



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

March 29, 2018

#5E25774-BG19

NMOCD District II
Crystal Weaver
811 S. First St.
Artesia, NM 88210

SUBJECT: 2RP-4290 CLOSURE REPORT FOR THE INCIDENT AT THE TIGER 14-24S-28E RB, #202H & #222H PAD, EDDY COUNTY, NEW MEXICO

Dear Crystal Weaver,

On behalf of Matador Resources, Souder, Miller & Associates (SMA) has prepared this CLOSURE REPORT that describes the assessment, initial delineation and remediation for a release associated with the Tiger 14-24S-28E RB #202H & #222H pad (Tiger #202) release. The site is in UNIT H, SECTION 14, 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	TIGER 14-24S-28E RB, #202H & #222H PAD
Company	Matador Resources
RP Number	2RP-4290
API Number	30-015-44119
Location	32.220092, -104.0505577
Estimated Date of Release	7/6/2017
Date Reported to NMOCD	7/6/2017
Land Owner	Private
Reported To	Tim Gum
Source of Release	Gasket on line Failed
Released Material	Produced Water
Released Volume	52 bbls
Recovered Volume	15 bbls
Net Release	37 bbls
Nearest Waterway	1.1 mile West of The Pecos River
Depth to Groundwater	Estimated to be less than 50'
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	20
SMA Response Dates	Initial: 8/30/17

Closure 2RP-4290 Tiger 14-24S-28E-RB
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1.0 Background

The ring Gasket on the zipper manifold washed out during hydraulic stimulation operations. Vacuum trucks were called in to clean up standing water, and the ring gasket was replaced. The affected area is approximately a 50 foot radius around the wellhead. For further information see C-141 initial located in appendix A.

The fluid released recycled and treated produced water from the Tiger Facility 2RF-106, operating under 19.15.34.12 NMAC which allows the disposition of produced water for use as a drilling or completion fluid at a drilling site or disposition under other Division authorization. The produced water treated at the Tiger Facility 2RF-106 has been treated to reduce total dissolved solids found in the produced water, see appendix D for third party lab analysis of the inlet produced water from the Tiger Facility 2RF-106. Also included is the New Mexico Water Resource Research Institute (WRRI) data on the Tiger location formation produced water data.

The soil types located under and around the Tiger #202 have a moderate to high electrical conductivity (EC) according to United States Department of Agriculture (USDA) and Natural Resource Conservation Service NRCS. "(EC) is the electrolytic conductivity of an extract from saturated soil paste, expressed as decisiemens per meter at 25 degrees C. Electrical conductivity is a measure of the concentration of water-soluble salts in soils. It is used to indicate saline soils. High concentrations of neutral salts, such as sodium chloride and sodium sulfate." (NRCS soil sampling guide) According to the Eddy County Soil Survey the soils in and around the Tiger #202 location are moderately high in sodium chloride and sodium sulfate with baseline (EC) from 2-5 decisiemens per meter at 25 degrees C see NRCS Electrical Conductivity Map (Figure #3).

SMA and Matador have confirmed this moderately high (EC) effect from the area soil types in several baseline sampling events conducted on Matadors behalf prior to E&P operations (see appendix D). All attached third party lab results have been collected in the same area soil types that surround the irrigated river valley near the Tiger #202 location. The four representative baseline sample events where collected by SMA and are summarized in (Table # 4).

- Tom Walters baseline soil data shows pre-Matador oil and gas operation EPA 300 CI- from 2300ppm-3900ppm
- Warren baseline soil data shows pre-Matador oil and gas operation EPA 300 CI- from 170ppm- 2400ppm
- Guitar baseline soil data shows pre-Matador oil and gas operation EPA 300 CI- from 2200ppm- 4000ppm
- B Banker baseline soil data shows pre-Matador oil and gas operation EPA 300 CI- from 55ppm- 3500ppm

In addition, SMA and Matador have confirmed this moderately high (EC) effect from the area soil types in Background delineation from sampling events conducted on Matadors behalf by SMA for remedial purposes.

- Paul background soil data BG1, BG2, and BG3 shows non-disturbed by Matador oil and gas operations EPA 300 CI- from 43ppm-5300ppm
- Tiger background soil data BG1 shows non-disturbed by Matador oil and gas operations EPA 300 CI- from 24ppm-4800ppm

As outlined above, the high concentrations of neutral salts, such as sodium chloride and sodium sulfate should be found in the Tiger #202 soil types; Gypsum Cottonwood, Karro Loam, Pima Silt, Regan and Reeves loams. Several samples were taken at one background location to a total depth of 10 feet and tested for sulfates. SMA has also included data from three other background locations in the same soil types as located at the Paul location. Sulfates can be used as a reference criterion on this release due to the natural parent material found in the area soil types and its low concentrations found in the produced water from the area wells, formations, and the Tiger Facility 2RF-106 (see attached data in

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appendix E). Four background sample locations (shown in Table #4) were used to establish the background level of sulfates in the area and serve as further proof of the NRCS, USDA and SMA baseline data. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis for sulfates (all lab reports are located in appendix D).

2.0 Site Ranking and Land Jurisdiction

The release site is located approximately 1.1 miles west of the Pecos River, with an elevation of approximately 2,966 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. 0 wells are located within a 1,000 foot radius of the site. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 40' feet below ground surface (bgs). This determination was made using OSE well and elevation correction to determine the depth of ground water below location.

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 August 28, 2017, with approval from area utilities owners via 811, Matador and its subcontractors performed a 0.5 feet bgs scrap of the entire Tiger #202 location. This is standard operating procedure

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March 29, 2017

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for Matador locations to provide an unaffected surface for completion operations. All soil is then hauled to and NMOCD approved facility for disposal. SMA was on site June 21, 2017 and sampled the pre-scraped location pad. SMA collected 10 discrete soil sample locations and an unaffected background. All samples were screened in the field with a mobile (EC) unit (EPA 4500). SMA also mapped the affected area on the pad, a to scale map of the sample locations an affected area can be found in Figure #2.

SMA returned on August 30th 2017 after the Tiger #202 location pad had been scraped and had the top 0.5 feet removed and disposed. The Background sample location BG1 as denoted on Figure #2, was delineated to 10 feet bgs with EPA method 300 chloride concentrations in the of 1600ppm at the surface. Location L1 is the discrete sample location closes to the source of the release. L1 was delineated to 10ft bgs. All sample locations depicted on Figure 2 (Sample Location Map) along with sampling details within Table 3. All samples were collected and processed according to NMOCD soil sampling procedures. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis for total Chlorides using EPA Method 300.0.

4.0 Summary of Soil Remediation

Closure samples were collected at the final depth of pad scrape in discrete locations as depicted in the Figure #2 map. No sidewall samples were collected because the locations pad was scraped in its entirety, thus leaving no sidewalls. All closure samples collected on August 30th 2017 by SMA are less than the background concentration of naturally occurring chloride.

The closure samples taken were tested for Sulfates and Calcium in addition to Chlorides. Sulfates and Calcium were used as a reference criterion on this release to help proved added data to the high background Chlorides from previous agricultural activities and soil parent material, as discussed with the in section 1 of this report. Soils high in Sulfates can historically be high in Chloride constituent as well, all soils tested on location where high in Sulfides even at depth even though the released fluid is not Sulfide rich.

The recycled produced water used to hydraulic stimulate the wells located at the Tiger #202 contains 490ppm Sulfate, 6800ppm of Calcium and 1000000 ppm of Chloride in its untreated state, as shown in the lab analysis provided in Appendix D. As shown in Table # 3 the soils left in-situ on location have less than or equal concentrations of Calcium when compared to the background. The closure samples tested for Chlorides and Calcium compared to the background sample results to help determine that contaminated soils were adequately removed. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis.

Closure 2RP-4290 Tiger 14-24S-28E-RB
March 29, 2017

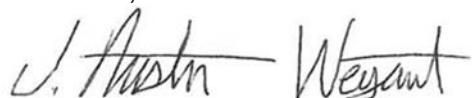
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5.0 Scope and Limitations

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

If there are any questions regarding this report, please contact either Austin Weyant at 575-689-8801 or Cynthia Gray at 505-325-7535, extension 1104.

Submitted by:
SOUDER, MILLER & ASSOCIATES



Austin Weyant
Project Scientist

Reviewed by:



Reid S. Allan
Principal Scientist, Sr. Vice President

ATTACHMENTS:

Figures:

Figure 1: Vicinity and NMOSE Well Head Protection Map
Figure 2: Site and Sample Location Map
Figure 3: NRCS Electrical Conductivity Map

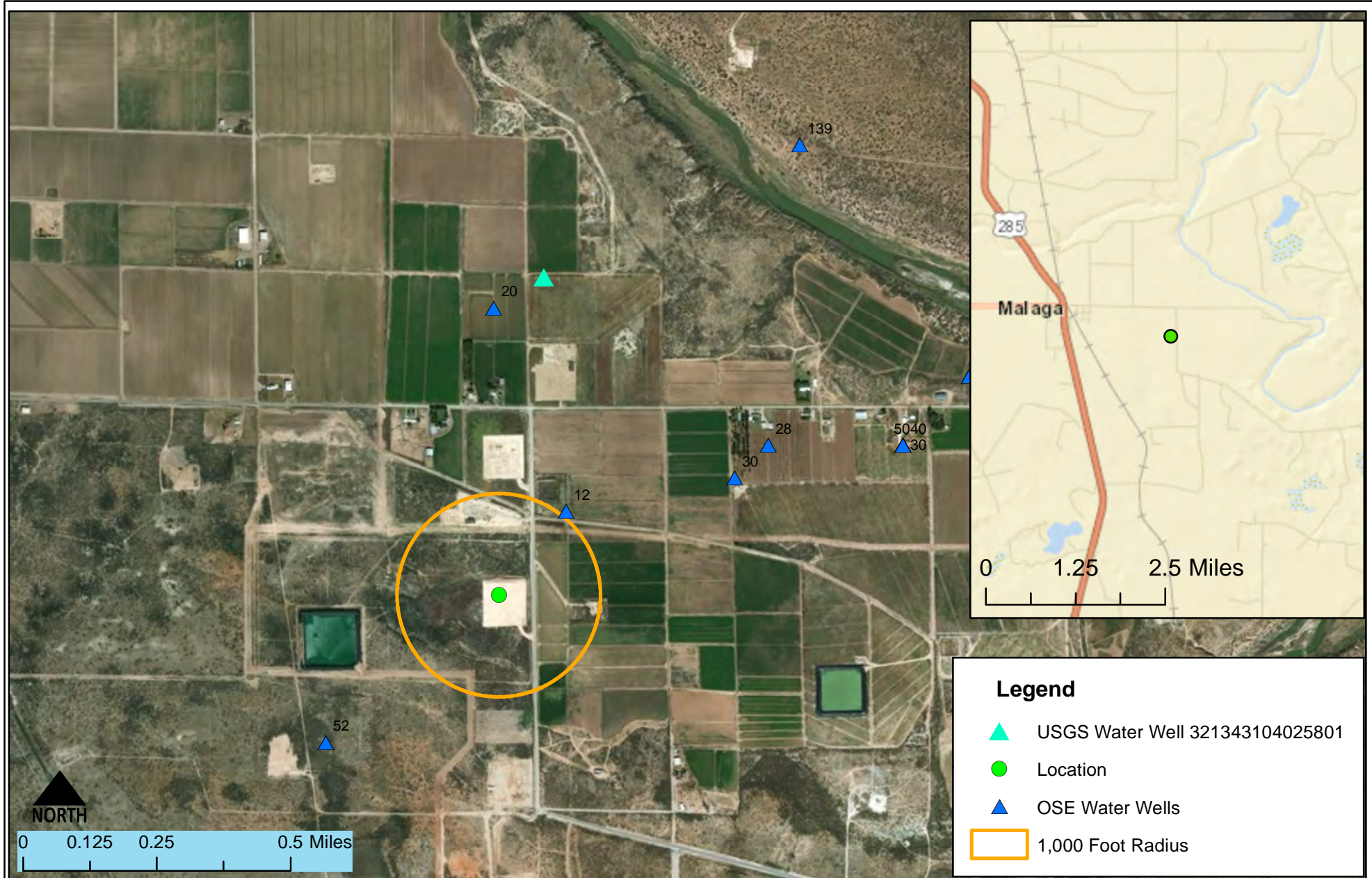
Tables:

Table 3: Summary of Sample Results
Table 4: Summary of Baseline and Background Sample Results

Appendices:

Appendix A: Form C141 Final
Appendix B: NMOSE Wells Report
Appendix C: Laboratory Analytical Reports
Appendix D: Laboratory Analytical Reports (BASELINE AND BACKGROUND)

FIGURE 1 VICINITY AND NMOSE DATA MAP



Vicinity and Well Head Protection Map
 Matador- Tiger #202H
 S; 14 T24S R28E, New Mexico

Figure 1

Date Saved:
3/28/2018

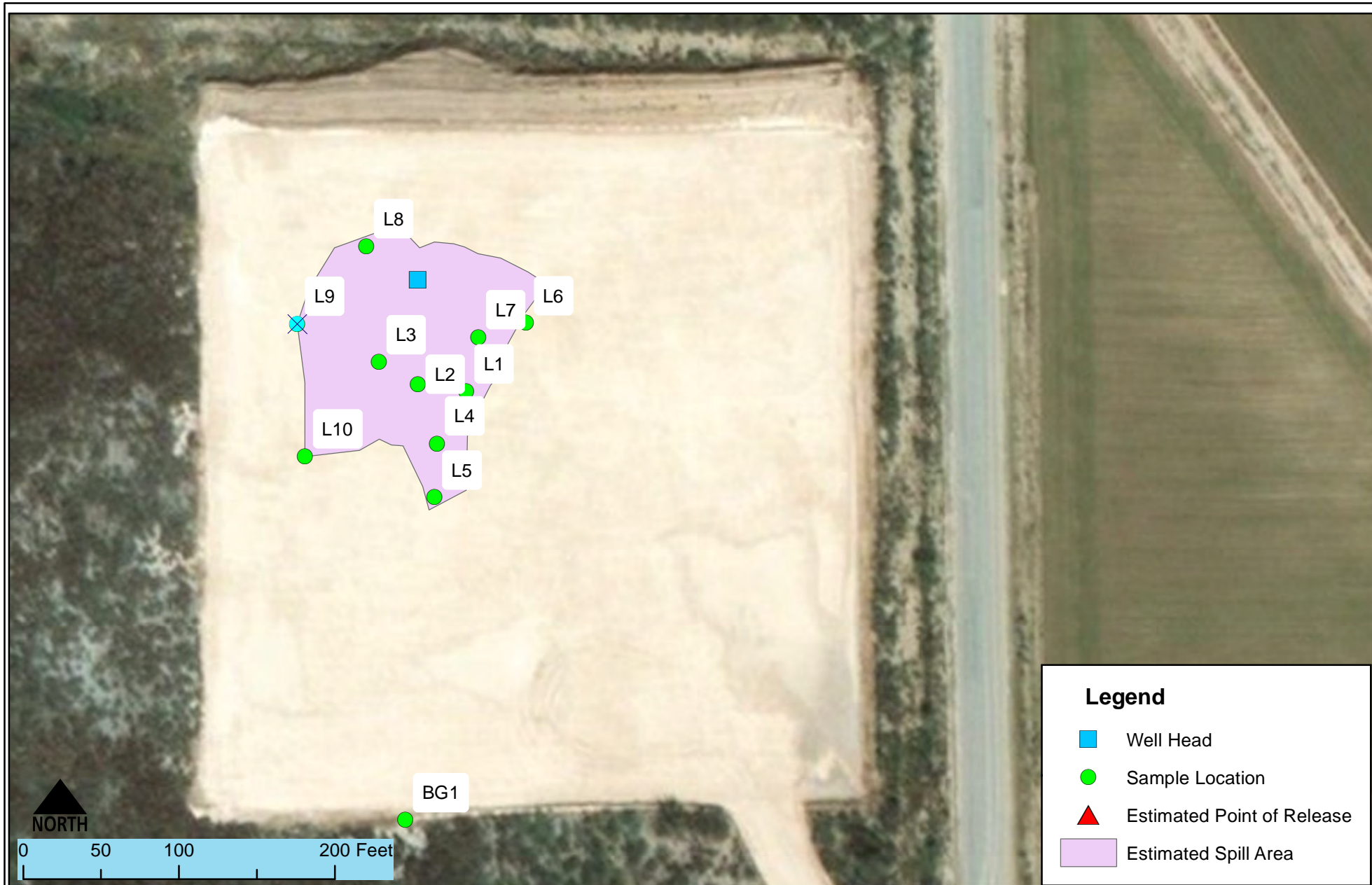
Revisions
 By: _____ Date: _____ Descr: _____
 By: _____ Date: _____ Descr: _____
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Drawn Lucas Middleton
 Checked _____
 Approved _____



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



Detailed Site and Sample Map
 Matador- Tiger #202H
 S; 14 T24S R28E, New Mexico

Figure 2

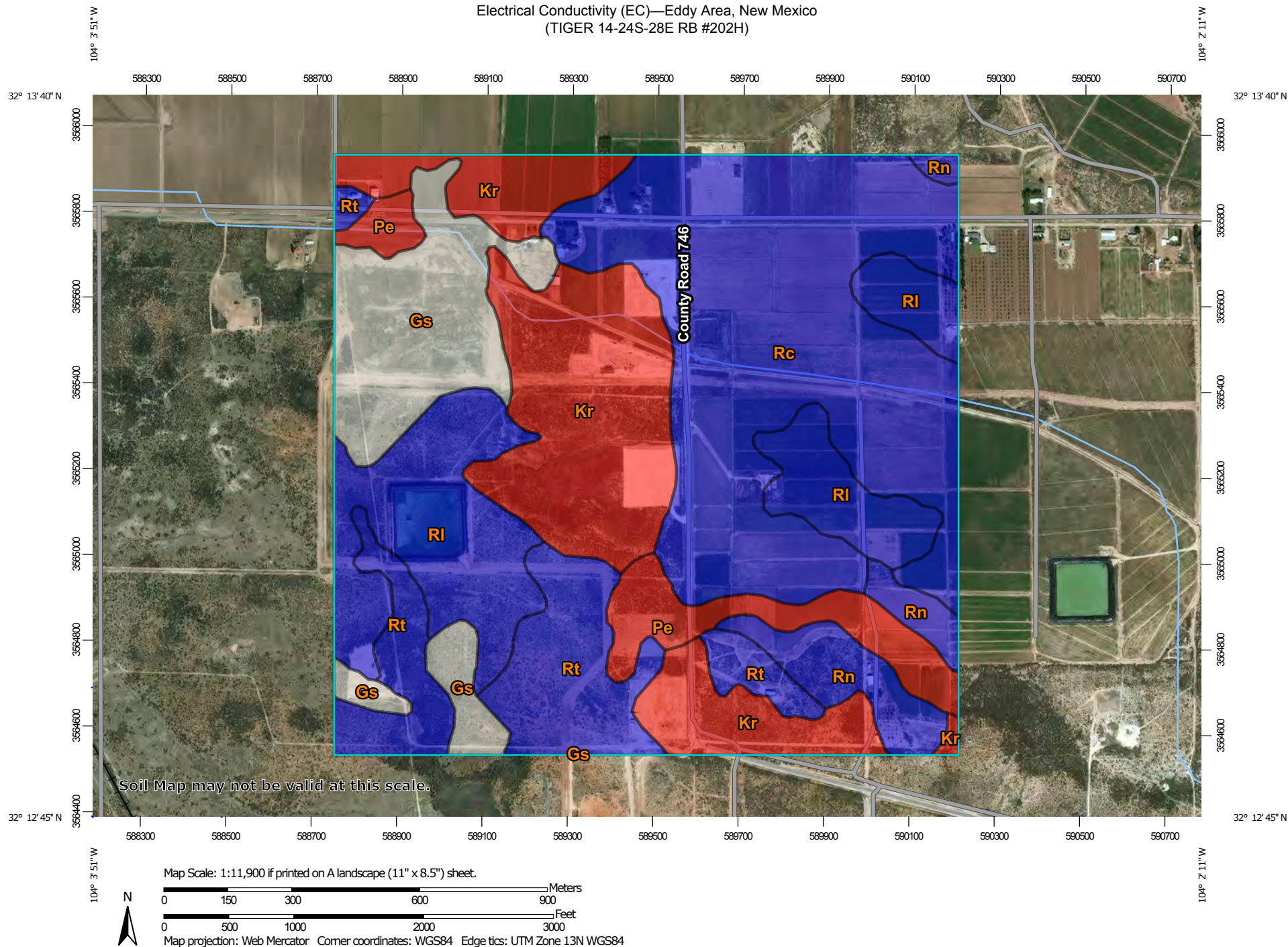
Date Saved: 3/29/2018	By: _____	Date: _____	Revisions	Descr: _____	Drawn	Lucas Middleton
	By: _____	Date: _____		Descr: _____	Checked	_____
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201 South Halaguena Street
 Carlsbad, New Mexico 88221
 (575) 689-7040
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FIGURE 3:
NRCS ELECTRICAL
CONDUCTIVITY MAP

Electrical Conductivity (EC)—Eddy Area, New Mexico
(TIGER 14-24S-28E RB #202H)



Natural Resources
Conservation Service


Web Soil Survey
National Cooperative Soil Survey

3/28/2018
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Electrical Conductivity (EC)—Eddy Area, New Mexico
(TIGER 14-24S-28E RB #202H)




MAP LEGEND

Area of Interest (AOI)




 Area of Interest (AOI)

Soils




Soil Rating Polygons

 ≤ 2.0
 > 2.0 and ≤ 5.0
 Not rated or not available

Soil Rating Lines

 ≤ 2.0
 > 2.0 and ≤ 5.0
 Not rated or not available






Soil Rating Points

 ≤ 2.0
 > 2.0 and ≤ 5.0
 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico
 Survey Area Data: Version 13, Sep 9, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 21, 2013—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Electrical Conductivity (EC)

Map unit symbol	Map unit name	Rating (decisiemens per meter)	Acres in AOI	Percent of AOI
Gs	Gypsum land-Cottonwood complex, 0 to 3 percent slopes		58.3	11.5%
Kr	Karro loam, 0 to 1 percent slopes	2.0	103.6	20.4%
Pe	Pima silt loam, 0 to 1 percent slopes	2.0	27.6	5.4%
Rc	Reagan loam, 0 to 1 percent slopes	5.0	157.5	31.0%
RI	Reeves loam, 0 to 1 percent slopes	5.0	79.9	15.7%
Rn	Reeves loam, 1 to 3 percent slopes	5.0	23.3	4.6%
Rt	Reeves loam, shallow, 0 to 1 percent slopes	5.0	57.6	11.3%
Totals for Area of Interest			507.8	100.0%

Description

Electrical conductivity (EC) is the electrolytic conductivity of an extract from saturated soil paste, expressed as decisiemens per meter at 25 degrees C. Electrical conductivity is a measure of the concentration of water-soluble salts in soils. It is used to indicate saline soils. High concentrations of neutral salts, such as sodium chloride and sodium sulfate, may interfere with the absorption of water by plants because the osmotic pressure in the soil solution is nearly as high as or higher than that in the plant cells.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: decisiemens per meter

Aggregation Method: Dominant Component

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Component" returns the attribute value associated with the component with the highest percent composition in the map unit. If more than one component shares the highest percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher attribute value should be returned in the case of a percent composition tie. The result returned by this aggregation method may or may not represent the dominant condition throughout the map unit.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Interpret Nulls as Zero: No

This option indicates if a null value for a component should be converted to zero before aggregation occurs. This will be done only if a map unit has at least one component where this value is not null.

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

For an attribute of a soil horizon, a depth qualification must be specified. In most cases it is probably most appropriate to specify a fixed depth range, either in centimeters or inches. The Bottom Depth must be greater than the Top Depth, and the Top Depth can be greater than zero. The choice of "inches" or "centimeters" only applies to the depth of soil to be evaluated. It has no influence on the units of measure the data are presented in.

When "Surface Layer" is specified as the depth qualifier, only the surface layer or horizon is considered when deriving a value for a component, but keep in mind that the thickness of the surface layer varies from component to component.

When "All Layers" is specified as the depth qualifier, all layers recorded for a component are considered when deriving the value for that component.

Whenever more than one layer or horizon is considered when deriving a value for a component, and the attribute being aggregated is a numeric attribute, a weighted average value is returned, where the weighting factor is the layer or horizon thickness.

TABLE 3

SUMMARY SAMPLE RESULTS

Tiger # 202

Table 3.

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Proposed Action	Calcium mg/L	Magnesium mg/L	Sodium mg/L	Sulfate mg/Kg	Cl- Field Screens (ppm)	Cl- Laboratory mg/Kg
L1	7/21/2017	0.5	scraped	--	--	--	--	22950	--
	8/30/2017	1	in-situ	690	130	990	3200	1062	990
	8/30/2017	2	in-situ	850	130	440	4600	--	660
	8/30/2017	3	in-situ	1500	470	2800	3800	--	2500
	8/30/2017	4	in-situ	1700	550	3000	2900	4071	4200
	8/30/2017	5	in-situ	2000	70000	3600	2700	--	5000
	8/30/2017	6	in-situ	1900	760	4400	2,600	4788	4500
	8/30/2017	7	in-situ	1600	600	3300	4900	--	3500
	8/30/2017	8	in-situ	1500	580	2900	5300	5992	4300
	8/30/2017	9	in-situ	1100	320	1700	4800	--	1900
L2	7/21/2017	0.5	scraped	--	--	--	--	13569	--
	8/30/2017	1	in-situ	--	--	--	--	1142	--
	8/30/2017	3	in-situ	720	100	480	2000	717	390
L3	7/21/2017	0.5	scraped	--	--	--	--	18332	--
	8/30/2017	1	in-situ	--	--	--	--	911	--
L4	7/21/2017	0.5	scraped	--	--	--	--	11130	--
	8/30/2017	1	in-situ	--	--	--	--	1027	--
	8/30/2017	3	in-situ	1300	420	3100	5400	--	2100
L5	7/21/2017	0.5	scraped	--	--	--	--	3336	--
	8/30/2017	1	in-situ	960	220	1400	4400	1503	1200
L6	7/21/2017	0.5	in-situ	--	--	--	--	1850	--
	8/30/2017	2	in-situ	870	180	2500	4100	1935	1900
	8/30/2017	10	in-situ	890	220	1500	4800	--	1300
L7	7/21/2017	0.5	in-situ	--	--	--	--	<163	--
	8/30/2017	2	in-situ	1700	180	1100	4000	--	1100
L8	7/21/2017	0.5	scraped	--	--	--	--	23109	--
	8/30/2017	1	in-situ	--	--	--	--	<163	--
	8/30/2017	2	in-situ	730	120	460	4400	--	340
	8/30/2017	10	in-situ	1400	270	2500	2,000	3197	3800
L9	7/21/2017	0.5	in-situ	--	--	--	--	1215	--
L10	7/21/2017	0.5	in-situ	--	--	--	--	2013	--
BG1	8/30/2017	0.5	in-situ	1600	430	1400	760	2340	2200
	8/30/2017	1	in-situ	1100	150	940	1,700	1448	1000
	8/30/2017	2	in-situ	490	77	870	240	1061	860
	8/30/2017	4	in-situ	1300	500	1400	2,900	2537	1700
	8/30/2017	6	in-situ	2000	700	1800	1,500	3254	2500
	8/30/2017	8	in-situ	2200	820	1500	1100	2910	2900
	8/30/2017	10	in-situ	2400	820	1500	520	2738	2700

"--" = Not Analyzed

TABLE 4:
SUMMARY OF BASELINE AND
BACKGROUND SAMPLE RESULTS

Tiger #202

Table 4.

	Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Proposed Action	Nitrate mg/L	Sulfate mg/Kg	Cl- Laboratory mg/Kg
Tom Waltors	L1	10/20/2016	0.5	Baseline	--	--	3200
	L2	10/20/2016	0.5	Baseline	--	--	3600
	L3	10/20/2016	0.5	Baseline	--	--	3900
	L4	10/20/2016	0.5	Baseline	--	--	2300
	L5	10/20/2016	0.5	Baseline	--	--	3000
Warren	L1	5/2/2017	0.5	Baseline	--	--	1100
	L2	5/2/2017	0.5	Baseline	--	--	120
	L3	5/2/2017	0.5	Baseline	--	--	170
	L4	5/2/2017	0.5	Baseline	--	--	2400
Guitar	L1	1/9/2017	0.5	Baseline	--	--	4000
	L2	1/9/2017	0.5	Baseline	--	--	3500
	L3	1/9/2017	0.5	Baseline	--	--	2200
	L4	1/9/2017	0.5	Baseline	--	--	6300
	L5	1/9/2017	0.5	Baseline	--	--	3800
B Banker	BL1	5/3/2016	0.5	Baseline	--	--	<20
	BL2	5/3/2016	0.5	Baseline	--	--	120
	BL3	5/3/2016	0.5	Baseline	--	--	55
	BL4	5/3/2016	0.5	Baseline	--	--	3500
	BL5	5/3/2016	0.5	Baseline	--	--	<20
Paul	BG1	6/7/2017	0.5	Background	--	--	43
		6/7/2017	1	Background	--	--	2600
		6/7/2017	2	Background	--	--	3000
		6/7/2017	4	Background	--	--	5300
	BG2	6/7/2017	0.5	Background	--	--	<30
		6/7/2017	1	Background	--	--	530
		6/7/2017	2	Background	--	--	1500
		6/7/2017	4	Background	--	--	2600
Paul	BGC	6/12/2017	0.5	Background	6.3	4800	24
		6/12/2017	1	Background	<1.5	7700	1000
		6/12/2017	2	Background	1.5	10000	3200
		6/12/2017	3	Background	1.6	7800	4800
		6/12/2017	4	Background	<1.5	9500	4800
		6/12/2017	6	Background	<1.5	5300	3500
		6/12/2017	8	Background	1.6	8300	2400
		6/12/2017	10	Background	<1.5	7200	2700
		6/12/2017	12	Background	<1.5	7100	1300

"--" = Not Analyzed

APPENDIX A

FORM C141 FINAL

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

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Matador Resources	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM	Telephone No. 575-623-6601
Facility Name Tiger 14-24S-28E RB, #202H & #22H Pad	Facility Type Oil
Surface Owner Private	Mineral Owner Private
API No. 30-015-44119	

LOCATION OF RELEASE

Unit Letter H	Section 14	Township 24S	Range 28E	Feet from the 1796	North/South Line N	Feet from the 356	East/West Line E	County Eddy
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Latitude 32.220920 Longitude -104.0505578 NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 52bbls	Volume Recovered 15 bbls
Source of Release gasket on line failed	Date and Hour of Occurrence July 6, 2017 8:57am	Date and Hour of Discovery July 6, 2017 8:57am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Tim Gum July 6, 2017 10am	
By Whom? Casey Snow	Date and Hour July 6, 2017 11:05 am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*



Describe Cause of Problem and Remedial Action Taken.*

Ring Gasket on zipper manifold washed out during the course of hydraulic stimulation operations. Used vacuum trucks to clean up standing water. Replaced ring gasket on zipper manifold.

Describe Area Affected and Cleanup Action Taken.*

Area affected is approximately 50 feet radius around wellhead. Will delineate soil and remediate once work crew has vacated area.

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>OIL CONSERVATION DIVISION</u>	
Printed Name: Casey Snow	Approved by Environmental Specialist: 	
Title: Manager Regulatory, Environmental, & Safety	Approval Date: 3/6/2023	Expiration Date:
E-mail Address: csnow@matadorresources.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3/29/18 Phone (972) 371-5439		

* Attach Additional Sheets If Necessary

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 00738			ED	3	1	1	13	24S	28E	589673	3565472*	320	125	12	113
C 02057	C		ED		1	4	14	24S	28E	588956	3564774*	682	126	52	74
C 00903	C		ED		2	1	13	24S	28E	590178	3565575*	791	57	30	27
C 00574			ED	2	4	4	11	24S	28E	589452	3566081*	854	200	20	180
C 00464			ED	2	2	1	13	24S	28E	590277	3565674*	925	111	28	83
C 00329	C		ED	2	1	2	13	24S	28E	590682	3565677*	1295	95	30	65
C 00684			ED	2	1	2	13	24S	28E	590682	3565677*	1295	95	40	55
C 01154	C		ED	2	1	2	13	24S	28E	590682	3565677*	1295	95	50	45
C 00353	C	C	ED		3	4	13	24S	28E	590603	3564367*	1424	2726		
C 00750			ED	1	2	4	13	24S	28E	590898	3564871*	1474	110		
C 00618	C		ED	3	4	4	12	24S	28E	590880	3565885*	1558	80	40	40
C 01082			ED	3	3	2	11	24S	28E	588832	3566693*	1597	120		
C 01747			ED				12	24S	28E	590367	3566577*	1622	176	139	37
C 02524 POD2	C		ED	2	2	2	15	24S	28E	587814	3565690*	1716	90	11	79
C 00983	C		ED	4	4	4	12	24S	28E	591080	3565885*	1742	92	40	52
C 00354	C	C	ED		4	4	13	24S	28E	591005	3564367*	1762	2739		
C 00346	C		ED		2	2	15	24S	28E	587715	3565591*	1789	90	32	58
C 03132	C		ED	1	2	4	15	24S	28E	587616	3564877*	1883	90	19	71
C 00349	C	CUB	ED		1	3	18	24S	29E	591401	3564773*	1986	2734		
C 00488	C		ED	2	1	2	15	24S	28E	587412	3565688*	2105	64	8	56
C 03862 POD5		CUB	ED	4	3	3	01	24S	28E	589785	3567458	2254	17	10	7
C 03862 POD4		CUB	ED	3	3	3	01	24S	28E	589705	3567490	2276	30	10	20
C 02713	C		ED	4	4	1	16	24S	29E	591633	3565944	2282	230	18	212
C 03862 POD3		CUB	ED	3	3	3	01	24S	28E	589685	3567500	2284	60	10	50
C 03862 POD1		CUB	ED	3	3	3	01	24S	28E	589672	3567505	2287	17	10	7
C 03862 POD2		CUB	ED	3	3	3	01	24S	28E	589665	3567507	2289	30	10	20

*UTM location was derived from PLSS - see Help

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 00890			ED	3	3	4	10	24S	28E	587211	3565897*	2353	50		
C 00381	C	C	ED	3	2	3	07	24S	29E	591682	3566297*	2460	2797		
C 02184		C	ED	2	4	3	01	24S	28E	590248	3567700*	2593	87	60	27
C 02244		C	LE	3	1	2	22	24S	28E	587224	3563865*	2623	260		
C 03833 POD1		C	ED	2	1	2	26	24S	28E	589014	3562545	2719	96	55	41
C 01442		C	ED		1	2	10	24S	28E	587298	3567199*	2931	100		
C 00511		C	ED		2	3	02	24S	28E	588518	3568001*	2931	268	140	128
C 04026 POD1		CUB	ED	3	2	1	25	24S	28E	590148	3562290	3014	190	90	100
C 00962		C	ED		3	3	10	24S	28E	586505	3565992*	3059	63	9	54
C 01237		C	ED	1	1	2	10	24S	28E	587197	3567298*	3072	123		
C 00764			ED	3	1	3	10	24S	28E	586399	3566292*	3247	118	25	93
C 03358 POD1		C	ED	1	4	1	26	24S	28E	588416	3562116	3283	135		
C 02836		C	ED	2	2	2	16	24S	28E	586203	3565676*	3294		15	
C 02186		C	ED			2	02	24S	28E	589128	3568606*	3396	100	55	45
C 02198		C	ED			1	01	24S	28E	589940	3568611*	3417	78		
C 00570		C	ED		1	1	10	24S	28E	586490	3567195*	3568	100	28	72
C 03824 POD1		CUB	ED	4	1	2	16	24S	28E	585770	3565578	3713	290	60	230
C 03615 POD1		CUB	ED	1	3	2	06	24S	29E	591964	3568500	4116	60	36	24
C 03615 POD2		CUB	ED	4	2	4	06	24S	29E	592661	3568013	4239	60	26	34
C 00573			ED	2	2	4	04	24S	28E	586188	3568087*	4350	250	35	215
C 00318		C	ED	2	4	4	34	23S	28E	587811	3569298*	4394	150		
C 00857			ED	3	1	4	30	24S	29E	592135	3561440*	4632	306		
C 03703 POD1		C	ED	1	2	1	09	24S	28E	585259	3567225	4658	74	15	59
C 00856			ED	1	2	4	30	24S	29E	592538	3561644*	4719	380		
C 00862			ED	1	2	4	30	24S	29E	592538	3561644*	4719	155		
C 00513 S		C	ED	1	3	3	16	24S	28E	584802	3564432	4732	161	42	119
C 00709		C	ED	3	3	3	16	24S	28E	584802	3564232*	4769			
C 00648		C	ED	2	2	2	17	24S	28E	584593	3565644*	4891	96	58	38
C 02306		C	ED		3	2	04	24S	28E	585690	3568382*	4921	75	25	50

*UTM location was derived from PLSS - see Help

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 00463	C		ED	4	4	4	17	24S	29E	594332	3564282*	4956	260	4	256

Average Depth to Water: **35 feet**

Minimum Depth: **4 feet**

Maximum Depth: **140 feet**

Record Count: 56

UTMNAD83 Radius Search (in meters):

Easting (X): 589466.8

Northing (Y): 3565226.9

Radius: 5000

*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.

9/25/17 3:46 PM

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WATER COLUMN/ AVERAGE
DEPTH TO WATER

APPENDIX C

LABORATORY ANALYTICAL REPORTS

Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-1

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-001

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	690	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	130	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	990	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	9.0	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	0.41	0.30	H	mg/Kg	1	10/5/2017 4:24:33 PM	34269
Chloride	990	30	H	mg/Kg	20	10/5/2017 5:01:47 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 5:01:47 PM	34269
Bromide	0.62	0.30	H	mg/Kg	1	10/5/2017 4:24:33 PM	34269
Nitrogen, Nitrate (As N)	13	0.30	H	mg/Kg	1	10/5/2017 4:24:33 PM	34269
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/5/2017 5:01:47 PM	34269
Sulfate	3200	75	H	mg/Kg	50	10/9/2017 8:49:01 PM	34269

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	Page 1 of 0
	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 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-2

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-002

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	850	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	130	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	440	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	3.8	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	1.2	0.30	H	mg/Kg	1	10/5/2017 5:14:12 PM	34269
Chloride	660	30	H	mg/Kg	20	10/5/2017 5:51:26 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 5:51:26 PM	34269
Bromide	1.2	0.30	H	mg/Kg	1	10/5/2017 5:14:12 PM	34269
Nitrogen, Nitrate (As N)	5.9	0.30	H	mg/Kg	1	10/5/2017 5:14:12 PM	34269
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/5/2017 5:51:26 PM	34269
Sulfate	4600	75	H	mg/Kg	50	10/9/2017 9:01:26 PM	34269

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	Page 2 of 0
	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 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-3

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-003

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1500	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	470	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	2800	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	16	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/5/2017 6:28:39 PM	34269
Chloride	2500	150	H	mg/Kg	100	10/9/2017 9:13:50 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 6:41:03 PM	34269
Bromide	1.8	0.30	H	mg/Kg	1	10/5/2017 6:28:39 PM	34269
Nitrogen, Nitrate (As N)	1.9	0.30	H	mg/Kg	1	10/5/2017 6:28:39 PM	34269
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/5/2017 6:41:03 PM	34269
Sulfate	3800	150	H	mg/Kg	100	10/9/2017 9:13:50 PM	34269

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	Page 3 of 0
	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 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-4

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-004

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1700	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	550	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	3000	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	16	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/5/2017 6:53:28 PM	34269
Chloride	4200	150	H	mg/Kg	100	10/10/2017 11:59:57 AM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 7:05:53 PM	34269
Bromide	2.4	0.30	H	mg/Kg	1	10/5/2017 6:53:28 PM	34269
Nitrogen, Nitrate (As N)	3.5	0.30	H	mg/Kg	1	10/5/2017 6:53:28 PM	34269
Phosphorus, Orthophosphate (As P)	ND	1.5	H	mg/Kg	1	10/5/2017 6:53:28 PM	34269
Sulfate	2900	30	H	mg/Kg	20	10/5/2017 7:05:53 PM	34269

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	Page 4 of 0
	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 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-5

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-005

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	2000	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	70000	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	3600	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	18	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/5/2017 7:18:17 PM	34269
Chloride	5000	300	H	mg/Kg	200	10/10/2017 12:12:21 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 7:30:41 PM	34269
Bromide	2.9	0.30	H	mg/Kg	1	10/5/2017 7:18:17 PM	34269
Nitrogen, Nitrate (As N)	5.9	0.30	H	mg/Kg	1	10/5/2017 7:18:17 PM	34269
Phosphorus, Orthophosphate (As P)	ND	1.5	H	mg/Kg	1	10/5/2017 7:18:17 PM	34269
Sulfate	2700	30	H	mg/Kg	20	10/5/2017 7:30:41 PM	34269

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	Page 5 of 0
	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 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-6

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-006

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1900	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	760	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	4400	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	22	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/5/2017 7:43:06 PM	34269
Chloride	4500	300	H	mg/Kg	200	10/10/2017 12:24:45 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 7:55:31 PM	34269
Bromide	3.6	0.30	H	mg/Kg	1	10/5/2017 7:43:06 PM	34269
Nitrogen, Nitrate (As N)	3.4	0.30	H	mg/Kg	1	10/5/2017 7:43:06 PM	34269
Phosphorus, Orthophosphate (As P)	ND	1.5	H	mg/Kg	1	10/5/2017 7:43:06 PM	34269
Sulfate	2600	30	H	mg/Kg	20	10/5/2017 7:55:31 PM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-7

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-007

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1600	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	600	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	3300	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	18	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	0.41	0.30	H	mg/Kg	1	10/5/2017 8:07:55 PM	34269
Chloride	3500	150	H	mg/Kg	100	10/10/2017 12:37:10 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 8:20:20 PM	34269
Bromide	2.2	0.30	H	mg/Kg	1	10/5/2017 8:07:55 PM	34269
Nitrogen, Nitrate (As N)	2.3	0.30	H	mg/Kg	1	10/5/2017 8:07:55 PM	34269
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/5/2017 8:20:20 PM	34269
Sulfate	4900	150	H	mg/Kg	100	10/10/2017 12:37:10 PM	34269

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	Page 7 of 0
	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 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-8

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-008

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1500	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	580	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	2900	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	16	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	0.51	0.30	H	mg/Kg	1	10/5/2017 8:57:34 PM	34269
Chloride	4300	150	H	mg/Kg	100	10/10/2017 12:49:35 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 9:09:59 PM	34269
Bromide	2.6	0.30	H	mg/Kg	1	10/5/2017 8:57:34 PM	34269
Nitrogen, Nitrate (As N)	4.1	0.30	H	mg/Kg	1	10/5/2017 8:57:34 PM	34269
Phosphorus, Orthophosphate (As P)	ND	1.5	H	mg/Kg	1	10/5/2017 8:57:34 PM	34269
Sulfate	5300	150	H	mg/Kg	100	10/10/2017 12:49:35 PM	34269

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	Page 8 of 0
	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 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-9

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-009

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1100	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	320	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	1700	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	11	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	1.7	0.30	H	mg/Kg	1	10/5/2017 9:22:23 PM	34269
Chloride	1900	75	H	mg/Kg	50	10/9/2017 10:53:07 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 9:34:49 PM	34269
Bromide	1.1	0.30	H	mg/Kg	1	10/5/2017 9:22:23 PM	34269
Nitrogen, Nitrate (As N)	ND	0.30	H	mg/Kg	1	10/5/2017 9:22:23 PM	34269
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/5/2017 9:34:49 PM	34269
Sulfate	4800	75	H	mg/Kg	50	10/9/2017 10:53:07 PM	34269

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	Page 9 of 0
	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 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L7-2

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-010

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1700	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	180	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	1100	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	7.0	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/5/2017 9:47:14 PM	34269
Chloride	1100	75	H	mg/Kg	50	10/9/2017 11:05:32 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 9:59:39 PM	34269
Bromide	3.7	0.30	H	mg/Kg	1	10/5/2017 9:47:14 PM	34269
Nitrogen, Nitrate (As N)	6.3	0.30	H	mg/Kg	1	10/5/2017 9:47:14 PM	34269
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/5/2017 9:59:39 PM	34269
Sulfate	4000	75	H	mg/Kg	50	10/9/2017 11:05:32 PM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L8-2

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-011

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	730	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	120	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	460	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	4.2	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/5/2017 10:12:03 PM	34269
Chloride	340	30	H	mg/Kg	20	10/5/2017 10:24:27 PM	34269
Nitrogen, Nitrite (As N)	ND	0.30	H	mg/Kg	1	10/5/2017 10:12:03 PM	34269
Bromide	0.47	0.30	H	mg/Kg	1	10/5/2017 10:12:03 PM	34269
Nitrogen, Nitrate (As N)	2.7	0.30	H	mg/Kg	1	10/5/2017 10:12:03 PM	34269
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/5/2017 10:24:27 PM	34269
Sulfate	4400	75	H	mg/Kg	50	10/9/2017 11:17:57 PM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L8-10

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-012

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1400	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	270	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	2500	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	16	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	1.0	0.30	H	mg/Kg	1	10/5/2017 10:36:52 PM	34269
Chloride	3800	150	H	mg/Kg	100	10/9/2017 11:30:21 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 10:49:17 PM	34269
Bromide	2.1	0.30	H	mg/Kg	1	10/5/2017 10:36:52 PM	34269
Nitrogen, Nitrate (As N)	0.30	0.30	H	mg/Kg	1	10/5/2017 10:36:52 PM	34269
Phosphorus, Orthophosphate (As P)	ND	1.5	H	mg/Kg	1	10/5/2017 10:36:52 PM	34269
Sulfate	2000	30	H	mg/Kg	20	10/5/2017 10:49:17 PM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BG1-S

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-013

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1600	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	430	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	1400	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	7.8	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	0.71	0.30	H	mg/Kg	1	10/5/2017 11:26:31 PM	34269
Chloride	2200	75	H	mg/Kg	50	10/9/2017 11:42:46 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/5/2017 11:38:55 PM	34269
Bromide	3.9	0.30	H	mg/Kg	1	10/5/2017 11:26:31 PM	34269
Nitrogen, Nitrate (As N)	7.8	0.30	H	mg/Kg	1	10/5/2017 11:26:31 PM	34269
Phosphorus, Orthophosphate (As P)	ND	1.5	H	mg/Kg	1	10/5/2017 11:26:31 PM	34269
Sulfate	760	30	H	mg/Kg	20	10/5/2017 11:38:55 PM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BG1-1

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-014

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1100	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	150	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	940	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	7.1	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/5/2017 11:51:20 PM	34269
Chloride	1000	30	H	mg/Kg	20	10/6/2017 12:03:45 AM	34269
Nitrogen, Nitrite (As N)	ND	0.30	H	mg/Kg	1	10/5/2017 11:51:20 PM	34269
Bromide	0.63	0.30	H	mg/Kg	1	10/5/2017 11:51:20 PM	34269
Nitrogen, Nitrate (As N)	13	0.30	H	mg/Kg	1	10/5/2017 11:51:20 PM	34269
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/6/2017 12:03:45 AM	34269
Sulfate	1700	30	H	mg/Kg	20	10/6/2017 12:03:45 AM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BG1-2

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-015

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	490	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	77	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	870	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	9.6	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/6/2017 12:16:10 AM	34269
Chloride	860	30	H	mg/Kg	20	10/6/2017 12:28:34 AM	34269
Nitrogen, Nitrite (As N)	ND	0.30	H	mg/Kg	1	10/6/2017 12:16:10 AM	34269
Bromide	ND	0.30	H	mg/Kg	1	10/6/2017 12:16:10 AM	34269
Nitrogen, Nitrate (As N)	11	0.30	H	mg/Kg	1	10/6/2017 12:16:10 AM	34269
Phosphorus, Orthophosphate (As P)	ND	1.5	H	mg/Kg	1	10/6/2017 12:16:10 AM	34269
Sulfate	240	30	H	mg/Kg	20	10/6/2017 12:28:34 AM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BG1-4

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-016

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1300	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	500	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	1400	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	8.2	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/6/2017 12:40:58 AM	34269
Chloride	1700	75	H	mg/Kg	50	10/9/2017 11:55:10 PM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/6/2017 12:53:22 AM	34269
Bromide	1.4	0.30	H	mg/Kg	1	10/6/2017 12:40:58 AM	34269
Nitrogen, Nitrate (As N)	0.74	0.30	H	mg/Kg	1	10/6/2017 12:40:58 AM	34269
Phosphorus, Orthophosphate (As P)	ND	1.5	H	mg/Kg	1	10/6/2017 12:40:58 AM	34269
Sulfate	2900	75	H	mg/Kg	50	10/9/2017 11:55:10 PM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BG1-6

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-017

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	2000	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	700	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	1800	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	8.9	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/6/2017 1:05:47 AM	34269
Chloride	2500	150	H	mg/Kg	100	10/10/2017 12:07:34 AM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/6/2017 1:18:12 AM	34269
Bromide	1.9	0.30	H	mg/Kg	1	10/6/2017 1:05:47 AM	34269
Nitrogen, Nitrate (As N)	0.38	0.30	H	mg/Kg	1	10/6/2017 1:05:47 AM	34269
Phosphorus, Orthophosphate (As P)	ND	1.5	H	mg/Kg	1	10/6/2017 1:05:47 AM	34269
Sulfate	1500	30	H	mg/Kg	20	10/6/2017 1:18:12 AM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BG1-8

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-018

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	2200	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	820	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	1500	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	6.8	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	1.6	0.30	H	mg/Kg	1	10/6/2017 1:55:24 AM	34269
Chloride	2900	150	H	mg/Kg	100	10/10/2017 12:19:59 AM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/6/2017 2:07:49 AM	34269
Bromide	2.1	0.30	H	mg/Kg	1	10/6/2017 1:55:24 AM	34269
Nitrogen, Nitrate (As N)	0.49	0.30	H	mg/Kg	1	10/6/2017 1:55:24 AM	34269
Phosphorus, Orthophosphate (As P)	ND	1.5	H	mg/Kg	1	10/6/2017 1:55:24 AM	34269
Sulfate	1100	30	H	mg/Kg	20	10/6/2017 2:07:49 AM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BG1-10

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-019

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	2400	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	820	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	1500	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	6.6	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	9.9	0.30	H	mg/Kg	1	10/6/2017 2:20:13 AM	34269
Chloride	2700	150	H	mg/Kg	100	10/10/2017 12:32:24 AM	34269
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/6/2017 2:32:38 AM	34269
Bromide	2.0	0.30	H	mg/Kg	1	10/6/2017 2:20:13 AM	34269
Nitrogen, Nitrate (As N)	0.42	0.30	H	mg/Kg	1	10/6/2017 2:20:13 AM	34269
Phosphorus, Orthophosphate (As P)	1.6	1.5	H	mg/Kg	1	10/6/2017 2:20:13 AM	34269
Sulfate	520	30	H	mg/Kg	20	10/6/2017 2:32:38 AM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L2-3

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-020

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	720	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Magnesium	100	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium	480	1.0		mg/L	1	10/16/2017 9:00:00 AM	34390
Sodium Adsorption Ratio	4.5	0			1	10/16/2017 9:00:00 AM	34390
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/6/2017 2:45:03 AM	34269
Chloride	390	30	H	mg/Kg	20	10/6/2017 2:57:27 AM	34269
Nitrogen, Nitrite (As N)	ND	0.30	H	mg/Kg	1	10/6/2017 2:45:03 AM	34269
Bromide	ND	0.30	H	mg/Kg	1	10/6/2017 2:45:03 AM	34269
Nitrogen, Nitrate (As N)	14	0.30	H	mg/Kg	1	10/6/2017 2:45:03 AM	34269
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/6/2017 2:57:27 AM	34269
Sulfate	2000	30	H	mg/Kg	20	10/6/2017 2:57:27 AM	34269

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L5-1

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-021

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	960	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Magnesium	220	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Sodium	1400	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Sodium Adsorption Ratio	11	0			1	10/16/2017 9:00:00 AM	34391
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/9/2017 3:51:08 PM	34306
Chloride	1200	75	H	mg/Kg	50	10/10/2017 12:44:49 AM	34306
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/9/2017 4:03:32 PM	34306
Bromide	2.4	0.30	H	mg/Kg	1	10/9/2017 3:51:08 PM	34306
Nitrogen, Nitrate (As N)	4.7	0.30	H	mg/Kg	1	10/9/2017 3:51:08 PM	34306
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/9/2017 4:03:32 PM	34306
Sulfate	4400	75	H	mg/Kg	50	10/10/2017 12:44:49 AM	34306

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L4-3

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-022

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	1300	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Magnesium	420	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Sodium	3100	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Sodium Adsorption Ratio	19	0			1	10/16/2017 9:00:00 AM	34391
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.30	H	mg/Kg	1	10/9/2017 4:15:57 PM	34306
Chloride	2100	75	H	mg/Kg	50	10/10/2017 1:22:02 AM	34306
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/9/2017 4:28:21 PM	34306
Bromide	1.5	0.30	H	mg/Kg	1	10/9/2017 4:15:57 PM	34306
Nitrogen, Nitrate (As N)	1.7	0.30	H	mg/Kg	1	10/9/2017 4:15:57 PM	34306
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/9/2017 4:28:21 PM	34306
Sulfate	5400	75	H	mg/Kg	50	10/10/2017 1:22:02 AM	34306

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L6-2

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-023

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	870	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Magnesium	180	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Sodium	2500	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Sodium Adsorption Ratio	20	0			1	10/16/2017 9:00:00 AM	34391
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	1.8	0.30	H	mg/Kg	1	10/9/2017 4:40:46 PM	34306
Chloride	1900	75	H	mg/Kg	50	10/10/2017 1:34:27 AM	34306
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/9/2017 4:53:11 PM	34306
Bromide	2.8	0.30	H	mg/Kg	1	10/9/2017 4:40:46 PM	34306
Nitrogen, Nitrate (As N)	5.4	0.30	H	mg/Kg	1	10/9/2017 4:40:46 PM	34306
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/9/2017 4:53:11 PM	34306
Sulfate	4100	75	H	mg/Kg	50	10/10/2017 1:34:27 AM	34306

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

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Analytical Report

Lab Order 1710098

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L6-10

Project: Tiger

Collection Date: 8/30/2017

Lab ID: 1710098-024

Matrix: SOIL

Received Date: 10/3/2017 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SAR SOLUBLE CATIONS							Analyst: MED
Calcium	890	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Magnesium	220	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Sodium	1500	1.0		mg/L	1	10/16/2017 9:00:00 AM	34391
Sodium Adsorption Ratio	12	0			1	10/16/2017 9:00:00 AM	34391
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	1.2	0.30	H	mg/Kg	1	10/9/2017 5:05:36 PM	34306
Chloride	1300	75	H	mg/Kg	50	10/10/2017 1:46:52 AM	34306
Nitrogen, Nitrite (As N)	ND	6.0	H	mg/Kg	20	10/9/2017 5:18:00 PM	34306
Bromide	0.83	0.30	H	mg/Kg	1	10/9/2017 5:05:36 PM	34306
Nitrogen, Nitrate (As N)	1.2	0.30	H	mg/Kg	1	10/9/2017 5:05:36 PM	34306
Phosphorus, Orthophosphate (As P)	ND	30	H	mg/Kg	20	10/9/2017 5:18:00 PM	34306
Sulfate	4800	75	H	mg/Kg	50	10/10/2017 1:46:52 AM	34306

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


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APPENDIX D: LABORATORY ANALYTICAL REPORTS (BASELINE AND BACKGROUND)



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

November 16, 2016

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

RE: Tom Waltors

OrderNo.: 1611165

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/1/2016 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 qualifers 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

Analytical Report

Lab Order: 1611165

Date Reported: 11/16/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Tom Walters

Lab Order: 1611165

Lab ID: 1611165-001

Collection Date: 10/20/2016 10:00:00 AM

Client Sample ID: L1

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	3200	150		mg/Kg	100	11/14/2016 1:24:36 PM	28450

Lab ID: 1611165-002

Collection Date: 10/20/2016 10:00:00 AM

Client Sample ID: L2

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	3600	150		mg/Kg	100	11/14/2016 1:37:01 PM	28450

Lab ID: 1611165-003

Collection Date: 10/20/2016 10:00:00 AM

Client Sample ID: L3

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	3900	150		mg/Kg	100	11/14/2016 1:49:25 PM	28450

Lab ID: 1611165-004

Collection Date: 10/20/2016 10:00:00 AM

Client Sample ID: L4

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	2300	150		mg/Kg	100	11/14/2016 2:01:50 PM	28450

Lab ID: 1611165-005

Collection Date: 10/20/2016 10:00:00 AM

Client Sample ID: L5

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	3000	150		mg/Kg	100	11/14/2016 2:14:14 PM	28450

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	Page 1 of 2
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1611165

16-Nov-16

Client: Souder, Miller & Associates**Project:** Tom Walters

Sample ID	MB-28450	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	28450	RunNo:	38449					
Prep Date:	11/3/2016	Analysis Date:	11/3/2016	SeqNo:	1200952	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-28450	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	28450	RunNo:	38449					
Prep Date:	11/3/2016	Analysis Date:	11/3/2016	SeqNo:	1200953	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.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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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: 1611165

RcptNo: 1

Received by/date:

AG

11/01/16

Logged By:

Ashley Gallegos

11/1/2016 10:00:00 AM

Completed By:

Ashley Gallegos

11/2/2016 9:49:24 PM

Reviewed By:

as

11/03/16

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° 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 ✓ | # of preserved bottles checked for pH: |
| 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes ✓ | No | (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ✓ | No | Adjusted? |
| 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 | Checked by: |

Special Handling (if applicable)

- | | | | |
|---|-----|----|------|
| 16. Was client notified of all discrepancies with this order? | Yes | No | NA ✓ |
|---|-----|----|------|

Person Notified:

Date

By Whom:

Via:

eMail

Phone

Fax

In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			



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

June 16, 2017

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

RE: Warner

OrderNo.: 1706268

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/6/2017 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

Analytical Report

Lab Order: 1706268

Date Reported: 6/16/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Warner

Lab Order: 1706268

Lab ID: 1706268-001

Collection Date: 5/2/2017 11:00:00 AM

Client Sample ID: L1

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1100	75	H	mg/Kg	50	6/12/2017 5:12:47 PM	32211

Lab ID: 1706268-002

Collection Date: 5/2/2017 11:00:00 AM

Client Sample ID: L2

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	120	30	H	mg/Kg	20	6/10/2017 12:08:34 AM	32211

Lab ID: 1706268-003

Collection Date: 5/2/2017 11:00:00 AM

Client Sample ID: L3

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	170	30	H	mg/Kg	20	6/10/2017 12:20:59 AM	32211

Lab ID: 1706268-004

Collection Date: 5/2/2017 11:00:00 AM

Client Sample ID: L4

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2400	75	H	mg/Kg	50	6/12/2017 5:25:11 PM	32211

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	R	RPD outside accepted recovery limits
	RL	Reporting Detection Limit	S	% Recovery outside of range due to dilution or matrix

Page 1 of 2

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706268

16-Jun-17

Client: Souder, Miller & Associates
Project: Warner

Sample ID	MB-32211	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	32211	RunNo:	43415					
Prep Date:	6/9/2017	Analysis Date:	6/9/2017	SeqNo:	1366812	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-32211	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	32211	RunNo:	43415					
Prep Date:	6/9/2017	Analysis Date:	6/9/2017	SeqNo:	1366813	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.8	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

RL Reporting Detection Limit

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

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

Page 2 of 2



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: 1706268

RcptNo: 1

Received By: Richie Eriacho 6/6/2017 10:15:00 AM

Completed By: Richie Eriacho 6/6/2017 2:19:36 PM

Reviewed By: *SRE 06/06/17*

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

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good				



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

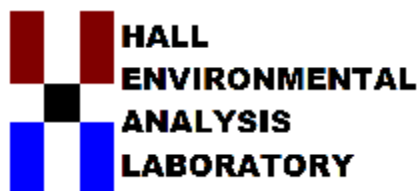
4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Client: SMA Carlsbad						<input type="checkbox"/> Standard	<input type="checkbox"/> Rush
Project Name: Warner							
Mailing Address:							
Phone #:							
email or Fax#:							
QA/QC Package: <input type="checkbox"/> Level 4 (Full Validation)							
<input type="checkbox"/> Standard							
Accreditation: <input type="checkbox"/> NELAP <input type="checkbox"/> Other							
<input type="checkbox"/> EDD (Type)							
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	
5/2/17	11 am	Soil	L1	402		1706268	
5/2/17	11 am	Soil	L2	402		-001	
5/2/17	11 am	Soil	L3	402		-002	
5/2/17	11 am	Soil	L4	402		-003	
						-064	
Date:	Time:	Relinquished by:	Received by:		Date	Time	
5-17	2:00	[Signature]	[Signature]		6/5/17	1400	
Date:	Time:	Relinquished by:	Received by:		Date	Time	
6/5/17	190	[Signature]	[Signature]		6/6/17	1015	

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



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

January 24, 2017

Austin Weyant

Souder, Miller & Associates

201 S Halagueno 

Carlsbad, NM 88221

TEL: (575) 689-7040

FAX

RE: Guitas #221

OrderNo.: 1701762

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/18/2017 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".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: 1701762

Date Reported: 1/24/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Guitas #221

Lab Order: 1701762

Lab ID: 1701762-001

Collection Date: 1/9/2017 7:00:00 AM

Client Sample ID: L1

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	4000	150		mg/Kg	100	1/23/2017 1:29:23 PM	29816

Lab ID: 1701762-002

Collection Date: 1/9/2017 7:00:00 AM

Client Sample ID: L2

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	3500	150		mg/Kg	100	1/23/2017 1:41:48 PM	29816

Lab ID: 1701762-003

Collection Date: 1/9/2017 7:00:00 AM

Client Sample ID: L3

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	2200	150		mg/Kg	100	1/23/2017 2:19:02 PM	29816

Lab ID: 1701762-004

Collection Date: 1/9/2017 7:00:00 AM

Client Sample ID: L4

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	6300	300		mg/Kg	200	1/23/2017 2:31:27 PM	29816

Lab ID: 1701762-005

Collection Date: 1/9/2017 7:00:00 AM

Client Sample ID: L5

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	3800	150		mg/Kg	100	1/23/2017 2:43:51 PM	29816

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	Page 1 of 2
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1701762

24-Jan-17

Client: Souder, Miller & Associates**Project:** Guitas #221

Sample ID	MB-29816	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	29816	RunNo:	40191					
Prep Date:	1/20/2017	Analysis Date:	1/20/2017	SeqNo:	1260055	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29816	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	29816	RunNo:	40191					
Prep Date:	1/20/2017	Analysis Date:	1/20/2017	SeqNo:	1260056	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	90	110			

Qualifiers:

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

Page 2 of 2



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: 1701762

RcptNo: 1

Received by/date:

Logged By: Ashley Gallegos

1/18/2017 9:30:00 AM

Completed By: Ashley Gallegos

1/18/2017 12:28:42 PM

Reviewed By:

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Chain-of-Custody Record				Turn-Around Time:	
Client: <u>SM4 - Corbould</u>		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush			
Mailing Address:		Project Name: <u>Guita #221</u>			
Phone #:		Project #:			
email or Fax#:		Project Manager: <u>Arsh Wapal</u>			
QA/QC Package:		Sampler: <u>LCR</u>			
<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Accreditation		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		Sample Temperature: <u>3.0 - 10.0°F</u>			
<input type="checkbox"/> EDD (Type) _____		HEAL No. <u>1701702</u>			
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type
L7-16	2:00	Soil	L1	402	-001
			L2		-002
			L3		-003
			L4		-004
			L5		-005
Date: <u>L7-17</u>	Time: <u>9:00</u>	Relinquished by: <u>[Signature]</u>		Received by: <u>[Signature]</u>	Date: <u>11/18/17</u> Time: <u>0930</u>
Date:	Time:	Relinquished by:		Received by:	Date: Time


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



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

May 12, 2016

Austin Weyant

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

RE: B Banker

OrderNo.: 1605079

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 5 sample(s) on 5/3/2016 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 qualifers 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

Analytical Report

Lab Order 1605079

Date Reported: 5/12/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BL-1

Project: B Banker

Collection Date: 4/29/2016 12:00:00 PM

Lab ID: 1605079-001

Matrix: SOIL

Received Date: 5/3/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	5/9/2016 1:49:28 PM	25197
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/6/2016 6:49:57 PM	25139
Surr: DNOP	21.1	70-130	S	%Rec	1	5/6/2016 6:49:57 PM	25139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/4/2016 12:04:04 PM	25130
Surr: BFB	95.0	80-120		%Rec	1	5/4/2016 12:04:04 PM	25130
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	5/4/2016 12:04:04 PM	25130
Benzene	ND	0.025		mg/Kg	1	5/4/2016 12:04:04 PM	25130
Toluene	ND	0.049		mg/Kg	1	5/4/2016 12:04:04 PM	25130
Ethylbenzene	ND	0.049		mg/Kg	1	5/4/2016 12:04:04 PM	25130
Xylenes, Total	ND	0.099		mg/Kg	1	5/4/2016 12:04:04 PM	25130
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	5/4/2016 12:04:04 PM	25130

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

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

Page 1 of 10

Analytical Report

Lab Order 1605079

Date Reported: 5/12/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BL-2

Project: B Banker

Collection Date: 4/29/2016 12:00:00 PM

Lab ID: 1605079-002

Matrix: SOIL

Received Date: 5/3/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	120	30		mg/Kg	20	5/9/2016 2:26:42 PM	25197
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/6/2016 7:11:48 PM	25139
Surr: DNOP	14.6	70-130	S	%Rec	1	5/6/2016 7:11:48 PM	25139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/4/2016 10:50:01 PM	25130
Surr: BFB	95.7	80-120		%Rec	1	5/4/2016 10:50:01 PM	25130
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	5/4/2016 10:50:01 PM	25130
Benzene	ND	0.024		mg/Kg	1	5/4/2016 10:50:01 PM	25130
Toluene	ND	0.048		mg/Kg	1	5/4/2016 10:50:01 PM	25130
Ethylbenzene	ND	0.048		mg/Kg	1	5/4/2016 10:50:01 PM	25130
Xylenes, Total	ND	0.096		mg/Kg	1	5/4/2016 10:50:01 PM	25130
Surr: 4-Bromofluorobenzene	96.5	80-120		%Rec	1	5/4/2016 10:50:01 PM	25130

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

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

Page 2 of 10

Analytical Report

Lab Order 1605079

Date Reported: 5/12/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BL-3

Project: B Banker

Collection Date: 4/29/2016 12:00:00 PM

Lab ID: 1605079-003

Matrix: SOIL

Received Date: 5/3/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	55	30		mg/Kg	20	5/9/2016 2:39:06 PM	25197
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/6/2016 7:33:46 PM	25139
Surr: DNOP	9.41	70-130	S	%Rec	1	5/6/2016 7:33:46 PM	25139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/4/2016 11:13:30 PM	25130
Surr: BFB	97.1	80-120		%Rec	1	5/4/2016 11:13:30 PM	25130
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.093		mg/Kg	1	5/4/2016 11:13:30 PM	25130
Benzene	ND	0.023		mg/Kg	1	5/4/2016 11:13:30 PM	25130
Toluene	ND	0.047		mg/Kg	1	5/4/2016 11:13:30 PM	25130
Ethylbenzene	ND	0.047		mg/Kg	1	5/4/2016 11:13:30 PM	25130
Xylenes, Total	ND	0.093		mg/Kg	1	5/4/2016 11:13:30 PM	25130
Surr: 4-Bromofluorobenzene	98.6	80-120		%Rec	1	5/4/2016 11:13:30 PM	25130

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

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

Page 3 of 10

Analytical Report

Lab Order 1605079

Date Reported: 5/12/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BL-4

Project: B Banker

Collection Date: 4/29/2016 12:00:00 PM

Lab ID: 1605079-004

Matrix: SOIL

Received Date: 5/3/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	3500	150		mg/Kg	100	5/11/2016 3:17:06 AM	25197
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/6/2016 7:55:39 PM	25139
Surr: DNOP	9.15	70-130	S	%Rec	1	5/6/2016 7:55:39 PM	25139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/5/2016 12:47:24 AM	25130
Surr: BFB	94.2	80-120		%Rec	1	5/5/2016 12:47:24 AM	25130
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.095		mg/Kg	1	5/5/2016 12:47:24 AM	25130
Benzene	ND	0.024		mg/Kg	1	5/5/2016 12:47:24 AM	25130
Toluene	ND	0.048		mg/Kg	1	5/5/2016 12:47:24 AM	25130
Ethylbenzene	ND	0.048		mg/Kg	1	5/5/2016 12:47:24 AM	25130
Xylenes, Total	ND	0.095		mg/Kg	1	5/5/2016 12:47:24 AM	25130
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	5/5/2016 12:47:24 AM	25130

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

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

Page 4 of 10

Analytical Report

Lab Order 1605079

Date Reported: 5/12/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BL-5

Project: B Banker

Collection Date: 4/29/2016 12:00:00 PM

Lab ID: 1605079-005

Matrix: SOIL

Received Date: 5/3/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	5/9/2016 3:03:54 PM	25197
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/6/2016 8:17:38 PM	25139
Surr: DNOP	8.53	70-130	S	%Rec	1	5/6/2016 8:17:38 PM	25139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/5/2016 1:10:55 AM	25130
Surr: BFB	95.3	80-120		%Rec	1	5/5/2016 1:10:55 AM	25130
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.092		mg/Kg	1	5/5/2016 1:10:55 AM	25130
Benzene	ND	0.023		mg/Kg	1	5/5/2016 1:10:55 AM	25130
Toluene	ND	0.046		mg/Kg	1	5/5/2016 1:10:55 AM	25130
Ethylbenzene	ND	0.046		mg/Kg	1	5/5/2016 1:10:55 AM	25130
Xylenes, Total	ND	0.092		mg/Kg	1	5/5/2016 1:10:55 AM	25130
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	5/5/2016 1:10:55 AM	25130

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

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

Page 5 of 10

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1605079
12-May-16

Client: Souder, Miller & Associates
Project: B Banker

Sample ID	MB-25197	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions						
Client ID:	PBS	Batch ID:	25197	RunNo:	34101						
Prep Date:	5/6/2016	Analysis Date:	5/9/2016	SeqNo:	1051147	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-25197	SampType:	LCS	TestCode:	EPA Method 300.0: Anions						
Client ID:	LCSS	Batch ID:	25197	RunNo:	34101						
Prep Date:	5/6/2016	Analysis Date:	5/9/2016	SeqNo:	1051148	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.	B Analyte detected in the associated Method Blank	Page 6 of 10
D Sample Diluted Due to Matrix	E Value above quantitation range	
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
R RPD outside accepted recovery limits	RL Reporting Detection Limit	
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1605079

12-May-16

Client: Souder, Miller & Associates**Project:** B Banker

Sample ID MB-25139	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 25139	RunNo: 34001								
Prep Date: 5/4/2016	Analysis Date: 5/5/2016	SeqNo: 1047876 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.4		10.00		74.0	70	130			

Sample ID 1605058-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 25139	RunNo: 34001								
Prep Date: 5/4/2016	Analysis Date: 5/5/2016	SeqNo: 1048316 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.05	0	97.0	33.9	141			
Surr: DNOP	4.1		5.005		81.4	70	130			

Sample ID 1605058-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 25139	RunNo: 34001								
Prep Date: 5/4/2016	Analysis Date: 5/5/2016	SeqNo: 1048317 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.20	0	96.7	33.9	141	0.0323	20	
Surr: DNOP	4.0		5.020		79.7	70	130	0	0	

Sample ID LCS-25139	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 25139	RunNo: 34001								
Prep Date: 5/4/2016	Analysis Date: 5/5/2016	SeqNo: 1048346 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.4	65.8	136			
Surr: DNOP	3.7		5.000		74.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1605079

12-May-16

Client: Souder, Miller & Associates**Project:** B Banker

Sample ID MB-25130	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 25130		RunNo: 33977							
Prep Date: 5/3/2016	Analysis Date: 5/4/2016		SeqNo: 1047281		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	910		1000		91.4	80	120			

Sample ID LCS-25130	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 25130		RunNo: 33977							
Prep Date: 5/3/2016	Analysis Date: 5/4/2016		SeqNo: 1047282		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	86.8	80	120			
Surr: BFB	970		1000		97.2	80	120			

Sample ID 1605079-001AMS	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BL-1	Batch ID: 25130		RunNo: 33977							
Prep Date: 5/3/2016	Analysis Date: 5/4/2016		SeqNo: 1047284		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	24.98	0	102	59.3	143			
Surr: BFB	1000		999.0		101	80	120			

Sample ID 1605079-001AMSD	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BL-1	Batch ID: 25130		RunNo: 33977							
Prep Date: 5/3/2016	Analysis Date: 5/4/2016		SeqNo: 1047285		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	24.78	0	107	59.3	143	4.02	20	
Surr: BFB	1000		991.1		103	80	120	0	0	

Qualifiers:

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

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

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1605079

12-May-16

Client: Souder, Miller & Associates**Project:** B Banker

Sample ID MB-25130	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 25130		RunNo: 33977							
Prep Date: 5/3/2016	Analysis Date: 5/4/2016		SeqNo: 1047315		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		92.9	80	120			

Sample ID LCS-25130	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 25130		RunNo: 33977							
Prep Date: 5/3/2016	Analysis Date: 5/4/2016		SeqNo: 1047316		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.95	0.10	1.000	0	95.3	61	143			
Benzene	1.0	0.025	1.000	0	100	75.3	123			
Toluene	0.93	0.050	1.000	0	93.3	80	124			
Ethylbenzene	0.88	0.050	1.000	0	88.0	82.8	121			
Xylenes, Total	2.6	0.10	3.000	0	87.2	83.9	122			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.4	80	120			

Sample ID 1605082-001AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BatchQC	Batch ID: 25130		RunNo: 33977							
Prep Date: 5/3/2016	Analysis Date: 5/4/2016		SeqNo: 1047319		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.98	0.098	0.9775	0	99.8	69.2	128			
Benzene	1.1	0.024	0.9775	0	108	71.5	122			
Toluene	0.99	0.049	0.9775	0	101	71.2	123			
Ethylbenzene	0.95	0.049	0.9775	0	96.8	75.2	130			
Xylenes, Total	2.8	0.098	2.933	0	96.4	72.4	131			
Surr: 4-Bromofluorobenzene	0.94		0.9775		96.4	80	120			

Sample ID 1605082-001AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BatchQC	Batch ID: 25130		RunNo: 33977							
Prep Date: 5/3/2016	Analysis Date: 5/4/2016		SeqNo: 1047320		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.89	0.099	0.9901	0	90.3	69.2	128	8.72	20	
Benzene	0.98	0.025	0.9901	0	99.2	71.5	122	7.34	20	
Toluene	0.96	0.050	0.9901	0	96.7	71.2	123	2.87	20	
Ethylbenzene	0.95	0.050	0.9901	0	96.0	75.2	130	0.454	20	

Qualifiers:

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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1605079

12-May-16

Client: Souder, Miller & Associates
Project: B Banker

Sample ID	1605082-001AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	BatchQC		Batch ID:	25130		RunNo:	33977				
Prep Date:	5/3/2016		Analysis Date:	5/4/2016		SeqNo:	1047320		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Xylenes, Total	2.8	0.099	2.970	0	95.3	72.4	131	0.0491	20		
Surr: 4-Bromofluorobenzene	1.0		0.9901		101	80	120	0	0		

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

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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: 1605079

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

5/3/2016 9:40:00 AM

Completed By: Lindsay Mangin

5/3/2016 1:33:11 PM

Reviewed By:

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by

Special Handling (if applicable)

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

Person Notified:

Date

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			



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

June 26, 2017

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

RE: Paul 2nd

OrderNo.: 1706671

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/13/2017 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

Analytical Report

Lab Order: 1706671

Date Reported: 6/26/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Paul 2nd

Lab Order: 1706671**Lab ID:** 1706671-001**Collection Date:** 6/7/2017 12:00:00 PM**Client Sample ID:** BG1-5**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	43	30		mg/Kg	20	6/21/2017 11:21:24 AM	32409

Analyst: MRA

Lab ID: 1706671-002**Collection Date:** 6/7/2017 12:00:00 PM**Client Sample ID:** BG1-1**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	2600	75		mg/Kg	50	6/22/2017 6:35:28 PM	32409

Analyst: MRA

Lab ID: 1706671-003**Collection Date:** 6/7/2017 12:00:00 PM**Client Sample ID:** BG1-2**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	3000	150		mg/Kg	100	6/22/2017 6:47:52 PM	32409

Analyst: MRA

Lab ID: 1706671-004**Collection Date:** 6/7/2017 12:00:00 PM**Client Sample ID:** BG1-4**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	5300	300		mg/Kg	200	6/22/2017 7:00:17 PM	32409

Analyst: MRA

Lab ID: 1706671-005**Collection Date:** 6/7/2017 11:00:00 AM**Client Sample ID:** BG2-5**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	ND	30		mg/Kg	20	6/21/2017 1:00:40 PM	32409

Analyst: MRA

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	Page 1 of 3
	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: 1706671

Date Reported: 6/26/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Paul 2nd

Lab Order: 1706671

Lab ID: 1706671-006 **Collection Date:** 6/7/2017 11:00:00 AM
Client Sample ID: BG2-1 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	530	30		mg/Kg	20	6/21/2017 1:13:05 PM	32409

Lab ID: 1706671-007 **Collection Date:** 6/7/2017 11:00:00 AM
Client Sample ID: BG2-2 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	1500	75		mg/Kg	50	6/22/2017 7:12:42 PM	32409

Lab ID: 1706671-008 **Collection Date:** 6/7/2017 11:00:00 AM
Client Sample ID: BG2-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	2600	150		mg/Kg	100	6/22/2017 7:25:07 PM	32409

Lab ID: 1706671-009 **Collection Date:** 6/7/2017 1:00:00 PM
Client Sample ID: A1-2 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	650	30		mg/Kg	20	6/21/2017 1:50:18 PM	32409

Lab ID: 1706671-010 **Collection Date:** 6/7/2017 2:00:00 PM
Client Sample ID: A2-3 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	1600	75		mg/Kg	50	6/22/2017 7:37:32 PM	32409

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	Page 2 of 3
	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#: 1706671

26-Jun-17

Client: Souder, Miller & Associates**Project:** Paul 2nd

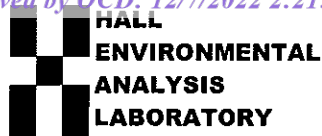
Sample ID	MB-32409	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	32409	RunNo:	43687					
Prep Date:	6/21/2017	Analysis Date:	6/21/2017	SeqNo:	1377078	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-32409	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	32409	RunNo:	43687					
Prep Date:	6/21/2017	Analysis Date:	6/21/2017	SeqNo:	1377079	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.7	90	110			

Qualifiers:

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

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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: 1706671

RcptNo: 1

Received By: Richie Eriacho

6/13/2017 9:45:00 AM

Completed By: Ashley Gallegos

6/13/2017 12:50:23 PM

Reviewed By: ENM

06/13/17

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks: _____

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Paul 2nd

Project #:

Project Manager:

Austin WeyantSampler: LGM/MPsOn Ice: ☒ Yes ☐ NoSample Temperature: 1.3

Date Time Matrix Sample Request ID

12/1712:00SoilBG1-S

Container Type and #

402

Preservative Type

HEAL No.1706671

BTX + MTBE + TMBs (8021)

BTX + MTBE + TPH (Gas only)

TPH 8015B (GRO / DRO / MRO)

TPH (Method 418.1)

EDB (Method 504.1)

PAHs (8310 or 8270 SIMS)

RCRA 8 Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / 8082 PCBs

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

Date: 12/17 Time: 1:00Relinquished by: Austin WeyantReceived by: SpkDate: 6/2/17 Time: 1400

Remarks:

Date: 12/17 Time: 1:00Relinquished by: SpkReceived by: SpkDate: 6/13/17 Time: 0945

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

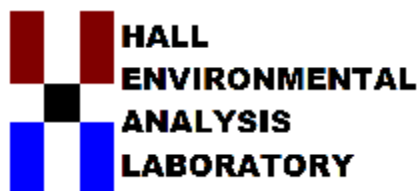
HALL ENVIRONMENTAL
ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel: 505-345-3975 Fax: 505-345-4107

Analysis Request



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

June 30, 2017



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

RE: Matador Paul 2nd

OrderNo.: 1706A44

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 21 sample(s) on 6/20/2017 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".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: SW2

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-001

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	5500	300		mg/Kg	200	6/27/2017 4:36:37 AM	32485
Nitrogen, Nitrate (As N)	8.4	6.0		mg/Kg	20	6/26/2017 1:05:47 PM	32485
Sulfate	6400	300		mg/Kg	200	6/27/2017 4:36:37 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: SW4

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-002

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	120	30		mg/Kg	20	6/26/2017 2:20:15 PM	32485
Nitrogen, Nitrate (As N)	1.9	0.30		mg/Kg	1	6/26/2017 1:43:01 PM	32485
Sulfate	5800	75		mg/Kg	50	6/27/2017 4:49:02 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: SW5

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-003

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1000	30		mg/Kg	20	6/26/2017 2:45:04 PM	32485
Nitrogen, Nitrate (As N)	2.3	1.5		mg/Kg	5	6/26/2017 2:32:40 PM	32485
Sulfate	5400	75		mg/Kg	50	6/27/2017 5:01:27 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: SW6

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-004

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	19	7.5		mg/Kg	5	6/26/2017 2:57:28 PM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 2:57:28 PM	32485
Sulfate	5300	75		mg/Kg	50	6/27/2017 5:13:52 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: SW7

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-005

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	15	7.5		mg/Kg	5	6/26/2017 3:22:16 PM	32485
Nitrogen, Nitrate (As N)	1.7	1.5		mg/Kg	5	6/26/2017 3:22:16 PM	32485
Sulfate	5100	75		mg/Kg	50	6/27/2017 5:26:17 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: SW8

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-006

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1200	75		mg/Kg	50	6/27/2017 5:38:41 AM	32485
Nitrogen, Nitrate (As N)	1.9	1.5		mg/Kg	5	6/26/2017 4:11:55 PM	32485
Sulfate	5100	75		mg/Kg	50	6/27/2017 5:38:41 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: SW9

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-007

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	140	7.5		mg/Kg	5	6/26/2017 4:36:44 PM	32485
Nitrogen, Nitrate (As N)	2.8	1.5		mg/Kg	5	6/26/2017 4:36:44 PM	32485
Sulfate	5100	75		mg/Kg	50	6/27/2017 5:51:06 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: SW11

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-008

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	87	7.5		mg/Kg	5	6/26/2017 5:01:33 PM	32485
Nitrogen, Nitrate (As N)	3.1	1.5		mg/Kg	5	6/26/2017 5:01:33 PM	32485
Sulfate	5300	75		mg/Kg	50	6/27/2017 6:03:30 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BH 2-3

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-009

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3000	150		mg/Kg	100	6/27/2017 6:15:54 AM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 5:26:23 PM	32485
Sulfate	4100	150		mg/Kg	100	6/27/2017 6:15:54 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BH 2-5.5

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-010

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2100	150		mg/Kg	100	6/27/2017 6:28:19 AM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 5:51:13 PM	32485
Sulfate	7500	150		mg/Kg	100	6/27/2017 6:28:19 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BH 2-10

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-011

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1200	150		mg/Kg	100	6/27/2017 9:08:03 AM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 6:40:51 PM	32485
Sulfate	6300	150		mg/Kg	100	6/27/2017 9:08:03 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BH 4-1.5

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:30:00 AM

Lab ID: 1706A44-012

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	300	7.5		mg/Kg	5	6/26/2017 7:05:40 PM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 7:05:40 PM	32485
Sulfate	5600	75		mg/Kg	50	6/27/2017 9:20:27 AM	32485

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 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-S

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-013

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	24	7.5		mg/Kg	5	6/26/2017 7:30:29 PM	32485
Nitrogen, Nitrate (As N)	6.3	1.5		mg/Kg	5	6/26/2017 7:30:29 PM	32485
Sulfate	4800	75		mg/Kg	50	6/27/2017 9:32:52 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-1

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-014

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1000	30		mg/Kg	20	6/26/2017 8:07:43 PM	32485
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 7:55:18 PM	32485
Sulfate	7700	150		mg/Kg	100	6/27/2017 9:45:17 AM	32485

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-2

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-015

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3200	150		mg/Kg	100	6/27/2017 9:57:41 AM	32503
Nitrogen, Nitrate (As N)	1.5	1.5		mg/Kg	5	6/26/2017 9:09:47 PM	32503
Sulfate	10000	150		mg/Kg	100	6/27/2017 9:57:41 AM	32503

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-3

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-016

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst: MRA		
Chloride	4800	300		mg/Kg	200	6/27/2017 10:10:05 AM	32503
Nitrogen, Nitrate (As N)	1.6	1.5		mg/Kg	5	6/26/2017 9:59:26 PM	32503
Sulfate	7800	300		mg/Kg	200	6/27/2017 10:10:05 AM	32503

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-4

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-017

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analyst: MRA			
Chloride	4800	150		mg/Kg	100	6/27/2017 10:22:30 AM	32503
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 10:24:16 PM	32503
Sulfate	9500	150		mg/Kg	100	6/27/2017 10:22:30 AM	32503

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-6

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-018

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3500	150		mg/Kg	100	6/27/2017 10:34:55 AM	32503
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/26/2017 10:49:05 PM	32503
Sulfate	5300	150		mg/Kg	100	6/27/2017 10:34:55 AM	32503

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-8

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-019

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2400	150		mg/Kg	100	6/27/2017 10:47:20 AM	32503
Nitrogen, Nitrate (As N)	1.6	1.5		mg/Kg	5	6/26/2017 11:38:45 PM	32503
Sulfate	8300	150		mg/Kg	100	6/27/2017 10:47:20 AM	32503

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-10

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-020

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst: MRA		
Chloride	2700	150		mg/Kg	100	6/27/2017 10:59:44 AM	32503
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/27/2017 12:03:34 AM	32503
Sulfate	7200	150		mg/Kg	100	6/27/2017 10:59:44 AM	32503

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

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Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: BGC-12

Project: Matador Paul 2nd

Collection Date: 6/12/2017 10:45:00 AM

Lab ID: 1706A44-021

Matrix: SOIL

Received Date: 6/20/2017 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analyst: MRA			
Chloride	1300	150		mg/Kg	100	6/27/2017 11:36:58 AM	32503
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	6/27/2017 12:28:23 AM	32503
Sulfate	7100	150		mg/Kg	100	6/27/2017 11:36:58 AM	32503

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

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1706A44

30-Jun-17

Client: Souder, Miller & Associates**Project:** Matador Paul 2nd

Sample ID MB-32485	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 32485	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380561	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

Sample ID LCS-32485	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 32485	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380562	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.1	90	110			
Nitrogen, Nitrate (As N)	7.1	0.30	7.500	0	94.2	90	110			
Sulfate	28	1.5	30.00	0	93.7	90	110			

Sample ID 1706A44-002AMS	SampType: ms	TestCode: EPA Method 300.0: Anions								
Client ID: SW4	Batch ID: 32485	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380574	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	8.7	0.30	7.500	1.907	90.0	61.8	142			

Sample ID 1706A44-002AMSD	SampType: msd	TestCode: EPA Method 300.0: Anions								
Client ID: SW4	Batch ID: 32485	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380575	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	8.6	0.30	7.500	1.907	88.6	61.8	142	1.22	20	

Sample ID MB-32503	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 32503	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380605	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

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#: **1706A44****30-Jun-17****Client:** Souder, Miller & Associates**Project:** Matador Paul 2nd

Sample ID LCS-32503	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 32503		RunNo: 43787							
Prep Date: 6/26/2017	Analysis Date: 6/26/2017		SeqNo: 1380606		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			
Nitrogen, Nitrate (As N)	7.3	0.30	7.500	0	97.5	90	110			
Sulfate	28	1.5	30.00	0	95.0	90	110			

Sample ID 1706A44-015AMS	SampType: ms		TestCode: EPA Method 300.0: Anions							
Client ID: BGC-2	Batch ID: 32503		RunNo: 43787							
Prep Date: 6/26/2017	Analysis Date: 6/26/2017		SeqNo: 1380610		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	8.2	1.5	7.500	1.546	88.5	61.8	142			

Sample ID 1706A44-015AMSD	SampType: msd		TestCode: EPA Method 300.0: Anions							
Client ID: BGC-2	Batch ID: 32503		RunNo: 43787							
Prep Date: 6/26/2017	Analysis Date: 6/26/2017		SeqNo: 1380611		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	8.1	1.5	7.500	1.546	87.7	61.8	142	0.768	20	

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: 1706A44

RcptNo: 1

Received By: Sophia Campuzano

6/20/2017 10:15:00 AM

Completed By: Richie Eriacho

6/20/2017 10:54:47 AM

Reviewed By: *Re las*

6/20/17

*Sophia Campuzano**Richie Eriacho*

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks: _____

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	6.0	Good				

Analytical Report

Lab Order 1706875

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: Tiger W1

Project: Tiger W1

Collection Date: 6/13/2017 3:00:00 PM

Lab ID: 1706875-001

Matrix: AQUEOUS

Received Date: 6/15/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
CARBON DIOXIDE							Analyst: JRR
Total Carbon Dioxide	180	1.0	H	mg CO2/L	1	6/15/2017 8:49:30 PM	R43555
SPECIFIC GRAVITY							Analyst: JRR
Specific Gravity	1.096	0			1	6/22/2017 1:34:00 PM	R43724
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	100000	5000	*	mg/L	1E	6/24/2017 4:31:52 AM	R43793
Sulfate	490	10	*	mg/L	20	6/16/2017 12:35:34 PM	R43601
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	150.6	20.00		mg/L CaCO3	1	6/15/2017 8:49:30 PM	R43555
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	6/15/2017 8:49:30 PM	R43555
Total Alkalinity (as CaCO3)	150.6	20.00		mg/L CaCO3	1	6/15/2017 8:49:30 PM	R43555
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	164000	2000	*D	mg/L	1	6/21/2017 5:49:00 PM	32389
SM4500-H+B: PH							Analyst: JRR
pH	6.77		H	pH units	1	6/15/2017 8:49:30 PM	R43555
EPA METHOD 200.7: METALS							Analyst: pmf
Barium	3.4	0.040	*	mg/L	20	6/22/2017 3:04:53 PM	32391
Calcium	6800	100		mg/L	100	6/22/2017 5:02:18 PM	32391
Iron	13	0.40	*	mg/L	20	6/22/2017 3:04:53 PM	32391
Magnesium	1000	20		mg/L	20	6/22/2017 3:04:53 PM	32391
Manganese	1.1	0.040	*	mg/L	20	6/22/2017 3:04:53 PM	32391
Potassium	860	20		mg/L	20	6/22/2017 3:04:53 PM	32391
Sodium	37000	1000		mg/L	1E	6/22/2017 8:15:36 PM	32391
Strontium	ND	0.20		mg/L	20	6/22/2017 3:04:53 PM	32391

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

Page 1 of 0



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 165018

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 165018
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	3/6/2023