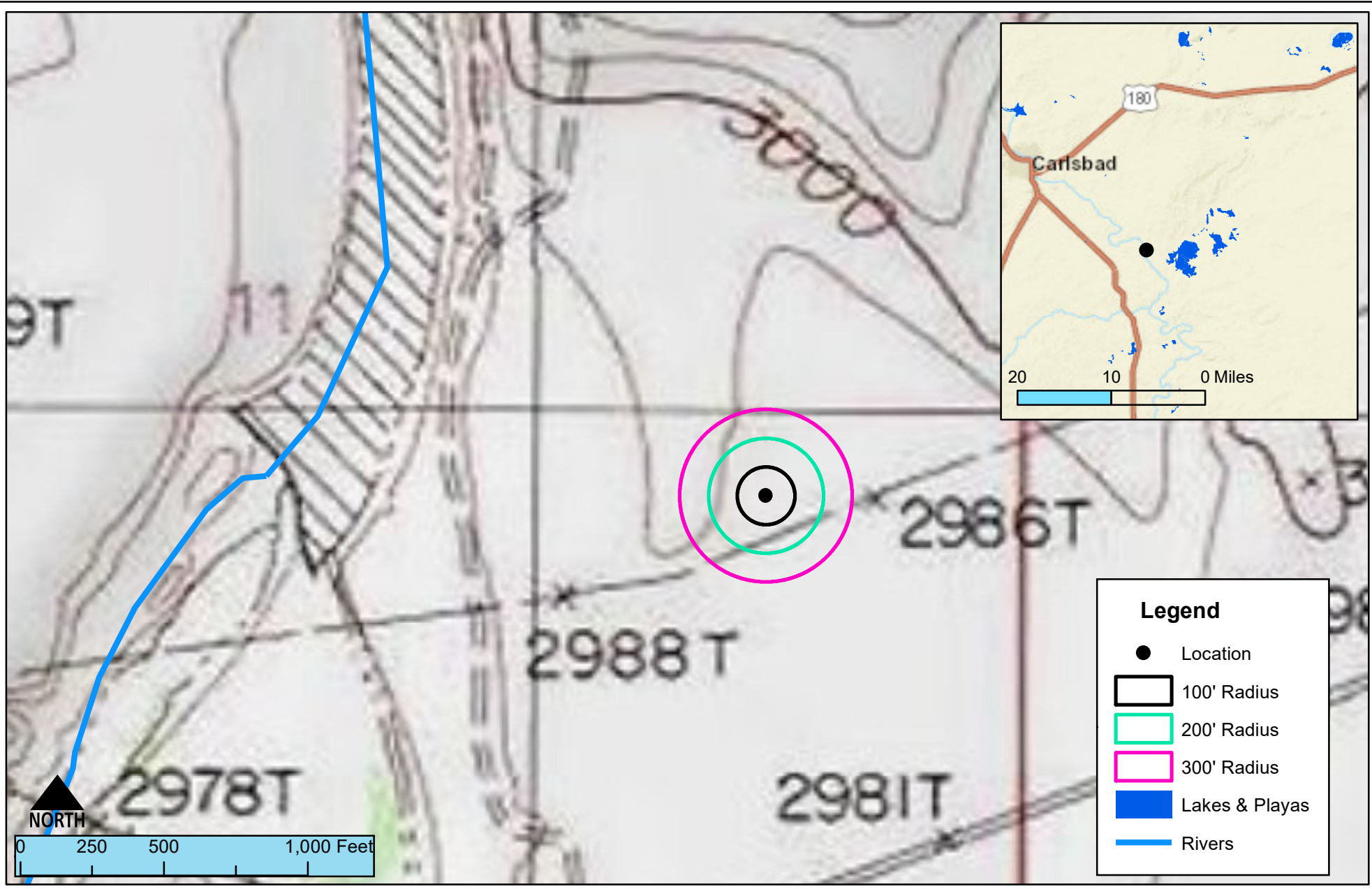
Drawn Melodie Sanjari  
 Checked \_\_\_\_\_  
 Approved \_\_\_\_\_



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**FIGURE 2**  
**SURFACE WATER MAP**





Surface Water Map  
Amoco Federal 11 #1 - Rockcliff Energy  
Sec. 11, T23S, R28E Eddy County, New Mexico

Figure 2

Date Saved: 8/20/2018	By: _____	Date: _____	Revisions	Descr: _____
	By: _____	Date: _____		Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved				

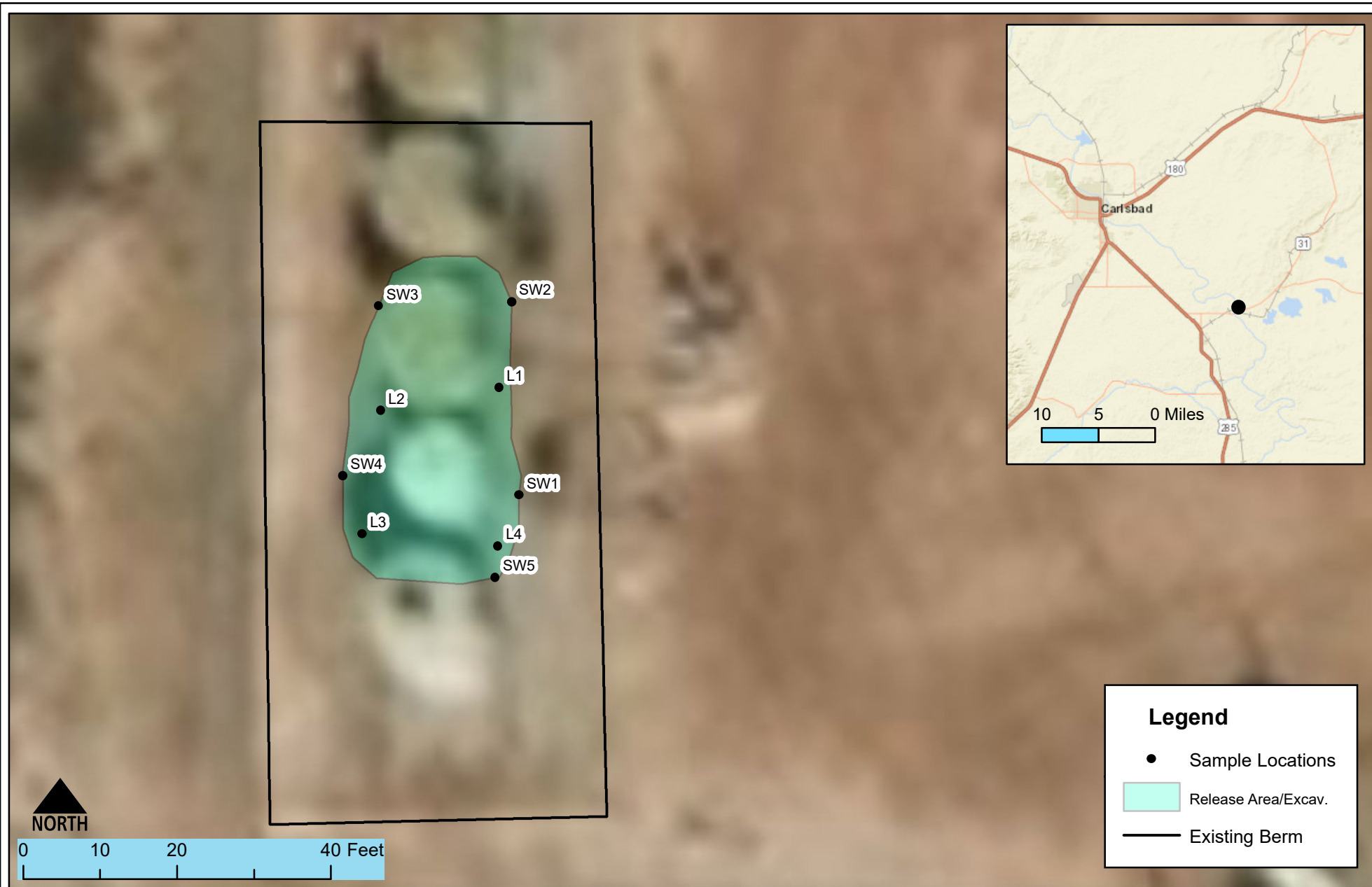
Drawn	<u>Melodie Sanjari</u>
Checked	_____
Approved	_____



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**FIGURE 3**  
**SITE AND SAMPLE**  
**LOCATION MAP**



Site and Sample Location Map  
 State D SWD #001 - EOG Resources  
 Sec. 16, T20S, R24E Eddy County, New Mexico

Figure 3

Date Saved: 8/22/2018	By: _____	Date: _____	Revisions	Descr: _____
	By: _____	Date: _____		Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved				

Drawn	<b>Melodie Sanjari</b>
Checked	_____
Approved	_____



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TABLE 2  
RANKING TABLE

Table 2:  
NMOCD Closure Criteria Justification

Rockcliff Energy  
Amoco Federal (2RP-4513)

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	<50	OSE
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	~1000	OSE
Hortizontal Distance to Nearest Significant Watercourse (ft)	958	USGS 7.5 min. Topographic Map

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		Closure Criteria (units in mg/kg)				
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
< 50' BGS	Yes	600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'		20000	2500	1000	50	10
Surface Water	yes or no	if yes, then				
<300' from continuously flowing watercourse or other significant watercourse?	no	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	no					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	no					
<1000' from fresh water well or spring?	yes					
Human and Other Areas						
<300' from an occupied permanent residence, school, hospital, institution or church?	no					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	no					
<100' from wetland?	no					
within area overlying a subsurface mine	no					
within an unstable area?	no					
within a 100-year floodplain?	no					

**TABLE 3**  
**SUMMARY SAMPLE RESULTS**

## Amoco Fed 11 #1 Sample Summary Table

Table 3

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Action Completed	BTEX	Benzene	GRO	DRO	MRO	Total TPH	Cl-
				ppm	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
NMOCD RRAL's for Site Ranking 20				50 mg/Kg	10 mg/Kg				100 mg/Kg	
L1 (source)	3/5/2018	Surface	excavated	7.5	0.3	190	32000	17000	49000	560
	3/5/2018	1	excavated	--	--	--	--	--	--	54
	3/5/2018	2.5	excavated	<0.097	<0.024	<4.9	<9.8	<49	<49	45
	5/16/2018	5 (refusal)	in-situ	--	--	--	--	--	--	<30
L2	3/5/2018	Surface	scraped	--	--	--	--	--	--	150
	3/5/2018	1.5	in-situ	--	--	--	--	--	--	32
	5/16/2018	5 (refusal)	in-situ	--	--	--	--	--	--	98
L3	3/5/2018	3	excavated	--	--	--	--	--	--	1000
	5/16/2018	5	in-situ	--	--	--	--	--	--	44
	5/16/2018	6.5	in-situ	--	--	--	--	--	--	210
	5/16/2018	7.5 (refusal)	in-situ	--	--	--	--	--	--	400
L4	3/5/2018	1.5	excavated	--	--	--	--	--	--	550
	3/5/2018	3	excavated	--	--	--	--	--	--	860
	5/16/2018	7	in-situ	--	--	--	--	--	--	260
	5/16/2018	8.5 (refusal)	in-situ	--	--	--	--	--	--	620
SW1	8/15/2018	sidewall	in-situ	<0.216	<0.024	<4.8	<9.9	<49	<63.7	--
SW2	8/15/2018	sidewall	in-situ	<0.219	<0.024	<4.9	17	<49	17	--
SW3	8/15/2018	sidewall	in-situ	<0.225	<0.025	<5.0	14	<50	14	--
SW4	8/15/2018	sidewall	in-situ	<0.216	<0.024	<4.8	<9.8	63	63	--
SW5	8/15/2018	sidewall	in-situ	<0.217	<0.024	<4.8	<9.9	<49	<63.7	--
BG	8/15/2018	sidewall	in-situ	--	--	--	--	--	--	<30

**exceeds RRAL's**

excavated

"--" = Not Analyzed



**APPENDIX A**  
**FORM C141 INITIAL AND FINAL**

# NM OIL CONSERVATION

ARTESIA DISTRICT

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

DEC 05 2017

Form C-141  
Revised April 3, 2017

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

RECEIVED

## Release Notification and Corrective Action

NAB1734230353 #37115 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company: Rockcliff Operating New Mexico LLC	Contact: John Turner
Address: 1301 McKinney St, Suite 1300, Houston, TX 77010	Telephone No.: 903-643-3791
Facility Name : Amoco Federal II #1	Facility Type: Oil and Gas Production Facility

Surface Owner: <u>BLM Private</u>	Mineral Owner: BLM	API No. 30-015-22975
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## LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	11	23S	28E	1980	South	990	East	Eddy

Latitude 32.318348 Longitude -104.053379 NAD 83

## NATURE OF RELEASE

Type of Release: Oil	Volume of Release: ~8 bbls	Volume Recovered: ~6 bbls
Source of Release: Oil Storage Tank	Date and Hour of Occurrence: 11/20/17; hour unknown	Date and Hour of Discovery 11/21/17, 1100hrs
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? NA	
By Whom? NA	Date and Hour: NA	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. NA	

If a Watercourse was Impacted, Describe Fully.\*  
NA - The release was contained inside earthen secondary containment.

Describe Cause of Problem and Remedial Action Taken.\*  
Oil storage tank developed small pinholes about 11 feet high on tank and released approximately 8 bbls of oil onto the ground inside the secondary containment. The fluids were removed from the tank and pinholes were repaired.

Describe Area Affected and Cleanup Action Taken.\*  
The release was contained by earthen secondary containment. The soil and pea gravel inside the firewall was impacted around the tanks. Vacuum truck removed 6 bbls of oil from the firewall on the day of occurrence. Removed approximately 18 yds of visually impacted soil from the firewall and hauled to disposal.

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: <u>Mike Martin</u>	OIL CONSERVATION DIVISION	
Printed Name: Mike Martin	Approved by Environmental Specialist: <u>Crystal W</u>	
Title: Field Operations Manager	Approval Date: <u>12/6/17</u>	Expiration Date: <u>N/A</u>
E-mail Address: mike.martin@rockcliffenergy.com	Conditions of Approval: <u>see COA attached</u> Attached <u>20P-4513</u>	
Date: 12/5/17	Phone: 903-643-3791	

\* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **12/05/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number ARP-4513 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 II office in Artesia on or before 1/05/18. 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<sub>6</sub> thru C<sub>36</sub>), 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<sub>6</sub> thru C<sub>36</sub>), 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

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

Form C-141  
Revised April 3, 2017

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

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: Rockcliff Operating New Mexico LLC	Contact: John Turner	
Address: 1301 McKinney St, Suite 1300, Houston, TX 77010	Telephone No.: 903-475-1865	
Facility Name: Amoco Federal 11 #1	Facility Type: Oil & Gas Production Facility	
Surface Owner: BLM	Mineral Owner: BLM	API No. 30-015-22975

**LOCATION OF RELEASE**

Unit Letter I	Section 11	Township 23S	Range 28E	Feet from the 1980	North/South Line South	Feet from the 990	East/West Line East	County Eddy
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Latitude 32.318348 Longitude -104.053379 NAD83

**NATURE OF RELEASE**

Type of Release: Oil	Volume of Release: ~ 8 BBLs	Volume Recovered: ~6 BBLs
Source of Release: Oil Storage Tank	Date and Hour of Occurrence: 11/20/17; hour unknown	Date and Hour of Discovery: 11/21/17 1100hrs
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour: N/A	
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.*  N/A – the release was contained inside an earthen secondary containment		
Describe Cause of Problem and Remedial Action Taken.*  An oil storage tank developed a small pinhole approximately 11 feet up the tank and released approximately 8 BBLs of oil onto the ground, within the secondary containment. The majority of the fluid was recovered, and the pinholes were repaired.		
Describe Area Affected and Cleanup Action Taken.*  The release was contained by the earthen secondary containment. The soil and pea gravel around the source tank were impacted and a vacuum truck was dispatched and removed 6 BBLs of oil from within the firewall on the day of discovery. Approximately 18 yds of visually impacted soil and hauled off for disposal at an NMOCD approved facility. Additional characterization and remediation efforts are outlined on the attached closure report.		
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: 		<b>OIL CONSERVATION DIVISION</b>
Printed Name: John Turner		Approved by Environmental Specialist:
Title: Sr. Environmental Specialist	Approval Date:	Expiration Date:
E-mail Address: jturner@rockcliffenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 9/7/18	Phone: 903-475-1865	

\* Attach Additional Sheets If Necessary

**2RP-4513**

# 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-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">C 04216 POD4</a>		CUB	ED	2	4	1	11	23S	28E	588499	3576513	801	20	10	10
<a href="#">C 04216 POD1</a>		CUB	ED	2	4	1	11	23S	28E	588488	3576534	821	20	10	10
<a href="#">C 00109</a>		CUB	ED	1	3	3	04	23S	27E	588486	3576531	822	168	120	48
<a href="#">C 04216 POD3</a>		CUB	ED	1	4	1	11	23S	28E	588501	3576556	822	23	13	10
<a href="#">C 04216 POD2</a>		CUB	ED	1	4	1	11	23S	28E	588465	3576555	853	20	10	10
<a href="#">C 03469 POD3</a>		CUB	ED	3	4	3	11	23S	28E	588381	3575538	988	47		
<a href="#">C 03469 POD1</a>		CUB	ED	3	4	3	11	23S	28E	588374	3575538	994	68	38	30
<a href="#">C 03469 POD2</a>		CUB	ED	3	4	3	11	23S	28E	588382	3575506	1006	48		
<a href="#">C 01216</a>		CUB	ED	4	1	1	13	23S	28E	589801	3575205*	1089	60	45	15
<a href="#">C 00512 EXPL</a>	O		ED			1	11	23S	28E	588272	3576703*	1094	200	16	184
<a href="#">C 03460 POD1</a>		CUB	ED	3	1	2	14	23S	28E	588857	3575004	1151	100	38	62
<a href="#">C 00512</a>		CUB	ED	4	1	1	11	23S	28E	588188	3576775	1204	175	15	160
<a href="#">C 00315</a>		CUB	ED	3	1	3	11	23S	28E	587973	3575995*	1222	100	45	55
<a href="#">C 00512 CLW198323</a>	O		ED	4	1	1	11	23S	28E	588167	3576806*	1239	100		
<a href="#">C 00512 S</a>		CUB	ED	4	1	1	11	23S	28E	588167	3576806*	1239	100		
<a href="#">C 00608</a>		C	ED	3	3	1	11	23S	28E	587970	3576401*	1255	200		
<a href="#">C 01217</a>		CUB	ED	1	1	3	13	23S	28E	589606	3574593*	1569	87	50	37

Average Depth to Water: **34 feet**

Minimum Depth: **10 feet**

Maximum Depth: **120 feet**

Record Count: 17

UTMNAD83 Radius Search (in meters):

Easting (X): 589190

Northing (Y): 3576106.78

Radius: 1650

\*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.

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](http://www.hallenvironmental.com)

March 19, 2018

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

RE: Amaco Fed 11 2

OrderNo.: 1803502

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 8 sample(s) on 3/8/2018 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](http://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 **1803502**

Date Reported: **3/19/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L1-Surface

**Project:** Amaco Fed 11 2

**Collection Date:** 3/5/2018 12:01:00 PM

**Lab ID:** 1803502-001

**Matrix:** SOIL

**Received Date:** 3/8/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	560	30		mg/Kg	20	3/15/2018 3:25:52 PM	37043
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	32000	980		mg/Kg	100	3/13/2018 1:30:24 PM	36966
Motor Oil Range Organics (MRO)	17000	4900		mg/Kg	100	3/13/2018 1:30:24 PM	36966
Surr: DNOP	0	70-130	S	%Rec	100	3/13/2018 1:30:24 PM	36966
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	190	24		mg/Kg	5	3/12/2018 9:46:59 PM	36923
Surr: BFB	340	15-316	S	%Rec	5	3/12/2018 9:46:59 PM	36923
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.30	0.12		mg/Kg	5	3/12/2018 9:46:59 PM	36923
Toluene	2.6	0.24		mg/Kg	5	3/12/2018 9:46:59 PM	36923
Ethylbenzene	1.6	0.24		mg/Kg	5	3/12/2018 9:46:59 PM	36923
Xylenes, Total	7.5	0.48		mg/Kg	5	3/12/2018 9:46:59 PM	36923
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	5	3/12/2018 9:46:59 PM	36923

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1803502**

Date Reported: **3/19/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L1-1

**Project:** Amaco Fed 11 2

**Collection Date:** 3/5/2018 12:20:00 PM

**Lab ID:** 1803502-002

**Matrix:** SOIL

**Received Date:** 3/8/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	54	30		mg/Kg	20	3/15/2018 4:03:05 PM	37043

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1803502**

Date Reported: **3/19/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L1-2.5

**Project:** Amaco Fed 11 2

**Collection Date:** 3/5/2018 12:45:00 PM

**Lab ID:** 1803502-003

**Matrix:** SOIL

**Received Date:** 3/8/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	45	30		mg/Kg	20	3/15/2018 4:15:29 PM	37043
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/13/2018 4:21:22 PM	36966
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/13/2018 4:21:22 PM	36966
Surr: DNOP	115	70-130		%Rec	1	3/13/2018 4:21:22 PM	36966
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/12/2018 12:18:35 PM	36923
Surr: BFB	91.7	15-316		%Rec	1	3/12/2018 12:18:35 PM	36923
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	3/12/2018 12:18:35 PM	36923
Toluene	ND	0.049		mg/Kg	1	3/12/2018 12:18:35 PM	36923
Ethylbenzene	ND	0.049		mg/Kg	1	3/12/2018 12:18:35 PM	36923
Xylenes, Total	ND	0.097		mg/Kg	1	3/12/2018 12:18:35 PM	36923
Surr: 4-Bromofluorobenzene	99.9	80-120		%Rec	1	3/12/2018 12:18:35 PM	36923

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1803502**

Date Reported: **3/19/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L2-Surface

**Project:** Amaco Fed 11 2

**Collection Date:** 3/5/2018 1:10:00 PM

**Lab ID:** 1803502-004

**Matrix:** SOIL

**Received Date:** 3/8/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	150		30	mg/Kg	20	3/15/2018 4:27:54 PM	37043

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1803502**

Date Reported: **3/19/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L2-1.5

**Project:** Amaco Fed 11 2

**Collection Date:** 3/5/2018 1:15:00 PM

**Lab ID:** 1803502-005

**Matrix:** SOIL

**Received Date:** 3/8/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	32	30		mg/Kg	20	3/15/2018 4:40:19 PM	37043

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1803502**

Date Reported: **3/19/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L3-3

**Project:** Amaco Fed 11 2

**Collection Date:** 3/5/2018 1:59:00 PM

**Lab ID:** 1803502-006

**Matrix:** SOIL

**Received Date:** 3/8/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	1000		30	mg/Kg	20	3/15/2018 4:52:44 PM	37043

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1803502**

Date Reported: **3/19/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L4-1.5

**Project:** Amaco Fed 11 2

**Collection Date:** 3/5/2018 2:15:00 PM

**Lab ID:** 1803502-007

**Matrix:** SOIL

**Received Date:** 3/8/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	550		30	mg/Kg	20	3/15/2018 5:05:09 PM	37043

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1803502**

Date Reported: **3/19/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L4-3

**Project:** Amaco Fed 11 2

**Collection Date:** 3/5/2018 2:30:00 PM

**Lab ID:** 1803502-008

**Matrix:** SOIL

**Received Date:** 3/8/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	860		30	mg/Kg	20	3/16/2018 2:38:06 PM	37065

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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#: 1803502

19-Mar-18

Client: Souder, Miller &amp; Associates

Project: Amaco Fed 11 2

Sample ID	MB-37043		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 37043		RunNo: 49843					
Prep Date:	3/15/2018		Analysis Date: 3/15/2018		SeqNo: 1613173		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-37043		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 37043		RunNo: 49843					
Prep Date:	3/15/2018		Analysis Date: 3/15/2018		SeqNo: 1613174		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.7	90	110			

Sample ID	MB-37065		SampType:	mblk		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	37065		RunNo:	49860				
Prep Date:	3/16/2018		Analysis Date:	3/16/2018		SeqNo:	1614077		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-37065		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 37065		RunNo: 49860					
Prep Date:	3/16/2018		Analysis Date: 3/16/2018		SeqNo: 1614078		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

### Qualifiers:

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1803502

19-Mar-18

Client: Souder, Miller &amp; Associates

Project: Amaco Fed 11 2

Sample ID	LCS-36966		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 36966		RunNo: 49733					
Prep Date:	3/12/2018		Analysis Date: 3/13/2018		SeqNo: 1609104		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	70	130			
Surr: DNOP	5.3		5.000		107	70	130			

Sample ID	MB-36966		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 36966		RunNo: 49733					
Prep Date:	3/12/2018		Analysis Date: 3/13/2018		SeqNo: 1609105		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		105	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  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1803502

19-Mar-18

Client: Souder, Miller &amp; Associates

Project: Amaco Fed 11 2

Sample ID	MB-36923		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 36923		RunNo: 49718					
Prep Date:	3/8/2018		Analysis Date: 3/12/2018		SeqNo: 1608047		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	890		1000		89.0	15	316			

Sample ID	LCS-36923		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 36923		RunNo: 49718					
Prep Date:	3/8/2018		Analysis Date: 3/12/2018		SeqNo: 1608048		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.8	75.9	131			
Surr: BFB	1100		1000		107	15	316			

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1803502

19-Mar-18

Client: Souder, Miller &amp; Associates

Project: Amaco Fed 11 2

Sample ID	MB-36923	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles						
Client ID:	PBS	Batch ID: 36923		RunNo: 49718						
Prep Date:	3/8/2018	Analysis Date: 3/12/2018		SeqNo: 1608075		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	0.96		1.000		95.6	80	120			

Sample ID	LCS-36923		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 36923		RunNo: 49718					
Prep Date:	3/8/2018		Analysis Date: 3/12/2018		SeqNo: 1608076		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.9	77.3	128			
Toluene	1.1	0.050	1.000	0	108	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	104	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	103	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

### Qualifiers:

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

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

## Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1803502

RcptNo: 1

Received By: Mandy Woods 3/8/2018 9:55:00 AM

Completed By: Ashley Gallegos 3/8/2018 3:41:41 PM

Reviewed By: *see 03/09/18*

*labeled by mw 3/9/18*

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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? Yes ☒ No ☐  
(Note discrepancies on chain of custody)  
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? Yes ☒ No ☐  
(If no, notify customer for authorization.)

# of preserved  
bottles checked  
for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

### Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.3	Good	Yes			

# Chain-of-Custody Record

Client: SMT ☒ Standard ☐ Rush

Mailing Address: Corkland

Project Name: Amaco Fed 11 #2

Project #: \_\_\_\_\_

Turn-Around Time: \_\_\_\_\_

Phone #: \_\_\_\_\_

email or Fax#: \_\_\_\_\_

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

Accreditation: ☐ NELAP ☐ Other \_\_\_\_\_

On Ice: ☒ Yes ☐ No

Sample Temperature: 5.9 - 1.0 (C/F) = 4.9

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
3/5/18	12:07	8011	L1-Surf	A03	N/A	1803508
	12:20		L1-1			-001
	12:45		L1 2.5			-002
	1:10		L2-Surf			-003
	1:15		L2-1.5			-004
	1:59		L3-3			-005
	2:15		L4-1.5			-006
	2:30		L4-3			-007
						-008

Project Manager: Austin Weyant

Sampler: LCM

Analysis Request

BTEX + MTBE + TMBs (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 <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
X	X	X					X				
X		X					X				
							X				
							X				
							X				
							X				
							X				

Remarks: Rock Creek

Received by: [Signature] Date: 3/7/18 Time: 1500

Relinquished by: [Signature] Date: 3/7/18 Time: 1500

Received by: [Signature] Date: 3/8/18 Time: 0955



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

May 31, 2018

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

RE: Amoco Fed 11 1

OrderNo.: 1805C50

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/23/2018 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](http://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,

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 **1805C50**

Date Reported: **5/31/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L1-5

**Project:** Amoco Fed 11 1

**Collection Date:** 5/16/2018 11:00:00 AM

**Lab ID:** 1805C50-001

**Matrix:** SOIL

**Received Date:** 5/23/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	5/29/2018 2:30:54 PM	38357

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1805C50**

Date Reported: **5/31/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L2-5

**Project:** Amoco Fed 11 1

**Collection Date:** 5/16/2018 11:10:00 AM

**Lab ID:** 1805C50-002

**Matrix:** SOIL

**Received Date:** 5/23/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	98	30		mg/Kg	20	5/29/2018 2:43:19 PM	38357

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1805C50**

Date Reported: **5/31/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L3-5

**Project:** Amoco Fed 11 1

**Collection Date:** 5/16/2018 8:00:00 AM

**Lab ID:** 1805C50-003

**Matrix:** SOIL

**Received Date:** 5/23/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	44	30		mg/Kg	20	5/29/2018 2:55:44 PM	38357

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1805C50**

Date Reported: **5/31/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L3-6.5

**Project:** Amoco Fed 11 1

**Collection Date:** 5/16/2018 8:15:00 AM

**Lab ID:** 1805C50-004

**Matrix:** SOIL

**Received Date:** 5/23/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	210	30		mg/Kg	20	5/29/2018 3:08:09 PM	38357

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1805C50**

Date Reported: **5/31/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L3-7.5

**Project:** Amoco Fed 11 1

**Collection Date:** 5/16/2018 8:30:00 AM

**Lab ID:** 1805C50-005

**Matrix:** SOIL

**Received Date:** 5/23/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	400		30	mg/Kg	20	5/29/2018 3:20:34 PM	38357

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1805C50**

Date Reported: **5/31/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L4-7

**Project:** Amoco Fed 11 1

**Collection Date:** 5/16/2018 10:00:00 AM

**Lab ID:** 1805C50-006

**Matrix:** SOIL

**Received Date:** 5/23/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	260	30		mg/Kg	20	5/29/2018 3:32:58 PM	38357

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1805C50**

Date Reported: **5/31/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L4-8.5

**Project:** Amoco Fed 11 1

**Collection Date:** 5/16/2018 10:30:00 AM

**Lab ID:** 1805C50-007

**Matrix:** SOIL

**Received Date:** 5/23/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	620		30	mg/Kg	20	5/29/2018 3:45:23 PM	38357

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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#: 1805C50

31-May-18

Client: Souder, Miller &amp; Associates

Project: Amoco Fed 11 1

Sample ID	MB-38357		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 38357		RunNo: 51572					
Prep Date:	5/29/2018		Analysis Date: 5/29/2018		SeqNo: 1682543		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-38357		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 38357		RunNo: 51572					
Prep Date:	5/29/2018		Analysis Date: 5/29/2018		SeqNo: 1682544		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.5	90	110			

### Qualifiers:

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

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

# Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1805C50

ReptNo: 1

Received By: Isaiah Ortiz 5/23/2018 10:00:00 AM

Completed By: Erin Melendrez 5/23/2018 10:59:49 AM

Reviewed By:

Labeled By: *RB* 5/23/18

## 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? Yes ☒ No ☐

(Note discrepancies on chain of custody)

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? Yes ☒ No ☐

(If no, notify customer for authorization)

# of preserved  
bottles checked  
for pH:

*11/13 5/23/18*  
(2 or 12 unless noted)

Adjusted:

Checked by:

## Special Handling (if applicable)

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

Person Notified:

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	1.3	Good	Yes			

# Chain-of-Custody Record

Client: SMT

Cabland

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush

Project Name:

Amoco Fed 11 #4

Project #:



**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

Project Manager:

Austin Weyl

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.3

Date Time Matrix Sample Request ID

5-16-18 11:00 Rox L1-S

11:10 Rox L2-S

8:00 L3-S

8:05 L3-6.5

9:30 L3-7.5

9:30 L4-7

10:00 L4-8.5

10:30 L4-8.5

5/22/18

Date: 5-22-18

Time: 11:00

Relinquished by: [Signature]

Relinquished by: [Signature]

Date: 5/22/18

Time: 19:00

Relinquished by: [Signature]

Relinquished by: [Signature]

Container Type and #

Preservative Type

HEAL No.

bag

bag

-001

-002

-003

-004

-005

-006

-007

1805C50

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<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

Remarks:

Some water, from the cooler ice leaked into the zip-bags for L1-S and L4-7. 5/23/18





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

August 23, 2018

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

RE: Amoco Federal

OrderNo.: 1808A90

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/17/2018 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](http://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,

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 **1808A90**

Date Reported: **8/23/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** BG1

**Project:** Amoco Federal

**Collection Date:** 8/15/2018 2:00:00 PM

**Lab ID:** 1808A90-001

**Matrix:** SOIL

**Received Date:** 8/17/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	8/21/2018 11:54:49 AM	39907

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1808A90**

Date Reported: **8/23/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** SW1

**Project:** Amoco Federal

**Collection Date:** 8/15/2018 10:30:00 AM

**Lab ID:** 1808A90-002

**Matrix:** SOIL

**Received Date:** 8/17/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>IRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/21/2018 12:58:11 AM	39855
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/21/2018 12:58:11 AM	39855
Surr: DNOP	84.8	50.6-138		%Rec	1	8/21/2018 12:58:11 AM	39855
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/20/2018 3:52:50 PM	39861
Surr: BFB	90.4	15-316		%Rec	1	8/20/2018 3:52:50 PM	39861
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	8/20/2018 3:52:50 PM	39861
Toluene	ND	0.048		mg/Kg	1	8/20/2018 3:52:50 PM	39861
Ethylbenzene	ND	0.048		mg/Kg	1	8/20/2018 3:52:50 PM	39861
Xylenes, Total	ND	0.096		mg/Kg	1	8/20/2018 3:52:50 PM	39861
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	8/20/2018 3:52:50 PM	39861

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1808A90**

Date Reported: **8/23/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** SW2

**Project:** Amoco Federal

**Collection Date:** 8/15/2018 10:45:00 AM

**Lab ID:** 1808A90-003

**Matrix:** SOIL

**Received Date:** 8/17/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>IRM</b>
Diesel Range Organics (DRO)	17	9.8		mg/Kg	1	8/21/2018 1:47:15 AM	39855
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/21/2018 1:47:15 AM	39855
Surr: DNOP	82.1	50.6-138		%Rec	1	8/21/2018 1:47:15 AM	39855
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/20/2018 5:49:55 PM	39861
Surr: BFB	92.2	15-316		%Rec	1	8/20/2018 5:49:55 PM	39861
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	8/20/2018 5:49:55 PM	39861
Toluene	ND	0.049		mg/Kg	1	8/20/2018 5:49:55 PM	39861
Ethylbenzene	ND	0.049		mg/Kg	1	8/20/2018 5:49:55 PM	39861
Xylenes, Total	ND	0.097		mg/Kg	1	8/20/2018 5:49:55 PM	39861
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	8/20/2018 5:49:55 PM	39861

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1808A90**

Date Reported: **8/23/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** SW3

**Project:** Amoco Federal

**Collection Date:** 8/15/2018 10:52:00 AM

**Lab ID:** 1808A90-004

**Matrix:** SOIL

**Received Date:** 8/17/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>IRM</b>
Diesel Range Organics (DRO)	14	9.9		mg/Kg	1	8/21/2018 2:11:37 AM	39855
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/21/2018 2:11:37 AM	39855
Surr: DNOP	82.2	50.6-138		%Rec	1	8/21/2018 2:11:37 AM	39855
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/20/2018 6:13:16 PM	39861
Surr: BFB	92.7	15-316		%Rec	1	8/20/2018 6:13:16 PM	39861
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	8/20/2018 6:13:16 PM	39861
Toluene	ND	0.050		mg/Kg	1	8/20/2018 6:13:16 PM	39861
Ethylbenzene	ND	0.050		mg/Kg	1	8/20/2018 6:13:16 PM	39861
Xylenes, Total	ND	0.10		mg/Kg	1	8/20/2018 6:13:16 PM	39861
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	8/20/2018 6:13:16 PM	39861

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1808A90**

Date Reported: **8/23/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** SW4

**Project:** Amoco Federal

**Collection Date:** 8/15/2018 11:07:00 AM

**Lab ID:** 1808A90-005

**Matrix:** SOIL

**Received Date:** 8/17/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>IRM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/21/2018 3:00:28 AM	39855
Motor Oil Range Organics (MRO)	63	49		mg/Kg	1	8/21/2018 3:00:28 AM	39855
Surr: DNOP	79.8	50.6-138		%Rec	1	8/21/2018 3:00:28 AM	39855
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/20/2018 6:36:41 PM	39861
Surr: BFB	88.1	15-316		%Rec	1	8/20/2018 6:36:41 PM	39861
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	8/20/2018 6:36:41 PM	39861
Toluene	ND	0.048		mg/Kg	1	8/20/2018 6:36:41 PM	39861
Ethylbenzene	ND	0.048		mg/Kg	1	8/20/2018 6:36:41 PM	39861
Xylenes, Total	ND	0.096		mg/Kg	1	8/20/2018 6:36:41 PM	39861
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	8/20/2018 6:36:41 PM	39861

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1808A90**

Date Reported: **8/23/2018**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** SW5

**Project:** Amoco Federal

**Collection Date:** 8/15/2018 11:30:00 AM

**Lab ID:** 1808A90-006

**Matrix:** SOIL

**Received Date:** 8/17/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>IRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/21/2018 3:24:57 AM	39855
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/21/2018 3:24:57 AM	39855
Surr: DNOP	72.2	50.6-138		%Rec	1	8/21/2018 3:24:57 AM	39855
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/20/2018 7:00:03 PM	39861
Surr: BFB	89.5	15-316		%Rec	1	8/20/2018 7:00:03 PM	39861
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	8/20/2018 7:00:03 PM	39861
Toluene	ND	0.048		mg/Kg	1	8/20/2018 7:00:03 PM	39861
Ethylbenzene	ND	0.048		mg/Kg	1	8/20/2018 7:00:03 PM	39861
Xylenes, Total	ND	0.097		mg/Kg	1	8/20/2018 7:00:03 PM	39861
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	8/20/2018 7:00:03 PM	39861

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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#: 1808A90

23-Aug-18

Client: Souder, Miller &amp; Associates

Project: Amoco Federal

Sample ID	MB-39907		SampType:	mblk		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	39907		RunNo:	53581				
Prep Date:	8/21/2018		Analysis Date:	8/21/2018		SeqNo:	1768275		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-39907		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 39907		RunNo: 53581					
Prep Date:	8/21/2018		Analysis Date: 8/21/2018		SeqNo: 1768276		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	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  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1808A90

23-Aug-18

Client: Souder, Miller &amp; Associates

Project: Amoco Federal

Sample ID	LCS-39855		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 39855		RunNo: 53552					
Prep Date:	8/17/2018		Analysis Date: 8/20/2018		SeqNo: 1766421		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.2	70	130			
Surr: DNOP	4.5		5.000		90.3	50.6	138			

Sample ID	MB-39855		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 39855		RunNo: 53552					
Prep Date:	8/17/2018		Analysis Date: 8/20/2018		SeqNo: 1766422		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	9.3		10.00		93.0	50.6	138			

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1808A90

23-Aug-18

Client: Souder, Miller &amp; Associates

Project: Amoco Federal

Sample ID	MB-39861		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 39861		RunNo: 53568					
Prep Date:	8/17/2018		Analysis Date: 8/20/2018		SeqNo: 1765927		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		88.0	15	316			

Sample ID	LCS-39861		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 39861		RunNo: 53568					
Prep Date:	8/17/2018		Analysis Date: 8/20/2018		SeqNo: 1765928		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.3	75.9	131			
Surr: BFB	970		1000		96.9	15	316			

### Qualifiers:

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1808A90

23-Aug-18

Client: Souder, Miller &amp; Associates

Project: Amoco Federal

Sample ID	MB-39861		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 39861		RunNo: 53568					
Prep Date:	8/17/2018		Analysis Date: 8/20/2018		SeqNo: 1765954		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID	LCS-39861		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 39861		RunNo: 53568					
Prep Date:	8/17/2018		Analysis Date: 8/20/2018		SeqNo: 1765955		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.9	77.3	128			
Toluene	0.96	0.050	1.000	0	95.9	79.2	125			
Ethylbenzene	0.96	0.050	1.000	0	96.0	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	97.4	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

### Qualifiers:

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

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting 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: 1808A90

RcptNo: 1

Received By: Erin Melendrez

8/17/2018 8:35:00 AM

Completed By: Ashley Gallegos

8/17/2018 9:03:23 AM

Reviewed By:

SAB 08/17/18

labeled by: ENM 8/17/18

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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? Yes ☒ No ☐

(Note discrepancies on chain of custody)

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? Yes ☒ No ☐

(If no, notify customer for authorization.)

# of preserved bottles checked for pH: ENM 8/17/18  
( $<3$  or  $>12$  unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

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

Person Notified:

By Whom:

Regarding:

Client Instructions:

Date:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.0	Good	Yes			

[www.hallenvironmental.com](http://www.hallenvironmental.com)

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

## Analysis Request

*[Signature]* This service is not intended to be substituted for other accredited laboratories. Any sub-contracted data will be clearly notated on the analytical report.