



January 17, 2018

#5E25774- BG27

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

SUBJECT: SOIL REMEDIATION WORK PLAN FOR THE INCIDENT AT THE ANNE COM #202H
RELEASE, EDDY COUNTY, NEW MEXICO

Dear Mr. Bratcher,

On behalf of Matador Resources, Souder, Miller & Associates (SMA) has prepared this WORK PLAN that describes the assessment, initial delineation and proposed remediation for a release associated with the Anne Com #202H. The site is in UNIT E, SECTION 15, TOWNSHIP 24S, RANGE 28E, NMPM, Eddy 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	Anne COM #202H
Company	Matador Resources
RP Number	2RP-4515
API Number	30-015-44417
Location	32.219370° -104.080831°
Estimated Date of Release	11/23/17
Date Reported to NMOCD	11/27/17
Land Owner	Private
Reported To	Mike Bratcher
Source of Release	Equipment Failure
Released Material	Frac Fluid (fresh and recycled water)
Released Volume	268 bbls
Recovered Volume	175 bbls
Net Release	93 bbls
Nearest Waterway	1.0 Miles from Black River
Depth to Groundwater	Estimated to be below 50'
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	20
SMA Response Dates	Initial: 11/27/17

1.0 Background

The release occurred due to frac equipment failing. The source occurred on the well pad and the release moved east then south along the bar ditch of the road. A vac truck was utilized to remove all standing fluid on site.

2.0 Site Ranking and Land Jurisdiction

The release site is located approximately 1.0 miles south of the Black River, with an elevation of approximately 3,012 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. 10 wells are located within a one-mile radius of the site. Well C03824 was used in ground water level determination. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be 42 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 November 27, 2017 SMA was on site for an initial site evaluation to sample and map the extent of the release. The release was a mix of fresh and recycled water used in fracing. On December 6, 2017 after receiving 811 clearance, SMA field personnel assessed the release area. Soil samples were field-screened using an EC meter and collected to characterize and delineate the release. 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 analyses including chlorides by Method 300.0, volatile organics (BTEX) by Method 8021B, and MRO, DRO, and GRO by EPA Method 8015D. Sample locations are depicted on Figure 2. All field screening and laboratory results are summarized in Table 3. Laboratory reports are included in Appendix C.

4.0 Soil Remediation Workplan

SMA will begin the excavation of affected soils, with approval from area utilities owners via 811 and NMOCD. SMA will continuously guide the excavation activities by collecting composite soil samples for field screening with a mobile titration unit (EPA 4500). Then entire spill area will be excavated to depths of one-foot bgs as shown in Figure 2. This excavation will remove the affected soils on and adjacent to the well pad. Approximately 825 cubic yards of contaminated soil are projected to be removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil will be transported for proper disposal at Lea Land, near Carlsbad, NM, an NMOCD permitted disposal facility.

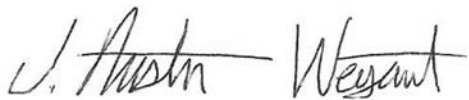
5.0 Scope and Limitations

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

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

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:



Austin Weyant
Project Scientist



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

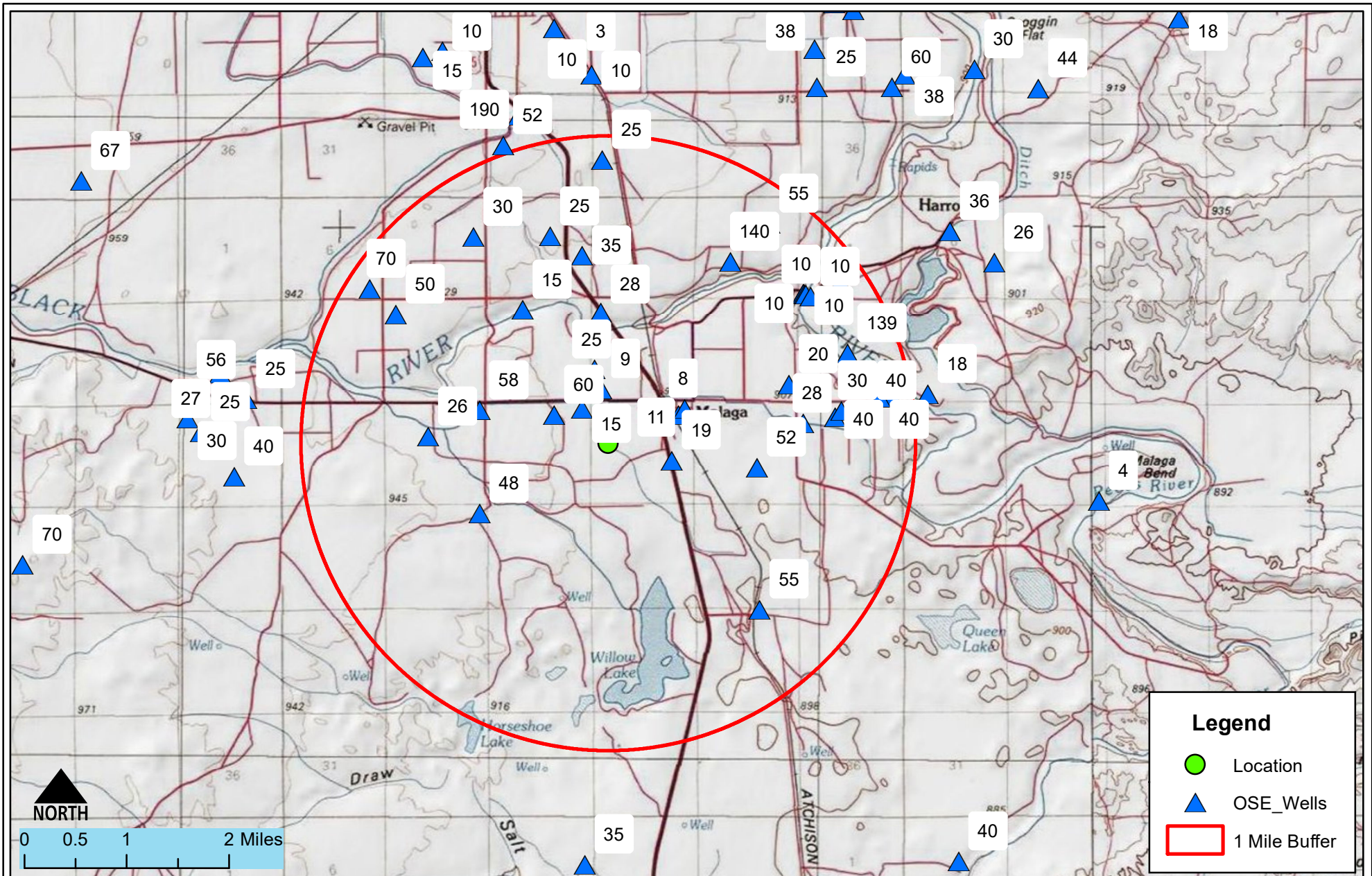
Appendices:

Appendix A: Form C141 Initial

Appendix B: NMOSE Wells Report

Appendix C: Laboratory Analytical Reports

FIGURE 1
VICINITY AND NMOSE
DATA MAP



VICINITY AND NMOSE DATA MAP
 Anne Com #202H - Matador Resources
 S: 15 T24S R28E, Eddy County New Mexico

Figure 1

Date Saved:
12/4/2017

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

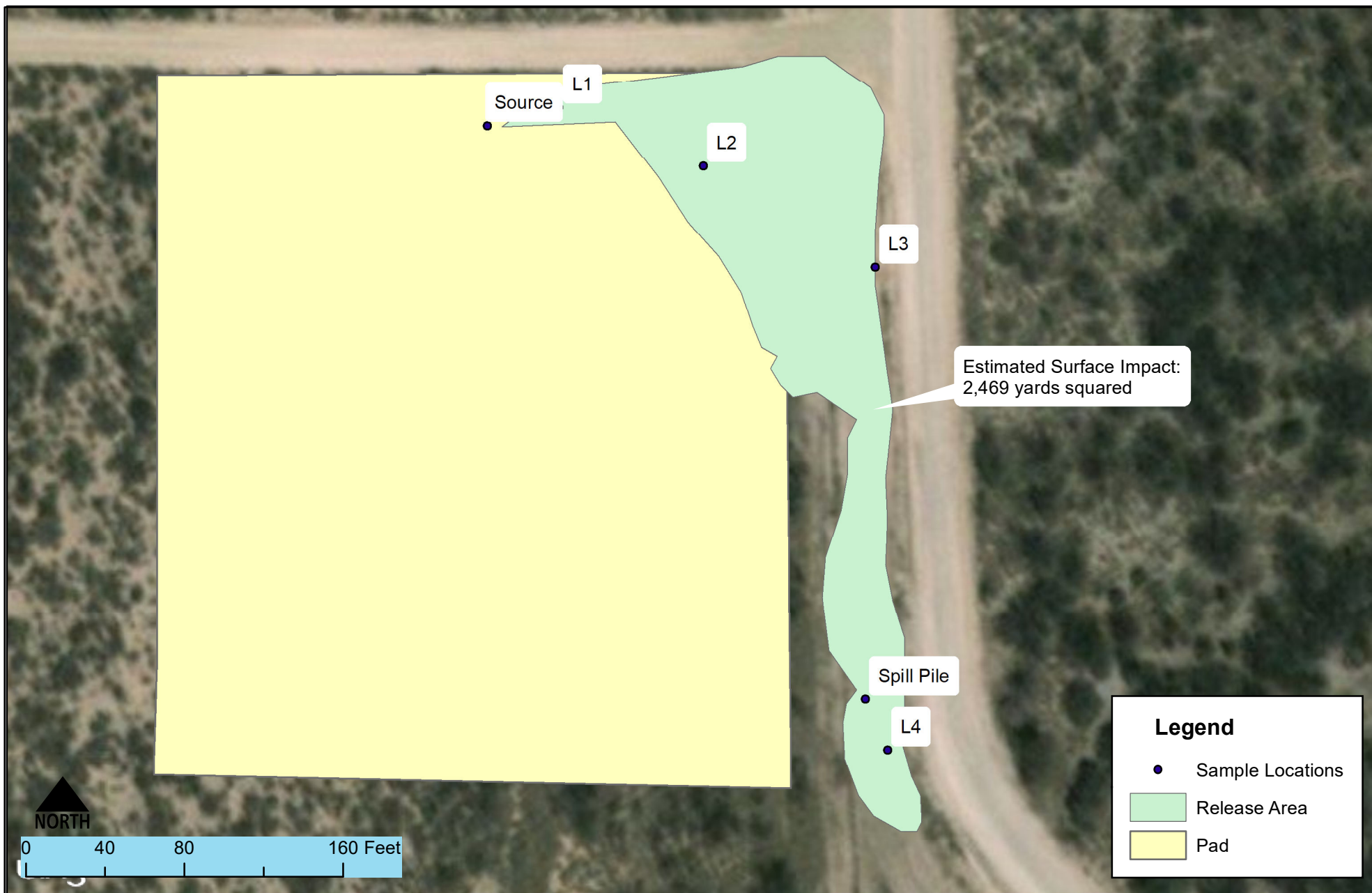
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Drawn Lucas Middleton
 Checked _____
 Approved _____



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



Legend

- Sample Locations
- Release Area
- Pad

Site and Sample Location Map
 Anne Com #202H - Matador Resources
 S: 15 T24S R28E, Eddy County New Mexico

Figure 2

Date Saved:
12/21/2017

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

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Drawn	<u>Lucas Middleton</u>
Checked	_____
Approved	_____



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TABLE 3
SUMMARY SAMPLE RESULTS

Anne COM #202H

Table 3

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Proposed Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- Field Screens (ppm)	Cl- Laboratory mg/Kg
NMOCD RRAL's for Site Ranking 20				50 mg/Kg	10 mg/Kg				100 mg/Kg		
Source	12/6/2017	1'	In-Situ	<0.093	<0.023	<4.7	<9.9	<50	<50	430	230
	12/6/2017	2'	In-Situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<30
	12/6/2017	2.5'	In-Situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	780
L1	11/27/2017	Surface	Excavate	N/A	N/A	N/A	N/A	N/A	N/A	11,481	N/A
L2	11/27/2017	Surface	Excavate	N/A	N/A	N/A	N/A	N/A	N/A	8,758	N/A
	12/6/2017	1'	In-Situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300
	12/6/2017	2'	In-Situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	220
	12/6/2017	3'	In-Situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1000
L3	11/27/2017	Surface	Excavate	N/A	N/A	N/A	N/A	N/A	N/A	9,905	N/A
	12/6/2017	1'	In-Situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	280
	12/6/2017	2'	In-Situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	88
	12/6/2017	3'	In-Situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	110
L4	11/27/2017	Surface	Excavate	N/A	N/A	N/A	N/A	N/A	N/A	8,830	N/A
	12/6/2017	1'	In-Situ	N/A	N/A	N/A	N/A	N/A	N/A	172	270
	12/6/2017	2'	In-Situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1200
Spill Pile	11/27/2017	Surface	Sample	N/A	N/A	N/A	N/A	N/A	N/A	4,315	N/A
BG	12/6/2017	1'	Sample	N/A	N/A	N/A	N/A	N/A	N/A	N/A	50
	12/6/2017	2'	Sample	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33
	12/6/2017	2.5'	Sample	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36

N/A = Not Analyzed

APPENDIX A
FORM C141 INITIAL

NM OIL CONSERVATION

ARTESIA DISTRICT

DEC 07 2017

Form C-141
Revised April 3, 2017

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

RECEIVED to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1734231291

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Matador Resources #228937	Contact John Hurt
Address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	Telephone No. 972-371-5499
Facility Name Anne COM RB #202H	Facility Type Oil Well

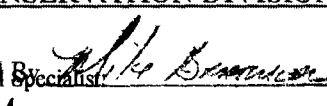
Surface Owner Private	Mineral Owner Private	API No. 300-015-44417
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LOCATION OF RELEASE

Unit Letter E	Section 15	Township 24S	Range 28E	Feet from the N	North/South Line 2376	Feet from the W	East/West Line 877	County Eddy
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Latitude 32.2189835 Longitude -104.0830436 NAD83

NATURE OF RELEASE

Type of Release Frac Fluid	Volume of Release 268 bbl	Volume Recovered 175 bbl
Source of Release Equipment Error	Date and Hour of Occurrence 11/23/17	Date and Hour of Discovery 8pm
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom? Casey Snow	Date and Hour	
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		
Describe Cause of Problem and Remedial Action Taken.* Piping from fracing operations failed. Pipe broke and release fluids on pad and bar ditch. Vac truck removed all standing fluid.		
Describe Area Affected and Cleanup Action Taken.* The release occurred on the north portion of the production pad. The release moved east and south down the bar ditch associated with the road. SMA will delineate and submit a work plan for approval of remediation actions.		
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: Casey Snow	Approved by Environmental Specialist: 	
Title: Manager RES	Approval Date: 12/8/17	Expiration Date: N/A
E-mail Address: JHurt@matadorresources.com	Conditions of Approval: See attached	
Date: 12/6/2017 Phone: 972-371-5439	Attached <input checked="" type="checkbox"/> 2RP.4515	

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 12/7/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number ARP-4515 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 1/7/2018. 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; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- **Vertical delineation of soil impacts.** Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- **Nominal detection limits for field and laboratory analyses must be provided.**
- **Composite sampling is not generally allowed.**
- **Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined.** Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

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

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

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

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

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

Jim Griswold

OCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

505-476-3465

jim.griswold@state.nm.us

Bratcher, Mike, EMNRD

From: Lucas Middleton <lucas.middleton@soudermiller.com>
Sent: Thursday, December 7, 2017 9:14 AM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD
Cc: John Hurt; Csnow (Csnow@matadorresources.com)
Subject: Anne COM 202H C141- Initial
Attachments: 2898_001.pdf

Good Morning,

On behalf of Matador Resources, SMA is filing with you the C141- Initial for a release occurred on the Anne COM #202H. See attachment.

Thank You

Lucas Middleton
Staff Scientist
(575) 499-9244 (mobile)



Souder, Miller & Associates
Engineering • Environmental • Surveying
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Carlsbad, NM 88220
www.soudermiller.com

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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
C 02836	C	ED		2	2	2	16	24S	28E	586203	3565676*	639		15	
C 00962	C	ED			3	3	10	24S	28E	586505	3565992*	821	63	9	54
C 03824 POD1	CUB	ED		4	1	2	16	24S	28E	585770	3565578	923	290	60	230
C 00890		ED		3	3	4	10	24S	28E	587211	3565897*	944	50		
C 00488	C	ED		2	1	2	15	24S	28E	587412	3565688*	958	64	8	56
C 03132	C	ED		1	2	4	15	24S	28E	587616	3564877*	1057	90	19	71
C 00764		ED		3	1	3	10	24S	28E	586399	3566292*	1134	118	25	93
C 00346	C	ED			2	2	15	24S	28E	587715	3565591*	1188	90	32	58
C 02524 POD2	C	ED		2	2	2	15	24S	28E	587814	3565690*	1316	90	11	79
C 02244	C	LE		3	1	2	22	24S	28E	587224	3563865*	1451	260		

Average Depth to Water: **22 feet**

Minimum Depth: **8 feet**

Maximum Depth: **60 feet**

Record Count: 10

UTMNAD83 Radius Search (in meters):

Easting (X): 586601.51

Northing (Y): 3565176

Radius: 1609

*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

December 18, 2017

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

RE: Anne Com 202 H

OrderNo.: 1712483

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 8 sample(s) on 12/8/2017 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1712483

Date Reported: 12/18/2017

CLIENT: Souder, Miller & Associates
Project: Anne Com 202 H

Lab Order: 1712483

Lab ID: 1712483-001 **Collection Date:** 12/6/2017 12:20:00 PM
Client Sample ID: L2-1 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	300	30		mg/Kg	20	12/15/2017 2:01:17 PM	35535

Lab ID: 1712483-002 **Collection Date:** 12/6/2017 12:25:00 PM
Client Sample ID: L2-2 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	220	30		mg/Kg	20	12/15/2017 2:38:30 PM	35535

Lab ID: 1712483-003 **Collection Date:** 12/6/2017 12:40:00 PM
Client Sample ID: L2-3 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	1000	30		mg/Kg	20	12/15/2017 2:50:55 PM	35535

Lab ID: 1712483-004 **Collection Date:** 12/6/2017 1:10:00 PM
Client Sample ID: L3-1 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	280	30		mg/Kg	20	12/15/2017 12:57:44 PM	35538

Lab ID: 1712483-005 **Collection Date:** 12/6/2017 1:13:00 AM
Client Sample ID: L3-2 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	88	30		mg/Kg	20	12/15/2017 1:10:09 PM	35538

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

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

Analytical Report

Lab Order: 1712483

Date Reported: 12/18/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller & Associates
Project: Anne Com 202 H**Lab Order:** 1712483**Lab ID:** 1712483-006**Collection Date:** 12/6/2017 1:18:00 PM**Client Sample ID:** L3-3**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	110	30		mg/Kg	20	12/15/2017 1:22:34 PM	35538

Lab ID: 1712483-007**Collection Date:** 12/6/2017 2:00:00 PM**Client Sample ID:** L4-1**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	270	30		mg/Kg	20	12/15/2017 1:34:58 PM	35538

Lab ID: 1712483-008**Collection Date:** 12/6/2017 2:08:00 AM**Client Sample ID:** L4-2**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1200	75		mg/Kg	50	12/15/2017 2:49:26 PM	35538

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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#: 1712483

18-Dec-17

Client: Souder, Miller & Associates

Project: Anne Com 202 H

Sample ID	MB-35535		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 35535		RunNo: 47816					
Prep Date:	12/15/2017		Analysis Date: 12/15/2017		SeqNo: 1531039		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-35535		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 35535		RunNo: 47816					
Prep Date:	12/15/2017		Analysis Date: 12/15/2017		SeqNo: 1531040		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.4	90	110			

Sample ID	MB-35538		SampType:	mblk		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	35538		RunNo:	47827				
Prep Date:	12/15/2017		Analysis Date:	12/15/2017		SeqNo:	1531133		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-35538		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 35538		RunNo: 47827					
Prep Date:	12/15/2017		Analysis Date: 12/15/2017		SeqNo: 1531134		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
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: 1712483

RcptNo: 1

Received By: Erin Melendrez

12/8/2017 9:35:00 AM

Completed By: Isaiah Ortiz

12/8/2017 10:56:31 AM

Reviewed By: ENM

12/8/17

u. n. g.

I G

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ?

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☐

No ☐

No VOA Vials ☒

11. Were any sample containers received broken?

Yes ☐

No ☒

12. Does paperwork match bottle labels?

Yes ☒

No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

(If no, notify customer for authorization.)

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

☐ Standard ☒ Rush 5 day turn

Anne COM 202 444

email or Fax#:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other[illegible]

Sample Request ID

12-1'

12-21

15631

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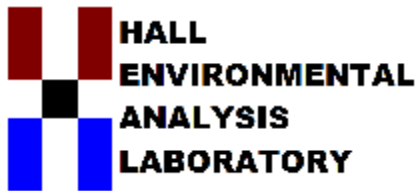
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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

courier



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

December 18, 2017

Austin Weyant
Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-7040
FAX (505) 885-0776

RE: Anne Com 202 11

OrderNo.: 1712480

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/8/2017 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712480

Date Reported: 12/18/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BG-1

Project: Anne Com 202 11

Collection Date: 12/6/2017 1:42:00 PM

Lab ID: 1712480-001

Matrix: SOIL

Received Date: 12/8/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	50	30		mg/Kg	20	12/15/2017 11:19:56 AM	35535

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 1712480

Date Reported: 12/18/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BG-2

Project: Anne Com 202 11

Collection Date: 12/6/2017 1:45:00 PM

Lab ID: 1712480-002

Matrix: SOIL

Received Date: 12/8/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	33	30		mg/Kg	20	12/15/2017 11:32:20 AM	35535

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 1712480

Date Reported: 12/18/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: BG-2.5

Project: Anne Com 202 11

Collection Date: 12/6/2017 1:53:00 PM

Lab ID: 1712480-003

Matrix: SOIL

Received Date: 12/8/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	36	30		mg/Kg	20	12/15/2017 12:09:34 PM	35535

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 1712480

Date Reported: 12/18/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: Source 1

Project: Anne Com 202 11

Collection Date: 12/6/2017 11:57:00 AM

Lab ID: 1712480-004

Matrix: SOIL

Received Date: 12/8/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	230	30		mg/Kg	20	12/15/2017 12:21:59 PM	35535
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/12/2017 6:43:34 PM	35433
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/12/2017 6:43:34 PM	35433
Surr: DNOP	85.2	70-130		%Rec	1	12/12/2017 6:43:34 PM	35433
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/11/2017 11:10:18 AM	35409
Surr: BFB	114	15-316		%Rec	1	12/11/2017 11:10:18 AM	35409
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	12/11/2017 11:10:18 AM	35409
Toluene	ND	0.047		mg/Kg	1	12/11/2017 11:10:18 AM	35409
Ethylbenzene	ND	0.047		mg/Kg	1	12/11/2017 11:10:18 AM	35409
Xylenes, Total	ND	0.093		mg/Kg	1	12/11/2017 11:10:18 AM	35409
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	12/11/2017 11:10:18 AM	35409

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 **1712480**

Date Reported: **12/18/2017**

CLIENT: Souder, Miller & Associates

Client Sample ID: Source 2

Project: Anne Com 202 11

Collection Date: 12/6/2017 12:00:00 PM

Lab ID: 1712480-005

Matrix: SOIL

Received Date: 12/8/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	ND	30		mg/Kg	20	12/15/2017 12:34:24 PM	35535

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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 1712480

Date Reported: 12/18/2017

CLIENT: Souder, Miller & Associates

Client Sample ID: Source 2.5

Project: Anne Com 202 11

Collection Date: 12/6/2017 12:13:00 PM

Lab ID: 1712480-006

Matrix: SOIL

Received Date: 12/8/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	780		30	mg/Kg	20	12/15/2017 12:46:49 PM	35535

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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#: 1712480

18-Dec-17

Client: Souder, Miller & Associates

Project: Anne Com 202 11

Sample ID	MB-35535		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 35535		RunNo: 47816					
Prep Date:	12/15/2017		Analysis Date: 12/15/2017		SeqNo: 1531039		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-35535		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 35535		RunNo: 47816					
Prep Date:	12/15/2017		Analysis Date: 12/15/2017		SeqNo: 1531040		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.4	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#: 1712480

18-Dec-17

Client: Souder, Miller & Associates

Project: Anne Com 202 11

Sample ID	LCS-35433		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 35433		RunNo: 47696					
Prep Date:	12/11/2017		Analysis Date: 12/12/2017		SeqNo: 1524952		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.7	73.2	114			
Surr: DNOP	4.4		5.000		88.8	70	130			

Sample ID	MB-35433	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 35433			RunNo: 47696					
Prep Date:	12/11/2017	Analysis Date: 12/12/2017			SeqNo: 1524953		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	9.2		10.00		91.9	70	130			

Sample ID	1712480-004AMS	SampType: MS			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	Source 1	Batch ID: 35433			RunNo: 47696					
Prep Date:	12/11/2017	Analysis Date: 12/12/2017			SeqNo: 1525778		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	9.3	46.43	0	84.7	55.8	125			
Surr: DNOP	3.7		4.643		80.0	70	130			

Sample ID	1712480-004AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	Source 1		Batch ID: 35433		RunNo: 47696					
Prep Date:	12/11/2017		Analysis Date: 12/12/2017		SeqNo: 1525779		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.2	46.08	0	92.6	55.8	125	8.14	20	
Surr: DNOP	4.2		4.608		90.6	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical 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#: 1712480

18-Dec-17

Client: Souder, Miller & Associates

Project: Anne Com 202 11

Sample ID	MB-35409		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 35409		RunNo: 47674					
Prep Date:	12/8/2017		Analysis Date: 12/11/2017		SeqNo: 1523843		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	1100		1000		110	15	316			

Sample ID	LCS-35409		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 35409		RunNo: 47674					
Prep Date:	12/8/2017		Analysis Date: 12/11/2017		SeqNo: 1523844		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	108	75.9	131			
Surr: BFB	1200		1000		122	15	316			

Sample ID	1712480-004AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	Source 1		Batch ID: 35409		RunNo: 47674					
Prep Date:	12/8/2017		Analysis Date: 12/11/2017		SeqNo: 1523847		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.6	22.87	0	111	77.8	128			
Surr: BFB	1100		914.9		124	15	316			

Sample ID	1712480-004AMSD		SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	Source 1		Batch ID:	35409		RunNo:	47674				
Prep Date:	12/8/2017		Analysis Date:	12/11/2017		SeqNo:	1523848		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	26	4.8	24.22	0	109	77.8	128	4.03	20		
Surr: BFB	1200		969.0		128	15	316	0	0		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical 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#: 1712480

18-Dec-17

Client: Souder, Miller & Associates

Project: Anne Com 202 11

Sample ID	MB-35409		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 35409		RunNo: 47674					
Prep Date:	12/8/2017		Analysis Date: 12/11/2017		SeqNo: 1523870		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		104	80	120			

Sample ID	LCS-35409		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 35409		RunNo: 47674					
Prep Date:	12/8/2017		Analysis Date: 12/11/2017		SeqNo: 1523871		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	93.9	77.3	128			
Toluene	0.92	0.050	1.000	0	92.3	79.2	125			
Ethylbenzene	0.87	0.050	1.000	0	87.3	80.7	127			
Xylenes, Total	2.6	0.10	3.000	0	85.7	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	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: 1712480

RcptNo: 1

Received By: Erin Melendrez

12/8/2017 9:35:00 AM

EM

Completed By: Isaiah Ortiz

12/8/2017 10:39:07 AM

IO

Reviewed By: *ENH*

12/8/17

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

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

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Not Present			

